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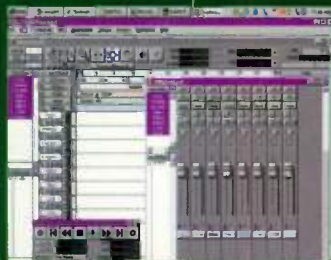


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Cover photo by Robert Perry.
Special thanks to Crazy Dream Sound Productions
and Harvest Moon Studios.

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As an EM subscriber, you know the value of having all the technical information you need conveniently at hand when you most need it. In each issue of *Electronic Musician*, we present a blend of features, columns, reviews, and special editorial departments, which doesn't leave much room for large spec tables, except in our narrowly focused product roundups. That's why we created the *Personal Studio Buyer's Guide*. In this exclusive supplement, the spec tables are paramount, and the features and tech tips are a bonus.

In this seventh annual edition of the *Personal Studio Buyer's Guide*, you'll find that some aspects have remained constant (for instance, the specs for each product type have changed little) while some things have changed significantly.

The biggest changes are in the features. In the past, we offered straightforward tips and techniques. However, we wanted to bring you something different and equally useful this year, so we decided to present some interview stories.

I thoroughly enjoy the Mix Masters series of interviews by Los Angeles-based engineer Maureen Droney, which appear in our sister publication, *Mix* magazine. Most EM readers have never seen these stories, so I selected prime Droney interviews with big-league engineer-producers Chuck Ainlay and Steve Marcantonio and lightly reedited them to fit in *Personal Studio Buyer's Guide*. I am confident that you will enjoy and learn from these interviews as much as I did.

We had one slight problem, though: presenting two large feature interviews and some cool tech tips, along with two dozen large and complex tables, takes up a lot of magazine space. In fact, it took up too much space! Partway through production, we discovered that our space couldn't accommodate all of the tables we had so carefully prepared.

Thank goodness for the Web! We created a special PSBG 2004 microsite within EM's Web site (www.emusician.com), as we did last year. There, you will find the tables for five product categories: Audio Patch Bays, Cassette and MiniDisc Multitrack Recorders, Headphones, Modular Digital Multitrack Recorders, and Power Amplifiers. The tables are provided in PDF format, and you can download them for free. You can also download (free) all of the tables that appear in the print version. To top it off, the microsite includes a selection of relevant articles from back issues of EM.

Thanks for subscribing to EM! I think you will find this supplement to be an enjoyable and practical bonus.



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Steve Marcantonio

By Maureen Droney



Keeping it real.

Engineering country music is a special balancing act. Take a roomful of musicians, then double or maybe triple the guitars, add piano, stacks of keyboards, some strings, high-profile background vocals, a pedal steel, and perhaps even some electronic percussion. There's almost always a lot going on, but somehow you have to make it all sound simple. And, you still have to hear the bass and keep that all-important lead vocal way out front.

Steve Marcantonio is a master at the task. Given his trademark punchy drums, well-placed guitars, and tastefully present lead vocals, it's no surprise that the client list of this former Jersey boy reads like a who's who of country. His work encompasses classic Nashville as well as the edgier side of the genre, including projects for Rodney Crowell, Deana Carter, Billy Falcon, the Nitty Gritty Dirt Band, George Strait, Alabama, the Warren Brothers, and Vince Gill, among others.

It wasn't easy to catch up with Marcantonio. There are a lot of good studios in Nashville, and he seems to be spending time in most of them, juggling projects and producers. We finally caught up with Marcantonio on his cell and arranged to talk between mixes for Montgomery Gentry at Ocean Way Nashville and Deana Carter's latest at Sound Kitchen. It's a noteworthy comment on Marcantonio's personality and vibe that, even though our conversations were by phone, his enthusiasm and honest



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Steve Marcantonio

enjoyment of his work came clearly over the land lines.

So how does an Italian guy from Jersey end up as one of the busiest engineers in Nashville? I grew up at New York Record Plant; I started there in '78. But really, it was pretty much a fluke the way I got started in the business. I come from a musical family, and one of my cousins, who lived with us, was in the Four Seasons. I used to go to a lot of concerts when I was a kid, and I always read the backs of album covers. So I knew about engineers, and I said, "I want to do that." Then, when I was a junior in high school, I took a course in record engineering. But during that course, I realized I was in way over my head.

I pretty much gave up on the idea of being an engineer after that class, although I kept on being into music. After high school, I went to work at the General Motors assembly plant.

God, that's so Jersey. [Laughs] Yeah. Well, at the plant there was a time each year while they changed over to make the new models, and everybody got laid off for a few months. During that layoff time in '78, my cousin Joey happened to get on the phone with Roy Cicala, who owned the Record Plant. I'd read Roy's name on albums, and I knew who he was. I guess that impressed Joey, because he said, "Let me see what I can do for you." Long story short, Roy took me under his wing, and I worked there until '84 when I became freelance.

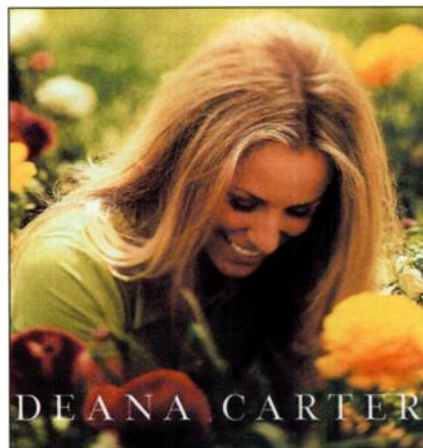
Who did you work with at Record Plant? Just the staff. But the staff at that time was like, Dave Thoener, Thom Panunzio, Jay Messina...

Jimmy Iovine was still there then, and I got to do a couple of sessions with him and Shelly Yakus. It was a great time to be there. I didn't know a thing about recording when I started, but Roy wanted people like that because he liked to teach them his way. You came up through the ranks; you paid your dues—it was a great school. I was addicted to that place. I was there all the time; I slept there. I truly loved it. As tired as I was, every time that I went there I felt rejuvenated.

How did you move up to engineering? I worked with Dave Thoener a bunch, and he really helped me out a lot. He was working with Rodney Crowell, and he used to let me do overdubs for him.

One day I did an overdub for Rodney where I had to match a vocal sound. It was a bit difficult, but I did it, and he was really impressed. A year or two later, out of the blue, he called me up in New Jersey, to come down here [to Nashville] to work with Rosanne Cash, who he was married to at the time. So I came down to do a record, which was called *King's Record Shop*.

I did Rodney's record after that, with Tony Brown producing, and I started



meeting people. Back then, it seemed like I was like the only person from New York around here. So I think I was looked at as having a different sort of attitude and a different sort of sound.

What was the difference? When I first came here, they were doing things like recording drums direct. I'll never forget walking into Sound Stage Studios where they were recording Russ Kunkel, and he was playing pads! That seemed so bizarre to me. They did it, I think, because the control room was not isolated from the studio. There was no wall, so, in order to record drums, you had to either listen on headphones or record direct.

But, overall, I think that at that time, in Nashville, the sound was a little bit more tame than it is now. And my sound, coming from New York, was a little bit

rougher than what they were used to. I think, in general, my drums were a little louder, my guitars were a little louder, and there was more 'verb on the drums. People seemed to like it, and that's how I got started. Then I met Josh Leo, who'd moved here from California at around the same time. We're both Italian, and we hit it off immediately. I worked with him for about eight years. We did Alabama and a bunch of other stuff...and here I am.

Some people specialize in tracking or mixing, but you seem to do both equally. [Laughs] Well, there are fewer acts now, and a lot more engineers, so it's a good thing I like to do both! I always love to mix, but tracking is sort of why I started engineering in the first place.

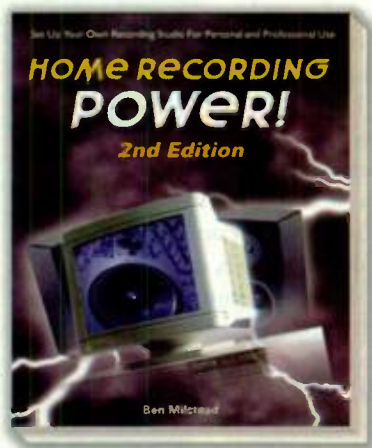
If you get it down really good on tape, then mixing is that much easier; that's my philosophy. When I track a record, if I know I'm going to mix it, I assume that what I'm hearing in my basic tracks is going to be the record—just maybe a bit more polished or fine-tuned. A lot of people have told me that my rough track mixes sound like records, and I take pride in that. It's the birth of the song right there in tracking, and that's really exciting for me.

If you know you're going to mix a record, do you prefer to cut the tracks? Absolutely. Even the best tracks that you get, you always say, "I wish I could have done this or that." I just feel more comfortable with my tracks. I think most every engineer would probably feel the same way, don't you?

Can you describe your day today? It's funny you ask that, because I just came back from mixing in New York, and on my way to work today I was thinking about how good we have it here in Nashville. It's so easy to drive to this studio [Sound Kitchen]. It's easy to park; it's easy to get in and out. I live ten minutes away from where I'm working today. This morning, I was reading the paper at home at quarter after nine, and I knew that the producer was getting in at about ten. I'd been thinking about a couple of changes to make in the mix, so I threw on my clothes and came over

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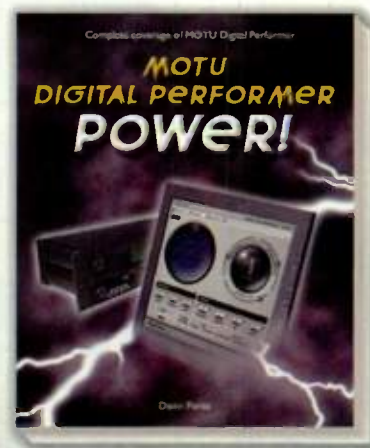
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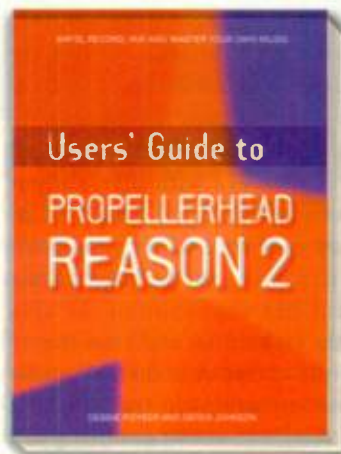
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Steve Marcantonio

Recently I bought these really tiny Sennheiser MD-504s and I've been using them. Even with those, though, I try to place the tom mics a little farther away, maybe 8 inches off the head, once again to get in a little of the air.

On hi-hat, usually a KM84. On cymbals, KM84s sometimes. Or 414s, 67s...I treat my overheads sort of like a stereo drum mix; there are a lot of cymbals in them. I try to get the sound of the drum kit in the overheads. Sometimes I'll start with those mics and build my drum sound from that.

Then, depending on where I'm working, I'll use some room mics—M49s or 67s. Over at Ocean Way, they've got RCA77s, the old ribbon mics; I like those for the room. And also I've used the Coles. At Sound Kitchen, they have four Audio-Technica mics wired into the ceiling that come up in the patch bay. They sound incredible, sort of like a nonlinear-type room [setting]—a tight, short decay that's good for rock 'n' roll.

Sometimes I'll also put a center room mic down low, or sometimes I'll put a mic behind the drummer. I'll print them on separate tracks. If I have the tracks, I like to print three or even four tracks of room, to be able to blend them later.

You compress the room mics. Definitely. I love the 1178s and the Fairchilds for that. If I can get hold of a nice set of Fairchilds, I'm happy. I also love using the Distressor on room mics. Actually, I'll use a Distressor on almost anything.

When you get to mixing, what's the

first thing you do? I'll listen to the overheads, blend stuff into them, and try to get back what we had when we were tracking. Then what I'll usually do is run a submix of the drums through a Fairchild or an 1178 and bring that back on two faders to make it real punchy.

What settings would you be likely to use on compressors? It depends on the song, the rhythm of the song. With the 1178, sometimes I'll press all the buttons in, and it does "infinity" or something like that; that can be really cool. Generally, I'll use the slowest attack and then a quick release, which gets them pumping. But it does depend on the tempo of the song. I'll mess with the attack mostly; the release I'll keep quick.

With the Fairchild, there's only one knob, and I usually tend to keep it on one, which I think is the quickest. If I use Distressors, I usually put them on Nuke or Opto.

What mics do you use on guitars? I like 57s. Coles are cool, but sometimes they almost sound like the compressor is in already, giving a real attack-y kind of sound. Royers are good on guitars, and I also like using an 87 a little farther away, in conjunction with the close mics. A FET 47 also sounds great on electric guitar.

If I'm recording a straight-ahead guitar sound through an amp, I'll either put an 1176 on it at four to one, with the attack about medium and the release on quick, or the Distressor at about six to one, or maybe the Fairchild. Sometimes on certain guitars, if you put the Fairchild on

three, they'll sound really smooth. When I cut tracks, I usually run the acoustic guitar through a Fairchild. I like mixing it up and trying different things. If I go to a studio I've never worked at before, I'll ask the guys who work there what they have that's cool. Some guys don't like to do that, but I do.

What do you usually mix to? I always mix to half-inch.

Do you prefer a Studer or an Ampex? I use an [Ampex] ATR, although if there's a Studer available, I'll use it. Sound Kitchen just purchased two of the older Studers—I don't know the model, with the scissors and the little speaker. I just did my first mix yesterday on one of them, and it sounded great. I really prefer using half-inch when I mix, although I'll always run a DAT as a safety. And you never know—if the mastering engineer prefers to use the DAT tape, you will. But most of the time it's half-inch.

What kind of tape? Quantegy 499, at plus-5 over 250. And I put some hefty level onto the tape.

Do you carry your own speakers around? I have Genelec 1031As. Lately, I've been going back to NS-10s, too; I go through different speakers when I'm mixing. Like today, I have the big KRKs, I've got the Genelecs, and I've got NS-10s. The other thing I rely heavily on is my old Sony jam box.

How long have you had it? It's 14 years old, and I must've put a few hundred dollars into it, just fixing it. It sounds great. There are many times during the day I'll have it on, in front of the console or somewhere behind me. It does wonders. I mean, you can't really judge a mix on it, because there's a lot of high-end stuff that sounds really loud on it.

But it's like the radio. Yeah. We used to do that at the Record Plant. There was an engineer I worked with a lot, Bill Whitman, and he used to crank up his compressors and listen to it on a radio speaker. So I took that idea.

What else do you own? When I first came here, everyone had their own gear.

—continued on page 54

Steve Marcantonio Selected Discography

Alabama: *Pass It Down* (1990), *American Pride* (1992)

Deana Carter: *Did I Shave My Legs for This?* (1995)

George Strait: *Lead On* (1994); *Carrying Your Love With Me* (1997)

Hank Williams Jr.: *Stormy* (1999)

Mark Chestnutt: *Thank God for Believers* (1997)

Randy Scruggs: *Crown of Jewels* (1998)

Rodney Crowell: *Street Language* (1986); *Keys to the Highway* (1989); *Jewel of the South* (1995)

Rosanne Cash: *King's Record Shop* (1988)

Suzy Bogguss: *Give Me Some Wheels* (1996)

The Nitty Gritty Dirt Band: *Bang Bang Bang* (1998)

Trisha Yearwood: *Where Your Road Leads* (1998)

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Chuck Ainlay

How's the new record? It's great—and very country. I think Vince has decided to just go for it and that he doesn't have anything to prove anymore.

Did you record the record also? Most of it. He wanted to do it whenever he came into town and had time off, so I had to rearrange my schedule to accommodate that. For one tracking date, I was mixing Trisha Yearwood and couldn't make the session, but I did all the rest of the tracking.

Do you prefer to record the music that you mix? Well, it doesn't always work out that way. I end up mixing more than anything, but I do like to work on what I've recorded. I love tracking; I think it's probably the most fun, because you're there with all the players creating music, and you hear it all come together, from nothing to magic. That one moment when it happens is just amazing: the camaraderie of people coming in and digging what you're doing, and you digging what they're doing; there's nothing like it.

Mixing is different. It's more self-indulgent. That can be great, too, because you get to sit there and fine-tune things that you hear. It takes time; sometimes you feel like there's nothing there, and then suddenly it all comes together, and in that one moment it is just shining in your face, and you're going, "wow!"

Obviously, I love to do both. But to answer your question, I do prefer to mix what I track, because when you're tracking there are always things that you leave to do in the mix, and it's not always obvious what somebody else had intended to leave to mixing.

Is it accurate to say that most of the music in Nashville is recorded live? Very little is done here using sequencers, except maybe for the Christian market. Country music is pretty much driven by live musicians and session players.

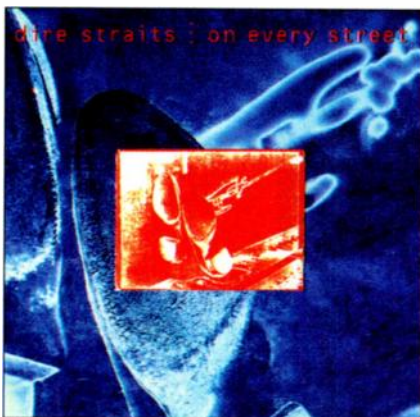
In general most of the tracking is done live; the amount of overdubbing, of course, depends on the album. Because there are so many solo artists, the bands are usually comprised of session musicians, and the studios are set up to where you can get isolation on a lot of players

at once. For the basic country record, you cut a track, then the acoustic-guitar player doubles, then the electric-guitar player might take a lead, but usually the steel and the fiddle and all those other solos are done live.

Which is why it's so exciting to track in this town. You get to hear it come together, and it happens really fast, in maybe three takes. From an engineering perspective, you have to be on it for that first take, because that really might be the one. You always need to be ready, because they're going to go with the magic of the track rather than with whether it was technically good or not.

And you sure don't want to have to tell all those musicians you're not ready.

[Laughs] Well, you don't tell them.



You fix it in the mix. Live music is one of the great things about working in Nashville. I happen to love real drums and the fact that there is human error. I don't hear that a lot in the records that are on the radio where the timing is just perfect, and they've put everything in a hard-disk system and lined everything up, and the pitch is just absolutely dead-on. I don't hear that magic in songs that makes you want to listen to the record over and over again. Sometimes it seems that there's this thing that everybody is going for now, an instant impression of "wow that's great—listen to how tight it is," but as far as that depth, that human feeling that makes you really love a song and dig it for the rest of your life, I don't think it's out there that much.

Instant perfection—something that catches your ear immediately but

doesn't have staying power. It's one of the things that drives me crazy about records today, and it's starting to happen in Nashville, too—the process where you cut the vocal, you comp the vocal, you tune the vocal....

There are a lot of great tracking rooms in Nashville. You'll find here that even the bigger rooms have a lot of isolation booths, so you can put the acoustic, the piano, the fiddle, the vocal all in separate rooms, with the drums in the main part of the room, and you can get everything live. You need that isolation because with acoustic instruments like fiddle or upright bass, there isn't a lot of output, yet on modern country records, the drums are a real driving thing, and they're played loud.

Do you mix fast? I wouldn't say I'm a fast mixer, because I don't think I'm a golden-ear kind of guy. I think I'm a hardworking kind of guy. I just work until it sounds and feels right. I push all the faders up to begin with and just listen to the song and get an image in my head of what it should be as an end result. Then I go to work to achieve that. I generally like to tell clients it's going to take a day a song. I don't think that's fast; I think that's about average.

How did you get started in engineering? I played guitar in bands in high school in Northern Indiana. Actually I started out with drums when I was a child, and then The Beatles came around, so I wanted to be a guitar player. I always loved listening to records and would save up money to buy a new tape deck or some new bit of stereo gear; I would always look at record covers to see who engineered them. When it came time to graduate high school, I went to the guidance counselor and said I wanted to be a recording engineer and he said, "huh?"

So I went to Indiana U, and there was a studio in town that had a six-week engineering course. I went through that program and realized that it was truly what I wanted to do. Someone recommended that I check out Belmont College in Nashville, which had a recording business program with an eight-track

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Chuck Ainlay

studio—it was one of the first studios to do that. I went to Belmont for about a year and a half and then got a job in a tourist studio.

A what? That's where we would have busloads of tourists come into the studio, and we'd put on a skit and record it, then play it back over the speakers and get the audience to clap and shout as an overdub, then play it back for them.

A theme park studio. Yeah. Then at night we'd do radio interviews and demos.

What next? My next job after the tourist studio was as head engineer at a studio up in Fort Wayne, Indiana. I went up there for six months, 'till I realized I didn't want to do jingles. There wasn't anything else going on so I went back to Nashville and got a job assisting at Quad Studios. That lasted for about a month until somebody said, "if you go tear out all the equipment in the studio and get us out of there so we don't have to pay next month's rent, you can have the equipment." So we had a 16-track studio for nothing; we got a trailer and built a remote truck, and that was my next deal. That kind of worked into a job at Sound Lab.

Were you ever an assistant engineer? Well, the way it worked at Sound Lab, the chief engineer got all the record business work, and then, for the custom work and demos, rather than hiring an independent engineer like people might today, the client would just come to the

studio and, since they were paying less money, they got the assistant. So rather than assisting on many albums I was just thrown straight into the fire doing demos and custom albums and then worked my way up.

Custom albums? That's where it's not a label deal, just somebody with money who wants to record an artist. There was a lot of that that went on in town. People who wanted to be a star would come to Nashville and pay to have their record made; there were a lot of people who made a lot of money just doing that.

In country music there usually seems to be a lot going on, and a lot that's in the midrange frequencies: piano, guitars, fiddles. How do you cope with all of the parts?

In the studio at Indiana U where I first had my introduction to recording, the instructor said, "It's not so much blending the instruments together as it is making the instruments not mask each other." That was one of the first things I learned and have held true to the art: it's not so much making each instrument sound great as it is making each instrument have a place to live.

That's part of the art of miking and using equalizers and compressors—to allow all these instruments in the same range, which ordinarily would tend to mask each other, to have a place to live and breathe in the mix.

How do you generally record

acoustic guitars? For an acoustic, I'll generally use a Neumann KM84 or the tube version, a KM56 or 54, and I'll go out and listen to determine what kind of guitar it is. If it's a boomy Martin sort of guitar, I'll tend to stay away from the center; with a Gibson that's more midrangy, you can use the hole to get warmth. It's a matter of going into the control room and listening, then going out and adjusting. I do try not to mic too closely; that's one of the benefits of using isolation rooms: you don't have to mic right up on the guitar because you're not as concerned about leakage. A lot of times I'll track an acoustic using Focusrite modules, because I like the airiness about them. If the acoustic is doing more finger-style stuff or if they are taking a lead, I'll use two mics; the second is usually further out or higher up or towards the rear of the guitar.

Would you usually compress the guitar signal? When I track I really tend to shy away from compression; I deal with that more during the mix, when yes, I do generally compress the acoustic.

What sort of compressors would you use? Actually, for an acoustic, I tend to use an onboard SSL compressor on the auto setting—it just works. For a more classic sound I may use an LA-2A or my Tube Tech.

What's in that rack of yours that you bring to the session? I've got a lot of Neve modules: 1081s and 1073s. I've got GML mic pre's; Focusrite and API modules; Tube Tech, UREI 1176, and GML compressors. I also have a rack of effects gear.

What might your mic choices be for piano? If I have them, I'll put two C-12s on the piano and use GML mic pre's, or a lot of times I'll go through Focusrites. I'll use 414s if I don't have C-12s. I never mic right over the hammers; I usually use the bracing in the piano as a mark for where I'll mic. For the high end, it's generally about six inches back and up from the hammers near the upper bracing, and at the low end bracing maybe a bit further toward the low strings, about the same distance up and further back into the piano. For country,

Chuck Ainlay Selected Discography Engineering/Mixing

Dire Straits: *On Every Street* (1991), *On the Night* (1993)

George Strait: *Blue Clear Sky* (1996), *Carrying Your Love With Me* (1997)

Lyle Lovett: *Lyle Lovett & His Large Band* (1989)

Marty Stuart: *Hillbilly Rock* (1989), *Tempted* (1991)

Reba McEntire: *Whoever's in New England* (1986), *The Last One to Know* (1987)

Steve Earle: *Guitar Town*, *Exit Zero*

Trisha Yearwood: *Thinkin' About You* (1995), *Everybody Knows* (1996)

Vince Gill: *When Love Finds You* (1994), *High Lonesome Sound* (1996)

Wynonna: *Wynonna* (1992), *Tell Me Why* (1993), *Revelations* (1996)

Ziggy Marley: *Jehmekya* (1991)

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Chuck Ainlay

you usually want that left hand/right hand spread; you're not generally going for that solid middle kind of thing. I've got a Drawmer 1960 that I like to use on piano for compression—it adds a little air to it. Piano is one of the things I may compress a little when I track.

Any tricks for recording pedal-steel guitars? [Laughs] The thing about recording is that it's so much easier when

you're working with the best musicians, like I am. Ninety-nine percent of it is the musicians. Steel guitar, you want to know what I do? I put two 421s out there and cut it flat—I mean, Paul Franklin has the most amazing tone in the world. But, okay, if you really want to know, for steel guitar it's either a 421 or a 57, and I usually mic a bit off the speaker center, so that you don't get the brittle-

ness that can come from the center. Pretty much that's how I mic any amped instrument. But for steel, it's a fairly simple signal path: through a Neve module straight to tape. I generally don't do much EQ.

Your records don't sound like they have a lot of EQ in general. I really would like to emphasize that with me it's all about the music and trying not to overhype things so that the warmth and emotion of the music comes through.

Do you do a lot of riding faders by hand in the mix? I do. I use compression to help me and to make things sound powerful and strong, but there's a lot of riding involved, and I think that's why I generally like to work on the J Series desks—because the automation is killer.

Any favorite snare compressors you'll tell us about? Once again I usually use the desk compressor, but I'll also bus the drums out to a separate compressor and bring that up in the mix—I like to use a Calrec or an 1176 for that. My 1081 Neve modules generally end up on the bass drum and snare as well.

In a lot of the music that you work on the vocals are very out front. That makes the ambience on them apparent and important. Do you have any favorite settings for those ambiances? For vocals, I spend a lot of time choosing the microphone. It usually ends up being a tube microphone—a C-12, a U47 or a 251—and I'll either use the GML mic pre's, which I like for their warmth and overall transparency, or I'll use the Neve 1073s with the EQ out, just using the mic-preamp section. I almost never use EQ when I'm tracking a vocal, but I'll compress it slightly with my Tube Tech compressor. It's one of the original ones that I really like, a CL1A that they don't make anymore.

For the 'verbs you're asking about, I like to have an EMT 250 around; I like a Lexicon 300, usually a plate program, then I may use a [Lexicon] 224X with a longer predelay as well. I usually mix a lot of 'verbs together for vocals, using one for warmth, one for decay, and one for brilliance, and I'll usually use a bit of

—continued on page 68



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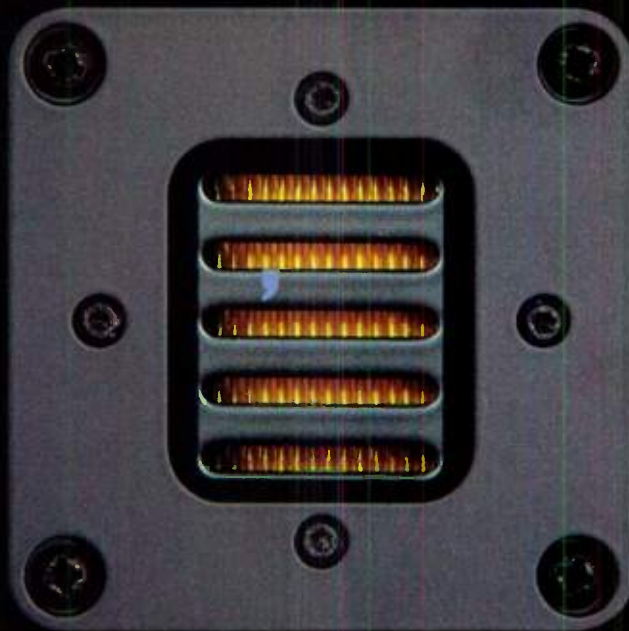


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SETTING UP THE MIXER

By Thomas E. Rudolph
and Vincent A. Leonard, Jr.

The first thing to do when you sit down at your mixer is to make sure all input signals are routed to the proper channel strips. Check the gain level on the mixer to ensure your cables are providing a clean signal. Next, label your channels. Use a piece of white removable tape to create a scribble strip if your mixer does not have one. I use 3M 6-Line Correction and Cover-up Tape in my studio. It's large enough to write on and is not hard to remove after the session. I've also seen artist's tape and removable masking tape used. Boards with scribble strips use a china marker to write in the names; the markings can be removed with a cloth or paper towel.

This section contains screen shots from Mark of the Unicorn Digital Performer and Digidesign Pro Tools software. This is partly to demonstrate the features of these packages and partially to provide visual examples. However the concepts are the same, regardless of which software or hardware you may be using.

For most computer-based systems, you will need to create and name the proper number of tracks. Fig. 1 shows the type of tracks available in Pro Tools. You can create MIDI tracks, audio tracks, mono and stereo aux-send tracks, and mono and stereo master tracks. Build your mixer first, including aux and master faders, so that you have all the flexi-

bility of a large console right from the start. You can add any type of channel as you go, so you'll never paint yourself into a corner.

If you are using a MIDI/digital audio sequencer there are similar options.

Software offers the option to create templates and save them for future use. Once the number of tracks is set up and labeled, save the document with an easily identifiable name. Lock the files so they cannot be accidentally overwritten.

Then, at the start of each new session or song, call up the template and immediately save the file.

Getting the proper tone is the most time consuming part of a recording session. It takes time and critical listening to tweak EQs and get the right level of compression for a good sound. Take advantage of being able to save that information in your mixer so that you have a starting point for each new session.

Once you've confirmed the signal path into your mixer, it will need to be routed to the proper recorder track. You will have to look at the signal level going to the tape or hard disk. Digital has a lot of recording and editing flexibility but it is totally unforgiving when it comes to peaking the meters while recording. This may mean relearn-

ing some habits when it comes to setting the levels going to the recorder. For the laws, loopholes, and penalties of digital zero, see "Digital Zero" on p. 107.

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FIG. 1: Digidesign Pro Tools Mix window channel types.



FIG. 2: MOTU Digital Performer's Mixing Console channel types.

Fig. 2 shows Digital Performer's Mixer view. In addition to MIDI tracks it also has mono and stereo audio-file tracks, mono and stereo aux-send tracks, and a stereo master track with a mono button for checking mono compatibility. After creating your channels, check the cable routings to make sure the signal is reaching the proper channel and that the gain level is acceptable.

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SESSION PAPERWORK

By Thomas E. Rudolph
and Vincent A. Leonard, Jr.

One point I can't stress enough is to accurately log your session. This begins with a track sheet for the multitrack recorder. At the top of the track sheet there is a lot of basic information like

age your tracks and instantly know how many are available for use. The track sheet is also a place to log other information relevant to the recording, like the mics or external effects used, and any tracks that have been edited or composited. Musicians' names can be indicated, as can additional recording dates

erased") so they can be wiped and used for something else if necessary.

Keeping all this information may seem unnecessary in a small studio, but let me assure you, it will save you a lot of time and spare you frustration. The more things you are trying to do yourself, the less focused you are on each one. All it takes is selecting the wrong track and accidentally erasing something once to learn that the hard way. A well-kept track sheet is a must if you work with another person on the project, take the project to another studio, or go back to it after it's left your short-term memory.

Let's take a closer look at Apogee's Session Tools software. This package is designed for professional recording studios and not only tracks session information like track sheets and effects settings, but also handles tape labeling, tape logging, billing, client contact information, and equipment repair. Storing records in the computer will help cut down on the paper pile in your studio but remember to regularly back up these files.

FIG. 1: Track sheet from Apogee Session Tools software.

the date, name of the song, tempo, project, studio, client, producer, engineer, and assistant engineer. This information can be very helpful later on in assembling accurate album credits. Also logged are the number or name of the tape the song is on, its counter location and any time code or clock information. For digital recordings the sample rate is listed. For analog recordings the tape speed would be logged.

Fig. 1 shows a sample track sheet. This one is from Apogee's Session Tools software. Each box on the track sheet corresponds to a track on the multitrack recorder. In each box, fill in the name of the instrument being recorded on that track. This way you will be able to man-

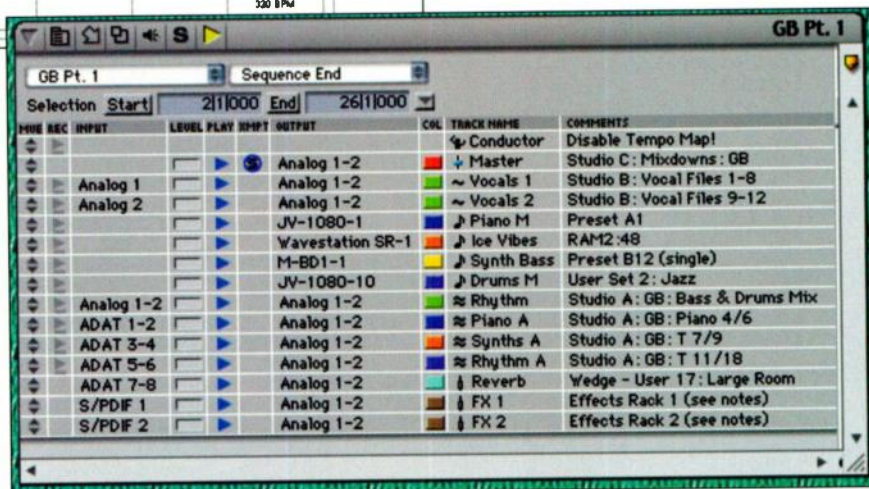


FIG. 2: The Tracks Window in Mark of the Unicorn's Digital Performer.

age your tracks and instantly know how many are available for use. The track sheet is also a place to log other information relevant to the recording, like the mics or external effects used, and any tracks that have been edited or composited. Musicians' names can be indicated, as can additional recording dates

If you are working with a computer-based system, you will be able to manage your tracks by naming them onscreen. Most digital audio sequencers allow you to enter comments for each audio or

MIDI track so that information on each track may be logged.

Fig. 2 shows how the information is displayed in the Tracks window of MOTU's Digital Performer. I recently went back to a project I had completed six years ago to update a tape for a client. The sequencer files were a mess of chunks, rehearsal tracks, discarded tracks, and final tracks. The musical director I originally worked with on the project had left and was working on a cruise ship, so I was on my own in reconstructing the song files. Fortunately, I had made detailed notes on the MIDI setup used for the recording so I knew which synths and sounds were used and

are usable. Sometimes a performer makes a mistake at the beginning and starts over rather than waiting for the tape to stop and be rewound. This is logged as a false start. Once a take has been chosen, indicate clearly which take is to be used.

A time-log sheet would only be necessary if you were doing work for a paying client and needed to track the session time and any other billing related information, such as the amount of blank

media used. Start labeling tapes at the beginning of their use and add new information as you begin each new song. The same goes for Zip or Jaz disks or any other devices that you use to save data to removable media. ■

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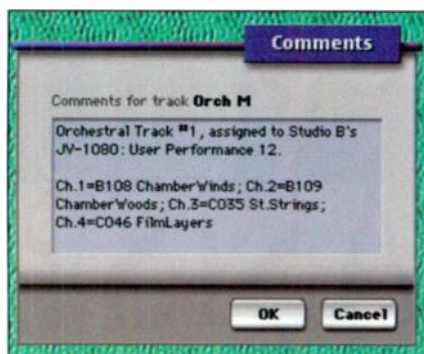


FIG. 3: Like most digital audio sequencers, Digital Performer provides a Comments window for each track, allowing you to keep detailed notes for that track. Shown here are comments for a MIDI track. software.

what MIDI track was used for which data. So, I was able to quickly reassign tracks for the sounds I am currently using without too much trouble. (Fig. 3 shows Digital Performer's Comments window.)

When recording multiple takes in a session, a take sheet is used to log information about each take. A take sheet, not to be confused with a track sheet, can be a specially printed form or simply a sheet of notepaper. First log the take number and start times of the take as they appear on the tape counter. If there is any start ID or memory-locator information, log that as well. Then list what is being recorded, followed by any comments on the take made by the producer. Comments would mention any obvious mistakes as well as sections that



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ANALOG MIXING CONSOLES

MANUFACTURER	PRODUCT	MIXER CONFIGURATION	MIC INPUTS (XLR) LINE INPUTS	# OF INSERTS / DIRECT OUTS	# OF AUX SENDS / RETURNS / TYPE	# OF BUS OUTPUTS / TYPE	EQ	MUTE	SOLO-IN-PLACE	FREQUENCY RESPONSE
Alesis	Studio 12R	14x2	8/14	8/0	(2/1) 1/4"	N/A	High/low shelving	No	No	20 Hz-50 kHz
Alesis	Studio 32	16x4x2, 40x2	16/40	16/16	(6/4) 1/4"	(4) 1/4" TRS	High/low shelving	Yes	Yes	20 Hz-50 kHz
API	7600	4x1	Mic XLR, 1/4"	4/1	4/0	N/A	HP/LP filters	Yes	Yes	30 Hz-20 kHz
Ashly Audio	MX-508	8x2	8/8	8/8	(2/2) 1/4"	N/A	3-band w/sweepable mid	Yes	No	20 Hz-20 kHz
Behringer	Pro Mixer DX1000	12x2	2/10	0/0	1/2	2	3-band	Yes	Yes	10 Hz-100 kHz
Behringer	Eurorack MX602A	6x2x2	2/2 (2 stereo)	0/0	2/2	N/A	3-band	No	No	10 Hz-60 kHz
Behringer	Eurorack MX802A	8x2x2	4/4 (2 stereo)	0/0	2/2	N/A	3-band	No	No	10 Hz-120 kHz
Behringer	Eurorack MX1604A	16x4x2	4/4 (4 stereo)	0/0	2/2	N/A	3-band parametric mids	Yes	Yes	10 Hz-60 kHz
Behringer	Eurorack MX2004A	20x4x2	8/8 (4 stereo)	8/0	2/2	N/A	3-band parametric mids	Yes	Yes	20 Hz-40 kHz
Behringer	Eurodesk MX2442A	24x8x2	16/16	20	6/2	4	3-band parametric	Yes	Yes	20 Hz-40 kHz
Behringer	Eurorack MX2642A	24x8x4	8/8 (4 stereo)	10/8	6/4	4	3-band parametric	Yes	Yes	20 Hz-40 kHz
Behringer	MX3242X	16x4x2	16/16	16/16	(6/4) 1/4"	(4) 1/4"	4-band parametric	Yes	Yes	10 Hz-130 kHz
Behringer	Eurodesk MX3282A	24x8x2	24/24	24	8/4	8	3-band parametric	Yes	Yes	20 Hz-40 kHz
Behringer	Eurodesk MX9000	24x8x2	24/24	24/24	6/6	3	4-band	Yes	Yes	20 Hz-40 kHz
Behringer	UB1622FXPRO	16x2x2	4/12	4/0	(2/2) 1/4"	(2) 1/4"	3-band mono; 4-band stereo	Yes	Yes	10 Hz-150 kHz
Behringer	UB1832FXPRO	18x3x2	6/14	6/0	(3/2) 1/4"	(2) 1/4"	3-band mono; 4-band stereo; 9-band graphic	Yes	Yes	10 Hz-150 kHz
Behringer	UB2222FXPRO	22x2/2x2	8/16	8/0	(3/3) 1/4"	(2) 1/4"	3-band mono; 4-band stereo	Yes	Yes	10 Hz-150 kHz
Behringer	UB2442FXPRO	24x4x2	10/16	1-8/8	(4/4) 1/4"	(8) 1/4"	3-band mono; 4-band stereo	Yes	Yes	10 Hz-150 kHz
Behringer	UB1204-PRO	12x2x2	4/12	0/0	(2/2) 1/4"	(2) fader	3-band	Yes	No	10 Hz-150 kHz
Behringer	UB1204FXPRO	12x2x2	4/8	0/0	(2/2) 1/4"	(2) knob (fader)	3-band	Yes	Yes	10 Hz-150 kHz
Behringer	UB1002	10x0x2	2/10	0/0	(1/0) 1/4"	N/A	3-band	No	No	10 Hz-150 kHz
Behringer	UB1202	12x0x2	4/12	0/0	(1/0) 1/4"	N/A	3-band	No	No	10 Hz-150 kHz
Behringer	UB502	5x0x02	1/5	0/0	N/A	N/A	2-band	No	No	10 Hz-150 kHz
Behringer	UB602	8x0x2	2/6	0/0	(1) 1/4"	N/A	3-band	No	No	10 Hz-150 kHz
Behringer	PMX2000	10x0x4	9/12	0/0	0/0	N/A	3-band	No	No	10 Hz-150 kHz
Carvin	C 844	8x4x2	8/10	8/8	(4/4) 1/4"	(4) 1/4"	3-band, sweep mid	Yes	Yes	20 Hz-20 kHz
Carvin	C 1644	16x4x2	16/10	16/16	(4/4) 1/4"	(4) 1/4"	3-band, sweep mid	Yes	Yes	20 Hz-20 kHz
Carvin	C 2444	24x4x2	24/10	24/24	(4/4) 1/4"	(4) 1/4"	3-band, sweep mid	Yes	Yes	20 Hz-20 kHz
Carvin	C 3244	32x4x2	32/10	32/32	(4/4) 1/4"	(4) 1/4"	3-band, sweep mid	Yes	Yes	20 Hz-20 kHz
Carvin	S/L24	24x8x2	24/32	24/32	(2/2) 1/4"	(2) 1/4" (2) RCA	Sweep mid/lo	Yes	Yes	20 Hz-20 kHz
Carvin	S/L40	40x8x2	40/48	40/48	(2/2) 1/4"	(2) 1/4" (2) RCA	Sweep mid/lo	Yes	Yes	20 Hz-20 kHz
Carvin	S/L56	56x8x2	50/58	50/58	(2/2) 1/4"	(2) 1/4" (2) RCA	Sweep mid/lo	Yes	Yes	20 Hz-20 kHz
Carvin	StuDiomate	16x2	8/16	8	(2/2) 1/4"	(2) 1/4" (2) RCA	3-band	No	No	20 Hz-20 kHz
Crate	CSM8	8x2x1	8/8	8/8	4/2	(2) XLR, 1/4"	3-band	Yes	Yes	20 Hz-20 kHz
Crate	CSM12	12x2x1	12/12	12/12	4/2	(2) XLR, 1/4"	3-band	Yes	Yes	20 Hz-20 kHz
Crate	CSM16	16x2x1	16/16	16/16	4/2	(2) XLR, 1/4"	3-band	Yes	Yes	20 Hz-20 kHz
Crate	CSM24	24x2x1	24/24	24/24	4/2	(2) XLR, 1/4"	3-band	Yes	Yes	20 Hz-20 kHz
Crate	CSM1402	18x2x1	6/18	6/0	2/2	N/A	3-band	Yes	Yes	70 Hz-120 kHz
D&R	Vision 8	8x4x2	8	8/8	4/4	8/+ 4/-10 dBv	3-band	Yes	No	20 Hz-120 kHz
FBT	Pickup 8E	8x2	4/4	2	2/2	2	3-band	No	No	20 Hz-90 kHz
FBT	Pickup 8X	8x2	4/4	2	2/2	2	3-band	No	No	20 Hz-90 kHz
FBT	Pickup 14E	14x2	6/8	4	2/2	2	3-band	No	Yes	20 Hz-90 kHz
FBT	Pickup 14X	14x2	6/8	4	2/2	2	3-band	No	Yes	20 Hz-90 kHz
FBT	Pickup 18E		10/8	6	3/3	2	3-band	Yes	Yes	20 Hz-90 kHz

SIGNAL-TO-NOISE RATIO	TOTAL HARMONIC DISTORTION	DYNAMIC RANGE	CHANNEL CROSSTALK (@ 1 KHz)	PHANTOM POWER	TALKBACK/ONBOARD OSCILLATOR	DEDICATED 2-TRACK RETURNS	SPECIAL FEATURES	DIMENSIONS	PRICE
90 dB	<0.005% @ 1 kHz	108 dB	>85 dB	Global	N/N	Yes	Rackmount, head control room outs	19x6x5.25	\$449
90 dB	<0.0025% @ 1 kHz	108 dB	>80 dB	Global	N/N	Yes	Inline monitor w/FX and control room sections	17.5x16.5x6	\$1,149
-128 dB	<0.05%	N/A	N/A	48V	N/N	No	Units stack to build 4-buss console/sidecars	1U	\$2,995
-90 dBu	<0.05%	-128 dBu	-85 dB	Yes	N/N	Yes	Rackmount	19.0x5.25x9.6	\$1,519
115 dB	0.003%	N/A	N/A	No	N/N	No	Talkover mic function, remote start buttons	6x17.5x6	\$449
-129.5 dBu	0.007%	N/A	N/A	48V	N/N	Yes		1.3x6.3x8.2	\$85
-129.5 dBu	0.007%	125 dB	-95 dB	48V	N/N	Yes		3x9x10.6	\$125
113.6 dB	0.007%	125 dB	-95 dB	48V	N/N	Yes	Alternate 3/4-bus, rackmount kit included	3.5x16x15	\$209
-129.5 dBu	0.007%	125 dB	-95 dB	48V	N/N	Yes	Alternate 3/4 bus, rackmount kit included	3.5x16x15	\$309
>129.5 dBu	0.007%	125 dB	-95 dB	48V	Y/N	Yes		4x28.5x18	\$869
-129 dBu	0.007%	125 dB	-95 dB	48V	N/N	Yes	Rackmount kit included	6x19x14	\$499
-97 dB	0.006%	N/A	N/A	Global	Y/N	Yes	Digital effects/Mix-B	19x3.75/9x21/22.5	\$999
>129 dB	0.007%	125 dB	-95 dB	48V	Y/N	Yes		4x41x21	\$1,479
>129 dBu	0.007%	125 dB	-95 dB	48V	Y/N	Yes	24 inputs with 2-band EQ, built-in meter bridge	8.6x37x29.5	\$2,399
110 dB	0.005%	N/A	N/A	Yes	N/Y	Yes	FX unit	3.88x11.88x13.88	\$250
110 dB	0.005%	N/A	N/A	Yes	N/Y	Yes	FX unit, XPO 3D surround function, 9-band stereo graphic EQ	3.88x16.06x14.06	\$310
110 dB	0.005%	N/A	N/A	Yes	N/Y	Yes	FX unit	3.88x16.06x14.06	\$380
110 dB	0.005%	N/A	N/A	Yes	N/Y	Yes	FX unit, mic ins on stereo ch 9/10, 11/2 direct outs (ch. 1-8, post fader), main inserts BNC con. for gooseneck lamps	5.38x16.5x17.25	\$440
110 dB	0.005%	N/A	N/A	Yes	N/N	Yes		3.88x9.69x13	\$180
110 dB	0.005%	N/A	N/A	Yes	N/Y	Yes	FX unit	3.88x9.69x13.15	\$210
110 dB	0.005%	N/A	N/A	Yes	N/N	Yes		1.83x15.7x4.86	\$100
110 dB	0.005%	N/A	N/A	Yes	N/N	Yes		1.83x9.5x8.67	\$130
110 dB	0.005%	N/A	N/A	No	N/N	Yes		1.83x15.5x5.25x7	\$60
110 dB	0.005%	N/A	N/A	Yes	N/N	Yes		1.83x15.7x4.86x7	\$90
110 dB	0.001%	N/A	N/A	Yes	N/Y	No	Powered 2x250W w/24-bit multi-fx processor	18.13x10.63x11	\$380
90 dB	<0.01%	104 dB	N/A	Switchable	N/N	Yes	XLR outs, 24-bit 256 voice DSP, dual 9-band graphic EQ, switching power supply 90 to 250 VAC operation	14.5x3.25x14.25	\$400
90 dB	<0.01%	104 dB	N/A	Switchable	N/N	Yes	XLR outs, 24-bit 256 voice DSP, dual 9-band graphic EQ, switching power supply 90 to 250 VAC operation	22.5x3.25x14.25	\$700
90 dB	<0.01%	104 dB	N/A	Switchable	N/N	Yes	XLR outs, 24-bit 256 voice DSP, dual 9-band graphic EQ, switching power supply 90 to 250 VAC operation	30x3.25x14.25	\$900
90 dB	<0.01%	104 dB	N/A	Switchable	N/N	Yes	XLR outs, 24-bit 256 voice DSP, dual 9-band graphic EQ, switching power supply 90 to 250 VAC operation	38.1x3.25x14.25	\$1,200
90 dB	<0.01%	104 dB	N/A	Yes	N/N	Yes	Low-noise toroid transformer	34.5x22.7x8	\$2,400
90 dB	<0.01%	104 dB	N/A	Yes	N/N	Yes	Low-noise toroid transformer	52x22.1x8	\$3,400
90 dB	<0.01%	104 dB	N/A	Yes	N/N	Yes	Low-noise toroid transformer	69.5x22.7x8	\$5,000
90 dB	<0.01%	104 dB	N/A	Yes	N/N	Yes	Low-noise toroid transformer	16x12x3	\$300
94 dB	<0.1%	N/A	-70 dB	48V	N/N	No	Balanced XLR & 1/4" outs, PFL output	20.25x4.25	\$480
94 dB	<0.1%	N/A	-70 dB	48 V	N/N	No	Balanced XLR & 1/4" outs, PFL output	25.13x4.25	\$600
94 dB	<0.1%	N/A	-70 dB	48V	N/N	No	Balanced XLR & 1/4" outs, PFL output	29.75x4.25x16.5	\$750
94 dB	<0.1%	N/A	-70 dB	48V	N/N	No	Balanced XLR & 1/4" outs, PFL output	40.75x4.25x16.5	\$950
N/A	N/A	N/A	N/A	Yes	N/N	Yes		N/A	\$580
N/A	0.015%	Hdmi >22dB, max output 26dBu	>90 dB	Per channel	Y/Y	Yes	Fully modular, optional meter bridge, rack mountable	19" frame	\$3,748
110 dB	0.003%	>129.5 dB	-85 dB	Yes	N/N	Yes	Built-in 256 multi-effects DSP 32-bit processor Rack mountable (rack mounts incl)	9.75x3.33x10.25	\$599
110 dB	0.003%	>129.5 dB	-85 dB	Yes	N/N	Yes	Rack mountable (rack mounts incl)	9.75x3.33x10.25	\$409
110 dB	0.003%	>129.5 dB	-85 dB	Yes	N/N	Yes	Built-in 256 multi-effects DSP 32-bit processor Rack mountable (rack mounts incl)	12.33x3.33x13	\$769
110 dB	0.003%	>129.5 dB	-85 dB	Yes	N/N	Yes	Rack mountable (rack mounts incl)	12.33x3.33x13	\$579
110 dB	0.003%	>129.5 dB	85 dB	Yes	N/N	Yes	Built in dual 256 multi-effects DSP w/32-bit processors Rack mountable (rack mounts incl)	17.25x3.33x15	\$1,219

ANALOG MIXING CONSOLES

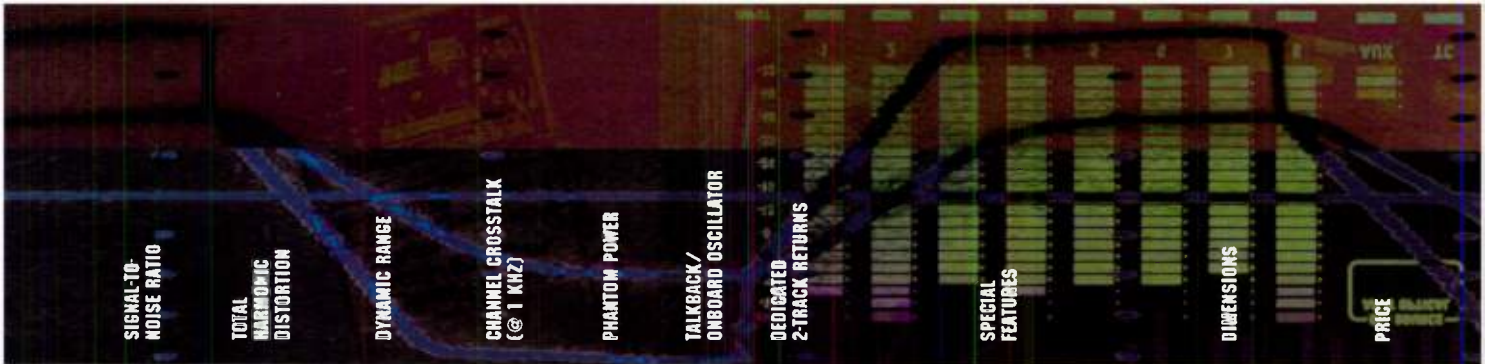
MANUFACTURER	PRODUCT	MIXER CONFIGURATION	MIC INPUTS (XLR) LINE INPUTS	# OF INSERTS/DIRECT OUTS	# OF AUX SENDS/RETURNS/TYPE	# OF BUS OUTPUTS/TYPE	EQ	MUTE	SOLO-IN-PLACE	FREQUENCY RESPONSE
FBT	Pickup 18X	18x2	10/18	8	(2/2) 1/4" TRS	(2) XLR	3-band parametric	Yes	Yes	20 Hz-90 kHz
FBT	Pickup 64-E	6x2	6/8	2/2	(2/2) 1/4"	(2) 1/4"	3-band parametric	No	No	20 Hz-20 kHz
FBT	Pickup 88-E	8x2	8/12	2/2	(2/2) 1/4"	(2) 1/4"	3-band parametric	Yes	No	20 Hz-20 kHz
Mackie Designs	24 8/32 8	32x24x8x2	24/32	24/32	6 mon/6 ster	(24) 1/4"	4-band; low cut filter	Yes	Yes	20 Hz-60 kHz
Mackie Designs	406M Powered Mixer	8x2x2	6/6	6/6	(2/2) 1/4" TRS	N/A	3-band fixed, 9-band mono	Yes	No	10 Hz-30 kHz
Mackie Designs	408M Powered Mixer	10x2x2	8/12	6/6	(2/2) 1/4" TRS	N/A	3-band fixed, 9-band mono	Yes	No	10 Hz-30 kHz
Mackie Designs	408S Powered Mixer	10x2x2	8/12	6/6	(2/2) 1/4" TRS	N/A	3-band fixed, 9-band graphic	Yes	No	1 Hz-30 kHz
Mackie Designs	808M Powered Mixer	10x2x2	8/12	6/6	(2/2) 1/4" TRS	N/A	3-band fixed, 9-band graphic	Yes	No	10 Hz-30 kHz
Mackie Designs	808S Powered Mixer	10x2	8/12	6/6	(4/2) 1/4" TRS	N/A	3-band fixed, 9-band graphic	Yes	No	32 Hz-20 kHz
Mackie Designs	1202 VLZ Pro	12x2x2	4/12	4/4	(2/4) 1/4" TRS	(2) 1/4" TRS	3-band fixed	Yes	Yes	20 Hz-60 kHz
Mackie Designs	1402 VLZ Pro	14x2x2	6/14	6/6	(2/4) 1/4" TRS	(2) 1/4" TRS	3-band fixed	Yes	Yes	20 Hz-60 kHz
Mackie Designs	1604 VLZ Pro	16x4x2	16/16	16/8	(6/8) 1/4" TRS	(4) 1/4" TRS	3-band w/swept mid	Yes	Yes	5 Hz-100 kHz
Mackie Designs	1642 VLZ Pro	16x4x2	10/16	8/8	(4/8) 1/4" TRS	(4) 1/4" TRS	3-band w/swept mid	Yes	Yes	20 Hz-60 kHz
Mackie Designs	CFX 12	12x4x2	12/4	8/8	(4/2) 1/4" TRS	(4) 1/4" TRS	3-band, 9-band stereo graphic	Yes	Yes	32 Hz-20 kHz
Mackie Designs	CFX 16	16x4x2	16/4	12/12	(4/2) 1/4" TRS	(4) 1/4" TRS	3-band, 9-band stereo graphic	Yes	Yes	32 Hz-20 kHz
Mackie Designs	CFX 20	20x4x2	16/4	16/16	(4/2) 1/4" TRS	(4) 1/4" TRS	3-band, 9-band stereo graphic	Yes	Yes	32 Hz-20 kHz
Mackie Designs	DFX6	6x2	4/8	2	(2/2) 1/4"	N/A	5-band graphic	Yes	No	20 Hz-60 kHz
Mackie Designs	DFX12	12x2	6/8	4/0	(2/2) 1/4"	N/A	5-band graphic	Yes	No	20 Hz-60 kHz
MAM	LM 122	12x2	0/12	N/A	(1/2) 1/4"	N/A	No	No	No	10 Hz-20 kHz
MAM	MLM 62	6x2	2/4	N/A	(1/2) 1/4"	N/A	High, low	No	No	4 Hz-20 kHz
MAM	MM 42	4x2	4/0	N/A	(1/2) 1/4"	N/A	High, low	No	No	5 Hz-20 kHz
MAM	SLE 82	8x2	N/A	N/A	(1/2) 1/4"	N/A	No	No	No	4 Hz-20 kHz
Martinsound	MonitorMAX	10x3	1 talkback	10	(4/4) 1/4"	(4) 1/4"	3-band graphic	Yes	Yes	20 Hz-22 kHz
Martinsound	MultiMAX EX	5x8 ch. monitor	0	1/8 ch. wide	(4/4) 1/4"	(4) 1/4"	3-band graphic	Yes	Yes	20 Hz-20 kHz
Oram Pro	Octamix	8x2x1	8	N/A	N/A	(2) XLR	N/A	No	No	18 Hz-73 kHz
Peavey	16-LM	8x2	8 stereo	N/A	N/A	N/A	No	No	No	20 Hz-20 kHz
Peavey	RQ-200	6x2	6/6 (4 stereo)	2	2	N/A	2-band; shelving	No	No	20 Hz-20 kHz
Peavey	RQ-2310	10x2x2	8/8 (2 stereo)	4/2	4/2	N/A	3-band, mid-sweep	Yes	Yes	20 Hz-20 kHz
Peavey	RQ-4324	24x4x3	24/24	24/0	6/2	7/Group 1-4	3-band, mid-sweep	Yes	Yes	20 Hz-20 kHz
Peavey	RQ-4332	32x4x3	32/32 (2 stereo)	32/0	6/2	7/Group 1-4	3-band, mid-sweep	Yes	Yes	20 Hz-20 kHz
Peavey	Unity 1002-8 RQ	8x2	8	N/A	2/0	2	3-band	No	No	20 Hz-20 kHz
Peavey	Unity 2002-12 RQ	12x2	12	N/A	4/0	2	3-band	No	No	20 Hz-20 kHz
Phonic	MM2005	8x2x2	8/4 stereo	8/0	(2/2) st 1/4" TRS	(2) 1/4" TRS	3-band/mid-sweep	Yes	Yes	10 Hz-30 kHz
Phonic	MR7X	18x4x2	18/10	10/10	(8/8) 1/4" TRS	(4) 1/4" TRS	4-band rotary/mid-sweep	Yes	Yes	10 Hz-30 kHz
Phonic	MR2443a	16x4	16	16/16	(4/4) 1/4" st, 1/4" TRS	(4) 1/4" TRS	3-band rotary	Yes	Yes	10 Hz-30 kHz
Phonic	MR4283D	28x8x2	24/28	24/24	(8/8) 1/4" TRS	(8) 1/4" TRS	4-band rotary/mid-sweep	Yes	Yes	10 Hz-30 kHz
Phonic	MRS1-20	20x6x4	20/20	20/20	(6/6) 1/4" TRS	(6/6) 1/4" TRS	3-band rotary	Yes	Yes	10 Hz-30 kHz
Redwood	STK-VX802	6x2	4x4	N/A	(2) 1/4", 1/4" stereo	(2) 1/4"	3-band fixed	No	Yes	20 Hz-60 kHz
Redwood	STK-VX802FX	6x2	4/4	N/A	(2) 1/4", 1/4" stereo	(2) 1/4"	3-band	No	Yes	20 Hz-60 kHz
Redwood	STK-VX1202N	8x2	8/8	2/0	(3/2) 1/4" stereo	(2) XLR, 1/4"	4-band	Yes	Yes	20 Hz-60 kHz
Redwood	STK-VX1443R	12x4x2	10/4	10/8	(4/2) 1/4" stereo	(4) 1/4"	4-band fixed	Yes	Yes	20 Hz-60 kHz
Redwood	STK-VX1602N	12x2	8/8	4/0	(3/2) 1/4" stereo	(2) XLR, 1/4"	4-band fixed	Yes	Yes	20 Hz-60 kHz
Redwood	STK-VX2043FX	18x4x2	16/4	16/0	(4/4) 1/4" stereo	(4) 1/4"	4-band	Yes	Yes	20 Hz-60 kHz

SIGNAL-TO-NOISE RATIO	TOTAL HARMONIC DISTORTION	DYNAMIC RANGE	CHANNEL CROSSTALK (@ 1 KHz)	PHANTOM POWER	TALKBACK/ONBOARD OSCILLATOR	DEDICATED 2-TRACK RETURNS	SPECIAL FEATURES	DIMENSIONS	PRICE
110 dB	0.003%	>129.5 dB	80 dB	Global	N/N	Yes	Monitor send #1 & #2 can be used as alt. bus #3 & #4	17.25x3.33x15	\$929
96 dB	0.025%	>95 dB	77 dB	Global	N/N	Yes	Built-in 24-bit DSP, 16 selectable effects, self switching power supply 110-230V	N/A	\$499
93 dB	0.025%	>95 dB	77 dB	Global	N/N	Yes	Built-in 24-bit DSP, 16 selectable effects, self switching power supply 110-230V	N/A	\$599
90 dBu	0.0013%	114 dBu	-91 dBu	Yes	Y/N	Yes	Inline monitoring	Depends on configuration	\$3,599-\$4,499
>105 dB	<0.10%	120 dB	75 dB	15V	N/N	Yes	Built-in effects, switchable stereo/mon. mains	11.7x20.5x13	\$699
>105 dB	<0.10%	120 dB	75 dB	15V	N/N	Yes	Built-in effects, switchable stereo/mon. mains	11.7x20.5x13	\$829
>105 dB	<0.10%	120 dB	75 dB	15V	N/N	Yes	Built-in effects, switchable stereo/mon. mains	11.7x20.5x3	\$929
>105 dB	<0.10%	120 dB	75 dB	15V	N/N	Yes	Built-in effects, switchable stereo/mon. mains	11.7x20.5x13	\$979
>105 dB	<0.10% @ 8Ω	120 dB	>75 dB	15V	N/N	Yes	Built-in effects, switchable stereo/mon. mains	11.7x20.5x13	\$1,079
>107 dB	0.0007%	130 dB	-84 dBu	48V	N/N	Yes	XDR mic preamps, alternate 3/4 bus	2.6x11.8x11.2	\$489
>107 dB	0.0007%	130 dB	-84 dBu	48V	N/N	Yes	XDR mic preamps, alternate 3/4 bus	2.9x14x12.9	\$659
>107 dB	0.0007%	130 dB	-84 dBu	48V	N/N	Yes	XDR mic preamps, rotatable patchbay	5x19x17.6	\$1,299
>107 dB	0.0007%	130 dB	-84 dBu	48V	N/N	Yes	XDR mic preamps	5.45x16.63x17.28	\$1,049
>105 dB	<0.05%	120 dB	-90 dB	48V	N/N	Yes	Built-in effects, 75Hz/XLR subwoofer output	4.6x17.2x15.7	\$719
>105 dB	<0.05%	120 dB	-90 dB	48V	N/N	Yes	Built-in effects, 75Hz/XLR subwoofer output	4.6x21.4x15.7	\$929
>105 dB	<0.05%	120 dB	-90 dB	48V	N/N	Yes	Built-in effects, 75Hz/XLR subwoofer output	4.6x25.6x15.7	\$1,129
>90 dB	<0.05%	N/A	-90 dB	Yes	N/N	Yes	32-bit EMAC digital EFX processor w/16 effects	11.8x14.4x4.1	\$379
>90 dB	<0.05%	N/A	-90 dB	Yes	N/N	Yes	32-bit EMAC digital EFX processor w/16 effects	16.1x14.4x4.1	\$479
>90 dB	0.002%	>88 dB	N/A	No	N/N	No	1U	19x1.75x3.5	\$259
>97 dB	0.003%	>96 dB	N/A	No	N/N	No	1U	19x1.75x3.5	\$199
>92 dB	0.002%	>90 dB	N/A	Global	N/N	No	1U	19x1.75x4.2	\$239
>97 dB	0.002%	>93 dB	N/A	No	N/N	No	1U	19x1.75x3.5	\$169
90.5 dB	0.002%	>90 dB	85 dB	Global	Y/Y	Yes	Stereo monitor controller, 10 inputs, main, alt monitor sends, cue send, remote control	19x1.75x10.5	\$1,995
>120 dB below max	<0.01% 20 Hz-20 kHz	>90 dB	>100 dB	Global	Y/Y	Yes	Multiformat monitor controller, (3) premix inputs, downmix, channel mutes, solos	19x1.75x10.5	\$2,795
N/A	>0.005%	N/A	N/A	No	N/N	No	Pan, 2 stereo XLR mix outs, headphone cue	1 RU	\$1,895
92 dB	<0.01%	110 dB	N/A	No	N/N	No	1U	19x7x1.7	\$150
128 dBu EIN	<0.01%	102 dB	N/A	Yes	N/N	No	AC/battery power	14x10x3	\$220
128 dBu EIN	<0.005%	110 dB	>80 dB	Yes	N/N	Yes	2 "super channels"	16.2x19x4.5	\$490
128 dBu EIN	<0.005%	110 dB	>85 dB	Yes	N/N	No	2 "super channels"	36.5x19x9	\$1,600
128 dBu EIN	<0.005%	110 dB	>85 dB	Yes	N/N	No	2 "super channels"	44.5x19x9	\$2,000
N/A	<0.01%	110 dB	90 dB	Yes	N/N	Yes		17x16x3.2	\$440
N/A	<0.01%	110 dB	90 dB	Yes	N/N	Yes		23x16x3.2	\$550
>90 dB	<0.005%	>90 dB	<-86 dB	Yes	N/N	Yes		17.3x2.4x15.4	\$350
>90 dB	<0.005%	>90 dB	<-84 dB	Yes	N/N	Yes	2 XLR inputs per stereo ch, linkable: 54 inputs/1 master	17.3x5.1x19.2	\$1,030
90 dB	<0.005%	90 dB	84 dB	Yes	N/N	Yes	16 true mic inputs	17.5x2x19	\$640
>90 dB	<0.005%	>90 dB	<89.5 dB	Yes	Y/N	Yes	S/PDIF in/out assign, level meters for all mic ins/tp outs	45.57x4.15x21.42	\$2,100
>90 dB	<0.005%	>90 dB	89.5 dB	Yes	Y/N	Yes	5.1 surround ctrl room monitor	33.9x43x21.5	\$1,700
>90 dB	<0.005%	N/A	-85 dBu	Global	N/N	No	Stereo channel switchable to RIAA level/EQ, optional crosslader available for stereo channel	10x10x3	\$275
90 dB	<0.005%	N/A	-85 dBu	Global	N/N	No	Stereo channels switchable to RIAA level EQ, optional crosslader available for stereo channels, on-board digital effects processor	10x10x3	\$380
>90 dB	<0.005%	N/A	-86 dBu	Global	N/N	Yes	Channels sent to separate "B" mix outputs when Mute is pushed	12x14x3	\$450
>90 dB	<0.005%	N/A	-85 dBu	Global	N/N	Yes	On board 7-band master graphic EQ, built-in subwoofer output, rackmountable	19x15x4	\$800
>90 dB	<0.005%	N/A	-86 dBu	Global	N/N	Yes	Channels sent to separate "B" mix outputs when Mute is pushed	16x14x3	\$580
>90 dB	<0.005%	N/A	-86 dBu	Global	N/N	Yes	On board digital effects, 7-band master graphic EQ, built-in subwoofer send	29x15x4	\$1,000

ANALOG MIXING CONSOLES

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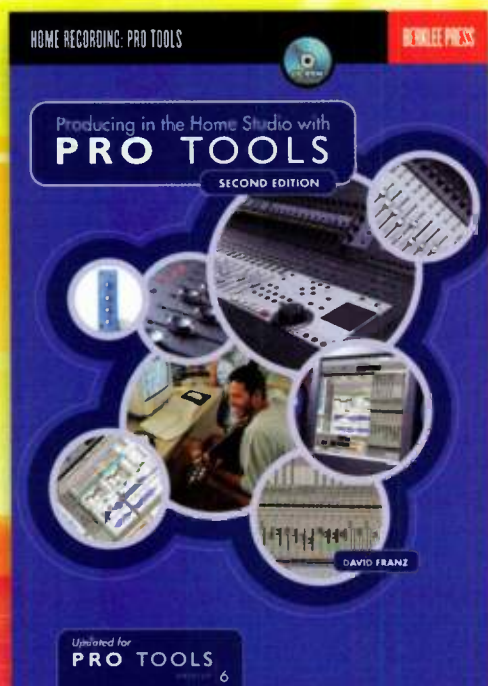
MANUFACTURER	PRODUCT	MIXER CONFIGURATION	MIC INPUTS (XLR) LINE INPUTS	# OF INSERTS/DIRECT OUTS	# OF AUX SENDS/RETURNS/TYPE	# OF BUS OUTPUTS/TYPE	EQ	MUTE	SOLO-IN-PLACE	FREQUENCY RESPONSE
Redwood	STK-VX2442N	20x4x2	20/8	16/8	(4/4) 1/4" stereo	(4) 1/4"	3-band mid sweep	Yes	Yes	20 Hz-60 kHz
Redwood	STK-VX3242N	28x4x2	24/8	24/16	(6/4) 1/4" stereo	(4) 1/4"	3-band mid sweep	Yes	Yes	20 Hz-60 kHz
Rolls	MX54 ProMixPlus	3x2	3	N/A	N/A	(1) 1/4"	No	No	No	25 Hz-16 kHz
Rolls	MX56s Playmate	4x2	1/3	N/A	N/A	(1) 1/4"	No	No	No	20 Hz-20 kHz
Samson	MPL 1204 Rackmount Mixer	12x4x2	12/12	12/12	24	N/A	3-band	Yes	Yes	<10 Hz-60 kHz
Sony	SRP-V110	34x8x2	10/24	10/8	(8/8) 1/4"	(8) RCA	3-band; mid-sweep	Yes	Yes	20 Hz-20 kHz
Soundcraft	Folio FX8	16x2x2	8/16	8/8	(3) 1/4"	(4) 1/4"	3-band; mid-sweep	Yes	Yes	20 Hz-20 kHz
Soundcraft	Ghost LE24	24x8x2	24/24	24/24	(8/8) 1/4"	8 1/4"	4-band w/2 fully parametric mid bands	Yes	Yes	20 Hz-20 kHz
Soundcraft	LX 7/16	16x4x2x1	16/16	16/8	(6) 1/4"	(7) 1/4"	4-band; 2 mid-sweep	Yes	Yes	20 Hz-20 kHz
Soundcraft	LX 7/24	24x4x2x1	24/24	24/16	(6) 1/4"	(7) 1/4"	4-band; 2 mid-sweep	Yes	Yes	20 Hz-20 kHz
Soundcraft	LX 7/32	32x4x2x1	32/32	32/24	(6) 1/4"	(7) 1/4"	4-band; 2 mid-sweep	Yes	Yes	20 Hz-20 kHz
Soundcraft	Spirit E6	10x2	6/10	8/0	(2) 1/4"	(2) XLR	3-band mid sweep	Yes	Yes	20 Hz-20 kHz
Soundcraft	Spirit E8	12x2	8/12	10/0	(2) 1/4"	(2) XLR	3-band mid sweep	Yes	Yes	20 Hz-20 kHz
Soundcraft	Spirit E12	16x2	12/16	14/0	(2) 1/4"	(2) XLR	3-band mid sweep	Yes	Yes	20 Hz-20 kHz
Soundcraft	Spirit ES	24x2	4/24	6/0	(2) 1/4"	(2) XLR	3-band mid sweep on monos	Yes	Yes	20 Hz-20 kHz
Soundcraft	Spirit FX16	16x2x2	16/16	16/16	(3) 1/4"	(4) 1/4"	3-band; mid-sweep	Yes	Yes	20 Hz-30 kHz
Soundcraft	Spirit M4	12x2	4/16	8/8	(4/8) RCA	2	4-band; 3 mid-sweep	Yes	No	20 Hz-20 kHz
Soundcraft	Spirit M8	16x2	8/16	8/8	(4/8) RCA	2	4-band; 3 mid-sweep	Yes	No	20 Hz-20 kHz
Soundcraft	Spirit M12	20x2	12/16	8/8	(4/8) RCA	2	4-band; 3 mid-sweep	Yes	No	20 Hz-20 kHz
Soundcraft	Spirit Notepad	8x2	4/8	N/A	(1) 1/4"	N/A	2-band; fixed	No	No	20 Hz-20 kHz
Soundcraft	Spirit Powerpad	8x2	4/8	N/A	(1) 1/4"	N/A	2-band; fixed	No	No	20 Hz-20 kHz
Soundcraft	Spirit SX	12x2x2	16/20	12/8	(3) 1/4"	(4) 1/4"	3-band; mid-sweep	Yes	Yes	20 Hz-30 kHz
Speck Electronics	XTRAMIX-V5	40x8x2	0/72	10/0	(8/8) 1/4"	(10) 1/4"	N/A	Yes	Yes	10 Hz-154 kHz
SPL Electronics	KEYMIX 6 Rack Mixer	6x2x2	2/8	2/0	N/A	(4) 1/4"	N/A	No	No	10 Hz-100 kHz
Studiomaster	162BP	16x2	16/14	16/14	2/1	(2) XLR	3-band; mid sweep	No	Yes	20 Hz-20 kHz
Studiomaster	Mixdown Classic 24	24x16x8x2	24/24	34/24	(6/18) 1/4"	(8) 1/4"	3-band	Yes	Yes	30 Hz-20 kHz
Studiomaster	Mixdown Classic 32	32x16x8x2	32/32	42/32	(6/18) 1/4"	(8) 1/4"	3-band	Yes	Yes	30 Hz-20 kHz
Studiomaster	Pro 2 163	12x2x1	12/14	12/0	(5/2) 1/4"	(3) XLR	3-band w/mid sweep	Yes	Yes	20 Hz-20 kHz
Studiomaster	Pro 2 203	16x2x1	16/18	10/0	(5/2) 1/4"	(3) XLR	3-band w/mid sweep	Yes	Yes	20 Hz-20 kHz
Studiomaster	Trilogy T 140	10 ch expander	10/12	8/8	6/4	(4) 1/4"	3-band w/mid sweep	Yes	Yes	20 Hz-20 kHz
Studiomaster	Trilogy T 166	12x4x2x1	12/14	14/10	(6/18) 1/4"	(4) 1/4"	3-band w/mid sweep	Yes	Yes	20 Hz-20 kHz
Studiomaster	Trilogy T 206	16x4x2x1	16/18	18/14	(6/18) 1/4"	(4) 1/4"	3-band w/mid sweep	Yes	Yes	20 Hz-20 kHz
Studiomaster	Trilogy T 326	24x4x2x1	24/28	24/20	6/8	(4) 1/4"	3-band w/sweep mids	Yes	Yes	20 Hz-20 kHz
Studiomaster	Trilogy T-406	32x4x2x1	32/28/4	32/28	6/4	(4) 1/4"	3-band w/mid sweeps	Yes	Yes	20 Hz-20 kHz
TL Audio	M-3 Tube Tracker	8x2	8/8	8/8	(2/2) 1/4"	N/A	4-band mid sweep	Yes	No	10 Hz-40 kHz
Vermona	Rack Mix	8x2	(4) stereo	N/A	(1/1) 1/4"	N/A	N/A	No	No	20 Hz-22 kHz
Yamaha	GF 12/12	12x4x2	8/12	8/8	(6/4) 1/4"	(4) 1/4"	3-band; mid-sweep	Yes	Yes	20 Hz-20 kHz
Yamaha	GF 16/12	16x4x2	12/16	12/12	(6/4) 1/4"	(4) 1/4"	3-band; mid-sweep	Yes	Yes	20 Hz-20 kHz
Yamaha	GF 24/12	24x4x2	20/24	20/20	(6/4) 1/4"	(4) 1/4"	3-band; mid-sweep	Yes	Yes	20 Hz-20 kHz
Yamaha	MG 10/2	10x2	4/10	2/0	(2/2) 1/4"	(2) 1/4"	3-band	No	No	20 Hz-20 kHz
Yamaha	MG 12/4	12x4x2	6/6	4/0	(2/2) 1/4"	(2) 1/4"	3-band	Yes	Yes	20 Hz-20 kHz
Yamaha	MG 16/4	16x4x2	10/8	8/0	(2/1) stereo/1/4"	(2) 1/4"	3-band	Yes	Yes	20 Hz-20 kHz
Yamaha	MG 16/6 FX	16x4x2	10/8	8/0	(3/1) stereo/1/4"	(4) 1/4"	3-band mid sweep	Yes	Yes	20 Hz-20 kHz
Yamaha	MG 24/14 FX	24x4x2	16/24	16/0	(6/2) stereo/1/4"	N/A	3-band mid sweep	Yes	Yes	20 Hz-20 kHz
Yamaha	MG 32/14 FX	32x4x2	24/32	24/0	(6/2) stereo/1/4"	(6) 1/4" TRS	3-band mid sweep	Yes	Yes	20 Hz-20 kHz



SIGNAL-TO-NOISE RATIO	TOTAL HARMONIC DISTORTION	DYNAMIC RANGE	CHANNEL CROSSTALK (@ 1 kHz)	PHANTOM POWER	TALKBACK / ONBOARD OSCILLATOR	DEDICATED 2-TRACK RETURNS	SPECIAL FEATURES	DIMENSIONS	PRICE
>90 dB	<0.005%	N/A	-86 dBu	Global	Y/N	Yes	Switchable in 2 groups of 8 ch	31x15x4	\$1,420
>90 dB	<0.005%	N/A	-86 dBu	Global	Y/N	Yes	Switchable in 2 groups of 8 ch	38x20x4	\$2,200
84 dB	0.02%	84 dB	-70 dB	+18 VDC	N/N	No		5.3x3.7x2	\$150
>80 dB	<0.05%	84 dB	-70 dB	12 VDC	N/N	No		19x2.5x1.75	\$100
-90 dB	0.056%		80 dB	48V	N/N		10-segment LED meters, headphone out, 56 mm faders	7x19x7.1	\$600
-95 dB	<0.005%	>95 dB	90 dB	Yes	N/N	No	Rackmounts optional	17x4.75x5.625	\$2,180
N/A	<0.009%	N/A	>96 dB	Global	N/N	Yes	Built-in Lexicon effects	17.5x16.5x4.1	\$650
N/A	0.002%	N/A	-100 dB (mic input to line input)	Yes	Y/Y	Yes	In-line multitrack mix with Mix B path, non-LE features transport/automation, 32-ch and 24-ch available	41.71x30.75x8.97	\$5,495
N/A	<0.006%	N/A	>95 dB	Global	Y/N	Yes	Left, right, and mono outputs	19.5x26x7	\$1,700
N/A	<0.006%	N/A	>95 dB	Global	Y/N	Yes	Left, right, and mono outputs	19.5x34x7	\$2,100
N/A	<0.006%	N/A	>95 dB	Global	Y/N	Yes	Left, right, and mono outputs	19.5x42x7	\$2,800
N/A	<0.007% @ 1 kHz	N/A	>96 dB	Global	N/N	Yes	100mm faders, rackmountable (w/rack extender) (9U)	14.8x16.3x3.5	\$355
N/A	<0.007% @ 1 kHz	N/A	>96 dB	Global	N/N	Yes	100mm faders, rackmountable (9U)	16.8x16.3x3.5	\$400
N/A	<0.007% @ 1 kHz	N/A	>96 dB	Global	N/N	Yes	100mm faders, rackmountable (9U)	20.8x16.3x3.5	\$490
N/A	<0.007% @ 1 kHz	N/A	>96 dB	Global rack-	N/N	Yes	10 stereo, 4 mono in, 100mm fader, mountable (9U)	20.8x16.3x3.5	\$600
N/A	<0.009%	N/A	>96 dB	Global	N/N	Yes	Built-in Lexicon effects, rotatable patch bay	17.5x18x6.3	\$1,100
N/A	<0.008% @ 1kHz	N/A	<90 dB	Global	N/N	Yes	S/PDIF digital output, integral rack rails	20.9x16x5	\$700
N/A	<0.008% @ 1kHz	N/A	<90 dB	Global	N/N	Yes	S/PDIF digital output, integral rack rails	20.9x20.2x5	\$850
N/A	<0.008% @ 1kHz	N/A	<90 dB	Global	N/N	Yes	S/PDIF digital output, integral rack rails	20.9x20.2x5	\$1,000
N/A	<0.005%	N/A	>90 dB	Global	N/N	Yes	Optional mic stand adapter	8.7x9.6x2	\$200
N/A	<0.005%	N/A	>90 dB	Global	N/N	Yes	Built-in 30W x 2 power amp	9.8x9.3x4	\$430
N/A	<0.006%	N/A	>95 dB	Global	N/N	Yes	100 mm faders	19x20x2.8	\$700
-90.8 dBu	0.008%	N/A	N/A	No	Y/N	Yes	Compact line mixer for DAW mixing	19x7x7	\$4,950
90 dB	90 dB	102 dB	N/A	Yes	N/N	No	Mic ch. w/mic pre; 2 mono mic/line ch., 3 stereo line ch., stereo monitor master outs	1U	\$299
85 dB	0.006%	108 dB	85 dB	48V global	N/N	Yes	Rack mount, internally modular, rear patching	19x4.8x10.5	\$649
92 dB	0.005%	N/A	-95 dB	48V per ch	Y/Y	Yes	MIDI muting, split design, meter bridge	47.2x25.5x5	\$2,995
92 dB	0.005%	N/A	-95 dB	48V per ch	Y/Y	Yes	MIDI muting, split design, optional meter bridge	58.5x25.5x5	\$3,595
89 dB	0.0085%	112 dB	90 dB	48V	N/N	No	100 Hz channel HPF, rackmountable	21.19x2.13x3	\$870
89 dB	0.0085%	112 dB	90 dB	48V	N/N	No	100 Hz channel HPF	24.19x21.13x3	\$1,070
89 dB	0.0085%	112 dB	90 dB	48V	N/N	Yes	Rackmountable	15.75x21.13xH.3	\$449
89 dB	0.0085%	112 dB	90 dB	48V	N/N	Yes	Expandable to 22 channels, rackmountable	21.19x2.13x3	\$995
89 dB	0.0085%	112 dB	90 dB	48V	N/N	Yes	Expandable to 26 channels	24.19x21.13x3	\$1,195
89 dB	0.0085%	112 dB	90 dB	48V	N/N	Yes	Combo XLR/stereo, monitor/stereo channels	34x21.125x3	\$1,595
89 dB	0.0085%	112 dB	90 dB	48V global	N/N	Yes	Expandable to 42 and 52 channels	42.6x21.125x3	\$1,895
-127 dBu	0.05% @ 1 kHz	110 dB	-100 dB	Global	N/N	No	Tube gain stages, linkable, digital out option w/workclock in	19x17.4x4.92	\$3,549
>110 dB	<0.005%	>110 dB	75 dB	No	N/N	No		N/A	\$269
-128 dB	>0.1%	-95 dB	70 dB	48V global	N/N	Yes	Aux masters on faders	23x19x6.25	\$1,049
-128 dB	>0.1%	-95 dB	70 dB	48V global	N/N	Yes	Aux masters on faders	27.5x19x6.25	\$1,249
-128 dB	>0.1%	-95 dB	70 dB	48V global	N/N	Yes	All aux busses have master faders	37x19x6.25	\$1,679
128 dBu	0.1%	N/A	-70 dB	Global	N/N	Yes	Optional stand mount	10.25x11.38x2	\$129
128 dBu	0.1%	N/A	-70 dB	Global	N/N	Yes	Rackmount kit incl.	12.5x16.5x4	\$239
128 dBu	0.1%	N/A	-70 dB	Global	N/N	Yes	Rackmount kit incl.	16.62x16.5x4	\$329
128 dBu	0.1%	N/A	-70 dB	Global	N/N	Yes	Rackmountable, built-in effects, graphic EQ	16.62x16.5x4	\$419
128 dBu	0.1%	N/A	-70 dB	8 ch. per switch	Y/N	Yes	Dual internal effects, LPF filter on mono out for sub, light socket	33.5x21.25x5	\$1,099
128 dBu	0.1%	N/A	-70 dB	8 ch. per switch	Y/N	Yes	Dual internal effects, LPF filter on mono out for sub, light socket	41.75x21.25x6	\$1,299

CD RECORDERS

CD RECORDERS	MANUFACTURER	PRODUCT	RECORD FORMATS	ANALOG I/O	DIGITAL I/O	SAMPLING RATES	DISC AT ONCE/ TRACK AT ONCE	INDIVIDUAL TRACK RECORD STOP/START	MANUAL TRACK INCREMENT	AUTO LEVEL RECORD	RECORD MUTE	TRACK NUMBERING
	Denon	DN-C550R	CD-R, CD-RW	RCA I/O; XLR ins	S/PDIF (optical, coax)	44.1 kHz	Y/Y	Yes	Yes	Yes	No	Auto
	HHB	CDR 830 BurnIT	CD-R; CD-RW	RCA	S/PDIF (coaxial & optical)	44.1 kHz	Y/Y	Yes	Yes	No	Yes	Auto or manual
	HHB	CDR 830 Plus	CD-R, CD-RW	XLR; RCA	S/PDIF (XLR, optical, coaxial)	44.1 kHz	Y/Y	Yes	Yes	Yes	Yes	Auto or manual
	HHB	CDR 850	Audio CD-R, CD-RW	XLR; RCA	S/PDIF (optical), AES/EBU	44.1 kHz	Y/Y	Yes	Yes	No	No	Yes
	Microboards	Copywriter Live	CD-R	XLR; RCA, 1/4"	N/A	44.1 kHz	Y/Y	Yes	Yes	Yes	No	Yes
	Philips	Dual Deck Audio CD Recorder	Audio CD-R; CD-RW	1/2	S/PDIF (RCA, optical)	12-56 kHz	Y/Y	Yes	Yes	No	Yes, soft mute	Auto or manual
	Philips	Integrated 3 CD-Changer/ CD Audio Recorder	Audio CD-R; CD-RW	1/1	S/PDIF (RCA, optical)	12-56 kHz	Y/Y	Yes	Yes	Yes	Yes, soft mute	Auto or manual
	Sony	CDR-W33	CD-R/RW	RCA	S/PDIF (coax, optical)	44.1 kHz	N/N	Yes	Yes	No	Yes	Yes
	Sony	CDR-W66	CD-R/RW	RCA; XLR	AES/EBU; S/PDIF (coax, optical)	44.1 kHz	N/N	Yes	Yes	No	Yes	Yes
	Superscope	PSD300	CD-R; CD-RW	XLR, 1/4"; RCA	S/PDIF; RCA	44.1 kHz	N/N	Yes	Yes	Yes	No	Auto
	Tascam	CC-222	CD-RW; CD-R-DA; CD-RW-DA	RCA	S/PDIF (coax, optical)	44.1 kHz	Y/Y	Yes	Yes	Yes	Yes	Auto/manual
	Tascam	CD-RW 4U	CD-R; CD-RW; CD-R-DA; CD-RW-DA	RCA	S/PDIF	44.1 kHz	Y/Y	Yes	Yes	Yes	Yes	Auto or manual
	Tascam	CD-RW 402	CD-R; CD-RW; CD-R-DA; CD-RW-DA; CD-DA	XLR; RCA	S/PDIF (coax, optical)	44.1 kHz	Y/Y	Yes	Yes	Yes	Yes	Auto or manual
	Tascam	CD-RW700	Audio CD-R; CD-RW	RCA	S/PDIF (RCA, optical)	44.1 kHz	N/Y	Yes	Yes	Yes	Yes	Auto or manual
	Tascam	CD-RW2000	Audio CD-R; CD-RW	XLR; RCA	S/PDIF (RCA, optical)	44.1 kHz	N/Y	Yes	Yes	Yes	Yes	Auto or manual



PRO TOOLS

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d digidesign



SAMPLE RATE CONVERSION	SERIAL COPY MANAGEMENT SYSTEM	RECORDING TIME DISPLAY	ERROR REPORTING	HEADPHONE JACK	REMOTE CONTROL	SCSI	DIMENSIONS	WEIGHT (LBS.)	ADDITIONAL FEATURES	PRICE
Yes	Yes	Yes	No	Yes	Yes	No	19x3.5x12.4	13.9	Dual player/recorder; HDCD compatible; data or audio discs ²	\$899
Yes	No	Yes	Yes	Yes	Yes	No	19x11.62x4.13	7.7	24-bit converters; CD text; digital input; gain control	\$589
Yes	No	Yes	Yes	Yes	Yes	No	19x11.62x4.13	8.10	Word clock input; parallel remote input; 24-bit converters	\$789
Yes	Yes	Yes	Yes	Yes	No	No	2U rack-mount	N/A	Timecode; adjustable auto-stop delay	\$995
No	No	Yes	Yes	No	Yes	No	16.93x11.42x4.13	9.9	Records CD audio and CD video	\$799
Yes	Yes	Yes	Yes	Yes	Yes	No	17.1x3.46x12.2	11	Plays back MP3	\$399
Yes	Yes	Yes	Yes	Yes	Yes	No	17.1x5.6x14.5	16.8	Mic input; automatic volume equalization	\$449
Yes	Yes	Yes	Yes	Yes	Yes	No	19x 3.5x10.5	10	DSP function; wired/wireless remote	\$799
Yes	Yes	Yes	Yes	Yes	Yes	No	19x 3.5x10.5	10	DSP function; wired/wireless remote; RS-232C and parallel (GPI) control ports	\$1,275
Yes	No	Yes	No	Yes	Yes	No	11x9x4	7	Real-time recorder; key, tempo controls; voice reduction; A-G loop, dual tray; playback, record; built-in mic, speaker	\$1,099
Yes	Yes	Yes	Yes	Yes	Yes	No	19x5.4x11.6	17.6	RIAA inputs for recording vinyl LPs; integrated cassette deck	\$875
Yes	Yes	Yes	Yes	Yes	Yes	No	8.5x3.3x12.2	7.25		\$479
Yes	Yes	Yes	Yes	Yes	Yes	No	19x10.5x5.25	N/A	Track editing; supports CD-text; parallel controller port; duplicator up to 4x; overburning (if disc supports it)	\$1,249
Yes	Yes	Yes	Yes	Yes	Yes	No	19x3.85x12.3	14.5	Remote; coaxial/optical digital I/O; adjustable digital gain	\$749
Yes	Yes	Yes	Yes	Yes	Yes	No	19x3.85x12.3	15.2	AES/EBU, coaxial, optical digital I/O; word clock	\$1,125

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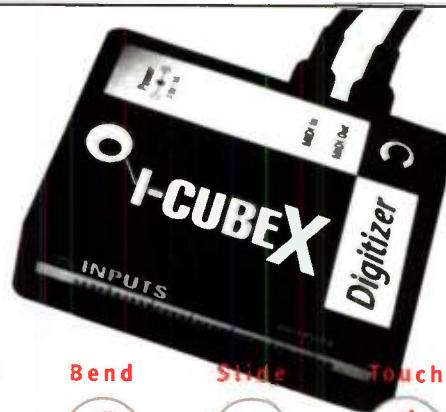
I-CUBEX

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CHANNEL STRIPS

CHANNEL STRIPS	MANUFACTURER	MODEL	# OF CHANNELS/ STEREO LINK	MIC PRE TYPES	ANALOG I/O	DIGITAL I/O	EQ TYPE	FILTERS	COMPRESSOR TYPE	EXPANDER	GATE	DE-ESSER
	Antares	Vocal Processor	2/N	Solid state	1/4", XLR/(2) 1/4"	N/A	2-band parametric	HP, LP	Solid state	Yes	Yes	Yes
	API	API 7600	1/Y	Discrete solid state	XLR, 1/4"	N/A	3-band fixed	HP, LP	N/A	No	No	No
	ART	Tube Channel	1/N	Tube	XLR, 1/4"	N/A	4-band parametric w/sweep mids	No	Optical tube	No	No	No
	ART	Pro Channel	1/N	Tube	XLR, 1/4"	N/A	4-band parametric w/sweep mids	HP variable	Optical tube/ variable mu	No	No	No
	Avalon Design	VT-737SP	1/Y	Tube (Class A)	XLR, 1/4" TRS in/XLR out	N/A	4-band parametric	HP	Optical Class A tube	No	No	Yes
	Behringer	Ultra-Voice Pro VX2000	1/N	Tube emulation	XLR, 1/4" TRS	N/A	3-band parametric	HP	Opto-compressor	Yes	Yes	Yes
	Behringer	Ultra-Voice Digital VX2496	1/N	Tube emulation	XLR, 1/4" TRS	24-bit AES/EBU	3-band parametric	HP	Opto-comp	Yes	Yes	Yes
	dbx	286A	1/N	Solid state	XLR, 1/4" TRS	N/A	2-band enhancer	HP	Overeasy	Yes	Yes	Yes
	dbx	376 Tube Channel Strip	2/N	Tube	XLR, 1/4"	AES/EBU	3-band parametric	HP	VCA	No	No	Yes
	dbx	ProVocal	1/N	Digital	XLR	AES/EBU	3-band parametric	No	Digital	No	Yes	Yes
	Drawmer	MX60 Front End One	1/N	Solid state	XLR, 1/4" TRS	N/A	3-band: high/low shelving, center parametric	HP 100 Hz	Soft knee	Yes	Yes	Yes
	Drawmer	TS1D	1/N	Solid state	XLR, 1/4" TRS	AES/EBU, S/PDIF	HF	HP	"Pull up"	No	No	No
	Focusrite	ISA220	1/Y	Solid state	XLR	Optional 24/96 A-D	4-band (2 parametric)	HP, LP	Discrete (Class A)	No	No	Yes
	Focusrite	ISA430 Producer Pack	1/N	Solid state (Class A)	XLR	24/96 A-D (optional)	Neve	HP	Class A, VCA	Yes	Yes	Yes
	Focusrite	OctoPre	8/N	Solid state (Class A)	XLR, 1/4" TRS via D-sub	Optional: 24/96 Toslink, S/PDIF, AES/EBU	N/A	No	Optical (8)	No	No	No
	Focusrite	Platinum VoiceMaster Pro	1/N	Solid state	XLR, 1/4"	Optional 24/96 A-D	Voice optimized EQ	Harmonics	Optical	Yes	No	Yes
	Focusrite	Trak Master	1/N	Solid state (Class A)	XLR, 1/4"	Optional 24/96 A-D	3-band, switchable for voice/instrument	No	Optical	Np	No	No
	HHB	Radius 5 Fatman 2	1/N	Tube	XLR, 1/4" TRS	N/A	N/A	HP 90 Hz	Tube	No	No	No
	Joemeek	MQ 3	1/N	Current sense	1/4"	N/A	3-band fixed	No	Optical	No	No	No
	Joemeek	Twin QCS	2/Y	Current sense	XLR	S/PDIF (optional)	3-band fixed	HP	Optical	No	No	No
	Joemeek	VC10 Studio Channel	1/N	Transformer- coupled	XLR, 1/4"	Optional	3-band with mid sweep	HP	Photo-optical	Yes	No	Yes
	LA Audio	MLX20	2/N	Solid state	XLR, 1/4" TRS	N/A	N/A	Sweepable HP	N/A	No	No	No
	LA Audio	MPX10 Mono Multi-Processor	1/N	Solid state	XLR, 1/4" TRS	N/A	4-band w/sweep high/low	HP 75 Hz, LP 12 kHz	Solid state	Yes	No	Yes
	LA Audio	PS10	1/N	Solid state	XLR, 1/4" TRS	Optional	4-band w/sweep high/low, 2 parametric mids	HP 75 Hz, LP 12 kHz	Hard or soft knee w/variable rate	Yes	No	Yes
	LA Audio	PS10D	1/N	Solid state	XLR, 1/4" TRS	24-bit A/D	4-band w/sweep high/low, 2 parametric mids	HP 75 Hz, LP 12 kHz	Hard or soft knee w/variable rate	Yes	No	Yes
	Langevin	Langevin Dual Vocal Combo	2/Y	All-discrete	XLR, 1/4"	N/A	High/low shelving	No	Electro-optical	No	No	No
	Manley Labs	Voxbox	1/Y	Tube	XLR, 1/4"	N/A	3-band Pultec-style	HP 80 Hz, 100 Hz	Optical	No	No	Yes
	Millennia	Twin Direct TD-1	1/N	HV-3	9 outputs	N/A	2-band parametric	No	No	No	No	No
	Millennia	Origin STT-1	1/Y	Tube/solid state	XLR, 1/4"	N/A	4-band parametric	No	Optical	No	No	Yes
	Oram Pro	MWS Microphone Work Station	2/N	Solid state	XLR	N/A	Series 24 console EQ	HP, LP	N/A	No	No	No
	Pendulum	Quartet	1/Y	Tube	XLR, 1/4"	N/A	3-band modified Baxadall	HP	Optical	No	No	Yes
	PreSonus	VXP Dynamic Voice Processor	1/N	Class A, discrete	XLR, 1/4" TRS	N/A	4-band semi-parametric	HP	VCA, variable soft- knee to hard limit	Yes	No	Yes
	Rane	VP12	2/N	Solid state	XLR, 1/4" TRS	N/A	2-band parametric	HP, LP	Solid state	Yes	Yes	Yes
	Requisite Audio	Pal Plus	2/Y	Tube, transformer	XLR, 1/4"	N/A	N/A	No	N/A	No	No	No
	SPL Electronics	Channel One	1/N	Solid state, Tube	XLR, 1/4" TRS	AES/EBU or S/PDIF (optional)	3-band (2 parametric), dist. & pre-comp.	HP	SPL Double VCA	No	Yes	Yes
	SPL Electronics	Track One	1/N	Solid state	XLR, 1/4" TRS	AES/EBU, S/PDIF (optional)	3-band (2 parametric)	HP	SPL double VCA	No	No	Yes
	Symetrix	528E Voice Processor	1/N	Solid state	XLR	N/A	3-band parametric	No	Analog	Yes	No	Yes
	TC-Helicon	Gold Channel	2/Y	Digital	XLR	AES/EBU, S/PDIF, ADAT	5-band parametric	No	Digital	Yes	No	Yes
	TL Audio	5050 Mono Valve Compressor	1/N	Tube	Mic, line, instrument	S/PDIF (optional)	N/A	HP 90 Hz	Tube	No	No	No
	TL Audio	5051 Mono Valve Compressor	1/Y	Solid state/tube	XLR, 1/4"	N/A	4-band parametric	HP 90 Hz	Tube	No	Yes	No
	TL Audio	5052 Stereo Valve Processor	2/Y	Tube	XLR, 1/4" TRS	24-bit S/PDIF (optional)	2 parametric mids w/high-low sweeps	HP 90 Hz	Transconductance/ tube	No	No	No
	TL Audio	VP-1	1/Y	Tube or solid state (Class A)	XLR, 1/4"	AES/EBU or S/PDIF (optional)	4-band parametric	HP variable	Tube or optical	Yes	Yes	Yes
	Universal Audio	6176	1/Y	Tube	XLR, Hi-Z	N/A	HF/LF shelf w/selectable freq	No	Solid state (Class A)	No	No	No

SIDECHAIN	BYPASS	METER TYPE	FREQUENCY RESPONSE	DYNAMIC RANGE	THD	DIMENSIONS (INCHES)	WEIGHT (LBS.)	SPECIAL FEATURES	PRICE
No	No	5-seg LED	10 Hz-20 kHz	N/A	>0.005%	19x1.75x5	4.5	Stereo double-tracking, tube modeling, mic modeling	\$595
No	Yes	LED	N/A	N/A	N/A	N/A	N/A	Includes sends, busses, solo functions, units can be linked w/API 7800 master controller	\$2,995
No	Yes	LED, VU	20 Hz-20 kHz	>90 dB	<0.1%	19x5.25x1.75	8	Preamp/comp/EQ inserts, selectable metering	\$499
No	Yes	LED, VU	20 Hz-20 kHz	>100 dB	<0.1%	19x6.5x3.5	12	Preamp/comp/EQ inserts, selectable metering	\$799
Yes	Yes	VU	1 Hz-200 kHz	148 dB	0.05%	19x12x3.5	26	Fully-discrete Class A tubes, EQ switch	\$2,295
No	Yes	Gain reduction and output LEDs	10 Hz-200 kHz	N/A	0.02% mic, 0.002% line	19x8.5x1.75	N/A	Enhancer, recording output, 4580 operational amplifiers	\$159
No	Yes	Gain reduction/output LED	<10 Hz->200 kHz	N/A	0.001%	19x8.5x1.75	N/A	24-bit/96 kHz AES/EBU output w/selectable sampling rates or external clocking	\$200
Yes	Yes	LED	20 Hz-20 kHz	105 dB	0.005%	19x7.5x1.75	5	Phantom powered	\$300
Yes	No	LED	20 Hz-20 kHz	>107 dB	0.003%	19x8.25x1.75	N/A		\$600
No	Yes	LED	20 Hz-22 kHz	103 dB	0.003%	19x1.75x5.75	7.14	Delay, chorus, mic modeling, preamp modeling	\$450
No	Yes	LED	20 Hz-20 kHz	N/A	<0.01%	1RU	9	Instrument input with 20 dB pad	\$780
Yes	Yes	LED	20 Hz-20 kHz	>90 dB	<0.01%	N/A	N/A	Mono DI, mic pre, stereo comp, 24/96k output	\$1,150
Yes	Yes	VU, LED	10 Hz-140 kHz	N/A	0.001%	19x1.75x6	N/A	Blend feature on compressor	\$2,295
Yes	Yes	LED	20 Hz-200 kHz	>120 dB	0.002%	N/A	N/A	Classic channel strip from Focusrite Consoles	\$3,495
No	Yes	LED	20 Hz-200 kHz	N/A	0.0002%	19x1.75x6	N/A	Phantom power, word clock, (2) instrument inputs with phase reverse	\$1,169
No	Yes	Peak reading	10 Hz-200 kHz	110 dB	0.002%	3RU	N/A	Tube emulation circuitry, latency-free monitoring section	\$750
No	Yes	LED	20 Hz-200 kHz	N/A	0.0003%	1RU	N/A	Tube sound circuit	\$450
No	Yes	Output or gain reduction VU	5 Hz-40 kHz	N/A	0.5%	8.5x8.3x5.25	7.72	15 presets, manual mode	\$399
No	Yes	Input on LED	20 Hz-20 kHz	115 dB	0.006%	1/2RU	4	Insert and mix inputs	\$299
No	Yes	Input/gain reduction	20 Hz-20 kHz	115 dB	0.006%	2RU	9		\$999
No	Yes	VU	10 Hz-50 kHz	N/A	0.01%	2RU	9	Phase reverse, phantom powered	\$800
No	No	LED	20 Hz-20 kHz	N/A	<0.05%	19x6x1.75	5	Phantom powered, -10/+4dB operation	\$320
No	Yes	LED	20 Hz-20 kHz	N/A	<0.05%	19x6x1.75	4.8	Phantom powered, -10/+4dB operation	\$400
No	Yes	LED	20 Hz-20 kHz	N/A	<0.05%	19x6x1.75	N/A	Phantom powered, -10/+4dB operation	\$850
No	Yes	LED	20 Hz-20 kHz	N/A	<0.05%	19x6x1.75	N/A	Phantom powered, -10/+4dB operation	\$1,150
No	Yes	VU	10 Hz-60 kHz	127 dB	<0.04%	19x3.5x10	12	All discrete, direct injection and limiter inputs	\$2,000
Yes	Yes	VU	10 Hz-100 kHz	>117 dB	0.3%	19x5.25x10	21	All tube	\$4,000
No	Yes	LED	10 Hz-200 kHz	>100 dB	0.002%	8.5x12x3.5	15	Twin Topology	\$1,395
No	Yes	VU	10 Hz-200 kHz	>100 dB	0.002%	19x12x3.5	27	Twin Topology	\$2,895
No	Yes	LED	20 Hz-20 kHz	N/A	0.005%	N/A	N/A	Phantom, unity gain padless front end	\$2,590
No	Yes	VU output/compression	20 Hz-100 kHz	>90 dB	N/A	19x3.5x12	14		\$3,250
No	Yes	LEDs	20 Hz-40 kHz	116 dB	0.001%	19x8x1.75	8	Class A, transformer-coupled input with dual servo gain stage	\$800
No	Yes	LED	20 Hz-20 kHz	N/A	0.01%	1RU	N/A	Phantom powered; mic/line mix control	\$599
No	No	VU	10 Hz-100 kHz	>115 dB	0.03%	1U or 2U	28 or 42	Feedback/limiter response control, outboard pwr, point-to-point wiring	\$3,000 and up
Yes	Yes	Gain reduction, output LED	10 Hz-100 kHz	118 dB	-97.4 dBu @ 20 dB	19x3.5x8	1.9	Phones out phase rev., 48 V phantom power, separate mic, line, inst. inputs & gain controls	\$1,599
Yes	Yes	Gain reduction/output LED	10 Hz-200 kHz	115 dB	-97.5 dBu @ 20 dB	19x1.7x8.25	1.4		\$899
Yes	Yes	Gain reduction LED	20 Hz-20 kHz	N/A	<0.08%	19x8x2	9	Voice symmetry, phantom power	\$749
No	Yes	LED	10 Hz-20 kHz	>103 db	0.003%	1RU	5.5	Digital radiance generation, time alignment	\$2,495
No	Yes	Output/gain reduction LED	10 Hz-40 kHz	100 dB	0.05%	19x7.9x3.5	13.23	Gain control, 2 units stereo linkable, optional dig. out w/wordclock in	\$469
Yes	Yes	In/out gain reduction	10 Hz-40 kHz	106 dB	0.05%	19x7.9x3.5	5.5	Gain control, 2 units stereo linkable, optional dig. out w/wordclock in	\$749
Yes	Yes	Input/output/gain reduction VU	10 Hz-40 kHz	106 dB	0.5%	19x9.84x5.2	20	Optical output lim, optional S/PDIF digital output	\$1,699
Yes	Yes	Input, output, or gain reduction VU	20 Hz-20 kHz	110 dB	0.015%	19x10x5.25	22	Optional digital output	\$2,999
No	Yes	VU	20 Hz-20 kHz	N/A	N/A	2U	12	15 dB pad; 610/1176 join/split mode	\$2,495

COMPUTER-BASED DAWs

MANUFACTURER

PRODUCT

ANALOG I/O

DIGITAL I/O

PLATFORM VERSION

BUS TYPE

PLUG-IN FORMATS SUPPORTED

SAMPLE RATE

A/D/A CONVERTER/ BIT RATE

Aardvark	Aark 24	(8/8) 1/4" balanced	(2/2) S/PDIF (RCA optical) (8/8) ADAT (optical)	Win; Mac	PCI	GSIF; ASIO 2; A/WDM; VST	32, 44.1, 48 kHz	24-bit
Aardvark	Direct Mix USB3	(3/3); (2) 1/4" line; mic/guitar; headphone	N/A	Win; Mac	USB	USB audio standard	44.1, 48 kHz	24-bit
Aardvark	Direct Pro 24/96	(4/6); (4) XLR/mic-1/4" line in; (6) line out; headphone	(2/2) S/PDIF; RCA	Win; Mac	PCI	GSIF; ASIO 2; A/WDM; VST	32, 44.1, 48, 96 kHz	24-bit
Aardvark	Direct Pro LX6	(4/6) 1/4" line; headphone	(2/2) S/PDIF (RCA)	Win; Mac	PCI	GSIF; ASIO 2; A/WDM; VST	32, 44.1, 48, 96 kHz	24-bit
Aardvark	Direct Pro Q10	(8) XLR mic-1/4" line in; (2) 1/4" guitar in; (4) 1/4" inserts; headphone	(2/2) S/PDIF (RCA)	Win; Mac	PCI	GSIF; ASIO 2; A/WDM; VST	32, 44.1, 48, 96 kHz	24-bit
Alesis	ADAT/EDIT 2.0	ADAT Optical	ADAT optical	Win 95/98/NT/ 2000/XP, Mac	PCI	N/A	44.1, 48 kHz	N/A
Antex	SC22	2/2	N/A	Win 95/98/NT/2000/XP	PCI	DirectX	6.25-50 kHz	20-bit
Antex	SC2000	(4/4) XLR	(1/1) XLR AES/EBU; S/PDIF	Win 95/98/NT/2000/XP	PCI	DirectX	6.25-50 kHz	20-bit
Apogee Electronics	Native Tools Studio Edition	16	16	Win; Mac	PCI	VST; DirectX	44.1; 48; 88.2, 96 kHz	16/20/24-bit
Audiotrak	Maya 7.1	2/8	(1/1) S/PDIF coax/optical	Win	PCI	N/A	48 kHz	16
Audiotrak	Maya 44	4/4	(1/1) S/PDIF coax/optical	Win	PCI	N/A	48 kHz	16
Audiotrak	Inca 88	8/8	(1/1) S/PDIF coax/optical	Win	PCI	N/A	48 kHz	16
Audiotrak	Optoplay	0/2	(0/1) stereo S/PDIF optical	Win	USB	N/A	48 kHz	32
BIAS	Deck 3.5	64 - interface dependent	64 - interface dependent	Mac	N/A	VST	60 kHz	N/A
CreamWare	Luna II	Stereo 1/4" TRS	Coax	Win; Mac	PCI/DSP	N/A	N/A	24-bit
CreamWare	Luna II EX	Stereo 1/4" TRS	Coax	Win; Mac (no OSX)	PCI/DSP	Proprietary	32, 44.1, 48, 96 kHz	24-bit
CreamWare	Power Sampler II	Stereo TRS	Coax	Win; Mac (no OSX)	PCI/DSP	Proprietary	32, 44.1, 48, 96 kHz	24-bit
CreamWare	Power Sampler II EX	Stereo 1/4" TRS	Coax	Win; Mac (no OSX)	PCI/DSP	Proprietary	32, 44.1, 48, 96 kHz	24-bit
CreamWare	Pulsar II	(2) RCA or XLR	RCA unbalanced	Win; Mac (no OSX)	PCI/DSP	Proprietary	32, 44.1, 48, 96 kHz	24-bit
CreamWare	Power Pulsar	(2) RCA or XLR; ADAT	RCA unbalanced	Win; Mac (no OSX)	PCI/DSP	Proprietary	32, 44.1, 4 8, 96 kHz	24-bit
CreamWare	Scope/SP	(2) RCA or XLR; ADAT	RCA unbalanced	Win; Mac (no OSX)	PCI/DSP	Proprietary	32, 44.1, 48, 96 kHz	24-bit
Creative Labs	Sound Blaster Audigy 2	(2) 1/8" TRS mic/line in; (3) 1/8" TRS out	S/PDIF (coax/optical)	Win 98SE/ME/2000/XP	PCI	DirectX; EAX; ASIO2	8-192 kHz	24-bit
Creative Labs	Sound Blaster Live	1/8" mic/line	S/PDIF	Win 95/98/NT	PCI	EAX	8-48 kHz	16-bit
Digidesign	Digi 001	(2)XLR; (6)1/4" TRS	ADAT; (2) S/PDIF	Mac; Win	PCI	RTAS; AudioSuite	44.1, 48 kHz	24-bit
Digidesign	Digi 002	(8/8) XLR; 1/4" TRS	(8) ADAT optical; (2) S/PDIF	Win; Mac	Firewire	RTAs; AudioSuite	Up to 96 kHz	24-bit
Digidesign	Mbox	(2) XLR-1/4" TRS combo; 1/4" TRS	(2) S/PDIF	Mac/Win	USB	RTAS; AudioSuite	44.1, 48 kHz	24-bit
Digidesign	Pro Tools I 24 MIX/MIX Plus	8-72 channels	8-72 channels	N/A	PCI	RTAS; TDM; AudioSuite	48, 44.1 kHz	24-bit (with 888/24 I/O interface)
Digidesign	Pro Tools HD 1.2 & 3	(Up to 96 channels)	(Up to 96 channels)	Mac; Win	PCI	TDM; HTDM; RTAS; AudioSuite	44.1, 48, 88.2, 96, 176.4, 192 kHz	24-bit
Digram	VX222	(2/2) XLR	(2/2) S/PDIF; AES/EBU	Win; Mac	PCI	N/A	8-48 kHz	24-bit
Digram	VX Pocket 440	(4/4) XLR	(2/2) S/PDIF (coax)	Win; Mac	PC CARD	DirectX	8-48 kHz	24-bit
Digital Audio Labs	CardDeluxe	(2/2) 1/4" TRS (gold tipped RCA)	S/PDIF	Win	PCI	Active Movie; DirectX	8-48 kHz	24-bit/128x/ 24-bit/64x
Echo	Mia	(2/2) 1/4" TRS; 8 virtual out	S/PDIF (coaxial)	Win 95/98/ME/ 2000/XP, Mac	PCI	N/A	8-96 kHz	24-bit
Echo	Gina24	(2/8) 1/4"	S/PDIF; ADAT	Win 95/98/ME/NT 2000/XP, Mac	PCI	N/A	8-96 kHz	24-bit
Echo	Layla24	(8/8) 1/4"	S/PDIF; ADAT	Win 95/98/ME/NT 2000/XP, Mac	PCI	N/A	8-96 kHz	24-bit
Echo	MiaMIDI	(2/2) 1/4" TRS; (8) virtual outs	S/PDIF	Win; Mac OSX	PCI	N/A	8-96 kHz	24-bit
Edirol	DA-2496 Audio Interface	(8/8) 1/4" TRS or 1/4"-XLR combo; headphone	S/PDIF (optical, coaxial)	Win; Mac	PCI	N/A	8-96 kHz	24-bit A/D; 24-bit D/A
Edirol	M-100 FX	(10/2) (2) XLR; (4) 1/4", RCA; (4) RCA	S/PDIF out	Win; Mac	USB	DirectX; VST	44.1 kHz	24-bit
Edirol	UA-1A USB Audio Interface	(2/2) RCA	N/A	Win; Mac	USB	N/A	44.1 kHz	16-bit A/D; 16-bit D/A
Edirol	UA-1D USB Audio Interface	N/A	S/PDIF (optical); 5.1 surround	Win; Mac	USB	N/A	32/44.1/48 kHz in; 48 kHz out	N/A
Edirol	UA-3D USB	RCA; 1/4" guitar 1/8" mic and headphone	S/PDIF (optical)	Win; Mac	USB	N/A	44.1 kHz	16

DIGITAL RECORDER RESOLUTIONS (MAX)	SYNC TYPES	MIDI CONTROL	TRACKS/VIRTUAL TRACKS	# OF LOCATE POINTS	EFFECTS/ DYNAMIC PROCESSING	ADDITIONAL FEATURES	PRICE
24-bit	Word clock; S/PDIF; MTC; ADAT	Yes	10/unlimited	N/A	N/N	Low jitter clock; DSP; digital peak metering premium ND; full duplex; shielded PCI card	\$899
24-bit	N/A	No	2/8	N/A	N/N	Solid steel unit; 24-bit A/D; guitar in; self powered USB; Record LEDs	\$299
24-bit/96 kHz	MTC, S/PDIF	Yes	4/unlimited	N/A	Y/Y	4 class A mic pres; DSP compressor, EQ, reverb; full duplex; shielded PCI card	\$699
24-bit/96 kHz	MTC, S/PDIF	Yes	4/unlimited	N/A	Y/Y	Premium A/D; DSP compressor; EQ; reverb; full duplex; shielded PCI card	\$499
24-bit/96 kHz	MTC, S/PDIF; Word clock	Yes	10/unlimited	N/A	Y/Y	8 class A mic preamps; 2 EFR guitar inputs; shielded PCI card; no mixer required; easy monitoring	\$999
24-bit	ADAT sync in/out	Yes	16/8	16 (ADAT/ connect)	Y/Y	Sample-accurate transfer; zero latency monitoring; ASIO 2.0 support	\$399
N/A	LTC, VITC	No	4 stereo	N/A	N/N	Multi-card capability; WinTel & Alpha processor compatible	\$595
N/A	SMPTE read/write; video	Yes	8 stereo	N/A	N/N	Multicard capability; WinTel & Alpha processor compatible; LTC/VITC SMPTE read and generate sample clock generator	\$895
N/A	Word clock; digital formats	Yes	32-bit floating	Unlimited	Y/Y	Surround, EDL, unlimited undo w/history; VST instr., import OMF, REX, Cubase songs, open TL	\$7,995
N/A	N/A	No	N/A	N/A	N/N		\$80
N/A	N/A	No	N/A	N/A	N/N		\$130
N/A	N/A	No	N/A	N/A	N/N		\$280
N/A	N/A	No	N/A	N/A	N/N		\$80
16	N/A	Yes	64/999	Unlimited	N/Y	OMF Import; 5.1 Surround mixing; automated mixdown	\$399
N/A	N/A	Yes	N/A	N/A	Y/Y	ASIO, ASIO2, Wave GSIF; Direct Sound, Wave, MME; hardware comes w/mixers, effects	\$495
N/A	N/A	Yes	N/A	N/A	Y/Y	Same specs as Luna with addition of 1 Z-Link and 2 ADAT I/O expansion plate	\$645 and up
N/A	N/A	Yes	N/A	N/A	Y/Y	STS samplers, "Volksampler" (PC only), ASIO, ASIO 2, MME, GSIF, Direct Sound, Wave, mixers, effects	\$645 and up
N/A	N/A	Yes	N/A	N/A	Y/Y	Same specs as Power Sampler II but includes additional I/O expansion plate w/1 Z-link and 2 ADAT I/Os	\$795 and up
N/A	N/A	Yes	N/A	N/A	Y/Y	ASIO; ASIO 2; GSIF; WAVE, Direct Sound, MME incl. effects, mixers, synths, and sampling software	\$995 and up
N/A	N/A	Yes	N/A	N/A	Y/Y	ASIO; ASIO 2; GSIF, WAVE, Direct Sound drivers; MME incl. effects, mixers, synths, sampling software	\$1,995 and up
N/A	N/A	Yes	N/A	N/A	Y/Y	ASIO, ASIO 2; GSIF; WAVE, Direct Sound, MME drives; various software; MiniMax, Modulator III, Vectron	\$2,995
24-bit	MIDI, Word clock	No	N/A	N/A	Y/Y		\$130-\$250
16-bit	MIDI	No	N/A	N/A	Y/Y	Includes Cakewalk, Sound Forge, Mixman software and digital I/O card	\$199
24-bit	ADAT, S/PDIF	Yes	32/0	Unlimited	Y/Y	Two mic pres; 48V phantom, MIDI I/O, includes Pro Tools LE software	\$995
24-bit	ADAT, S/PDIF	Yes	32/0	Unlimited	Y/Y	Integrated control surface; bundled plug-ins, 48V phantom power; standalone mode	\$2,495
24-bit	N/A	Software only	24-32/0	Unlimited	Y/Y	Focusrite pres; 48V phantom, headphone jacks; expansion cards; near zero-latency monitoring; includes Pro Tools LE software	\$495
N/A	LTC, VITC; MTC, BiPhase; Pilot Tone; AES/EBU; S/PDIF; ADAT	Yes	64/128	Unlimited	Y/Y	ProControl support, Control24 support; DigiRack plug-ins (EQ, dynamics, delay, time comp/exp, pitch shift) included	\$5,995-\$9,995
24-bit	LTC, VITC; MTC, BiPhase; Pilot Tone; AES/EBU; S/PDIF; ADAT	With MIDI I/O peripheral	128/0	Unlimited	Y/Y	Pro Tools software, ProControl and ProControl 24; Digidesign plug-ins	\$7,995-\$12,995
24-bit	N/A	No	N/A	N/A	N/N		\$549
24-bit	SMPTE (LTR)	No	N/A	N/A	N/N		\$999
24-bit	Internal, ext. digital	No	N/A	N/A	N/N	Multiple card support	\$399
24-bit	S/PDIF	No	N/A	N/A	N/N	8 virtual outputs, GSIF; WDM	\$249
24-bit	Esync, S/PDIF, ADAT	No	N/A	N/A	N/N	Headphone output, GSIF, WDM	\$495
24-bit	Word, MTC, S/PDIF, ADAT	Yes	N/A	N/A	N/N	Headphone output, GSIF; WDM	\$995
24-bit	S/PDIF	Yes	2/2	N/A	N/A		\$199
24-bit	Word	No	8 mono/4 stereo	N/A	N/N	Phantom power; 24 db pad; 8 in/out gain controls; 8 peak indicators, WDM & ASIO drivers, MIDI I/O, Word Clock I/O	\$750
24-bit	N/A	No	N/A	N/A	Y/Y	Aux send, return	\$495
16-bit	N/A	No	2 mono/1 stereo	N/A	N/N	USB powered	\$99
16-bit	N/A	No	2 mono/1 stereo	N/A	N/N	USB powered; WinDVD	\$119
16-bit	N/A	No	2 mono/1 stereo	N/A	N/N	5.1 surround; Cool Edit Pro LE	\$215

COMPUTER-BASED DAWs

MANUFACTURER	PRODUCT	ANALOG I/O	DIGITAL I/O	PLATFORM VERSION	BUS TYPE	PLUGIN FORMAT(S) SUPPORTED	SAMPLE RATE	A/D/A CONVERTER/ BIT RATE
Edirol	UA-5 USB	(2/2) RCA; 1/4" XLR combo; 1/4" headphone	(2/2) S/PDIF (optical, coax)	Win; Mac	USB	DirectX; ASIO2	44.1, 48, 96 kHz	24-bit
Edirol	UA-20 USB MIDI/Audio	(2/2) 1/4" or 1/4" XLR; guitar/RCA; 1/8" headphone	S/PDIF (optical, coaxial)	Win; Mac	USB	DirectX; VST	44.1 kHz	24-bit A/D; 24-bit D/A
Edirol	UA-700 USB	(2/2) (2) 1/4" XLR combo-outs; (2) RCA; (2) 1/4" outs; 1/4" headphone	S/PDIF (optical, coaxial)	Win; Mac	USB	DirectX; VST	44.1/48/96 kHz	24-bit A/D; 24-bit D/A
Ego Sys	U 24 M	(4/4) RCA; (2) XLR in	N/A	Win; Mac	USB	N/A	96 kHz	24-bit
Ego Sys	MAXIO	(8/8) XLR	AES/EBU; S/PDIF	Win; Mac	PCI	N/A	192 kHz	24-bit
Ego Sys	WAMI Rack 192L	(4) XLR in/(4) 1/4" out	S/PDIF	Win; Mac	PCI	N/A	96 in/192 kHz out	24-bit
Ego Sys	WAMI Rack 192X	(4) XLR in/(8) 1/4" out	S/PDIF	Win; Mac	PCI	N/A	192 kHz	24-bit
Ego Sys	Wave Terminal 192L	(2/6) 1/4" TRS	S/PDIF	Win; Mac	PCI	N/A	96 kHz in/192 kHz out	24-bit
Ego Sys	Wave Terminal 192M	(4/8) 1/4" TRS	S/PDIF	Win; Mac	PCI	N/A	96 kHz in/192 kHz out	24-bit
Ego Sys	Wave Terminal 192X	(2/6) 1/4" TRS	S/PDIF	Win; Mac	PCI	N/A	192 kHz	24-bit
Ego Sys	Waveterminal U24	(2 x 2) 1/4"	(2 x 2) S/PDIF (coaxial, optical)	Win; Mac	USB	N/A	32, 44.1, 48 kHz	24-bit
Emagic	EMI 2/6	(2/6) RCA	(2/2) S/PDIF (coaxial)	Win ME/98; Mac	USB	DirectX; VST	44.1, 48 kHz	24-bit
Emagic	EMI 6/2M	(6/2) RCA	S/PDIF	Win 98SE/ME/XP; Mac OS X	USB	DirectX; VST; AU	44.1; 48; 88.2; 96 kHz	24-bit
Event Electronics	EZ8	N/A	(8x8) ADAT	Win 95/98/ME/XP	PCI	N/A	44.1, 48, 88.2, 96 kHz	N/A
Frontier Design Group	Dakota	N/A	(16/16) ADAT; (2x2) S/PDIF (optical, coax)	Win 95/98/ME/2000/XP; Mac	PCI	N/A	44.1 or 48 kHz	N/A
Frontier Design Group	WaveCenter/PCI	N/A	(8/8) ADAT; (2/2) S/PDIF (coax, optical)	Win 95/98/ME/2000/XP; Mac	PCI	N/A	44.1 or 48 kHz	N/A
Lynx	Lynx L22	(2/2) XLR	(2/2) S/PDIF or AES/EBU	Win 98/ME/NT/2000/XP; Mac	PCI	N/A	8-48 kHz (analog); 32-96 kHz (digital)	24-bit
Lynx	LynxONE	(2/2) XLR	(2/2) S/PDIF or AES/EBU	Win 95/98/NT/2000; Mac; Linux	PCI	N/A	8-48 kHz (analog); 32-96 kHz (digital)	24-bit
Lynx	LynxTWO	(4/4), (2/6), (6/2) XLR	(2/2) S/PDIF or AES/EBU	Win 95/98/NT/2000; Mac; Linux	PCI	N/A	8-192 kHz (analog); 32-96 kHz (digital)	24-bit
Mackie Designs	Mixtreme	Up to 16 with optional interface	(2) 8-ch TDIF (S/PDIF optional)	Win 95/98/NT/2000	PCI	Soundscape Real Time DSP	Up to 48, 96 kHz with ext super clock	24-bit
Mackie Designs	Soundscape 32	(2) XLR/(4) XLR	24-ch. TDIF I/O	Win 95/98/NT/2000/ME	N/A	Soundscape Real Time DSP	Up to 96 kHz	24-bit
Marian	Marc-A	N/A	ADAT	Win; Mac	PCI	N/A	48 kHz	N/A
Marian	Marc 2	(2/2) 1/4" TRS	S/PDIF; RCA; optical	Win; Mac	PCI	N/A	96 kHz	24-bit
Marian	Marc 4 MIDI	(4/4) 1/4" TRS	N/A	Win; Mac	PCI	N/A	96 kHz	24-bit
Marian	Marc 4 Digi	(4/4) 1/4" TRS	S/PDIF optical	Win; Mac	PCI	N/A	96 kHz	24-bit
Marian	Marc X	(2/2) 1/4" TRS	S/PDIF; RCA; optical	Win; Mac	PCI	N/A	96 kHz	24-bit
Marian	Marc 8 MIDI	(8/8) RCA	N/A	Win; Mac	PCI	N/A	96 kHz	24-bit
Marian	Marc 2 PRO	(2/2) XLR bal	AES/EBU; XLR; S/PDIF opt; RCA	Win; Mac	PCI	N/A	96 kHz	24-bit
M-Audio	Audiophile 2496	(2x2) RCA	S/PDIF (coaxial)	Win 95/98/2000; Mac; Linux	PCI	Direct X; VST	8-96 kHz	24-bit/128x
M-Audio	Audiophile USB	(2/2) RCA out; RCA, 1/4" in	(2/2) coax S/PDIF	Win 98SE/ME/2000/XP; Mac OS 9 x-X	USB	VST; Dxi; ASIO; EASI; WDM	44.1, 48, 96 kHz	24-bit
M-Audio	Audiosport Quattro	(4x4) 1/4" TRS	N/A	Win ME/2000; ASIO 1/2	USB	Direct X; VST	44.1, 48, 96 kHz	24-bit/128x
M-Audio	Delta 1010	(8/8) 1/4" TRS	(2/2) S/PDIF (coax)	Win 95/98/SE/NT/2000/ME/XP; Mac OS 8.6-X	PCI	VST; GSIF; Dxi; ASIO; EASI; WDM	8-96 kHz	24-bit
M-Audio	Delta 1010 LT	(8/8)	(2) S/PDIF	Win 95/98/SE/NT/2000/ME/XP; Mac OS 8.6-X	PCI	VST; Dxi; GSIF; ASIO; WDM; RA	8-96 kHz	24-bit
M-Audio	Delta Audiophile 2496	(2/2) RCA	(2/2) S/PDIF (coax)	Win 95/98/SE/NT/2000/ME/XP; Mac OS 8.6-X	PCI	VST; GSIF; Dxi; ASIO; EASI; WDM	8-96 kHz	24-bit
M-Audio	Duo USB	(2/2) XLR; 1/4" TRS	S/PDIF coax out	Win 98SE/ME/2000/XP; OS 9 x-X	USB	VST; Dxi; ASIO; EASI; WDM	44.1, 48, 96 kHz	24-bit
M-Audio	Omni Studio	(4x4) 1/4" TRS	(2x2) S/PDIF (coaxial)	Win 95/98/2000/NT; Mac; Linux	PCI	Direct X; VST	8-96 kHz	24-bit/128x
M-Audio	Omni Studio USB	(4/4) XLR; 1/4" TRS in; 1/4" TRS out	N/A	Win 98SE/ME/2000/XP; Mac OS 9 x-X	USB	VST; Dxi; ASIO; EASI; WDM	44.1, 48, 96 kHz	24-bit
Merging Technologies	PyraMix Virtual Studio 4.1	Optional external 24-bit/96 kHz	ADAT; S/PDIF; MADI; AES/EBU; TDIF; SDIF	Win 2000 Pro/XP Pro	PCI	Native; DirectX; VST	32 kHz; DSD 384	24-bit
Micro Technology	MicroSound/Krystal	2/2	AES/EBU; S/PDIF	Win	PCI	DirectX	8-48 kHz	16-bit
MOTU	24i	(24/2) 1/4" TRS	S/PDIF (RCA and Toslink) out	Win; Mac; ASIO; GSIF	PCI	All native	44.1, 48 kHz	24-bit
MOTU	308	N/A	(8) AES/EBU; 8 S/PDIF (coax)/ (8) S/PDIF (optical)	Win; Mac; ASIO; GSIF	PCI	All native	44.1, 48 kHz	24-bit

DIGITAL RECORDER RESOLUTIONS (MAX)	SYNC TYPES	MIDI CONTROL	TRACKS/VIRTUAL TRACKS	# OF LOCATE POINTS	EFFECTS/ DYNAMIC PROCESSING	ADDITIONAL FEATURES	PRICE
24-bit		No	2 mono/1 stereo	N/A		Phantom power, in/out gain controls, peak indicators, WDM and ASIO drivers	\$375
24-bit	N/A	No	2 mono/1 stereo	N/A	N/N	ASIO, WDM support, direct monitoring, MIDI I/O; (2) 1/4" mic/line/guitar inputs, 1/8" headphone out, FPT technology	\$225
24-bit	N/A	Yes	2 mono/1 stereo	N/A	Y/Y	Line/mic in, 1/4" guitar in, ASIO drivers, phantom power	\$595
24-bit	N/A	No	N/A	N/A	N/N	+48V phantom power, 2x2 MIDI I/O	\$400
24-bit	Word clock	No	N/A	N/A	N/N	PCI card can handle 4 expanders for 128 tracks total	\$2,000
24-bit	N/A	No	N/A	N/A	N/N	+48V phantom power	\$500
24-bit	N/A	No	N/A	N/A	N/N	+48V phantom power	\$750
24-bit	N/A	No	N/A	N/A	N/N		\$200
24-bit	N/A	No	N/A	N/A	N/N		\$250
24-bit	N/A	No	N/A	N/A	N/N		\$300
16/24-bit	S/PDIF	No	N/A	N/A	N/N	4-ch full duplex in and out (analog and digital)	\$299
24-bit	Word clock	No	Software dependent	N/A	N/N	N/A	\$399
24-bit	Word clock	No	Software dependent	N/A	N/N	Zero latency monitoring, integrated MIDI interface, low latency OSX driver	\$399
24-bit	N/A	No	8/0	N/A	N/N	S/MUX mode for 4-ch 24-bit/96kHz operation, software control panel for levels, monitoring, sample-rate selection, S/MUX selection	\$199
24-bit	ADAT sync, MTC, SoDA (SMPTE on digital audio)	No	N/A	N/A	N/N	ASIO 2.0, GigaStudio drivers, MIDI I/O (8x8 optional), expandable to 32 ADAT channels	\$449
24-bit	MTC	No	N/A	N/A	N/N	2x2 MIDI I/O, ASIO 2.0 and GigaSampler drivers	\$329
24-bit	AES/EBU, word clock, superclock	No	32/unlimited	N/A	N/N	L-Stream modules; 6-foot XLR audio cable; 2-foot sync cable; Multichannel ADAT and AES/EBU expansion cards	\$749
24-bit	AES/EBU, word clock, superclock	Yes	N/A	N/A	N/N	XLR audio and MIDI/clock I/O cables included	\$549
24-bit	AES/EBU, word clock, superclock, SMPTE, composite video	No	N/A	N/A	N/N	6-foot XLR audio cable; 2-foot sync cable; Multichannel ADAT and AES/EBU expansion cards	\$1,095
24-bit	Word clock, super clock, TDIF sync, S/PDIF sync	No	32/256	N/A	Y/Y		\$549
24-bit	LTC, VLTC, Sony 9-pin	Yes	32/256	999	N/N	Mixpander PCI card	\$6,250
24-bit	N/A	No	N/A	N/A	N/N	Can be combined w/any other Marian sound card	\$249
24-bit	N/A	No	N/A	N/A	N/N	Can be combined w/any other Marian sound card	\$299
24-bit	N/A	Yes	N/A	N/A	N/N	Can be combined w/any other Marian sound card	\$369
24-bit	N/A	No	N/A	N/A	N/N	Can be combined w/any other Marian sound card	\$369
24-bit	MTC	No	N/A	N/A	N/N	On-board mixer for all inputs, outputs, Word clock I/O, MIDI I/O	\$499
24-bit	MTC	Yes	N/A	N/A	N/N	Can be combined w/any other Marian sound card	\$499
24-bit	N/A	No	N/A	N/A	N/N	Can be combined w/any other Marian sound card	\$699
24-bit	Multicard sync	Yes	N/A	N/A	N/N	On-board digital mixing, routing and monitor controls, SCMS, ASIO 1/2, EASI, GSIF, DirectX	\$230
24-bit/128x	N/A	Yes	N/A	N/A	N/N	Headphone output (1/4" TRS) w/volume control	\$250
24-bit	N/A	No	N/A	N/A	N/N	Hardware monitoring; ASIO 1/2, Mac and Win support	\$350
24	Word clock, S/PDIF, internal	Yes	N/A	N/A	N/N	MIDI	\$800
24	S/PDIF, internal	Yes	N/A	N/A	N/N	MIDI; 2 built-in mic preamps	\$500
24-bit	S/PDIF, internal	Yes	N/A	N/A	N/N	MIDI	\$230
24-bit/128x	N/A	No	N/A	N/A	N/N	2 mic preamps w/phantom power	\$350
24-bit	Multicard sync	No	N/A	N/A	N/N	Split console design; 2 mic pres have inserts; 2 line inputs, 4 stereo aux inputs, effects send, monitor outs, 4 direct outs, stereo record outs; 2 headphone outs	\$600
24-bit/128x	N/A	Yes	N/A	N/A	N/N		\$599
PCM 32-bit, DSD 1-bit	SMPTE, VITC, MTC, word clock, RS422, PAL, NTSC, HDV	Yes	Unlimited	Unlimited	Y/Y	Cross-fade editor, multi-point source/master editing; DSD; supports PMF, SDII, AIFF, AVI, MPS, WAV, BWF, DMF	\$2,495 and up
24-bit	Video black burst, SMPTE (all, optional)	No	Unlimited	32,767	Y/Y	Can edit and mix CD-ROM master files	\$1,600 and up
24-bit	Internal, word clock (in/out), ADAT sync (in)	No	Host dependent	Host dependent	Host dependent	111 dB S/N A-weighted, accepts -10 dB input with software boost, front-panel headphone	\$1,195-\$1,495
24-bit	Internal, word clock, AES/EBU, S/PDIF, Toslink	No	Host dependent	Host dependent	Host dependent	Standalone format conversion of up to 8 ch at a time	\$695

COMPUTER-BASED DAWs

COMPUTER-BASED DAWs

MANUFACTURER	PRODUCT	ANALOG I/O	DIGITAL I/O	PLATFORM VERSION	BUS TYPE	PLUGIN FORMAT(S) SUPPORTED	SAMPLE RATE	A/D/A CONVERTER/BIT RATE
MOTU	828	(8/8) 1/4" TRS (2) XLR-1/4" combo	(2/2) S/PDIF (optical) or (8/8) ADAT	Win; Mac	Firewire (IEEE 1394)	All native	44.1, 48 kHz	24-bit
MOTU	896	(8/8) XLR-1/4" combo	(2/2) AES/EBU; (8/8) ADAT	Win ME/2000/XP, Mac OS 9	Firewire (IEEE 1394)	All native	44.1, 48, 88.2, 96 kHz	24-bit
MOTU	1224	(8/10) 1/4" TRS	AES/EBU	Win; Mac	PCI	All native	44.1, 48 kHz	24-bit
MOTU	1296	(12) XLR	AES/EBU	Win; Mac	PCI	All native	44.1, 48, 88.2, 96 kHz	24-bit
MOTU	2408mkII	(8/8) 1/4" TRS	S/PDIF; (3) ADAT Lightpipe; (3) TDIF	Win; Mac	PCI	All native	44.1, 48 kHz	24-bit
Mytek Digital	DAW 9624	(8/8) XLR (expandable)	(4) AES/EBU; ADAT (optional TDIF)	Win 95/NT; Mac BeOS; Linux	PCI	VST; DirectX	44.1, 48, 88.2, 96 kHz	24-bit
PreSonus	Fire Station	(8/8) TRS (2 mic/inst. in)	ADAT; S/PDIF; MLAN; IEEE 1394	Win XP; Mac 9.x	Firewire (IEEE 1394)	N/A	32, 44.1, 48 kHz	24-bit
RME	Digi 96/8	N/A	ADAT; S/PDIF; AES/EBU	Win 98/ME/2000, Mac	PCI	VST; DirectX	32, 44.1, 48, 64, 88.2, 96 kHz	N/A
RME	Digi 96/8 Pad	1/4" stereo	ADAT; S/PDIF; AES/EBU	Win 98/ME/2000/XP; Mac	PCI	VST; DirectX; ASIO	32, 44.1, 48, 64, 88.2, 96 kHz	24-bit
RME	Digi 96/8 PST	1/4" stereo	ADAT; S/PDIF; AES/EBU	Win 98/ME/2000/XP; Mac	PCI	VST; DirectX	32, 44.1, 48, 64, 88.2, 96 kHz	24-bit
RME	Hammerfall 96/36	N/A	(2) ADAT; S/PDIF; AES/EBU	Win 98x/ME/2000/XP; Mac	PCI	VST; DirectX	32, 44.1, 48, 64, 88.2, 96 kHz	24-bit
RME	Hammerfall 96/52	N/A	(3) ADAT; S/PDIF; AES/EBU	Win 98/ME/2000/XP; Mac	PCI	VST; DirectX	32, 44.1, 48, 64, 88.2, 96 kHz	24-bit
RME	Hammerfall Digiface	1/4" TRS stereo line out; headphone out	(3) ADAT; S/PDIF	Win 98/ME/2000/XP; Mac	PCI/PCM CIA	VST; DirectX	32, 44.1, 48, 64, 88.2, 96 kHz	24-bit
RME	Hammerfall Multiface	(8) 1/4" TRS line	ADAT; S/PDIF	Win 98/ME/2000/XP; Mac	PCI/PCM CIA	VST; DirectX	32, 44.1, 48, 64, 88.2, 96 kHz	24-bit
RME	HDSP MADI	N/A	MADI (optical; coax)	Win	PCI	DirectX; VST	96 kHz	N/A
RME	HDSP 9632	Bal stereo XLR in/ headphone out	S/PDIF; AES/EBU; ADAT	Win; Mac	PCI	DirectX; VST	N/A	24-bit
Roland	Studio Package Pro (RPC-S124)	(8) XLR/line in; gtr in; (6) analog out; headphone out	Coax; 8 ch 24/96	Win; Mac	PCI	VST	24-bit/96 kHz	24-bit/96 kHz
SEK'D	ARC88	(8/8)	Toslink; S/PDIF	Win 95/98/NT; Mac	PCI	N/A	32, 44.1, 48 kHz	16-bit
SEK'D	Prodit 88	(2) balanced out	(8) AES/EBU in/out on XLR	Win 95/98/NT/ 2000/ME	PCI	N/A	44.1, 48, 88.2, 96 kHz	24-bit/96 kHz
SEK'D	Prodit T 2496	N/A	(2) TDIF I/O	Win 95/98/ME/NT/ 2000, MME	PCI	N/A	44.1, 48, 96 kHz	N/A
Sonic Studio	Sonic Studio HD 1.8	Optional	Optional	Mac	PCI	N/A	192 kHz	N/A
Sonorus	STUDIO/O	Stereo monitor output	16 via 2x8 ADAT optical interfaces	Win 98/NT/2000; Mac; BeOS; Linux	PCI	N/A	44.1, 48, 88.2, 96 kHz	N/A
Sonorus	USB Studio D	(2) mic; (2) instrument; (2) phono; (4) line in; (2) line out; phone out	(2) S/PDIF I/O	Win; Mac	USB	N/A	44.1, 48 kHz	20-bit/128x
Steinberg	Nuendo 2.0	Open	Open	Win 2000/XP; Mac OSX	Open	VST; DirectX	Up to 192 kHz (dep. on hw/re)	24-bit (dep. on hw/re)
Swissonic	USB Studio D	(16/4) stereo 1/4" TRS in; (2) mic	S/PDIF	Win; Mac	N/A	N/A	N/A	16-bit
Tascam	PCI-822	N/A	(8) TDIF; S/PDIF	Win; Mac	PCI	N/A	44.1, 48 kHz	16-, 20-, 24-bit
Tascam	US-122	(2) XLR; 1/4"/(2) 1/4"	N/A	Win; Mac	USB	N/A	44.1 kHz	24-bit
Tascam	US-224	(2) XLR; 1/4"/(2) 1/4"	S/PDIF	Win; Mac	USB	N/A	44.1 kHz	24-bit
Tascam	US-428	(2) XLR; (4) 1/4" out	S/PDIF	Win; Mac	USB	N/A	44.1 kHz	24-bit A/D/A
TerraTec	DMX 6fire	(7/2) 5.1 analog out	(4/4) S/PDIF (coax, optical)	Win 95/98/2000/ NT/XP; Linux	PCI	N/A	32-96 kHz	24-bit
TerraTec	EWS-88D	Stereo out	ADAT; S/PDIF (coax, optical)	Win (all); Linux	PCI	N/A	32-96 kHz	24-bit/96 kHz
TerraTec	EWS-88MT AudioSystem	8/8	(2) S/PDIF	Win	PCI	DirectX	96 kHz	24-bit
TerraTec	EWX-24/96	(2/2) RCA	(2/2) S/PDIF (optical)	Win 95/98/2000/ NT/XP; Linux	PCI	N/A	32-96 kHz	24-bit
TerraTec	MIC 2	(8/8) XLR-1/4" combo	ADAT; S/PDIF; AES/EBU	Mac; Win 98/2000/ NT/XP	PCI; Firewire	N/A	32-96 kHz	24-bit
TerraTec	MIC 8	(8/8) XLR-1/4" combo	ADAT; S/PDIF; AES/EBU	Win 98/2000/ NT/XP; Mac	PCI; Firewire	N/A	32-96 kHz	24-bit
TerraTec	SoundSystem DMX	Stereo line input; (2) stereo outputs	S/PPDIF (coaxial, optical)	Win	PCI	DirectX	32, 44.1, and 48 kHz	8/16-bit
TerraTec	SoundSystem XLerate	Stereo line input; stereo mic input; switchable stereo speaker/line output	N/A	Win	PCI	DirectX	Up to 48 kHz	8/16-bit
TerraTec	SoundSystem XLerate PRO	Stereo line input; (2) stereo outputs	Optical output	Win	PCI	DirectX	32, 44.1, 48 kHz	8/16-bit

DIGITAL RECORDER RESOLUTIONS (bits)	SYNC TYPES	MIDI CONTROL	TRACKS/VIRTUAL TRACKS	# OF LOCATE POINTS	EFFECTS / DYNAMIC PROCESSING	ADDITIONAL FEATURES	PRICE
24-bit	ADAT sync (sample-accurate, lightpipe)	No	Host dependent	N/A	Host dependent	CueMix Plus no-latency monitoring; 2 mic inputs with mic pre-amps, front panel trims; main out volume knob	\$795
24-bit	ADAT, word clock, optical	No	Host dependent	Host dependent	Host-software dependent	Expandable to 72 channels XLR main outs, cuemix notation monitors	\$1,295
24-bit	Word clock, ADAT sync, AES/EBU	No	Host dependent	Host dependent	Host dependent	116 dB S/N A-weighted on inputs and XLR main outs; front-panel headphone control	\$1,295
24-bit	Internal word clock, AES/EBU, independent AES word in	No	Host dependent	Host dependent	Y/Y	117 dB S/N A-weighted, supports 5.1 surround I/O, AES/EBU I/O rate converters	\$1,795-\$2,095
24-bit	Word clock, lightpipe, ADAT, DTP	No	Host dependent	Host dependent	Host dependent	Works as standalone format converter, sample-accurate ADAT/Tascam transfers	\$695-\$995
32-bit, depending on 3rd party software	Word clock, video, (SMPTE w/extra hardware)	Yes	8 (expandable) 64	N/A	Optional	Various format DIO cards for 8x96	\$6,495
24-bit	ADAT, BNC, internal, IEEE 1394	No	N/A	N/A	N/N		\$1,000
24-bit	N/A	No	8-channel	N/A	N/N	Digicheck software	\$395
24-bit	N/A	No	8-channel	N/A	N/N	Digicheck software	\$635
24-bit	N/A	No	8-channel	N/A	N/N	Digicheck software	\$570
24-bit	ADAT	No	18-channel	N/A	N/N	Digicheck software	\$575
24-bit	ADAT, word clock	No	26-channel	N/A	N/N	Digicheck software	\$699
24-bit	Word clock, ADAT	Yes	26-channel	N/A	N/N	(2) MIDI I/O, Digicheck software, meter bridge	\$715
24-bit	Word clock, ADAT	Yes	18-channel	N/A	N/N	MIDI I/O, Digicheck software, meter bridge	\$910
24-bit	LTC, MIDI	Yes	N/A	N/A	N/N	Word clock I/O, 64 ch	TBA
32-bit	N/A	Yes	N/A	N/A	N/N	Includes Digicheck spectrum analyzer, 16-ch meter bridge, vectorscope-bit statistics	TBA
24-bit 96 kHz	MTC/MMC	Yes	24 audio/unlimited MIDI	Unlimited	Y/Y	Also MIDI interface, motorized faders, joystick, surround, templates for Steinberg, Hu, User Modes, knobs	\$1,495
24-bit	S/PDIF (dual card)	No	8	N/A	N/N	Input gain amplifier	\$499
24-bit	Word clock	No	N/A	N/A	N/N		\$799
24-bit	DTRS	No	N/A	N/A	N/N		\$599
24-bit	SMPTE	No	N/A	N/A	N/N	Professional mastering system	\$12,000
24-bit	MTC	No	N/A	N/A	N/N		\$849
N/A	N/A	No	N/A	N/A	N/N	Stereo input VU meter, phantom powered, insert jacks	\$849
32-bit	Nuendo Timebase	Yes	Unlimited	Unlimited	Y/Y	Networking capabilities, VST 3.0 audio engine, latency compensation, VST link, surround	\$1,499
N/A	N/A	No	N/A	N/A	N/N	19" rack-mount mixer with USB interface for Mac or Windows	\$699-\$849
N/A	N/A	No	N/A	N/A	N/N	Bundled w/Tascam's Gigastudio 24	\$369
24-bit	N/A	Yes	N/A	N/A	N/N	Self powered, bundled w/Tascam's Gigastudio 24, Steinberg's Cubasis recording/sequencing software	\$269
24-bit	N/A	Yes	N/A	N/A	N/N	Self powered via USB cable, ships w/Cubasis VST for Tascam US-224	\$375
24-bit	N/A	Yes	N/A	N/A	N/N	Bundled w/Cubasis VST for the Tascam US-428	\$625
24-bit	MTC	Yes	N/A	N/A	N/N	Front module, gain knobs, headphone, 5.1 playback	\$399
24-bit	MTC	Yes	N/A	N/A	N/N	2 MIDI ports	\$349
24-bit	N/A	Yes	N/A	N/A	N/N	Includes internal/external breakout box, fully routable I/O	\$599
24-bit	MTC	Yes	N/A	N/A	N/N	Daughter card expansion port	\$299
24-bit	LTC, MTC	Yes	N/A	N/A	N/N	32-ch MIDI	\$799
24-bit	LTC, MTC	Yes	N/A	N/A	N/N	32-ch MIDI	\$1,599
N/A	N/A	Yes	N/A	N/A	Y/N		\$199
N/A	N/A	Yes	N/A	N/A	Y/N		\$80
N/A	N/A	Yes	N/A	N/A	Y/Y		\$99

COMPUTER-BASED DAWS

COMPUTER-BASED DAWS

MANUFACTURER	PRODUCT	ANALOG I/O	DIGITAL I/O	PLATFORM VERSION	BUS TYPE	PLUG-IN FORMATS(S) SUPPORTED	SAMPLE RATE	A/D/A CONVERTER/BIT RATE
Voyetra	Pinnacle Project Studio	3/1	S/PDIF (coaxial)	Win 3.1/95/98/NT	ISA	N/A	Up to 48 kHz	20-bit
Voyetra	Montego II Home Studio	1/2	S/PDIF (RCA or optical)	Win 95/98/NT	PCI	N/A	Up to 48 kHz	18-bit
Xyitar	IDMS432CDR	(4/4) 3.5mm TRS jacks	S/PDIF	Proprietary	PCI	DirectX, VST proprietary	11-48 kHz	20-bit
Xyitar	IDMS832CDR	(8/8) supplied cables	S/PDIF	Proprietary	PCI	DirectX, VST proprietary	11-48 kHz	20-bit
Xyitar	IDMS1632CDR	(16/16) supplied cables	S/PDIF	Proprietary	PCI	DirectX, VST proprietary	11-48 kHz	20-bit
Xyitar	IDMS2432CDR	(24/24) supplied cables	S/PDIF	Proprietary	PCI	DirectX, VST proprietary	11-48 kHz	20-bit
Xyitar	IDMS232CDRHD	(2/2) 3.5mm TRS jacks	S/PDIF	Proprietary	PCI	DirectX, VST proprietary	11-96 kHz	24-bit
Xyitar	IDMS432CDRHD	(4/4) 3.5mm TRS jacks	S/PDIF	Proprietary	PCI	DirectX, VST proprietary	11-96 kHz	24-bit
Xyitar	IDMS832CDRHD	(8/8) supplied cables	S/PDIF	Proprietary	PCI	DirectX, VST proprietary	11-96 kHz	24-bit
Xyitar	IDMS1632CDRHD	(16/16) supplied cables	S/PDIF	Proprietary	PCI	DirectX, VST proprietary	11-96 kHz	24-bit
Xyitar	IDMS2432CDRHD	(24/24) supplied cables	S/PDIF	Proprietary	PCI	DirectX, VST proprietary	11-96 kHz	24-bit
Yamaha	01X	(8/4) (2 XLR)	Coax	Win XP, Mac OS 9-X	mLAN	VST	Up to 96 kHz	24-bit
YRS MIDI Systems	Digital Audio Workstation	8/8 RCA	2/2 S/PDIF (coaxial)	Win 98/2000/XP	PCI, USB, Firewire	VST, Direct X	8-96 kHz	A/D 24-bit, D/A 24-bit

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DIGITAL RECORDER RESOLUTIONS (MAX)	SYNC TYPES	MIDI CONTROL	TRACKS/VIRTUAL TRACKS	# OF LOCATE POINTS	EFFECTS/DYNAMIC PROCESSING	ADDITIONAL FEATURES	PRICE
20-bit	SMPTE, MTC	Yes	System dependent	N/A	Y/N	Includes Digital Orchestrator Pro, wavetable sampler, patch editor/librarian software	\$460
18-bit	SMPTE, MTC	Yes	System dependent	N/A	Y/Y	Includes Digital Orchestrator Pro, Roland GS-compatible wavetable daughter card	\$299
20-bit	SMPTE, MTC	Optional	32/Unlimited	Unlimited	Y/Y	Unlimited recording time w/Xyitar removable sound tray, ORB drive, 19" monitor, vocalizing transposer, CD mastering	\$2,999
20-bit	SMPTE, MTC	Optional	32/Unlimited	Unlimited	Y/Y	Unlimited record time w/Xyitar removable sound tray, ORB, 19" monitor, 20-ch. mic mixer, FFT noise removal	\$6,499
20-bit	SMPTE, MTC	Optional	32/Unlimited	Unlimited	Y/Y	Unlimited recording time w/Xyitar removable sound tray, ORB drive, 19" high res. monitor, 24-ch. mic mixer	\$8,499
20-bit	SMPTE, MTC	Optional	32/Unlimited	Unlimited	Y/Y	Unlimited record time w/sound tray, ORB drive, 19" monitor, mic mixer, CD mastering, 32-48 analog I/O versions avail. at \$11,000	\$10,499
24-bit	SMPTE, MTC	Optional	32/Unlimited	Unlimited	Y/Y	Unlimited record time w/removable sound tray, ORB, 19" mon, mic mixer, vocal transposer, CD mastering	\$3,499
24-bit	SMPTE, MTC	Optional	32/Unlimited	Unlimited	Y/Y	Unlimited record time w/Xyitar sound tray, ORB, 19" mon, mic mixer, FFT noise removal, CD mastering	\$3,999
24-bit	SMPTE, MTC	Optional	32/Unlimited	Unlimited	Y/Y	Unlimited record time w/Xyitar sound tray, ORB, 19" mon, FFT noise removal, vocalizing transposer, CD mastering	\$7,999
24-bit	SMPTE, MTC	Optional	32/Unlimited	Unlimited	Y/Y	Unlimited record time w/Xyitar sound tray, ORB, 19" mon, mic mixer, FFT noise removal, CD mastering	\$9,999
24-bit	SMPTE, MTC	Optional	32/Unlimited	Unlimited	Y/Y	Unlimited record time w/sound tray, ORB, mon, 48-ch. mic mixer, FFT noise removal, 32-48 analog I/O versions avail. at >\$13,000	\$12,999
24-bit	mLAN (Word clock), S/PDIF	Yes	N/A	N/A	Y/Y	Stand-alone digital mixer, remote control surface for DAW, motorized faders, bundled VST plug-ins	\$1,795
24-bit	All	Yes	Unlimited	9	Y/Y	Customized to your specifications	\$1,200-\$2,400

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Z-600

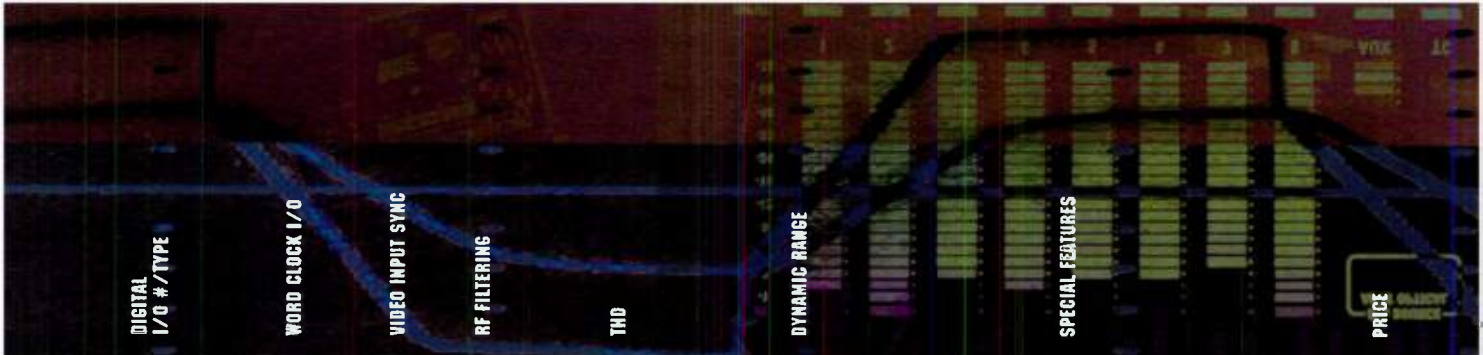
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DIGITAL AUDIO CONVERTERS

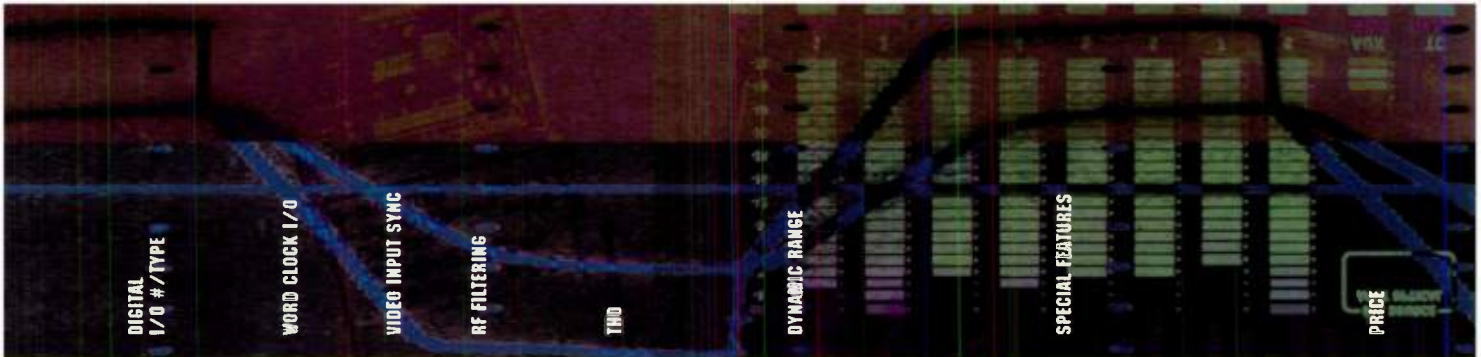
MANUFACTURER	PRODUCT	CONVERTER TYPE / #	ADC RESOLUTION, OVER SAMPLING	DAC RESOLUTION	SAMPLE RATE(S)	SAMPLE RATE CONVERSION	OTHER	ANALOG I/O # / TYPE
Alesis	A-3	A/D (8), D/A (8)	24-bit/128x	24-bit/128x	48 kHz	No	No	(8) 1/4" TRS
Alesis	AI-4	Format converter (8)	N/A	N/A	44.1, 48, 88.2, 96 kHz	No	No	N/A
Apogee Electronics	8-ch Converter Cards for Yamaha Systems	Various	24-bit Delta-Sigma	24-bit	44.1, 48, 88.2, 96 kHz	No	No	Various
Apogee Electronics	AD-16	A/D (16)	24-bit/OE	N/A	44.1-96 kHz	No	UV22HR	DB 25
Apogee Electronics	AD8000/AD8000 SE	A/D (8)	24-bit/SE	N/A	44.1, 48 kHz	No	UV22HR	(8) XLR
Apogee Electronics	DA-16	D/A (16)	N/A	24-bit/OE	44.1-96 kHz	No	No	DB-25
Apogee Electronics	Mini-DAC	D/A (2)	N/A	24-bit	44.1, 48-88.2/96-176/192 (all $\pm 10\%$)	No	No	(2) XLR, 1/8", 1/4" headphone
Apogee Electronics	Mini-Me	A/D (2)	24-bit/OE	N/A	44.1-96 kHz	Yes	UV22HR	(2) 1/4" TRS-XLR
Apogee Electronics	PSX-100/SE	A/D (2), D/A	24-bit Delta-Sigma	24-bit Delta-Sigma	44.1, 48, 88.2, 96 kHz	No	UV 22HR	XLR
Apogee Electronics	Rosetta 48K/96K	A/D (2)	24-bit Delta-Sigma	N/A	44.1, 48 kHz (Rosetta 48), 44.1, 48, 88.2, 96 kHz (Rosetta 96)	No	UV 22HR	XLR
Apogee Electronics	Trak2	2-channel mic pre w/24/96 A/D, 8-ch routing and dig I/O	24-bit Delta-Sigma	24-bit (optional)	44.1, 48, 88.2, 96 kHz	No	UV 22HR	XLR
ART	ART DIO	AD/DA	24-bit/128x	96 kHz	44.1, 48, 88.2, 96 kHz/128x oversampling	No	No	1/4"
Behringer	Ultramatch SRC2000	Digital formant converter	N/A	N/A	N/A	Yes	No	N/A
Benchmark	ADA 2008	A/D, D/A	20-bit/64x	20-bit	44.1, 48 kHz, varispeed (28-54 kHz)	No	No	XLR
Benchmark	ADC-1	A/D (2)	24-bit/128x	N/A	192 kHz	No	Yes	(2) XLR, (2) RCA
Benchmark	ADC-104	A/D (4)	24-bit/128x	N/A	28-108 kHz	Yes	Yes	(4)
Benchmark	AD2402-96	A/D (2)	24-bit/128x		44.1, 48, 88.2, 96 kHz	Yes	Yes	(2) XLR
Benchmark	AD2404-96	A/D (4)	24-bit/128x	N/A	44.1, 48, 88.2, 96 kHz, varispeed	No	Yes	(4) XLR
Benchmark	AD2408-96	A/D	24-bit/128x	N/A	44.1, 48, 88.2, 96 kHz, varispeed	No	Yes	(8) XLR
Benchmark	DAC-1	D/A (2)	N/A	24-bit/128x	28-96 kHz	No	No	(2) XLR, (2) RCA
Benchmark	DAC-104	D/A (4)	N/A	24-bit/128x	28-108 kHz	Yes	No	(8) bal
Crane Song	HEDD-192	A/D, D/A	24-bit	24-bit	44.1, 48 kHz	No	No	XLR
CreamWare	Luna 24/96 I/O Box	AD/DA	24-bit/64x	24-bit/128x	32, 44.1, 48, 88.2, 96 kHz	No	N/A	(8) RCA unbalanced
CreamWare	A16 Ultra	AD/DA	24-bit 96 kHz	N/A	32, 44.1, 48, 88.2, 96 kHz	Yes	N/A	1/4" TRS
dB Technologies	MAD•824	A/D	24-bit/128X	N/A	40-100 kHz	Yes	Yes	XLR
dB Technologies	MDA•824	D/A	N/A	24-bit/64X	40-100 kHz	Yes	Yes	XLR
Denecke	AD-20	A/D	20-bit/128x	N/A	44.1 kHz	No	Yes	XLR in, RCA line in (optional)
Digidesign	96 I/O	A/D (8), D/A (8)	24-bit	24-bit	44.1, 48, 88.2, 96 kHz	Yes	Yes	(8) 1/4" TRS
Digidesign	192 Digital I/O	D/D	N/A	N/A	44.1, 48, 88.2, 96, 176.4, 192 kHz	Yes	N/A	N/A
Digidesign	192 I/O	A/D (16), D/A (16)	24-bit	24-bit	44.1, 48, 88.2, 96, 172.4, 192 kHz	Yes	Yes	(16) D-Sub
Digidesign	882I20 I/O	A/D (8), D/A (8)	20-bit	20-bit	44.1, 48 kHz	Yes	Yes	(8) 1/4" TRS
Digidesign	882I24 I/O	A/D (8), D/A (8)	24-bit	24-bit	44.1, 48 kHz	Yes	Yes	(8) XLR
Digidesign	1622 I/O	A/D (16), D/A (2)	20-bit	24-bit	44.1, 48 kHz	Yes	Yes	(16) 1/4" TRS
Ego Sys	Gigaport AG	D/A (8)	N/A	24-bit	32, 44.1, 48 kHz	No	No	(8) RCA
Fostex	AC 2496	A/D (8) (16-ch optional)	24-bit/128x	N/A	44.1-96 kHz	No	No	(8) 1/4" TRS (+4/-10)
Fostex	COP-1/96k	A/D, D/A	N/A	N/A	32-96 kHz	No	No	N/A
Fostex	VC-8	ADAT optical to analog (8)	20-bit	20-bit	32, 44.1, 48 kHz	No	No	(8) 1/4"



DIGITAL I/O #/TYPE	WORD CLOCK I/O	VIDEO INPUT SYNC	RF FILTERING	THD	DYNAMIC RANGE	SPECIAL FEATURES	PRICE
ADAT (optical)	No	No	Yes	0.0025%	96 dB	Signal/clip meters; optical out source switch	\$499
(4) AES/EBU; (2) ADAT	Yes	No	No	N/A	144 dB	Independant clocking on AES/EBU to ADAT and ADAT to AES/EBU	\$499
Various	No	No	Yes	-105 dB (A/D), -103 dB (A/D)	117 dB A-weighted (A/D), 116 dB A-weighted (D/A)	8 ch converters; same cards fit both YGDAI (02R) and Mini-Y (01V) slots; AP8AD card features soft limit	\$1,495 (AP8AD) \$1,195 (AP8DA)
ADAT/S-MMX; AES/EBU option; TDIF option	Yes	No	Yes	THD+N = -105 dB	>117 dB	Soft limit	\$2,995
(4) XLR	Yes	Yes (optional)	Yes	THD+N = -110 dB	>114 dB	Card-based digital I/O, optional 8-ch and 2-ch D/A cards	\$4,995/\$6,995
AES/EBU; TDIF; ADAT/S-MMX	Yes	Optional	Yes	THD+N = -104 dB	>116 dB	Soft limit	\$2,995
(2) AES/EBU; ADAT; S/PDIF; USB	No	No	No	-107 dB	119 dB weighted	Analog output level control for direct connect of pwr'd monitors; digital thru mode adds USB functionality to digital devices	\$1,195 (w/USB), \$995
AES/EBU; S/PDIF; USB	No	No	Yes	THD+N = -93 dB	>105 dB	Mic/line/instr pre; phantom, soft limit, 3-curve comp/lim, mon out incl return from USB; low voltage/current op for batt power	\$1,395
AES/EBU; S/PDIF; ADAT; TDIF	Yes	Optional	Yes	-112 dB (-0.1 dBFS A-weighted)	>119 dB (-60 dB A-weighted)	3 modes enable cross-connection of A/D & D/A, format conversion; ABS/ABS96 bit-splitting; low jitter clock	\$2,995-\$3,995
AES/EBU; S/PDIF (coax/opt); ADAT; TDIF	Yes (out only)	No	Yes	-112 dB (-0.1 dBFS A-weighted)	>119 dB (-60 dB A-weighted)	Upgradable from 44.1/48 to add 88.2/96 kHz; pro/consumer analog in	\$1,295-\$1,995
2-ch AES/EBU; S/PDIF; plug-in cards	Yes	Optional	Yes	-112 dB A-weighted (A/D)	>119 dB -60 dB A-weighted (A/D)	2-ch mic pre; phantom; line mic/instr inputs; format conversion; AMBUS digital I/O cards; low jitter clock	\$3,995
S/PDIF (coax)	No	No	No	0.01% (clean settings); 0.1% (warm settings)	100 dB typical	Vacuum tube	\$199
AES/EBU; S/PDIF	Yes	No	No	0.001%	95 dBFS	SCMS copy-bit and emphasis-bit removal	\$169
AES/EBU; ALR; BNC	No	No	Yes	0.0004% @ -1 dB FSD (20 Hz-20 kHz)	110 dB (20 Hz-20 kHz)	128 dBFS (0.00004%) @ -1 dBFS DCCIF IM	\$4,285
AES/EBU	Yes	No	Yes	N/A	>120 dB	2 channels premium mic amp; A/D conversion	TBA
(8) AES/EBU; (2) ADAT; AES/EBU ref. in	No	No	Yes	0.001%	>115 dB	Card for system 1000 frame (4 to 48 channels/frame)	\$1,495
(2) AES/EBU; S/PDIF (coax; 2 in, 1 out)	No	No	Yes	THD+N = -107 dB (0.00033%)	117 dB	11 word length reduction types; 38 noise-shaping curves; simultaneous 16- and 24-bit output; dig-to-dig	\$1,795
(2) AES/EBU; (3) XLR; S/PDIF	No	No	Yes	0.00003% @ 1dB FSD (20 Hz-20 kHz)	117 dB (20 Hz-20 kHz)	Jitter reducing phase-locked-loop circuitry; (4) 9-segment digital monitors	\$2,850
(4) AES/EBU; XLR; AES2id; BNC; S/PDIF	No	No	Yes	0.00003% @ 1 dB FSD (20 Hz-20 kHz)	117 dB (20 Hz-20 kHz)	Jitter reducing phase-locked-loop circuitry; (4) 9-segment digital monitors	\$5,095
AES/EBU; S/PDIF (coax, optical)	No	No	Yes	THD+N = -104 dB (0.00067%)	117 dB	Ultra-low lock-jitter technology; headphone amp; direct connection to powered monitors	\$795
(2) AES/EBU	No	No	Yes	0.001%	>110 dB	Card for system 1000 frame (4-48-ch./frame)	\$1,295
AES/EBU; S/PDIF	Yes	No	Yes	Depends on process	>117 dB	DSP generates tricode/pentode tube sound in the digital domain	\$3,495
Z-Link	No	No	N/A	N/A	110 dB		\$425 and up
ADAT; Z-Link	Yes	No	N/A	N/A	110 dB		\$1,195
AES/EBU	Yes	No	Yes	0.001% unweighted	113 dB unweighted	Analog soft saturation and digital tape saturation; word length control—24, 20 or 16 bits; settings stored in non-volatile RAM; 112 dB channel separation	\$1,495 and up
AES/EBU	Yes	No	Yes	0.0014% unweighted	112 dB unweighted	Jitter removal; DSP based up-sampling; 96 kHz capable; 112 dB channel separation	\$1,345 and up
S/PDIF (optical, coax) out	No	No	Yes	0.0016%	>99 dB	Built-in mic preamp	\$325
(8) ADAT optical; AES/EBU; S/PDIF	Yes	No	Yes	A/D: <0.0007%; D/A: <0.0013%	A/D: 115 dB (A-weighted); D/A: 114 dB (A-weighted)	Expansion and Legacy Peripheral Ports	\$1,995
(26) AES/EBU; (16) TDIF; (16) ADAT; (2) S/PDIF	Yes	No	Yes	N/A	N/A	Expansion port; Legacy peripheral port	\$2,495
(8) AES/EBU; (8) TDIF; (16) ADAT; (2) add'l AES/EBU or S/PDIF	Yes	No	Yes	A/D: <0.00035%; D/A: <0.00056%	A/D: 120 dB (A-weighted); D/A: 118 dB (A-weighted)	192 DIGITAL I/O - all digital version; Expansion and Legacy Peripheral ports; expansion bay; soft-clip limiter	\$3,995
(2) S/PDIF, RCA	No	No	Yes	A/D: <0.003%; D/A: <0.003%	A/D: 103 dB (A-weighted); D/A: 98 dB (A-weighted)	For use with Pro Tools 24 Mix and Pro Tools HD systems	\$1,245
(8) AES/EBU; (2) S/PDIF (coax)	No	No	Yes	A/D: <0.003%; D/A: <0.003%	A/D: 110 dB (A-weighted); D/A: 105 dB (A-weighted)	For use with Pro Tools 24 Mix and Pro Tools HD systems; can be used in stand-alone mode	\$3,695
(2) 24-bit S/PDIF	No	No	Yes	A/D: <0.004%; D/A: <0.003%	A/D: 99 dB (A-weighted); D/A: 105 dB (A-weighted)	For use with Pro Tools 24 Mix & Pro Tools HD systems	\$1,595
(2) S/PDIF optical	No	No	No	0.03%	102 dB		\$200
N/A	Yes	Yes	Yes	<0.004%	>110 dB	Optional AES/EBU card; optional 8-ch card for 16 ch	\$899
S/PDIF (optical, cover)	No	No	No	N/A	N/A	96 kHz compatible	\$94
ADAT; S/PDIF	Yes	No	No	N/A	N/A	Selectable clock; adds analog I/Os to digital recorders, or 8 analog ins to PCs	\$339

DIGITAL AUDIO CONVERTERS

MANUFACTURER	PRODUCT	CONVERTER TYPE / #	ADC RESOLUTION, OVER SAMPLING	DAC RESOLUTION	SAMPLE RATE(S)	SAMPLE RATE CONVERSION	DITHER	ANALOG I/O # / TYPE
Frontier Design Group	Tango24	A/D (8), D/A (8)	24-bit/128x	24-bit/128x	44.1, 48 kHz, 39-51 kHz from external clock	No	No	(8) 1/4" TRS
Genex	GXA8 ADC	A/D (8)	24-bit/128x	N/A	44.1-192 kHz DSD	No	Yes	(8) XLR
Genex	GXD8 DAC	D/A (8)	N/A	24-bit/128x	44.1-192 kHz DSD	No	Yes	(8) XLR
iZ Technology	UFC-24	Digital format converter	N/A	N/A	32-48 kHz	No	No	N/A
Lucid	AD9624	A/D (2)	24-bit/128x	N/A	96, 88.2, 48, 44.1, 32 kHz	Yes	Yes	(2) XLR
Lucid	ADA1000	A/D, D/A	20-bit/64x	20-bit/64x	32, 44.1, 48 kHz	No	No	(4) XLR, (4) 1/4" TRS
Lucid	ADA8824 (ADAT)	A/D/A (8 ch)	24-bit/128x	24-bit/128x	44.1, 48 kHz	Yes	No	(8) XLR
Lucid	DA9624	D/A (2)	N/A	24-bit/128x	96, 88.2, 48, 44.1, 32 kHz	Yes	No	(2) 1/4" TRS, XLR
Lucid	SRC9624	Sample rate converter	N/A	N/A	32-100 kHz	Yes	Yes	N/A
Mackie Designs	8 Mix	Analog to TDIF converter	20-bit AKM	20-bit AKM	44.1, 48 kHz	No	No	(8) RCA
Mackie Designs	I/O896	A/D (8), D/A (8)	24-bit/128x	24-bit/128x	44, 48, 88.2, 96 kHz	Yes	Yes	Sub D-25
Marian	Adcon	A/D (8), D/A (8)	24-bit/128x	24-bit/128x	44.1, 48 kHz	No	No	(8) 1/4" TRS
M-Audio	CO3	Format converter: S/PDIF, Toslink, AES/EBU	N/A	N/A	All	Yes	No	N/A
M-Audio	Flying Cow 24-bit	A/D (2), D/A (2)	24-bit/128x	24-bit/128x	32, 44.1, 48 kHz	No	No	(2) 1/4"
Merging Technologies	Dua 11	A/D, D/A	24-bit	24-bit	32, 44.1, 48 kHz	Yes	Yes	XLR
Merging Technologies	Sphynx Modular High Resolution Audio Interface	N/A	24-bit	24-bit	32, 44.1, 48, 64, 88, 96 kHz	Yes	Yes	(8) 1/4"
Mytek Digital	8i96 Series	A/D, D/A	24-bit/64x/128x	24-bit	44.1, 48, 88.2, 96 kHz	No	Yes	(8) XLR
Mytek Digital	Workstation 24	N/A	24-bit/64x	24-bit	44.1, 48 kHz	No	Yes	XLR
Otari	FS-96	Format/sample rate converter	24-bit	24-bit	32, 44.1, 48, 88.2, 96 kHz	Yes	Yes	N/A
Panasonic	WZ A/D 96M	A/D	24-bit/128 X	24-bit	44.1, 48, 88.2, 96 kHz	No	Yes	8 XLR
Panasonic	WZ A/D 96/WZ D/A 96	A/D	24-bit/128x	24-bit	44.1, 48, 88.2, 96 kHz	No	Yes	(8) XLR
Precision	SRD-1	N/A	N/A	N/A	N/A	No	No	N/A
Radio Design Labs	RU-AEC1	N/A	24-bit	N/A	32, 44.1, 48, 88.2, 96 kHz	No	No	XLR
RME	ADI-8 DD	D/D (16)	N/A	24-bit/128x	44.1, 48, 88.2, 96 kHz	Yes	Yes	N/A
RME	ADI-8 DS	A/D (8), D/A (8)	24-bit/128x	24-bit/128x	44.1, 48, 88.2, 96 kHz	Yes	Yes	(8) 1/4" TRS, 25-pin
RME	ADI-8 Pro	A/D (8), D/A (8)	24-bit/128x	24-bit/128x	44.1, 48 kHz	Yes	No	(8) 1/4" TRS, 25-pin D type
RME	ADI-96 Pro	A/D (2)	24-bit/128x	N/A	32, 44.1, 48, 64, 88.2, 96 kHz	Yes	Yes	(2) XLR mic
SEK'D	2496 S	A/D, D/A	24-bit/128x	24-bit/128x	44.1, 48, 96 kHz	No	No	(2) XLR
Soniflex	RB-ADDA	A/D, D/A	N/A	24-bit	32, 44.1, 48, 64, 88.2, 96 kHz	No	No	XLR, RCA
Sonorus	AUDI/O AD/8	N/A	24 bits or dithered to 16 or 20 bits	N/A	44.1, 48, 88.2, 96 kHz	No	Yes	(8) XLR-1/4" combo
Sonorus	AUDI/O AD/24	N/A	24-bit/128x	N/A	44.1, 48 kHz	No	No	(8) XLR
Sonorus	AUDI/O AD/96	N/A	16, 18, 20, 24-bit	N/A	44.1, 48, 88.2, 96 kHz internal, 42-50, 84-100 kHz external	No	Yes	(4) XLR
Sonorus	AUDI/O DA/24	N/A	N/A	24-bit/128x	44.1, 48 kHz	No	No	(8) XLR
Sonorus	AUDI/O DA/96	N/A	N/A	24-bit	44.1, 48, 88.2, 96 kHz internal, 42-50, 84-100 kHz external	No	Yes	(4) XLR
Swissonic	AD8/AD8 Pro	A/D (8)	24-bit	N/A	44.1, 48, 88.2, 96 kHz	No	Yes	XLR-1/4" combo
Swissonic	AD24 Mk II	N/A	24-bit/64x	N/A	44.1, 48 kHz	No	No	CMR, XLR in
Swissonic	AD96 Mk II	N/A	16, 18, 20, 24-bit	N/A	44.1, 48, 88.2, 96 kHz	No	Yes	(4) CMR
Swissonic	DA24 Mk II	N/A	N/A	24, 16-bit	44.1, 48 kHz	No	No	(8) XLR
Swissonic	DA96 Mk II	N/A	N/A	24-bit	N/A	Yes	Yes	(4) XLR
Universal Audio	2192	A/D (2), D/A (2)	24-bit/128x	24-bit/128x	44.1, 48, 88.2, 96, 176.9, 192 kHz	No	No	(2) XLR



DIGITAL I/O #/TYPE	WORD CLOCK I/O	VIDEO INPUT SYNC	RF FILTERING	THD	DYNAMIC RANGE	SPECIAL FEATURES	PRICE
(8) ADAT optical in/out/thru	Yes	No	Yes	0.002% (A-weighted)	105 dB (A-weighted)	+4 dBu or -10 dBV, selectable per channel	\$699
(8) AES/EBU	Yes	No	No	<-103 dB	>117 dB	DSD support, Pagrat/Sony DSD, bit-splitting, support for ADAT, S/PDIF2	\$3,649
(8) AES/EBU	Yes	No	No	<-101 dB	117 dB	DSD support, Pagrat/Sony DSD bit-splitting, support for ADAT, TDIF, S/PDIF2	\$3,049
(24) AES/EBU, TDIF, ADAT, S/PDIF-2	Yes	No	No	N/A	>117 dB	Configuration presets recalled via MIDI, formats output simultaneously	\$1,495
(2) AES/EBU, (1) S/PDIF (coax), Toslink	Yes	No	Yes	<0.002%	>115 dB	User-selectable 16-bit noise shaping, 20-seg input level LED ladders w/peak, hold, clip indicator	\$899
(2) AES/EBU or (2) S/PDIF	No	No	Yes	0.005%	>95 dB		\$499
(4) AES/EBU, (1) S/PDIF, (2) ADAT sync	Yes	No	Yes	<0.005%	>113 dB A/D, >105 dB D/A	ADAT-optical (light pipe) I/O; ADAT sync I/O connectors	\$2,499
(2) AES/EBU, (1) S/PDIF (coax), Toslink	No	No	Yes	<0.002%	>114 dB	Separate headphone vol control, front panel out, 20-seg output level LED ladders	\$749
(2) XLR, AES/EBU, (2) S/PDIF coaxial, (2) Toslink	Yes	Yes	No	-117 dB max	120 dB min, 128 dB typical	Single & double wire 96 kHz I/O, 5 internal and 3 external master clock options	\$1,499
TDIF	Yes	No	No	<-94 dB	100 dB (A-weighted)	8 ch LED input level metering at -30 dBFS and -3 dBFS	\$399
AES/EBU, ADAT, MADI	Yes	Yes	Yes	THD+N <-116 dB @ -0.5 dBfs	-116 dB (A-weighted)	Optional MADI card bay, optional Firewire host I/O card bay	\$3,995
ADAT	No	No	No	0.005%	104/114 dB	2 mic pre inputs XLR, gain, phantom power	\$599
S/PDIF, Toslink, AES/EBU	No	No	No	N/A	N/A	SCMS bit management	\$250
(2) AES/EBU, (2) S/PDIF	No	No	No	0.003%	103 dB		\$400
AES/EBU ODI	Yes	No	Yes	THD+N -98 dB	100 dB, 103 dB (A)	Ideal for surround monitoring	\$1,295
up to 8 AES/EBU, ADAT, S/PDIF	Yes	Yes	Yes	THD+N -101dB	117 dB (A-weighted)	Extended modularity with up to 8 ch of 24-bit/96 kHz I/O	\$2,995 and up
(4) AES/EBU, (2) ADAT, ProTools, Sonic, TDIF	Yes	No	Yes	-106 dB	120 dB	S/MUX and MRX bit-splitting; digital format conversion, 96 kHz	\$2,795
S/PDIF, AES/EBU, Toslink	Yes	No	Yes	-103 dB THD	117 dB	Digital format conversion, signal routing	\$1,995
(24) ADAT, (24) TDIF, (24) S/PDIF, (24) AES/EBU	Yes	No	No	N/A	N/A	MADI option: TDIF to/from AES/EBU (\$995), IEEE-1394 option	\$3,495
AES/EBU, ADAT, TDIF optional	Yes	No	Yes	0.003	117 dB	Supports all current and proposed digital output; mic preamp w/ A/D converter	\$2,496
AES/EBU, Toslink	Yes	No	Yes	0.003	118 dB	Precision metering with selectable reference levels	\$2,195
N/A	Yes	No	No	N/A	N/A		\$150
N/A	No	No	Yes	< 0.04%	> 90 dB	Sure-Lok auto recovery system	\$443
(4) XLR, AES/EBU, ADAT optical, TDIF	Yes	No	Yes	0.00014%	-128 dB		\$1,215
ADAT, TDIF	Yes	No	Yes	0.0063%	116 dB		\$2,255
ADAT, TDIF	Yes	No	Yes	0.008%	-116 dB	Many DSP functions	\$1,750
S/PDIF, AES/EBU, (2) XLR link, (2) 1/4" TRS	Yes	No	Yes	0.001%, -100 dB	117 dB	Many DSP functions	\$1,750
(2) AES/EBU, S/PDIF (coax)	No	No	No	0.002%	>115 dB	Half-rack space	\$799
AES/EBU, S/PDIF	Yes	No	No	96 dB THD + N at 1 kHz	110 dB		\$820
(2) Toslink, (4) AES/EBU (Pro version)	Yes	No	Yes	0.007% at min gain	115 dB at min gain	Neutrik XLR/1/4" combo-inputs, phantom power, 40 dB gain	\$1,499
ADAT, Toslink	Yes	No	Yes	99 dB THD + N	115 dB SNR (A-weighted)	Half-rack space	\$749
AES/EBU, S/MUX, ADAT	Yes	No	Yes	100 dB	115 dB (A-weighted)	Half-rack space; high-res, multi-mode meters, bit-word-packing	\$999
ADAT, Toslink	Yes	No	Yes	97 dB THD + N	106 dB (A-weighted)	Half-rack space	\$599
AES/EBU, S/MUX, Toslink	Yes	No	Yes	96 dB	110 dB (A-weighted)	Half-rack space; supports bit- and sample-packing	\$999
(2) Toslink or (4) AES/EBU	Yes	No	No	< 0.007%	115 dB	Internal/external sync; gain pots, 19" rackmount; 8 mic preamps w/ phantom	\$2,098-\$2,598
Toslink	Yes	No	No	0.001% (-1 dBFS input level)	115 dB (A-weighted) 113 dB (unweighted)	Half-rack space	\$899
(2) XLR	Yes	No	No	0.003% @ -1 dBFS	115 dB (A-weighted)	For bit-packed/sample-packed ADAT formats	\$1,349
Toslink	Yes	No	No	< -97dB	115dB	Half-rack space	\$699
AES/EBU, XLR, Toslink	Yes	No	No	0.003% @ -1 dBFS	110 dB (A-weighted)	Support for bit-packed/sample-packed ADAT, record 24/96 data on conventional 16/48 MDM's; half-rack	\$1,149
(2) AES/EBU, ADAT, S/PDIF	Yes	No	Yes	N/A	>120 DAC, >123 ADC	Word Clock I/O w/2 in/4 out	\$2,495

DIGITAL MIXDOWN MACHINES

MANUFACTURER	MODEL	TYPE	SAMPLING FREQUENCY	PLAYBACK FREQUENCY	ADC	DAC	ANALOG I/O	DIGITAL I/O	TIME CODE	SCMS	SEPARATE MIC INPUT
Alesis	MasterLink ML-9600	Hard disk, CD-R	44.1, 48, 88.2, 96 kHz	44.1, 48, 88.2, 96 kHz	24-bit	24-bit	XLR, RCA	AES/EBU, S/PDIF (coax)	No	No	No
Denon	DN-F20R	CF I.C. recorder	24, 48 kHz	24, 48 kHz	1-bit, 64fs digital filter	1-bit, 8fs digital filter	RCA	N/A	No	No	Yes
Denon	DN-M991R	MiniDisc	44.1 kHz	44.1 kHz	16-bit	18-bit	XLR	XLR	No	Yes	No
Denon	DN-M991RM	MiniDisc	44.1 kHz	44.1 kHz	16-bit	18-bit	XLR	XLR	No	Yes	No
Denon	DN-M1050R	MiniDisc	32, 44.1, 48 kHz	44.1 kHz	16-bit	18-bit	XLR, RCA	AES/EBU, S/PDIF (coax)	Optional	Yes	No
Denon	DN-M2300R	MiniDisc	44.1 kHz	44.1 kHz	16-bit	18-bit	RCA	S/PDIF (coax)	No	Yes	No
Ego Sys	M-Fire 9600	DVD-R	96 kHz	96 kHz	24-bit	24-bit	XLR	AES/EBU, S/PDIF	No	No	No
Fostex	D5	DAT	32, 44.1, 48 kHz	44.1, 48 kHz	1-bit	1-bit	XLR	AES/EBU, S/PDIF (optical, coax)	No	No	No
Fostex	D15	DAT	44.1, 48 kHz	44.1, 48 kHz	18-bit	18-bit	XLR	AES/EBU	Optional	No	No
HHB	MDP500	Portable MiniDisc	44.1 kHz	44.1 kHz	20-bit	20-bit	XLR, RCA	S/PDIF (coax, optical)	No	Yes	Yes
Sony	MDS-E10	MiniDisc	44.1 kHz	44.1 kHz	24-bit	20-bit	RCA	S/PDIF (optical)	No	No	No
Sony	MDS-E12	MiniDisc	44.1 kHz	44.1 kHz	24-bit	20-bit	RCA	S/PDIF (optical)	No	No	No
Sony	MDS-JE630	MiniDisc	44.1 kHz	Auto	24-bit	20-bit	RCA	S/PDIF (optical)	No	Yes	No
Sony	MZR	Portable MiniDisc	44.1 kHz	Auto	16-bit	16-bit	1/8" mini stereo	S/PDIF (optical)	No	Yes	Yes
Sony	PCM-M1	DAT	32, 44.1, 48 kHz	Auto	16-bit	16-bit	1/8" stereo mini	7-pin w/opt. cable	No	No	Yes
Sony	PCM-R300	DAT	32, 44.1, 48 kHz	Auto	20-bit	16-bit	RCA	S/PDIF	No	No	No
Sony	PCM-R500	DAT	32, 44.1, 48 kHz	Auto	20-bit	16-bit	XLR, RCA	AES/EBU, S/PDIF (coax)	No	No	No
Sony	TCD-D8	DAT	32, 44.1, 48 kHz	Auto	16-bit	16-bit	1/8" stereo mini	7-pin connector w/opt. cable	No	Yes	Yes
Tascam	DA-20 MkII	DAT	32, 44.1, 48 kHz	32, 44.1, 48 kHz	1-bit Delta/ Sigma	1-bit Delta/ Sigma	RCA	S/PDIF (optical)	No	No	No
Tascam	DA-40	DAT	32, 44.1, 48 kHz	32, 44.1, 48 kHz	20-bit	20-bit	XLR, RCA	AES/EBU, S/PDIF	No	Yes	No
Tascam	DA-45HR	DAT	32, 44.1, 48 kHz	32, 44.1, 48 kHz	24-bit	24-bit	XLR, RCA	AES/EBU, S/PDIF	No	Yes	No
Tascam	DA-60 MkII Time Code DAT	DAT	44.1, 48 kHz	44.1, 48 kHz	16-bit linear	16-bit linear	XLR, RCA	AES/EBU, S/PDIF	Yes	Yes	No
Tascam	DA-302 Dual	DAT	32, 44.1, 48 kHz	32, 44.1, 48 kHz	16-bit	16-bit	RCA	S/PDIF	No	Yes	No
Tascam	MD-301 MkII	MiniDisc	32, 44.1, 48 kHz	32, 44.1, 48 kHz	20-bit	20-bit	XLR, RCA	Optical	No	No	No
Tascam	MD-350	Mini disc	44.1 kHz	44.1 kHz	16-bit, linear	16-bit, linear	XLR, RCA	S/PDIF (optical)	No	Yes	No
Tascam	MD-801R MkII	MiniDisc	32, 44.1, 48 kHz	32, 44.1, 48 kHz	20-bit	20-bit	XLR, RCA	AES/EBU, S/PDIF	No	No	No

Steve Marcantonio

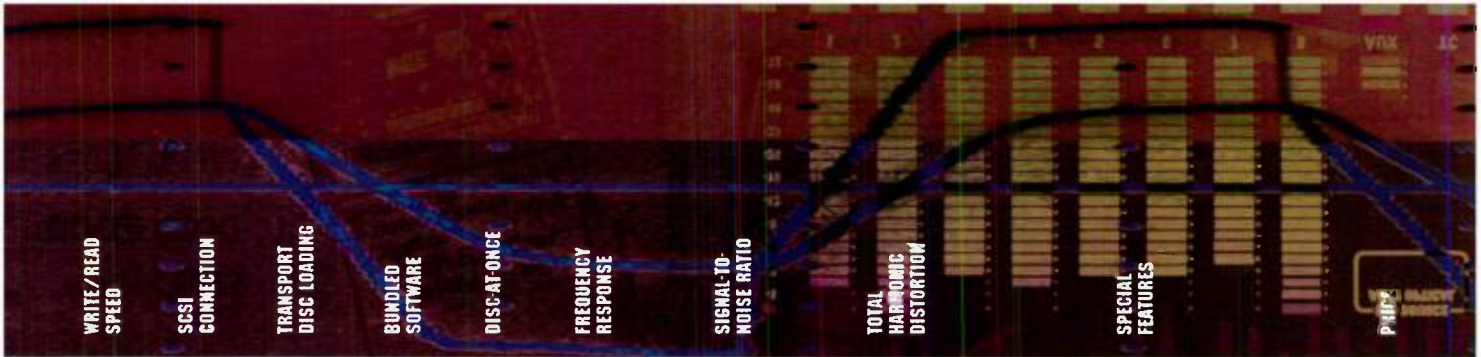
From page 16, Steve Marcantonio

but back in New York no one owned anything. So I fought it for years, but now I finally have a rack. It's a low-tech kind of rack, though. I've got some TC gear—the M2000 and 3000. I like them because they have two engines. I've got this BSS dynamic EQ. And I bought an 1178. I love an 1178. I'd like to get a couple of 1176s too. Oh, I also own two

Distressors. To me, they work similarly to almost every kind of limiter. A Distressor can be like an 1176, or, at times an LA2 or a dbx. I'll use them on everything—drums, vocals, bass. I've got some [API] 560s as well. And I've got a Space Station—I picked that up real cheap years ago.

Why do you think the engineer/manager thing, which is so ubiqui-

tous in L.A., doesn't seem to exist in Nashville? I think it's just smaller and more personal here. For example, Tony Brown is the president of MCA Records, and he produces a lot of major acts. I can call him up tomorrow, and if he can't take my call then, he'll call me back in five minutes. You have personal relationships with everybody in town: the producers, the production assistants. It's



WRITE/READ SPEED	SCSI CONNECTION	TRANSPORT DISC LOADING	BUNDLED SOFTWARE	DISC AT-ONCE	FREQUENCY RESPONSE	SIGNAL-TO-NOISE RATIO	TOTAL HARMONIC DISTORTION	SPECIAL FEATURES	
4x/8x	No	Front-loading CD-R drive	No	Yes	20 Hz-20 kHz	113 dB	<0.002%	Playlists, editing, CD24, audio CD	\$1,699
1x	No	No	No	No	20 Hz-20 kHz	>= 80 dB	0.005%	Linear, MPEG1, MPEG2 formats, mic limiter, low filter and atten, (2) slots for extended recording, onboard editing, approx 2 lbs.	\$1,299
1 x	No	Manual	No	No	20 Hz-20 kHz	>100 dB	0.02%	Hot start, shock memory, undo/redo, RS232/422, GPI interface	\$2,299
1 x	No	Manual	No	No	20 Hz-20 kHz	>100 dB	0.02%	Same as DN-M991R but with five enhanced features	\$2,499
1 x	No	Auto-load	No	No	20 Hz-20 kHz	>92 dB	0.012%	Extnd sync option, hot-start option, RS232/422, PC kybrd cntrl, GPI interface	\$1,999
1 x	No	Manual	No	No	20 Hz-20 kHz	>92 dB	<0.012%	Dual drives, disc copy, hot start, shock memory, disc tilling	\$1,499
1x	No	Front-loading	No	Yes	20 Hz-20 kHz	113 dB	0.002%	Playlists editing, supports CD-R	\$2,000
N/A	No	Tray	No	No	20 Hz-20 kHz	92 dB	N/A	Supplied infrared remote headphone matrix options	\$999
N/A	No	Drawer	No	No	20 Hz-20 kHz	92 dB	0.05%	Parallel port, time code w/video ref, RS422 rack optional	\$3,295
1 x	No	Front-loading	No	No	10 Hz-20 kHz	>89 dB	<0.02%	USB, transportable, onboard editing, carry case, NiMH batteries	\$1,599
N/A	No	No	No	No	5 Hz-20 kHz	96 dB	N/A	Pitch control, 10 hot starts, scale factor and ram editing	\$599
N/A	No	No	No	No	5 Hz-20 kHz	96 dB	N/A	Serial (RS-232C) and parallel (GPE) remote interfaces, rec/play cascade link, XLR balanced analog I/O	\$899
N/A	No	No	No	No	5 Hz-20 kHz	>96 dB	N/A	Sampling-freq converter allows dir rec from digital sources (48 kHz/32 kHz)	\$360
N/A	No	No	No	No	15 Hz-20 kHz	>96 dB	N/A	Editing/song search, digital sample rate converter, headphone/remote, auto-limiter	\$399
N/A	No	No	No	No	20 Hz-20 kHz	N/A	<0.008%	Adjustable level-sync, AGC/limiter circuit	\$1,040
N/A	No	No	No	No	20 Hz-20 kHz	>90 dB	<0.06%	20-bit A/D with super bit-mapping	\$1,025
N/A	No	No	No	No	20 Hz-20 kHz	>90 dB	<0.06%	20-bit A/D with super bit-mapping, 4 D.D. motor transport	\$1,765
N/A	No	No	No	No	20 Hz-20 kHz	>90 dB	<0.008%	High speed search/cue, auto-limiter, back-lit LCD	\$899
N/A	No	No	No	No	20 Hz-20 kHz	>91 dB	<0.0045%	Wireless remote, self diagnostic	\$1,060
N/A	No	No	No	No	20 Hz-20 kHz	>92 dB	<0.005%	Optional remote	\$1,399
N/A	No	No	No	No	20 Hz-20 kHz	>112 dB (HR recording), >105 dB	<0.002% (HR recording), <0.004%	Optional remote, word sync in/thru	\$2,249
N/A	No	No	No	No	5 Hz-22 kHz	>94 dB emphasis off, >98 dB emphasis on	<0.004%	Time code generator, P2 protocol, confidence monitoring	\$6,999
N/A	No	No	No	No	20 Hz-20 kHz	>92 dB	<0.005%	Remote, continuous recording between decks 1 & 2, simultaneous record capability	\$1,899
N/A	No	No	No	No	20 Hz-20 kHz	>94 dB	<0.013%	Wireless remote	\$585
N/A	No	No	No	No	20 Hz-20 kHz	>94 dB	<0.014%	Pitch control +/- 12%	\$699
N/A	No	No	No	Yes	20 Hz-20 kHz	>102 dB (playback) >96 dB (playback)	<0.006%	Optional remote	\$2,699

more one-on-one in Nashville; it's more of a community. Here, I think, you go by your reputation and by word of mouth.

Do you have any theories on what makes a good-sounding record? Well, I'm old school. When I listen to music on the radio, I try to picture the band actually playing. I listen a lot to oldies, and when you hear those records, you can almost see them in the studio. Nowa-

days, often you hear records and it sounds like, that guitar is "here" and something else is "over there"—it almost sounds like it's pasted. It doesn't sound real. I take pride in getting stuff on tape as good as possible, in just capturing the performance of the musicians without messing with it. And then, putting it out in its rawness. To me, that makes a good-sounding record. I don't care if there's a

mistake or if you can hear a car going by outside. You need to fix some mistakes, but if it sounds natural and real, that's a good-sounding record. ■

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DIGITAL MIXING CONSOLES

MANUFACTURER	PRODUCT	MIXER CONFIGURATION	MIC INPUTS (XLR)/ LINE INPUTS	# OF DIGITAL INPUTS/TYPE	# OF DIGITAL OUTPUTS/TYPE	# OF OPTION CARD SLOTS	ANALOG INSERTS/DIRECT OUTS	# OF ANALOG AUX SENDS/RETURNS	AD CONVERTERS	DA CONVERTERS
Behringer	DDX3216	32x16x2	2/16	S/PDIF (coax)	S/PDIF (coax)	2	12/10 1/4" TRS	0/0	24-bit/128x	24-bit/128x
Event Electronics	EZbus	8x4x2	(2) XLR; (16) 1/4" TRS line; (2) 1/4" TRS instr	ADAT optical; S/PDIF (optical, coax)	ADAT; (2) S/PDIF (coax)	N/A	0	(4/4) TRS	24-bit/128x	24-bit
Mackie Designs	Digital 8 Bus	56x8x2	12/24	Up to 34	Up to 34	8 (4 I/O, 4 effects)	12/24/options	12 1/4" TRS snds/ 8 optional rets	24-bit/128x	24-bit/128x
Roland	M-1000 Digital Line Mixer	10x2	0/2	(4) stereo coax, option; USB 1.1 audio I/O	Coax/optical; USB audio I/O	N/A	N/A	N/A	24-bit/64x	24-bit/128x
Roland	VM-3100 V Mixing Station	12x8x2	8/10	S/PDIF (optical, coax)	(2) S/PDIF (optical, coax)	N/A	4	4	24-bit	24-bit
Roland	VM-3100 Pro V Mixing Station	20x8x2	2/10	S/PDIF (optical, coax)	(2) S/PDIF (optical, coax)	1	4	4	24-bit	24-bit
Roland	VM-7100/VM-C7100 V Mixing System	38x14x2	11/1	S/PDIF or AES/EBU	(2) S/PDIF; AES/EBU	7	Up to 8	Up to 10	24-bit	24-bit
Roland	VM-7200/VM-C7200 V Mixing System	48x14x2	21/1	S/PDIF or AES/EBU	(2) S/PDIF; AES/EBU	8	Up to 18	Up to 10	24-bit	24-bit
Roland	VM-7200 (x2)/VM-C7200 (x2) V Mixing System	94x14/28 flex bus x 2	41/1	(2) S/PDIF or AES/EBU	(4) AES/EBU; S/PDIF	13	24/16	Up to 34	24-bit	24-bit
Soundcraft	Spirit 328XD	32x8x2	16/16 mono; 5 stereo	(2) ADAT; (2) TDIF; AES/EBU; S/PDIF	(2) ADAT; (2) TDIF; AES/EBU; S/PDIF	N/A	16/0 1/4" TRS	(4/4) 1/4" TRS	24-bit/128x	24-bit/128x
Tascam	DM-24	24x8x2	16/16	(24) TDIF; (8) ADAT; (2) AES/EBU	(24) TDIF; (8) ADAT; (2) AES/EBU	2	16/16 1/4"	(4/4) 1/4" TRS	24-bit	24-bit
Yamaha	01V	24x4	12/4	S/PDIF	S/PDIF	1	0/0 (4 using 1/4" omni outs)	0/0 (4 using 1/4" omni outs)	20-bit	20-bit
Yamaha	01V 96	40x8x2	12/16	S/PDIF (coax); ADAT	S/PDIF (coax); ADAT	1 (16-ch.)	12/N/A/TRS	N/A	24-bit/96 kHz	24-bit/96 kHz
Yamaha	02R96	56x8x2	16/8	AES/EBU; (2) S/PDIF	AES/EBU; (2) S/PDIF	4	16/16/ 1/4" TRS	8/0 1/4" TRS	24-bit/96 kHz	24-bit/96 kHz

DRUM MACHINES AND GROOVE BOXES

MANUFACTURER	PRODUCT	# OF PADS/ TOUCH SENSITIVE	NON-PERCUSSION SOUNDS	ONBOARD EFFECTS	# OF SOUNDS	# OF PATTERNS PRESET/USER
Akai	MPC2000XL MIDI Production Center	16/Yes	Yes	Optional 4-bus effects processor	128	0/99
Akai	MPC2000XL-ZP	16/Yes	Yes	Optional 4-bus effects processor	128	0/99
Akai	MPC4000	16/Yes	Yes	Yes	Unlimited	0/128
Alesis	SR-16	12/Yes	223	No	100	200/200
Boss	DR-202	8/No	Yes (bass)	Reverb, chorus	256	400/100
Boss	DR-3	13/Yes	Yes (bass)	Ambience, EQ, comp w/edit	120	100/100 x 11
Boss	DR-670	20/Yes	Yes (bass)	No	256	200/200
Boss	DR-770	16/Yes	Yes (bass)	Ambience, reverb, flange, EQ	255	400/400
E-mu	MP-7 Command Station 7760	13/Yes	Yes	Yes	512 factory/512 user	100+
E-mu	XL-7 Command Station 7750	13/Yes	Yes	Yes	512 factory/512 user	100+
Jomox	AirBase-99	Yes	No	No	Unlimited	200
Jomox	XBase-09	4/Yes	Yes (white noise)	No	Unlimited	64
Korg	Electrabe EM-1	10/No	Yes	Yes	194	256/256
Korg	ER-1	8/No	No	delay, flange/chorus, ring mod.	Unlimited	224/32
Roland	MC-307 Groovebox	16/Yes	64	Reverb, chorus, multi	800	710/200
Vermona	DRM1 Mk II	N/A	No	Yes	8 (programmable)	0/0
Yamaha	RY9	12/No	50	No	128	200/50
Yamaha	RY20	12/Yes	6 (bass)	Reverb, delay	300	300/600
Zoom	MRT-3	7/No	No	No	TBA	200/99
Zoom	Rhythmtrak 123	13/Yes	Yes (bass)	Yes	80 drum kits; 25 bass programs	297/99
Zoom	Rhythmtrak 234	13/Yes	Yes (bass)	Yes	124 drum kits; 50 bass programs	99/99
Zoom	RT323	13/Yes	Yes	No	432	400/100

EQ TYPE	# OF DYNAMIC PROCESSORS	# OF EFFECTS PROCESSORS	AUTOMATION: SCENE/ MIDI/ DYNAMIC	FREQUENCY RESPONSE	SIGNAL-TO-NOISE RATIO	TOTAL HARMONIC DISTORTION	CHANNEL CROSSTALK (@ 1 kHz)	PHANTOM POWER	SPECIAL FEATURES	DIMENSIONS (INCHES)	PRICE
4-band parametric	2	4	Y/Y/Y	20 Hz-20 kHz	95 dB	0.05%	N/A	Ch. 1-6, ch. 7-12	100mm ALPS, SMPTE, MTC; RS232 connector, PC card slot; free Windows software	17.25x22.5x6.5	\$1,999
3-band, low/high shelving, parametric mid	8	0	Y/Y/Y	20 Hz-20 kHz	A/D/A >101 dB, A/D 110 dB	N/A	<120 dB (below noise floor)	Yes	Control surface for DAWs, virtual instruments and MIDI devices, 8 ch. of 24-bit/48k audio or 4 ch. of 24-bit/96k audio via ADAT optical (\$199)	17.13 x 9.5 x 3	\$849
4-band parametric	48	Up to 16 optional	Y/Y/Y	20 Hz-20 kHz	106 dB @ 1 kHz	0.005%	-90 dBu	12 chans	VFX and MFX cards, optical cards	37.6x27.1x8.7	\$6,999
N/A	N/A	N/A	N/N/N	20 Hz-40 kHz (@96 kHz)	-132 dB EIN/ 105 dBu S/N	N/A	N/A	N/A	For digital signals from devices w/o Word Clock, sample freq rate conv on each dig in, 96 kHz op; Word clock I/O, XLR, headph outs		\$695
3-band	2	2	Y/Y/N	N/A	N/A	N/A	N/A	Yes	Dedicated Hi-Z guitar input	13.5x3.75x12	\$995
3-band	2	2	Y/Y/N	N/A	N/A	N/A	N/A	Yes	Dedicated Hi-Z guitar input, microphone modeling, speaker modeling	13.5x3.75x13.5	\$1,295
6-band	48	2 (up to 8)	Y/Y/Y	N/A	N/A	N/A	N/A	Yes	Modular, moving faders, 5.1 mixing, RTA, speaker modeling	17x5.25x16.5 (7100), 17x2.6x17 (C7100)	\$1,995/ \$2,995
6-band	48	2 (up to 8)	Y/Y/Y	N/A	N/A	N/A	N/A	Yes	Modular, moving faders, 5.1 mixing, RTA, speaker modeling	17x5.25x16.2 (7200), 29.5x2.75x17 (C7200)	\$2,795- \$3,695
5-band	94	4 (up to 16)	Y/Y/Y	N/A	N/A	N/A	N/A	Yes	Modular, moving faders, 5.1 mixing; RTA, speaker modeling; ADAT/Tascam interfaces	17x5.25x16.2 (7200), 29.5x2.75x17 (C7200)	\$3,695- \$6,590
3-band parametric	On all inputs, groups and main mix	2 (Lexicon)	Y/Y/Y	20 Hz-20 kHz	N/A	0.005%	>95 dB	Global	*E-strip* for analog console feel, 6 auxes per channel, 100mm faders, Undo/Redo, Copy, Paste	28.2x21.1x6.3	\$5,000
4-band parametric	2 each	2 ea ch	Y/Y/Y	N/A	N/A	N/A	N/A	Yes	24-bit/96 kHz performance, latency compensation		\$2,999
4-band parametric	22	2	Y/Y/N	20 Hz-20 kHz	98 dB	<0.1%	-70 dB	+48V		20.4x5.8x16.9	\$1,999
4-band parametric	48	4	Y/Y/N	20 Hz-40 kHz	N/A	<0.01%	80 dB	Groups of 4	Full operation at 96 kHz		\$2,499
4-band parametric	56	4	Y/Y/Y	20 Hz-40 kHz (96 kHz)	N/A	>0.01%	N/A	Per channel	I/O cards: ADAT, TDIF, AES/EBU, analog in, analog out, Apogee I/O, Waves effects card, MB02R96 meter bridge	26.25x27.5x9.5	\$11,397

# SONGS	QUANTIZATION TYPES/PPM	# OF OUTPUT/ TYPE	PORTS MIDI IN/OUT/THRU	SPECIAL FEATURES	PRICE
20	1/8, 1/16, 1/32 and triplets, 96	(2) 1/4"	Y/Y/N	Reads Roland & E-mu libraries, BPM matching time stretch, SE1, SE2, SE3 special edition w/enhanced graphics, automated mixing, 64 tracks, 300K note sequencer	\$1,499
20 (user only)	Off, 1/8, 1/8(3), 1/16, 1/16(3), 1/32, 1/32(3)/96ppq	(2) 1/4" TRS (8-out optional)	Y/Y/N	100 MB ZIP drive w/ 50 MB AKAI drum sounds; graphic flip-up display, real-time control, Timestretch, resample, Beat Loop function, tap tempo	\$1,649
128 (user only)	Off, 1/8, 1/8(3), 1/16, 1/16(3), 1/32, 1/32(3), 1/64, 1/64(3)/960ppq	(2) XLR/1/4" combo (8-out optional)	Y/Y/N	60 GB HD, CD burner; sample streaming; 272 MB RAM exp to 512 MB, (6) real-time controller, wordclock, SMPTE, optional ADAT I/O	\$3,399
100	96	(4) 1/4"	Y/Y/Y	Includes start/stop, A-B fill/count footswitches	\$269
50	96	(2) RCA	Y/Y/N	Roll button	\$495
100	96	(4) RCA, (4) 1/4" phone	Y/N/N	Arranger-style programming, TSC-total sound control, backlit display	\$225
100	96	(2) 1/4", phones (stereo mini)	Y/Y/N	Direct pattern play, bass patterns w/drum patterns	\$345
100	96	(2) 1/4", 1/4" phones	Y/Y/N	Direct pattern play, quick search for pattern play	\$495
128	1/4 to 1/64 w/swing/384	(6) 1/4", S/PDIF	Y/Y/Y	16 ARPS, 16 real-time knobs; aftertouch	\$995
128	1/4 to 1/64 w/swing/384	(6) 1/4", S/PDIF	Y/Y/Y	16 ARPS, 16 real-time knobs, aftertouch	\$995
200	N/A	(10) 1/4"	Y/Y/Y	Fully analog electronics	\$995
64	N/A	(4) 1/4"	Y/Y/Y	Fully analog electronics, onboard sequencer	\$1,095
16	16, 16T, 32, 32T	(2) 1/4", phones	Y/Y/Y	Drums plus 2 synth parts, 16-step sequencer, 11 types of insert effects	\$499
16	12 triplet, 16, 16 swing/32	(2) 1/4", phones	Y/Y/Y	Motion sequencer, analog-modeled sounds	\$399
N/A	Grid, groove, shuffle/8	(2) 1/4"	Y/Y/N	Grab switch, turntable emulation	\$995
0	N/A	(10) 1/4"	N/N/N	True analog drum synthesizer	\$599
100	16th note/24	(2) 1/4", phones	Y/Y/N	Guitar input w/ tuner and mono pitch-to-MIDI	\$300
50	Normal swing, groove/96	(2) 1/4", phones	Y/Y/N	4 tracks /patterns, programmable bass lines	\$500
99	N/A	(2) 1/4"	Y/N/N	Realistic drum sounds	\$175
99	96	(2) 1/4", phones	Y/N/N	External input for playing along with unit	\$300
99	96	(2) 1/4", phones	Y/N/N	3 drum, 1 bass track	\$400
100	N/A	(4) 1/4", 1/8"	Y/Y/Y		\$550

DIRECT BOXES

DIRECT BOXES	MANUFACTURER	PRODUCT	TYPE	POWER	# OF CHANNELS	INPUTS	OUTPUTS	GROUND LIFT
Palmer Direct		PDI-01	Passive DI Box	Passive	1	1/4"	XLR	Yes
Palmer Direct		PDI-02	Active DI Box	9V battery/48V phantom	1	1/4"	XLR	Yes
Palmer Direct		PDI-09 Direct Recording Device	Mono	Passive	1	1/4"	1/4", XLR	Yes
Palmer Direct		PGA-04 (for guitar)	Rackmount	Passive	1	1/4"	1/4", XLR	Yes
Palmer Direct		PGA-03 Guitar Y Box	Guitar	Battery, external AC	1	1/4"	(2) 1/4"	None required
Palmer Direct		PGA-05 (for guitar)	Rackmount	Internal AC	2	(2) 1/4"	1/4", XLR	Yes
Peavey		EDI	Floor	Passive	1	1/4"	1/4", XLR	No
Peavey		ID-1G	Floor	Passive	1	1/4"	(2) XLR	Yes
Peavey		1:1 Interface	Floor	Passive	1	1/4", XLR	1/4", XLR	Yes
Peavey		EDB-1	Floor	Active, phantom, battery, 16 V AC/DC external	1	1/4"	1/4", XLR	No
Phonic		A6200 Supreme DI	Rack	AC 110V	6	(6) 1/4"	XLR	Yes
Pro Co Sound		CB-1	Floor or rackmount	Passive	1	1/4"	1/4", XLR	Yes
Pro Co Sound		DB-1	Floor or rackmount	Passive	1	1/4"	1/4", XLR	Yes
Pro Co Sound		DB-4A	Rackmount	Passive	4	1/4"	1/4", XLR	Yes
Pro Co Sound		IT 1 Balancing Box/AV 1	Floor or rackmount	Passive	1	1/4", XLR	1/4", XLR	Yes
Pro Co Sound		AVP 1	Wall plate	Passive	1	1/4", RCA, XLR	Barrier strip	Yes
Pro Co Sound		MS 3/MC 2/MS2	Floor or rackmount	Passive	1	XLR	(3) XLR	Yes
Pro Co Sound		MS 42A	Rackmount	Passive	4	XLR	(3) XLR	Yes
Pro Co Sound		MS 43A	Rackmount	Passive	4	XLR	(3) XLR	Yes
Pro Co Sound		MS 82	Rackmount	Passive	8	Barrier strip	Barrier strip	Yes
Pro Co Sound		MS 83	Rackmount	Passive	8	Barrier strip	Barrier strip	Yes
Pro Co Sound		Switch Witch	Rackmount	Passive	4	XLR	(4) XLR	No
Radial Engineering		J-48	Floor	48V phantom	1	1/4"	XLR	Yes
Radial Engineering		JD4	Rackmount	Passive	4	(16) 1/4"	(4) XLR	Yes
Radial Engineering		JDI Mark III	Floor	Passive	1	(2) 1/4"	XLR	Yes
Radial Engineering		JDV	Floor	Active	1	(2) 1/4"	XLR	Yes
Rapco		ADB+8	Floor	Battery, phantom	1	1/4"	1/4", XLR	Yes
Rapco		DBR400	Rackmount	Passive	4	(4) 1/4"	(4) 1/4", (4) XLR	Yes
Rapco		DB-100	Floor	Passive	1	1/4"	(4) 1/4", (4) XLR	Yes
Rapco		DB-101SL	Floor	Passive	1	1/4"	(4) 1/4", (4) XLR	Yes
Raven Labs		APD-1 Active/Passive Direct	Floor	Battery, external AC	1	(2) 1/4"	XLR	Yes
Raven Labs		MDB-1 Mixer/Direct Box/Buffer	Active DI/3-channel mixer	Battery, external AC	3 in/1 out	(5) 1/4"	XLR, 1/4"	Yes
Roland		DI-1	Floor	Battery, phantom	1	1/4"	1/4", XLR	Yes
Rolls		ADi6 dB Max	Floor	9V phantom	1	1/4"	XLR	Yes
Rolls		RDB104	Rackmount	Internal AC	4	(8) 1/4"	(4) XLR	Yes
Rolls		RPB623 Phantom Hex	Rackmount	120 VAC	6	XLR	1/4"	No
Rolls		ADB2	Floor	Phantom	1	(2) 1/4"	XLR	Yes
Rolls		DB25	Floor	Passive	1	(2) 1/4"	XLR	Yes
Stewart Audio		ADB-1	Floor	Passive	1	1/4"	1/4", XLR	Yes
Stewart Audio		ADB-4	Floor or rackmount	External, phantom	4	(4) XLR	1/4", (4) XLR	Yes
Summit Audio		TD-100	Floor or rackmount	AC 110V	1	1/4"	1/4", XLR	Yes
Tech 21		SansAmp Acoustic DI	FET solid state floor	Phantom, 9V batt, opt DC power supply	1	(2) 1/4"	1/4", XLR	Yes
Tech 21		SansAmp Bass Driver DI	FET solid state floor	Phantom, 9V batt, opt DC power supply	1	1/4"	(2) 1/4", XLR	Yes
Tech 21		SansAmp XDI	DI box	Phantom, 9V batt, opt DC power supply	1	(2) 1/4"	1/4", XLR	No
The John Hardy Co.		AMB Tube Buffered Direct Injection Box	Tube buffered	AC power 110/220VAC	1	1/4"	(2) 1/4", XLR	Yes
Whirlwind		HotBox	Floor	Battery, phantom	1	1/4"	1/4", XLR	Yes
Whirlwind		HotBox Quad	Rackmount	Internal AC, phantom	4	(4) 1/4"	(4) 1/4", (4) XLR	Yes
Whirlwind		Director	Floor	Passive	1	1/4"	1/4", XLR	Yes
Whirlwind		Multi Director	Rackmount	Passive	4	(4) 1/4"	(4) 1/4", (4) XLR	Yes
Whirlwind		IMP 2	Floor	Passive	1	1/4"	1/4", XLR	Yes
Whirlwind		Direct 2 Dual	Dual direct box	Passive	2	(2) 1/4"	(2) 1/4", (2) XLR	Yes, 1/ch
Whirlwind		EDB-1	Floor	Passive	1	1/4"	XLR, 1/4"	Yes
Whirlwind		PCDI	Floor	Passive	2	(2) RCA, 1/8"	(2) XLR, (2) RCA	Yes

SPECIAL
FEATURES

PRICE

0/-20/-40 dB switch	\$1
0/-20/-40 dB switch	\$215
Variable tone and output attenuation switches	\$135
Integrated 8 ohm load box, filter section	\$500
Isolated transformer Y-box	\$120
Filter section	\$725
Includes timbre adjustment	\$60
	\$50
	\$60
	\$70
Hi cut filter, variable impedance/pad	\$160
	\$60
Line/speaker level in, high cut filter	\$110
Line/speaker level in, high cut filter	\$340
Line/speaker level in, high cut filter	\$124
Line/speaker level in	\$131
	\$130/\$136/ \$111
Microphone splitting features	\$310
Microphone splitting features	\$381
Phantom bus available on P model	\$650-\$673
Phantom bus available on P model	\$834-\$947
4-ch. line-level switching (powered monitors), stereo pair ins/outs	\$300
Has merge to mix 2 inputs to mono; 80 Hz rumble filter, polarity reverse (180 deg.) and 15 dB pad	\$199
Merged input pairs, ultrasonic noise filter	\$900
Merged inputs, -15 dB pad switch	\$199
Uses NiCad rechargeable batteries	\$300
Mic level/unity gain/+8 dB forward gain switch	\$208
4 units housed in 1U rackspace	\$249
Ground-lift jack	\$50
Accepts instrument/speaker level signals	\$60
Sidechain effects loop w/ assign switch	\$349
Mute, tuner send, effects loop, inst. presets	\$299
Auto power-off, phase inverse switch	\$150
	\$90
	\$200
Dynamic microphone, phantom power supply	\$150
3-position attenuation switch	\$50
3-position attenuation switch	\$35
Transformerless design	\$109
Selectable input sensitivity, ground lift on each channel	\$379
Instrument preamp & DI, phase control, power headphones, variable impedance	\$495
Semi-parametric EQ, tube/mic emulation	\$225
Bass tube amp emulation, active bass/treble, drive, presence, blend controls	\$225
Instrument interface for computer sound cards and mixing consoles	\$95
Switchable 15 dB boost circuit for Jensen output	\$595
Instrument/amplifier switch	\$160
Instrument/amplifier switch	\$395
Instrument/amplifier switch, LP switch	\$110
Instrument/amplifier switch, LP switch	\$400
	\$60
-20 dB pad switch per channel	\$199
0, -20, -40 dB pad switch	\$30
Interfaces with computer sound cards	\$199

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DYNAMICS PROCESSORS

DYNAMICS PROCESSORS

MANUFACTURER	MODEL	TYPE	THRESHOLD	RATIO	ATTACK TIMES	RELEASE TIMES
Alesis	3630	Compressor/limiter/gate	-40 to 20 dB	1:1 to ∞:1	0.1 to 200 ms/program dependent	50 ms to 3 sec
Alesis	Nano Compressor	Compressor/limiter	-40 to 8 dB	1:1 to ∞:1	Auto or man (0.1 to 200 ms)	Auto or man (50 ms to 3 sec)
Alto	Alpha Comp	Compressor/limiter	-40 to +20 dB	1:1 to 20:1	Variable	Variable
Aito	BK 2.0	Compressor/limiter	-20 to +40 dB	1:1	0.1 to 200 ms	50 ms to 4 sec
Alto	C6 2.0	Compressor/limiter	-40 to +20 dB	1:1 to 20:1	Variable	Variable
Alto	CLE 4.0	Compressor/limiter	-40 to +20 dB	1:1 to 20:1	Variable	Variable
Alto	CLE 8.0	Compressor/limiter	-40 to +20 dB	1:1 to 20:1	Variable	Variable
Anthony DeMaria Labs	1000	Compressor/limiter	Fixed	3:1 to 12:1	Auto (10 µs)	Auto (0.07 sec)
Anthony DeMaria Labs	1500	Compressor/limiter	Fixed	3:1 to 12:1	Auto (10 µs)	Auto (0.07 sec)
Aphex Systems	105	Logic-assisted noise gate	-50 to 20 dB	∞:1	Manual (200 to 250 ms)	Manual (150 ms to 4 sec)
Aphex Systems	108 Easyrider	2-channel compressor	Fixed	1:1 to 5:1 (prog dep)	Auto	Auto w/2 sel. ranges
Aphex Systems	320A Compellor	Compressor/leveler/limiter	Fixed	Comp: 1:1-3:1, lim: ∞:1	Auto (1 µs to 2.5 sec)	Auto w/2 sel. ranges
Aphex Systems	622 Expander/Gate	Expander/gate	-50 to 20 dB	Gate: ∞:1 exp. 1.2-10:1	Manual (10 to 100 µs)	Manual (40 ms to 5 sec)
Aphex Systems	661 Expressor	Tube compressor	-30 to 20 dB	1.1:1 to 30:1 (manual), no-knee (auto)	Auto or manual (0.05 to 100 ms)	Auto or manual (40 ms to 4 sec)
Aphex Systems	720 Dominator II	Peak limiter	-9 to 25 dB	∞:1	Auto	Auto and manual
API	525	Single-channel compressor	Variable: ∞ to 0 VU	2:1 or 20:1	15 ms	0.1 to 2.5 sec
ART	Dual Leveler	Tube compressor	-40 to 10 dB	Comp: 2.3:1, lim: 6:1	Auto/fast	Auto/fast
ART	Pro VLA	Tube compressor	-20 to 20 dB	2:1 to 10:1	2-15 ms	300 ms to 3 sec
ART	Tube Compressor	Tube compressor	-40 to 10 dB	Comp: 2.3:1, lim: 6:1	Auto/fast	Auto/fast
Ashly Audio	CLX 51	Compressor/limiter	-40 to 22 dBu	2:1 to ∞:1	Manual (200 µs to 20 ms)	Manual (100 ms to 3 sec)
Ashly Audio	CLX 52	Dual-channel compressor/limiter	-40 to 22 dBu	2:1 to ∞:1	Manual (200 µs to 20 ms)	Manual (100 ms to 3 sec)
Avision Design	AD2044	Compressor	-24 to +20 dB	1:1 to 20:1	0.5 ms to 150 ms	80 ms to 5 sec
Avision Design	VT-747SP	Class A opto-compressor	-30 to 20 dB	1:1 to 20:1	2 to 200 ms	10 ms to 5 sec
BBE	362 Sonic Maximizer	Audio enhancer	N/A	N/A	N/A	N/A
BBE	362NR Sonic Maximizer	Audio enhancer	N/A	N/A	N/A	N/A
BBE	362SW Sonic Maximizer	Audio enhancer	N/A	N/A	N/A	N/A
BBE	482 Sonic Maximizer	Audio enhancer	N/A	N/A	N/A	N/A
BBE	882 Sonic Maximizer	Audio enhancer	N/A	N/A	N/A	N/A
Behringer	Autocom Pro MDX1400	2-channel compressor/limiter/expander/enhancer/gate	(Comp) -40 to 20 dB (exp/gate) off to 10 dB	(Exp./gate) 1:1 to 1:8, (comp.) 1:1 to >1:8	Compressor: auto, 15 ms; 5 ms, 3 ms	Compressor: auto, program dependent
Behringer	Composer Pro MDX2200	2-channel compressor/limiter/expander/gate	-40 to 20 dB	1:1 to ∞:1	Variable (1 to 150 ms)	Variable (0.05 ms to 5 sec/20 dB)
Behringer	Autocom Pro-XL MDX1600	Compressor/expander/limiter/de-esser	-40 to +20 dB	1:1 to ∞:1	Man (0.3 to 300 ms), auto (15, 5, 3 ms)	Man (0.05 to 5 sec), auto (prog. dep.)
Behringer	Composer Pro-XL MDX2600	Expander/gate/compressor/limiter	-40 to +20 dB	1:1 to ∞:1	Man (0.3 to 300 ms); auto (15, 5, 3 ms)	Man (0.05 to 5 sec), auto (prog. dep.)
Behringer	Multicom Pro MDX4400	4-channel compressor/limiter	-40 to 20 dB	1:1 to ∞:1	15 ms at 10 dB, 5 ms at 20 dB, 3 ms at 30 dB	Program dependent, typ. 125 dB
Behringer	Multicom Pro-XL MDX4600	Expander/gate/compressor/limiter	-40 to +20 dB	1:1 to ∞:1	Man (0.3 to 300 ms), auto (15, 5, 3 ms)	Man (0.05 to 5 sec), auto (prog. dep.)
Behringer	Multigate Pro XR4400	4-channel expander/gate	Bypass to 10 dBu	1:1 to 1:4	Program dependent	Variable (50 ms to 4 sec)
Behringer	Super-X CX2310	Stereo/3-way mono crossover/band limiters	-6 to 18 dBu	N/A	N/A	N/A
Behringer	Tube Composer T1952	Expander/gate/compressor/limiter/peak limiter	-40 to +20 dB	1:1 to ∞:1	1 to 150 ms	50 ms to 5 sec
Behringer	Ultra-Dyne Pro DSP9024	6-band dynamic processor	-70 to 0 dB	1:1 to ∞ (90):1	0 to 255 ms	50-5,000 ms
Behringer	Ultramizer Pro DSP1400P	2-band compressor/leveler/loudness ultramizer	-48 to 0 dB	Density 0 - 100	0 to 100 ms	Speed 0 to 100
Bellari	LA120	Tube compressor/limiter	-20 to 20 dB	Switchable 2:1, 10:1	Program dependent	Program dependent
Bellari	RP583	Tube compressor/limiter	-20 to 20 dB	2:1 to ∞:1	Manual (0.5 to 100 ms)	Manual (1 to 2 sec)
BSS Audio	DPR402	Compressor/de-esser/limiter	-30 to 20 dBu	1:1 to ∞:1	Manual (50 µs to 80 ms)	Auto or manual (5 ms to 5 sec)
BSS Audio	DPR404	Quad compressor	-30 to 20 dBu	1:1 to ∞:1	Auto	Auto
BSS Audio	DPR422	Dual compressor/de-esser	-30 to 20 dB	1:1 to ∞:1	Auto or manual (50 µs to 400 ms)	Auto or manual (5 ms to 5 sec)
BSS Audio	DPR504	Quad gate	-50 to 20 dBu	N/A	Auto (20 µs or 40 µs to 5 ms) program dependent	Manual (1 ms to 3 sec)
BSS Audio	DPR522	Dual gate	-60 to 15 dB	N/A	Manual (20 µs to 1.5 sec)	Manual (1 ms to 3 sec)
BSS Audio	DPR901II	Dynamic equalizer	-30 to 20 dBu	N/A	Auto	Auto
BSS Audio	DPR944	Gate/compressor	Gate: -50 to 20 dB, comp: -30 to 20 dB	1:1 to ∞:1 comp. only	Auto	Auto
Crane Song	Trakker	Discrete Class A, single channel compressor/limiter	-40 to 24 dB	1.1:1 to 20:1	Manual 0.05 to 200 ms	Auto (40 ms to 10 sec)
Crate	SM4-CL	Compressor/limiter	-20 to 20 dBu	5-position switch: 2:1, 4:1, 8:1, 12:1, 20:1	20 µs to 1.1 sec, adjustable for 100% recovery	50 µs to 1.1 sec, adjustable for 63% recovery
dbx	160A	Compressor	-40 to 20 dBu	1:1 to 1:1	Auto	Auto
dbx	166XL	Compressor/limiter	Comp: -40 to 20 dBu; lim: 0 to 20 dBu	1:1 to ∞:1	Auto	Auto

GAIN CONTROL	BYPASS SWITCH	# OF CHANNELS/ STEREO LINK	METER TYPE	MAIN I/O	SIDECHAIN I/O	DIMENSIONS	SPECIAL FEATURES	PRICE
Output	Yes	2/Yes	12-seg LED	1/4"	1/4" TRS	19x1.7x4.5	Hard/soft knee, peak/RMS compression	\$199
Output	Yes	2/Yes	6-seg LED	1/4"	1/4" TRS	5.5x1.75x4.5	Hard/soft knee, peak/RMS compression	\$119
Yes	Yes	2/Yes	N/A	1/4"	No	7.8x5.9x1.75	Stereo multiband digital comp, 256 presets, editing	\$179
No	Yes	2/Yes	Multi-seg LED	1/4"	1/4" TRS	1U	Gate, peak limiter	\$109
Output	Yes	2/Yes	LED	1/4"	No	19x7.5x1.75	Expander, gate, peak limiter	\$124
Yes	Yes	4/Yes	LED	1/4"	No	19x7.5x1.75	IKA (Interactive Knee Adapting), peak limiter, 4-ch.	\$169
Output	Yes	8/Yes	LED	1/4"	No	19x7.5x3.5	THAT 2150 VCAs	\$529
Input	No	1/No	VU	XLR	No	19x3.5x8	All-tube architecture	\$1,695
Input	No	2/Yes	VU	XLR	No	19x3.5x9	All-tube architecture	\$2,995
No	No	4/No	LED	1/4" TRS	External key input	19x1.7x5.2	Logic assist, uses VCA 1001	\$449
Input/output	Yes	2/Yes	LED	1/4" TRS	No	19x1.75x5.2	Waveform-dependent compression	\$299
Output	Yes	2/Yes	LED	XLR	No	19x1.75x10	Frequency-dependent leveler	\$1,350
No	Yes	2/Yes	LED	XLR	1/4"	19x1.75x9	Logic assist	\$795
Input/output	Yes	1/No	LED	XLR, 1/4"	1/4"	19x1.75x10.125	Auto-compression mode, hi-freq expander	\$749
Input	Yes	2/Yes	LED	XLR	No	19x1.75x10	Brickwall limiter, 3-band auto limit threshold	\$1,350
Yes	Yes	1/No	VU miniature GR meter	XLR when in API frame	No	N/A	Re-issue of early 70's API compressor	\$1,295
Output	Yes	2/Yes	Segmented bar	XLR, 1/4"	No	19x3.5x6.5	Vactrol electro-optical tube compression	\$457
Output	Yes	2/Yes	LED, VU	XLR, 1/4" TRS	No	19x3.5x6.5	Vactrol electro-optical tube compression, 12AT7 Vacuum tube Vactrol	\$679
Output	Yes	1/No	LED	XLR, 1/4"	No	5.375x2x5.25	Vactrol electro-optical tube compression	\$99
Input/output	Yes	1/No	11-seg LED	XLR, 1/4"	1/4"	19x1.75x6	Infinite soft knee and timing based on comp. ratio	\$379
Input/output	Yes	2/Yes	11-seg LED	XLR, 1/4"	1/4"	19x1.75x6	Infinite soft knee and timing based on comp. ratio	\$539
Output	Yes	2/Yes	Analog VU	XLR	XLR	19x12x3.5		\$3,000
Make-up/ output control	Yes	2/Yes	VU, (2) 20-seg LED	XLR	Internal	19x12x3.5	6-band graphic EQ, tube bypass	\$2,495
No	Yes	2/Yes	1 LED clip per ch	1/4"	No	1U	Uses BBE process	\$259
No	Yes	2/Yes	1 LED clip per ch	1/4", RCA	No	1U	Uses BBE process, noise reduction	\$349
No	Yes	2/Yes	5-seg LED per ch	1/4", RCA	No	1U	Uses BBE process, subwoofer filter	\$349
No	Yes	2/No	5-seg LED per ch	1/4", RCA	No	1U	Uses BBE process, hard-wire bypass	\$349
No	Yes	2/No	5-seg LED per ch	XLR, 1/4" TRS	No	1U	Uses BBE process, hard-wire bypass	\$599
Yes	Yes	2/Yes	12 LEDs	XLR, phone	Yes	19x1.75x8.5	Link function, high-pass filter in sidechain	\$99
No	Yes	2/No	12 LEDs	XLR, phone	Yes	19x1.75x8.5	2-ch expander/gate/compressor/limiter	\$125
Output	Yes	2/Yes	12-seg LED	XLR, phone	Yes	19x1.75x8.5	Adjustable IDE dynamic enhancer, new circuitry from predecessor	\$110
Output	Yes	2/No	12-seg LED	XLR, phone	Yes	19x1.75x8.5	Authentic tube emulation	\$140
Yes	Yes	4/Yes	17 LEDs per ch	XLR, phone	No	19x1.75x8.5	High-pass filter in sidechain, auto compressor	\$145
Output	Yes	4/Yes	12-seg LED	XLR, phone	No	19x1.75x8.5	Dynamic enhancer	\$160
Yes	No	4/No	Traffic light display	XLR, phone	Yes	19x1.75x8.5	4 expander/gate circuits	\$209
Yes	No	1/No	N/A	Servo balanced in, balanced outs	No	19x1.75x8.5	Adjustable delay for runtime/phase inversion	\$125
Output	Yes	2/Yes	VU	XLR, 1/4" TRS	1/4"	19x8.5x3.5	Hard knee/interactive switch, 12AX7 tubes, warmth control, side chain filter	\$399
Yes	Yes	2/Yes	Digital RMS and peak	XLR, 1/4" TRS	No	19x3.5x12	MIDI-controllable, optional AES/EBU I/O	\$299
Yes	Yes	2/Yes	8-seg LEDs	XLR, 1/4" TRS	No	19x1.75x7.5	Includes PC remote control software	\$109
Output	Yes	1/No	VU	XLR, 1/4"	No	7.6x1.6x5.4		\$160
Output	Yes	2/Yes	VU	XLR, 1/4"	1/4"	19x3.5x6		\$650
Output	Yes	2/Yes	5/9/12-seg LED	XLR	Barrier strip	19x1.75x9	Variable knee with comp. ratio, sidechain mon	\$1,599
No	Yes	4/Yes	15/8-seg LED	XLR	1/4"	19x1.75x11	Variable HF de-essing, progressive knee	\$1,449
Output	Yes	2/Yes	5/6-seg LED	XLR	1/4"	19x1.75x8	Progressive knee, de-esser	\$899
No	Yes	4/Yes	12-seg LED	XLR	1/4" TRS	19x1.75x11	External key-source facility, sidechain filter	\$1,449
No	Yes	2/Yes	3/9-seg LED	XLR	1/4"	19x1.75x8	Automatic dynamics enhancement	\$799
No	Yes	2/Yes	10-seg LED	XLR	No	19x1.75x9	Shelving EQ, 1 & 2 ch split, filter width control	\$1,549
Output	Yes	4/Yes	12-seg LED	XLR	1/4" TRS (gate only)	19x1.75x7.1		\$899
Output	Yes	1/No	23-seg LED	XLR	DB-9	1U	Clean, vintage and clean/vintage VCA features	\$2,550
Yes	Yes	2/Yes	10-seg LED	1/4" TRS	No	1.6 x5.6 x 5.5	Switchable level meter displays, 1/3rd rack unit	\$200
Output	Yes	1/No	LED	XLR, 1/4"	1/4" TRS	1U	Switchable hard/soft/OverEasy compression	\$600
Output	Yes	2/Yes	19-seg LED	XLR, 1/4" TRS	1/4" TRS	1U	Switchable hard knee/OverEasy compression, expander	\$360

DYNAMICS PROCESSORS

DYNAMICS PROCESSORS

MANUFACTURER

MODEL

TYPE

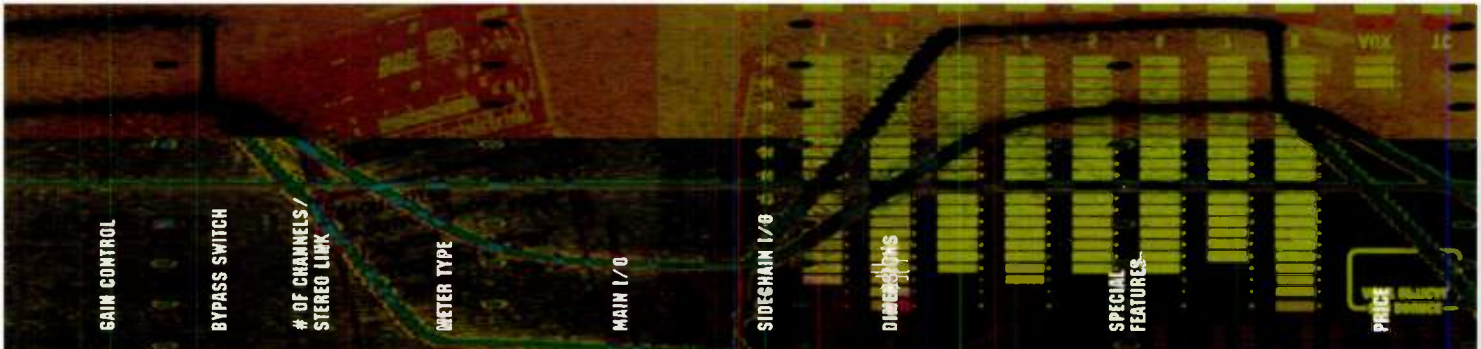
THRESHOLD

RATIO

ATTACK TIMES

RELEASE TIMES

dbx	266XL	Compressor/expander/gate	-40 to 20 dB, exp: -60 to 10 dB	1:1 to ∞:1	Auto or manual	Auto or manual
dbx	1046	Quad compressor/limiter	-40 to 20 dBu	1:1 to ∞:1	Auto	Auto
dbx	1066	Compressor/limiter/expander/gate	Exp gate: 0 to 15 dBu; comp: -40 to +20 dBu; lim: 0 to 24 dBu	Expander/gate: 1:1 to 30:1; compressor: 1:1 to ∞:1	Auto or man (0.05 to 100 ms)	Auto or man (0.05 ms to 5 sec)
dbx	DDP	Digital compressor	N/A	1:1 to ∞:1	Auto or manual (0.1-200 ms)	360-5 dB per sec
dbx	Drive Rack PA	Compressor/limiter/EQ/crossover/RTA	-40 to +20 dB	1:1 to ∞:1	Auto	Auto
dbx	Drive Rack 260	Zone contr. compressor/limiter; RTA, effects	-40 to +20 dB	1:1 to ∞:1	Auto or manual (0.1 to 200 ms)	Auto or manual (30 to 200 ms)
dbx	480 Drive Rack	EQ/loudspeaker mgmt	-40 to +20 dBu	1 to ∞:1	Program dep	Program dep
dbx	481 Drive Rack	EQ/loudspeaker mgmt	-40 to +20 dBu	1 to ∞:1	Program dep	Program dep
dbx	482 Drive Rack	EQ/loudspeaker mgmt	-40 to +20 dBu	1 to ∞:1	Program dep	Program dep
dbx	160SL	Compressor/limiter	-40 to +30 dBu	1:1 to ∞:1	Auto or manual (400dB/ms to 1dB/ms)	Auto or manual (4,000 dB/sec to 10 dB/sec)
Daking	FET Compressor/Limiter	Compressor/limiter	-10 to +10	1:1 to 20:1	250µs - 64ms	5, 1, 1.5, and 4 autos
Demeter	H C-1	Mono tube optical compressor	-30 to 20 dBu	Optical/soft knee 2:1 to 30:1	1 to 200 ms	100 ms to 5 sec
Demeter	VTCL-2b	Stereo tube optical compressor/limiter	-30 to 20 dBu	Optical/soft knee 2:1 to 30:1	1 to 200 ms	100 ms to 5 sec
Demeter	VTCL-2bx	Stereo tube optical compressor/limiter	-30 to 20 dBu	Optical/soft knee 2:1 to 30:1	1 to 200 ms	100 ms to 5 sec
DOD	SR866	Gated compressor/limiter	-40 to 20 dBu	1:1 to ∞:1	Manual (0.1 to 100 ms)	Manual (50 ms to 2.5 sec)
Drawmer	1960	Dual-channel tube compressor/tube preamp	0 to -24 dB	1:1 to 30:1	Man or auto (0.5 to 20 ms)	Man or auto (400 ms to 20 sec)
Drawmer	1969	FET compressor, 2-ch	-30 to ? dB	Auto	Auto or manual	Auto or manual
Drawmer	DL241/DL241XLR	Dual gated compressor/limiter	Comp: -40 to +20 dB; exp/gate: -70 to +20 dB; lim: 0 to 18 dB	1.2:1 to ∞:1	Auto or manual (0.5 to 100 ms)	Auto or manual (0.05 to 5 sec)
Drawmer	DL251	Dual-channel; spectral compressor	Comp: -40 to +20 dB; lim: 0 to 18 dB	1.2:1 to ∞:1	Auto or manual (0.5 to 100 ms)	Auto or manual (0.05 to 5 sec)
Drawmer	DL441	Quad compressor/limiter	Comp: -40 to +20 dB; lim: 0 to 18 dB	1.2:1 to ∞:1	Auto (0.5 to 100 ms)	Auto (0.05 to 4 sec)
Drawmer	DS201	Dual-frequency conscious noise gate	-54 to +20 dB	N/A	Manual (10 µs to 1 sec)	Manual (2 ms to 4 sec)
Drawmer	DS404	Quad noise gate	-70 to +20 dB	N/A	Auto	Combines hold and decay 10 ms to 5 sec
Drawmer	DS 501	Dual-ch. noise gate	-72 to ∞ dB	N/A	10 ms to 1.5 sec	N/A
Drawmer	MX30	Dual gated/auto compressor/limiter	Comp: -40 to +20 dB; exp/gate: -70 to +20 dB; lim: 0 to 18 dB	1.2:1 to ∞:1	Auto or man (0.5 to 100 ms)	Auto (0.05 to 4 sec)
Drawmer	MX40	4-channel tuneable gate with peak punch	-60 to +20 dB	N/A	10 µs	10 ms to 4 sec
Drawmer	MX50	Dual-channel de-esser	Auto	Auto	Auto	Auto
Drawmer	Sixpack	6-ch. compressor/gate	-40 to +20 dB; lim 0 to 18 dB	1:1 to ∞:1	Auto or manual (0.5 to 100 ms)	Auto or manual (0.05 to 5 sec)
Drawmer	TS-2	Tube compressor	Fixed	Auto	0.5 to 100 ms	0.05 to 5 sec
Drawmer	TS-2D	Tube compressor	Fixed	Auto	0.5 to 100 ms	0.05 to 5 sec
Empirical Labs	EL-8 Distressor	Compressor/limiter	Varies with input level	1:1 to ∞:1	Manual (<40 µs to 50 ms)	Manual (0.05 to 3.5 sec)
Focusrite	Penta	Solid state (Class A)	Preset	Preset	Preset	Preset
Focusrite	Platinum ComPounder	Dual mono/comp/exp/noise/limit	Comp: -24 to +12 dB; lim: 12 to 26 dBu	Variable 1.3:1 to ∞; soft/hard knee switchable	Variable 100 µs to 100 ms	Variable 100 ms to 4 sec
Focusrite	Platinum Digital MixMaster	Multiband compressor/expander/limiter/equalizer/stereo imager	Comp: -20 to +10 dB	Variable 1.3:1 to 5:1	Auto	200 ms to 1.6 sec
Focusrite	Red 3	Dual compressor/limiter	Comp: -24 to +12 dB; lim: 0 to 18 dB	Variable 1.5:1 to 10:1	Variable 300 µs to 90 ms	Variable 100 ms to 4 sec
FMR Audio	RNC 1773	Compressor	1	1:1 to 25:1	0.2 to 200 ms	0.05 to 5 sec
Galaxy Audio/Valley Audio	Valley 401	Microphone processor	-40 to +20 dB	Compression ratio fixed 20:1	Expander attack and gate attack 100 µs, compression attack 1-15 ms	Program dep, up to 25 sec
HHB	Radius 3 Fat Man	Tube compressor/limiter	10 dBu to -20 dBu	1:1.5 to 1:30	Slow 5 ms, fast 0.5 ms	Slow 1.5 sec, fast 0.2 sec
Joemeek	SC-2	Compressor	Varies	4.5:1 to 7:1	Manual (1.5 to 10 ms)	Manual
Joemeek	SC2.2	Photo-optical compression	Varies	2:1 to 10:1	Variable 0.5 and 10 ms	Variable
Klark-Teknik	DN500	Dual compressor/limiter/expander	Comp: -30 to 20 dB; exp: -40 to 20 dB; lim: 0 to 20 dB	Comp: 1:1 to 50:1; exp: 1:1 to 25:1	Comp: auto or man (50 µs-20 ms), exp: auto or man	Comp: auto/man (60 µs to 2 sec); exp: auto/man (40 ms to 2 sec)



GAIN CONTROL	BYPASS SWITCH	# OF CHANNELS / STEREO LINK	METER TYPE	MAIN I/O	SIDECHAIN I/O	DIMENSIONS	SPECIAL FEATURES	PRICE
Output	Yes	2/Yes	LED	XLR, 1/4" TRS	1/4" TRS	1U	Switchable hard knee/OverEasy compression	\$230
Output	Yes	4/Yes	LED	XLR, 1/4" TRS	No	1U	Switchable hard knee/OverEasy compression	\$750
Output	Yes	2/Yes	LED	XLR, 1/4" TRS	1/4" TRS	1U	Sidchain monitor, OverEasy compression	\$600
Input/output	Yes	2/Yes	8-seg LED	1/4", XLR, AES/EBU	No	19x1.75x5.75		\$600
Input/output	Yes	6/Yes	LCD	XLR	No	19x1.75x5.75	Feedback suppression, subharmonic synth, Wizard set-up, auto EQ	\$750
Auto input/output	Yes	6/Yes	LCD	XLR	No	19x1.75x5.75	Feedback suppression, GUI interface, subharmonic synth, Wizard set-up, auto EQ	\$1,000
Input/output	Yes	8/Yes	LCD, 12-seg LED, PC GUI	XLR	XLR	19x12.5x3.5	4 in/8 out, 31-band graphic/9-band para EQ per input, dual RTA, 27 crossover configs, time align delay	\$3,000
Input/output	Yes	8/Yes	PC GUI, 12-seg Lightpipe LED	Euroblock	Euroblock	19x7.9x1.5	4 in/8 out, 31-band graphic/9-band para EQ per input, dual RTA, network capable w/Drive Rack	\$2,400
Input/output	Yes	8/Yes	PC GUI, 12-seg Lightpipe LED	XLR	XLR	19x12.15x3.5	4 in/8 out, 31-band graphic/9-band para EQ per input, dual RTA, crossover, optional flying ladder remote	\$2,500
Output	Yes	2/Yes	VU meter, LED	XLR	XLR	19x3.5x9	Auto-velocity circuit, 127 dB dynamic range, hard knee-over easy switchable	\$3,500
Yes	Yes	1/Yes	VU	XLR	XLR, 1/4"	1U	Discrete transformer coupled PFT	\$1,995
Yes	No	1/Yes	10-seg LED VU/ overload LED	XLR, 1/4" TRS	XLR, 1/4" TRS	19x1.75x13	H series tube hybrid, variable attack/release	\$1,149
Yes	No	2/Yes	Overload/10-seg LED VU, 10-seg LED change	XLR, TT, 1/4"	No	19x3.5x12	All tube, adjustable input sensitivity	\$2,499
Yes	No	2/Yes	Overload/10-seg LED VU, 10-seg LED change	XLR, TT, 1/4"	No	19x3.5x12	Jensen transformers, all tube, variable attack/release	\$2,949
Input/output	Yes	2/Yes	LED	1/4" TRS, RCA	1/4"	19x1.75x9	Soft knee	\$280
Input/output	Yes	2/Yes	VU meter each channel	XLR	Yes	19x3.5x7	Tube comp with tube-based VCA, instrument preamp with EQ and variable gain	\$2,700
Output	Yes	2/Yes	VU	XLR	1/4" TRS	N/A	DI and mic pres incl., filter in stereo link, suitable as buss comp	\$3,100
Input/output	Yes	2/Yes	8-seg LED	1/4" (DL241), XLR (DL241XLR)	No	19x1.75x7	Program adaptive expander/gate, peak limiter auto/manual attack/release	\$800-\$875
Input/output	Yes	2/Yes	10-seg LED out, 9-seg GR LED	XLR	1/4" TRS	19x1.75x7	Variable dynamic spectral enhancement, hi-frequency dynamic expansion and compression, 0 response time peak limiter	\$1,200
Input/output	Yes	4/Yes	5-seg output LED, 8-seg gain reduction LED	XLR	No	19x1.75x7	0 response time peak limiter, variable hard/soft knee	\$1,300
No	Yes	2/Yes	3-seg LED	XLR	1/4" key input	19x1.75x7	Frequency-sensitive gating with high-/low-pass filters, hold and decay controls, key-listen ducker	\$825
No	Yes	4/Yes	3-seg LED per channel	XLR	1/4" key input	19x1.75x7	Frequency-sensitive gating with high-/low-pass filters, hard/soft gate (downward expansion), 20L-90 range switch	\$1,200
No	Yes	2/Yes	3-seg LED	XLR	No	N/A	Key filters, key input, tunable peak punch, dual ch	\$940
Output	Yes	2/Yes	8-seg LED comp out, 9-seg GR LED, 2-seg LED gate on/off	XLR, 1/4"	No	19x1.75x7	Program adaptive expander/gate, 0 response time peak limiter	\$535
No	Yes	4/Yes	3-seg LED	XLR	1/4" key input	19x1.75x7	Trigger stabilization, peak punch	\$760
De-ess frequency	Yes	2/Yes	9-LED each channel	XLR	No	19x1.75x8	-20 dB split/full band de-essing	\$645
Input/output	Yes	6/Yes	8-seg LED, 3-seg GR LED	XLR	No	N/A	Channel 6 has sub output w/built-in LPF	\$2,700
Output	Yes	2/Yes	8-seg LED	XLR, 1/4" TRS	1/4" TRS	N/A	Analog out, tube drive, 2-ch	\$850
Output	Yes	2/Yes	8-seg LED	XLR, 1/4"	1/4" TRS	N/A	24/96kHz out, analog out, tube drive, 2-ch	\$1,150
Input/output	Yes	2/Yes	LED	XLR, 1/4"	1/4"	19x1.75x10	Emulates classic compressors (LA2, LN1176, others)	\$1,499-\$3,299
Yes	Yes	2/No	LED	1/4" TRS	Yes	19x3.5x6	Warmth and image width controls, 16 presets, optional 24/96 A-D	\$495
Yes	Yes	2/Yes	LED	XLR, 1/4" TRS	1/4"	1U	Class A amplifier design, inductor-powered bass expander, switchable 4 dBu and -10 dBV operation	\$735
Yes	Yes	2/Yes	LED	XLR, 1/4" optional AES/EBU and S/PDIF digital output	No	2U	3-band stereo EQ, optional 24-bit/96K digital output	\$1,690
Output	Yes	2/Yes	VU	Transformer-balanced, XLR	Key inputs XLR	2U	Stereo switch, auto-release mode	\$3,295
Yes	Yes	2/Yes	8-seg LED	1/4" TRS	1/4" TRS	5.5x5.5x1.6	Super Nice mode	\$200
Output	No	1/No	LED, VU, attenuation	XLR	1/4" TRS	19x1.75x9.6	Clip indicator for preamp/EQ/VCA, phantom power	\$680
Input/output	Yes	2/Yes	VU	1/4"	No	8.4x5.2x8.3	15 presets, manual mode	\$359
Input/output	Yes	2/Yes	VU	XLR, 1/4" TRS	No	19x3.5	Vintage photo-optical compressor sound	\$1,299
Input	Yes	2/Yes	VU	XLR	No	2U	Dark switch for thicker sound	\$800
Yes	Yes	2/Yes	LED	XLR	1/4" TRS	19x1.75x11.5	Variable knee, VCA design, vari-ratio expander	\$1,425

DYNAMICS PROCESSORS

DYNAMICS PROCESSORS

MANUFACTURER	MODEL	TYPE	THRESHOLD	RATIO	ATTACK TIMES	RELEASE TIMES
Klark-Teknik	DN504	Quad compressor/limiter	-30 to 20 dBu	1:1 to 50:1	Auto or man (50 μ s to 20 ms)	Auto or man (60 ms to 2 sec)
Klark-Teknik	DN514	Quad auto gate	-40 to 20 dBu	N/A	Prog dep, semi-automatic expand auto/man (40 ms to 2 sec)	Man (40 ms to 2 sec) including hold
LA Audio	BCL20	Dual compressor/limiter	-40 to 20 dB	1:1 to 20:1	Peak: (1 to 70 ms), RMS, prog dep	Peak: 100 ms to 3 sec, RMS, prog dep
LA Audio	FGC20	Dual split-band compressor and frequency-selective gate	-40 to 20 dB	1:1 to 20:1	Fast = 1 ms, slow = 20 ms	40 ms to 4 sec
LA Audio	GCX20	Dual compressor/gate	-50 to 20 dB	1:1 to 20:1	Prog dep: 5 to 70 ms (fast), up to 3 sec (slow)	Prog dep: up to 1 sec (fast) and up to 3 sec (slow)
LA Audio	TCX20	Dual compressor/gate	-30 to 20 dB	1:1 to 20:1	Auto or man (0.1 to 100 ms)	Auto or man (0.04 to 4 sec)
Langevin	Langevin Stereo ELOP	Stereo limiter	22 dB	10:1	10 ms or 6 dB	2.5 ms or 6 dB
Manley Labs	Manley Stereo ELOP	Stereo electrical-optical limiter	22 dB	10:1	10 ms for 6 dB GR	2.5 seconds for 6 dB GR
Manley Labs	Stereo Variable Mu	Compressor/limiter	Variable	Comp 1.5:1, lim 4:1 to 20:1	25 to 70 ms	0.2 to 8 sec
Millennia	Twincom TCL-2	Compressor/limiter	-20 to +20 dB	1:1 to 30:1	2 to 200 ms	10 ms to 200 ms
Oram Pro	Sonicomp 1	Solid state compressor	Yes	Yes	Yes	Yes
Oram Pro	Sonicomp 2	Solid state compressor	Yes	Yes	Yes	Yes
Pendulum	6386	Variable-mu tube limiter	Off to -20	1:1 to limiting	0.1 to 100 ms	50 ms to 2 sec
Pendulum	ES-8	Variable-mu tube limiter	Off to -20	1:1 to limiting	0.1 to 100 ms	50 ms to 2 sec
Pendulum	OCL-2	Compressor/limiter	Off to -20 dB	1.5:1 to 15:1	1 to 50 ms	50 ms to 20 sec
Phonic Hi-Tech	PCL3200	Compressor/limiter/gate	-40 to 20 dB	1:1 to 10:1	Manual (0.1 to 200 ms)	Manual (50 ms to 3 sec)
PreSonus	ACP-22	Stereo compressor/limiter/spectral gate	-70 to 20 dB	1:1 to 20:1	Auto or man (comp: 0.1 to 100 ms, gate: 10 μ s to 100 ms)	Auto or man (0.02 ms to 2 sec)
PreSonus	ACP-88	Compressor/limiter/gate	-0 to 20 dBu	1:1 to 20:1	Auto or man (0.01 to 100 ms)	Auto or man (0.02 ms to 2 sec)
PreSonus	Blue Max	Small compressor/limiter	Fixed (-10 dB) manual mode	1:1 to 20:1	Manual (0.01 to 100 ms)	Manual (10 to 500 ms)
PreSonus	CL44	Quad compressor/limiter	+15 dBu to -40 dBu	1:1 to 20:1	Auto or manual (1 ms to 500 ms)	Auto or manual (1 sec to 3 sec)
PreSonus	GTX44	Quad gate/expander	+15 to -40	1:1 to gate	1 ms-500 ms	15 ms to 25 ms
QSC Audio	DSP-3	Compressor/limiter/EQ/crossover	-81 to 15 dB	1:1 to 200:1	Manual (1 to 200 ms)	Manual (2 ms to 1 sec)
QSC Audio	DSP-4	Compressor/limiter/EQ/crossover	-81 to 15 dB	1:1 to 200:1	Manual (1 to 200 ms)	Manual (2 ms to 1 sec)
QSC Audio	DSP-30	Compressor/limiter/EQ/crossover	-81 to 15 dB	1:1 to 200:1	Manual (1 to 200 ms)	Manual (2 ms to 1 sec)
Rane	DC 22 Dynamic Controller	Compressor/gate	-40 to +20 dB	1:1 to ∞ :1	Auto	Auto
Rane	DC24	Compressor/limiter/expander/gate 2-way crossover	-50 to 20 dB	1:1 to 20:1	Auto	Auto
Requisite Audio	PAL Plus	Tube mic pre/compressor/limiter	-30 dB	3:1, 10:1	10 μ sec (instant)	0.06 for 50% release, 0.5 to 5 sec complete release
Rollis	CL 151 GLC	Comp/limiter w/mic preamp	-30 to 10 dB	1:1 to ∞ :1	Auto	Auto
Rollis	RP252	Compressor/limiter/gate	-40 to 12 dB	1:1 to ∞ :1	Man (0.2 to 10 ms)	Man (40 ms to 2 sec)
Samsen	C-Com16	Stereo compressor	Variable	Variable	Variable	Variable
Samsen	C-Comp Opti	Optical compressor	-40 to +20 dB	1:1 to 2:1	0.3 to 300 ms	0.05 to 5 sec
Samsen	S Com	Stereo compressor	-40 to 20 dB	1:1 to ∞ :1	Variable (0.3 ms/20 dB to 300 ms/20 dB)	Auto or (0.5 to 3 sec)
Samsen	S Com 4	4-ch compressor/gate	-40 to 20 dB	1:1 to ∞ :1	Variable (0.3 ms/20 dB to 300 ms/20 dB)	Auto or (0.5 to 3 sec)
Samsen	S Com Plus	Expander/gate compressor/limiter de-esser	-40 to 20 dB	1:1 to ∞ :1	Variable (0.3 ms/20 dB to 300 ms/20 dB)	Auto or (0.5 to 3 sec)
Sony	SRP-F300	Digital speaker system multi-processor	N/A	N/A	N/A	N/A
SPL Electronics	De-Esser	Auto-Dynamic De-Esser	Auto	Variable	N/A	N/A
SPL Electronics	Dynamaxx	Compressor/limiter/gate	Variable	Variable	Auto	Auto
SPL Electronics	Kultube	Compressor/limiter	-37 dBu to +22 dBu	1:1 to ∞ :1	Auto or manual (-37 to +22 dB)	Auto or manual (0.3 to 2.2 sec)
SPL Electronics	Transient Designer 2	Envelope modeler	N/A	N/A	Variable	Variable
SPL Electronics	Transient Designer 4	Envelope modeler	N/A	N/A	Variable	Variable
Summit Audio	DCL-200	Dual compressor/limiter	N/A	1:1:1 to 7:1	Variable, 0.1 ms to 100 ms	Variable, 45 ms to 10 sec
Summit Audio	TLA-50	Compressor/limiter/gate	-25 to 25 dBu	1:1 to 4:1	Sel (fast, medium, slow)	Sel (fast, medium, slow)
Summit Audio	TLA-100A	Tube compressor	-25 to 25 dBu	1:1 to 4:1	Sel (fast, medium, slow)	Sel (fast, medium, slow)
Summit Audio	Tube Leveling Amplifier					
Studio Electronics	C2s	Compressor/limiter	Set by inp lev cntrl	4, 8, 12, 20:1	20 to 800 ms	50 ms to 1.1 sec
TC Electronic	Finalizer Express	Compressor	-25 to 0 dBu	1:1 to ∞ :1	0.3 to 100 ms/band	20 ms to 7 sec/band

GAIN CONTROL	BYPASS SWITCH	# OF CHANNELS/ STEREO LINK	METER TYPE	MAIN I/O	SIDECHAIN I/O	DIMENSIONS	SPECIAL FEATURES	PRICE
Yes	Yes	4/Yes	LED	XLR	1/4" TRS	19x1.75x10.5	Switchable hard or soft knee compression	\$1,495
No	Yes	1/No	LED	XLR	1/4"	19x1.75x11.5	Syncs audio tracks by interlocking gate release times	\$1,215
Yes	Yes	2/Yes	12-seg LED	XLR	No	19x7.5x1.75	RMS/peak detection mix feature, broadcast specs, transformer balanced outs	\$1,200
Yes	Yes	2/Yes	2x8-seg LED	XLR	No	19x7.5x1.75	Frequency windowing filters in gate/sidechain/audio path	\$1,000
Yes	Yes	2/Yes	2x6-seg LED	XLR, 1/4" TRS	No	19x61.75		\$300
Yes	Yes	2/Yes	2x6-seg LED	XLR, 1/4" TRS	No	19x6x1.75		\$500
Output/gain reduction	Yes	2/Yes	VU and gain reduction modes	XLR, 1/4" TRS	No	19x1.75x10	All discrete	\$1,775
Threshold/output	Yes	2/Yes	VU & GR	XLR, 1/4" TRS	No	19x3.5x10	LA-2A style, all tube	\$2,500
Yes	Yes	2/Yes	Analog	XLR	RCA (option)	19x3.5x10	All tube fully differential	\$4,000
Output	Yes	2/Yes	Analog VU	XLR	RCA	19x12x3.5	Twin Topology	\$2,995
Yes	Yes	2/Yes	LED, GR input	XLR, 1/4"	Yes	1U	Switchable light-dependent resistor	\$1,995
Yes	Yes	2/Yes	VU, GR input	XLR, 1/4"	Yes	2U	Solid state or light-dependent resistor	\$2,590
Yes	Yes	2/Yes	VU	XLR, 1/4"	1/4" TRS	19x3.5x12.5		\$3,495
Output	Yes	2/Yes	VU	XLR, 1/4"	1/4" TRS	19x3.5x12.5		\$3,995
Output	Yes	2/Yes	VU	XLR, 1/4"	1/4" TRS	19x3.5x12.5	All tube gain path, transformerless design	\$2,795
Output	Yes	2/Yes	LED	1/4"	1/4"	19x2x4.5	Hard/soft knee, peak RMS switch	\$249
Output	Yes	2/Yes	8-seg LED	XLR, 1/4"	1/4" TRS	19x1.75x5	Hard/soft knee, freq-dependent LP gate filter	\$400
Output	Yes	8/Yes	LED	1/4" TRS	1/4" TRS	19x3.5x6	Hard/soft knee, accepts +/-10 dBu inputs	\$1,200
Input/output	Yes	2/Yes	LED	1/4" TRS	1/4" TRS	19x1.75x8	Includes 15 inst-specific preset comp. curves	\$200
Output	Yes	2/Yes	10-seg LED	XLR, 1/4" TRS	1/4" TRS	19x1.75x7	Lo filter, optical compressor emulation	\$699
No	Yes	2/Yes	10-seg LED	XLR, 1/4" TRS	1/4" TRS	19x1.75x7	Frequency-controlled gating/expansion/ducking	\$699
Input/output	Yes	2/Yes	10-seg peak or RMS	(2) 3-pin euros, RS-232, data port in/ (2) 3-pin euros out	No	4.76x1.21x3.49	Computer controlled "set and forget" DSP, turns on w/same preset used last	\$525
Input/output	Yes	2/Yes	10-seg peak or RMS	(2) XLR, data port, RS232 in/ (2) XLR, data port out	No	3.75x1.38x3.5	Computer controlled "set and forget" DSP, turns on w/same preset used last	\$685
Input/output	Yes	2/Yes	10-seg peak or RMS	Bal combo in/XLR out	No	19x14.9x1.73	Computer controlled "set and forget" DSP, turns on w/same preset used last	\$525
Output	Yes	2/Yes	4-seg LED	XLR, 1/4" TRS	No	19x1.75x5.3	Adjustable gate/downward expander	\$349
Output	Yes	2/Yes	LED	XLR, 1/4" TRS	1/4" TRS	19x1.75x5.3	Combine crossover mode, -10/+4 dBu inputs	\$599
Output	No	1/Yes	VU for gain reduction	XLR	No	2U		\$2,500
Input/output	No	1/No	LED	XLR, 1/4"	1/4" TRS	4.15x2.46x1.55	Mic preamp, 40 dB total gain	\$120
Output	No	2/Yes	10-seg LED	XLR, 1/4"	1/4"	19x1.75x6		\$275
Variable	No	2/Yes	6-seg LED	1/4"	1/4" TRS	N/A	"C-class" 1/2 rack desktop design w/slacking rubber feet, presets	\$159
Output ±20	Yes	1/Yes	Analog	1/4" TRS	1/4" TRS	8.66x6.69x1.57	"C-class" 1/2 rack desktop design w/slacking rubber feet	\$160
Output variable (-20 to 20 dB)	Yes	2/Yes	12-seg LED	XLR, 1/4" TRS	1/4"	1.75x19x7.75	Full featured, dual-channel dynamics processor incl comp/lim, expander/gate, de-esser, peak limiter	\$220
Output variable (-20 to 20 dB)	Yes	4/Yes	5-seg LED	XLR, 1/4" TRS	1/4"	1.75x19x7.75	Full featured, 4-ch dynamics processor incl comp/lim and expander/gate on each channel	\$290
Output variable (-20 to 20 dB)	Yes	2/Yes	12-seg LED	XLR, 1/4" TRS	1/4"	1.75x19x7.75	Full featured, dual-channel dynamics processor incl comp/lim, expander/gate, de-esser, peak limiter	\$280
No	No	No	Peak-reading LED (x8)	XLR, AES/EBU	No	19x1.75x14.5	PC-controlled multi-processing with included software	\$1,875
No	Yes	2/No	10-seg LED	XLR, 1/4" TRS	No	19x1.7x9.3	De-essing via phase cancellation (inversion), extremely narrow bandwidth	\$699
Yes	Yes	2/Yes	20-seg LED	XLR, 1/4" TRS	1/4" TRS	19x1.7x9.3	SPL double-VCA circuitry, de-compression mode, soft limit switch	\$799
Yes	Yes	2/Yes	VU, switchable	XLR, 1/4" TRS	1/4" TRS	19x3.5x8.3	Discrete gain cells, hard/soft-knee switch, signal responsive time control, tube saturation	\$1,999
No	Yes	4/Yes	N/A	1/4"	No	19x1.7x6.2	Attack and sustain controls, envelope modeling	\$599
No	Yes	4/Yes	N/A	XLR	No	19x1.7x6.2	Attack and sustain controls, envelope modeling	\$1,199
Yes	Yes	2/Yes	True VU for level and gain reduction	XLR	1/4" TRS	19x10.5x3.38	Vacuum tube/solid state hybrid	\$3,490
Yes	Yes	1/Yes	VU	XLR, 1/4"	1/4" TRS	9.5x1.75 (1/2 rack)	Auto level switching (+4, -10) tube	\$695
Output	Yes	1/Yes	VU for output/GR	XLR	1/4" TRS	19x3.5x10.5	Soft knee, Jensen 990 output, transformerless	\$2,150
Input/output	Yes	2/Yes	20-seg LED PPM	TRS, XLR	No	19x10x1.75	Fully discrete Class A transformer coupled, classic FET compression	\$1,999
Input/output	Yes	2/Yes	LED	S/PDIF, AES/EBU, Toslink	No	1U	24-bit AD/DA, soft clip, spectral balance	\$1,599

DYNAMICS PROCESSORS

MANUFACTURER	MODEL	TYPE	THRESHOLD	RATIO	ATTACK TIMES	RELEASE TIMES
TC Electronic	Triple C Mono/Triple C Stereo	Compressor	-40 dB	1:1 to ∞:1	0.2 to 50 ms	20 to 2,000 ms
TL Audio	5021	Dual tube compressor	-20 to +20 dB	1:1.5 to 1:30	0.5 to 40 ms	40 ms to 4 sec
TL Audio	Classic C-1	Tube compressor	20 to 20 dB	Variable 1:1.5 to 1:30	Variable 0.5 to 50 ms	Variable 40 ms to 4 sec
Tube Tech	CL-1B	Tube compressor	20 to -40 dBm	2:1 to ∞:1	Fixed or continuously variable	Fixed or continuously variable
Tube Tech	CL-2A	Tube compressor	20 to -40 dBm	2:1 to ∞:1	Fixed or continuously variable	Fixed or continuously variable
Tube Tech	LCA-2B	Stereo compressor/limiter	Off to -10 dBu	1.6:1 to 20:1	0.3 to 70 ms	0.07 to 2 sec
Tube Tech	MEC-1A	Mic preamp/EQ/compressor	-20 dB to off	1.5:1 to 10:1	0.3 to 70 ms	60 ms to 2 sec
Tube Tech	SMC-2A	Stereo multiband compressor	Variable	1.6:1 to 20:1	0.3 to 70 ms	0.07 to 2 sec
Universal Audio	1176	Limiting amp	Set by inp lev cntrl	4:1 to 20:1	20 to 800 ms	50 ms to 1.1 sec
Universal Audio	1176LN	Limiting amp	Set by input level control	4:1 to 20:1	20 to 800 ms	50 ms to 1.1 sec
Voce	EVC-1	Tube compressor	0 to 20 dBu	1:1 to 10:1	Man (1 to 1000 ms)	Man (1 to 1,000 ms)
Waves	L2 Ultramaximizer	Limiter	0 to -30.0 dBFS	Limiter	N/A	0.1 ms to 1,000 ms
Waves	Maxxbass 101	Bass extension	N/A	N/A	N/A	N/A
Waves	Maxxbass 102	Bass extension	N/A	N/A	N/A	N/A
XTA	D2 Dynamic EQ	Dynamic EQ	-30 to 22 dB	1:1 to 16:1	N/A	N/A
XTA	C2 Dual Compressor	Compressor/limiter/de-esser	-30 to +22 dB	1:1 to 16:1	Auto or -60 usec to 250 ms	Auto or 25ms to 2 sec
XTA	G2 Dual Gate	Noise gate/expander	-40 to +22 dB	1:1 to 8:1	-60 us to 250 ms	25 ms to 2 sec
XTA	SiDD	Compressor/limiter/gate/expander/delay	Variable	Variable	Auto or manual	Auto or manual

Chuck Ainlay

From page 24, *Chuck Ainlay*

harmonization—dual Harmonizers split up and down—to spread the vocal a bit. Many times I'll also use some sort of delay to add dimension.

Someone commented to me that you somehow get the vocal to sound like the singer hears it inside his or her head. You were asking about riding things—I'll spend quite a lot of time riding the vocals. I usually compress them in the mix using the GML compressor. I love that compressor for how it rides the vocal but doesn't sound compressed—it doesn't eat into the air of a vocal. Then I'll spend a lot of time riding the vocal just trying to get the intent.

Do you use overall stereo compression on your mixes? I try to make it sound like a finished record. When I'm using an SSL I'll use the quad compressor, or I like the Alan Smart version of the SSL compressor if I'm working on a Neve. I also have the Calrec compressors; they work in a very similar way to the SSL compressors, and I'll use those sometimes on the overall

mix. I don't do any of that digital compression, maxing out a DAT kind of thing, like a lot of people do; I'll leave that to mastering.

What format do you mix to? I always mix to half-inch with AGFA tape on an ATR 100. I also mix through the Pacific Microsonics HDCD converters to the Genex magneto optical recorder, which allows me to record to at 88.2/24-bit.

What level on the half-inch? Plus 5 over 250; that works pretty good if I'm using 16 dB of headroom on the digital as far as maxing out the digital and still hitting the analog hard enough.

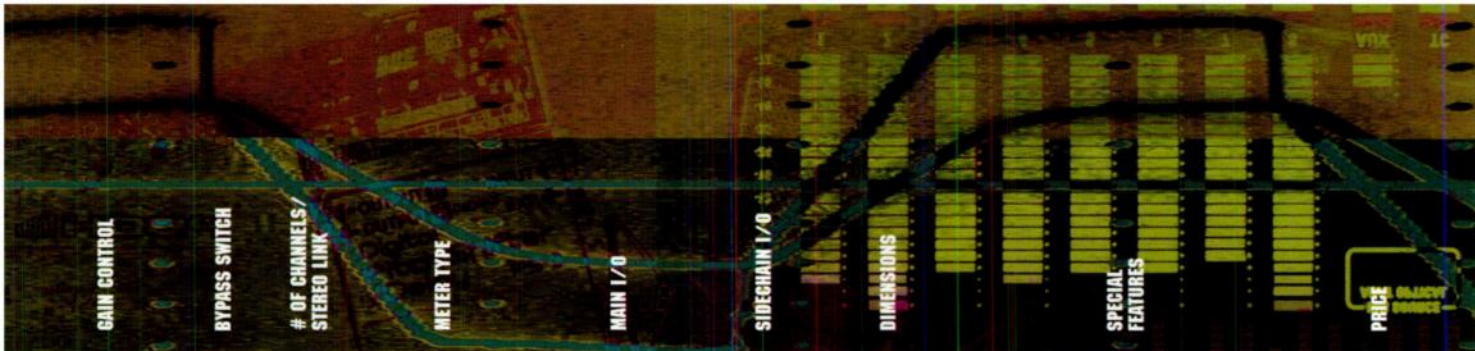
When do you choose between the formats? I'll wait until I get to mastering. Generally the half-inch wins. There isn't, in my opinion, a better representation of the console bus than the Pacific Microsonics system, but sometimes you just can't beat the character that the analog adds.

Why both formats then? Well, for example on this Vince Gill project, I had to get a single done for his next re-

lease. We took the tapes to Denny "Platinum Ears" Purcell at Georgetown Masters, where I master all my records; we decided to go with the 24-bit, and we mastered the song completely flat. I find if you get it absolutely right in mixing, there's just nothing that comes closer to the desk than that [Pacific Microsonics] system. And I've auditioned lots of converters.

What are your main monitoring speakers? Recently I've been using KRK Exposé 8s, which I love; I've been getting great mixes with them, and Keith Klawitter at KRK has been great. I came across them searching for a good monitor for 5.1, and I've been using them ever since. I also use the M&K subwoofer for the .1 when mixing in surround.

You're one of the main engineers in the forefront of mixing for 5.1—why is that? Just pure chance, I guess. DTS approached MCA Records and producer Tony Brown about doing Vince Gill's *High Lonesome Sound* in 5.1. I had been the engineer on that album, so I



Output	Yes	1/2/Yes	36-seg LED	1/4": S/PDIF; 1/4" TRS in stereo	1/4" TRS	19x8.2x1.75	MIDI; envelope compression	\$699/\$999
In/out gain make-up	Yes	2/Yes	VU	XLR: 1/4"	1/4" TRS	19x7.9x3.5	S/PDIF digital output (optional)	\$749
In/out gain make-up	Yes	2/Yes	VU	XLR; 1/4" TRS	1/4" TRS	19x3.5x10	Onboard mic preamps and direct inputs	\$1,599
Yes	Yes	1/No	VU	XLR	XLR	3U		\$2,195
Yes	Yes	1/No	VU	XLR	XLR	3U	2 channel version of CL-1B	\$3,295
Yes	Yes	1/Yes	LED	XLR	XLR	2U	Fairchild 670 attack/release presets	\$3,495
Yes	Yes	2/Yes	VU	XLR; 1/4"	No	2U	Gold-plated switches	\$3,995
Yes	Yes	2/Yes	LED	XLR	XLR	2U		\$4,395
Output	No	1/Yes	VU	XLR; barrier strip	No	2U	Authentic replica	\$1,895
Output	No	1/Yes	VU	XLR; barrier strip	No	2U	True replica	\$1,895
Output	Yes	1/No	LED	XLR; 1/4" TRS	1/4" TRS	8x1.6x8.5	Soft knee; no solidstate devices in audio path	\$799
Yes	Yes	2/Yes	peak LED ladders	(2) XLR; (2) 1/4" TRS; AES/EBU; S/PDIF	Yes	2U	24-bit AD and DA converters; x2 function for doubling sample rates (88.2/96 kHz); choice of sync to ext clock (BNC); digital input; or internal; re-quantizer output	\$2,395
Input	Yes	2/Yes	Input LED	XLR; TRS; wire terminal	No	1U	Up to 1 1/2 octaves bass extension w/equal or less speaker power consumption	\$350
Input	Yes	2/Yes	Input LED	XLR; TRS; wire terminal; RCA	No	1/2U	Up to 1 1/2 octaves bass extension w/equal or less speaker power consumption	\$250
Output	Yes	1/Yes	LED in/out/GR	XLR	XLR	19x11.8x1.75	Freq-selectable compression; fully digital (24-bit)	\$1,795
Output	Yes	2/Yes	In/out; GR	XLR	XLR	19x11.8x1.75	Soft/med/hard knee switch; de-ess/de-pop mode; sidechain EQ + listen; 24-bit digital	\$1,795
No	Yes	2/Yes	LED in, threshold, shut, open	XLR	XLR	19x11.8x1.75	Sidechain EQ; look ahead feature; fully digital (24-bit)	\$1,795
Input/output	Yes	2/Yes	7-seg in/out/GR	XLR	XLR	19x11.8x1.75	Computer control software; fully digital (24-bit)	\$2,795

was given the opportunity to do the project. I had a concept of how to do it, and I guess people are digging it; since then I've been asked to do quite a few other albums. I really believe that if it wasn't for DTS, music releases of 5.1 probably wouldn't be happening at all. Rory Kaplan and Bill Neighbors at DTS are very responsible, I think, for the musical integrity of what's going on by getting creative people with high standards involved and moving the whole concept forward.

So is it a lot more fun to mix in surround? Back when I was in high school, I would listen to music all the time with a pair of speakers in front and my dad's speakers in the back—that's how I listened, and I loved it. Then you become a professional, and you get into precise stereo positioning and all. When I did the surround mixing for the first time I thought, "This is how I remember it!"—to have sound coming from all around you. It really is fun; the fact that there are no guidelines of what you are supposed to do makes it very creative—I love it.

Would you like to have your own studio? I'm thinking about it. I see the need for a facility for mixing 5.1. Rooms now are acoustically designed and optimized for stereo, with the sound coming from one direction; generally they are live end/dead end situations, so with a surround setup, speakers in one end of the room will sound different than the speakers in the other end. Also, with 5.1 you really have to look at all the reflective surfaces. Because the sound is coming from more directions, your first reflections are more complicated to deal with. I think the big consoles we work on are a major factor as far as an imprint on the sound of the room, and that becomes an even bigger factor in surround. It's leading me to the idea that a digital console with a smaller imprint could work better in a surround room; also, because it's a pure digital medium that's only going to ever be heard off DVD or DTS CD with a decoder, I see how a digital desk could work. So that's the thought—a room designed acoustically for surround with a digital desk.

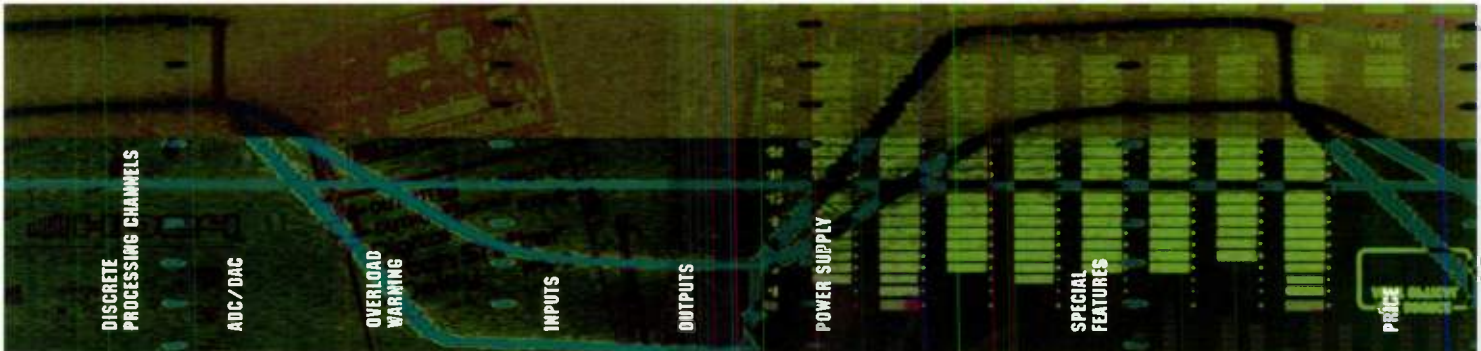
What's up next for you? I'm finishing Vince Gill's album, then I go out to L.A. to mix Trisha's new album at Capitol Studios; they have a Neve VRP console with the film mods so that I can mix it in surround. That will be a lot of fun, because, at the same time Vince Gill will also be out there doing his Christmas album in the next room with Al Schmitt engineering, and they are recording the whole thing in 5.1. Tony Brown is producer on both those projects.

After that I'm going to stay in L.A. for a while because I'm producing a Los Angeles band called Spaghetti Western for DTS. Meanwhile, we're also in the process of a Mark Knopfler record. [Laughs] I guess there's a lot going on. Oh, and of course I also intend to be doing a lot of water skiing! ■

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EFFECTS PROCESSORS

EFFECTS PROCESSORS	MANUFACTURER	PRODUCT	PRESETS (FACTORY/USER)	ANALOG EFFECTS	DIGITAL EFFECTS	SIMULTANEOUS EFFECTS	PROGRAMMABLE WET/DRY MIX	COMPARE/BYPASS	MAXIMUM DELAY TIME	MAXIMUM PITCH SHIFT RANGE	MIDI REAL-TIME CONTROL	SIMULTANEOUS MIDI CONTROLLERS
	Alesis	AcoustiFX	40	N/A	6 EX modules	20	Yes	Y/Y	N/A	N/A	No	No
	Alesis	AirFX	50/0	N/A	Vocoders, flangers, phasers, panners	1	No	Y/Y	N/A	N/A	No	No
	Alesis	Akira	50/50	N/A	Reverb, delay, pitch, filter	3	Yes	Y/Y	700 ms	+/- 1 octave	Yes	Yes
	Alesis	BassFX	80	N/A	9 EX modules	20	Yes	Y/Y	N/A	N/A	No	No
	Alesis	GuitarFX	80	N/A	9 EX modules multiple effects	40	Yes	Y/Y	N/A	N/A	No	No
	Alesis	Ineko	48/0	N/A	revb, dly, phasers, flng, voco, tape em	1	Yes	Y/Y	N/A	N/A	No	No
	Alesis	MicroVerb 4	100/100	N/A	Rvrb, chrs, dly, flng, rtry, ptch	3	Yes	N/Y	1,300 ms	±1 octave	Yes	2
	Alesis	MidVerb 4	128/128	N/A	Rvrb, chrs, dly, flng, rtry, ptch	3	Yes	Y/Y	1,300 ms	±1 octave	Yes	2
	Alesis	ModFX Ampliton	N/A	N/A	Tremolo, autopan	N/A	Yes	Y/Y	N/A	N/A	No	No
	Alesis	ModFX Bitrman	N/A	N/A	Comp, distortion, phaser digital manipulator	N/A	Yes	Y/Y	N/A	N/A	No	No
	Alesis	ModFX Faze	N/A	N/A	Stereo phaser w/modulation	N/A	Yes	Y/Y	N/A	N/A	No	No
	Alesis	ModFX Melavox	N/A	N/A	Vocoder	N/A	Yes	Y/Y	N/A	N/A	No	No
	Alesis	ModFX Phillro	N/A	N/A	High pass/band pass/low pass	N/A	Yes	Y/Y	N/A	N/A	No	No
	Alesis	ModFX Phlgr	N/A	N/A	Stereo flanger	N/A	Yes	Y/Y	N/A	N/A	No	No
	Alesis	ModFX Smash Up	N/A	N/A	Stereo compressor	N/A	Yes	Y/Y	N/A	N/A	No	No
	Alesis	NanoVerb	16/0	N/A	Rvrb, chrs, dly, flng, rtry	3	Yes	N/Y	1,300 ms	N/A	No	No
	Analogue Solutions	Filtered Coffee	N/A	Filter	N/A	3	No	Y/Y	N/A	N/A	No	No
	Antares	ATR-1A Auto-Tune	50/20	N/A	Real-time pitch correction	1	No	Y/Y	N/A	±1 octave	Yes	Yes
	Antares	Vocal Producer (AVP-1)	35/35	N/A	Auto-tune pitch correct, mic modling, tube modling, comp, gate, de-esser, EQ, stereo dbl trk	8	No	Y/Y	N/A	N/A	Yes	Yes
	ART	DMV-Pro	100/100	N/A	Rvrb, chrs, flng, ptch, trml, rtry, phsr, pan, dly	4	Yes	Y/Y	5 sec	>2 octaves	Yes	16
	ART	FX-1	60/0	N/A	Rvrb, chrs, dly, flng, ptch, trml, pan, gate	3	No	N/Y	420 ms	1 octave	No	No
	Behringer	Modulizer Pro DSP1224P	N/A	N/A	24 effect types, 100 programs	1	Yes	Y/Y	N/A	N/A	Yes	13
	Behringer	Virtualizer Pro DSP2024P	100/100	N/A	Rvrb, dly, ptch, lo-fi, modulation, 1 amp sim, distortion	1	Yes	Y/Y	N/A	N/A	Yes	Yes
	Boss	GT-6 Guitar	200/140	N/A	34	12	Yes	Y/Y	1,800 ms	±2 octaves	Yes	Yes
	Boss	GT-6B Bass	40/80	N/A	COSM modeled amps, cabs, OD/DS, comp/lim, other digital FX	11	Yes	Y/Y	1,400 ms	±2 octaves	Yes	Yes
	Boss	VF-1	200/200	N/A	Multi	9	Yes	Y/Y	2800 ms	+/- 2 octaves	Yes	Yes
	Boss	VT-1 Voice Transformer	20/20	N/A	Pitch/formant, rebot, reverb	5	Yes	Y/Y	N/A	± 1 octave	No	No
	Carvin	XP 2	100/100	N/A	Choruses, flangers, phasers, echoes, delays, rotary speakers	2	Yes	Y/Y	2 sec/eng	N/A	Yes	Yes
	Carvin	XP 4	100/100	N/A	Reverbs, choruses, flangers, phasers, echoes, delays, rotary speakers	4	Yes	Y/Y	4 sec/eng	N/A	Yes	Yes
	Crate	SM1-SP	32/0	N/A	Reverb, delay, flange, chorus, gated reverb, rotary	2	No	N/N	455 ms	N/A	No	No
	Crate	SM2-SRS	2/0	N/A	N/A	1	No	Y/Y	N/A	N/A	No	No
	DACS	FWS Series FREQue II	N/A	Ring mod, oscillator, frequency mod	N/A	3	Yes	N/N	N/A	N/A	No	No
	DACS	Vocoder	N/A	Vocoding filter	N/A	4	Yes	N/N	N/N	+/- 1 octave	Yes	No
	dbx	480 DriveRack	10/10	N/A	Delay, compressor/limiter, EQs, notch filters, RTA	1	No	N/N	600 ms	N/A	Yes	No
	dbx	481 DriveRack	10/10	N/A	Delay, compressor/limiter, EQ, crossovers, RTA	1	No	N/N	N/A	N/A	Yes	No
	dbx	482 DriveRack	10/10	N/A	Delay, compressor/limiter, crossovers, EQs, notch filters, RTA	1	No	N/N	600 ms	N/A	Yes	No
	Demeter	Real Reverb	N/A	Stereo spring reverb	N/A	3	Yes	N/Y	3.5 sec	N/A	No	No
	DigiTech	Genesis I	N/A	N/A	7	7	No	N/N	N/A	N/A	No	No
	DigiTech	Genesis 3	48/48	N/A	31	11	No	Y/Y	N/A	N/A	Yes	Yes
	DigiTech	GNX 2	64/64	N/A	31	13	No	Y/Y	N/A	N/A	Yes	Yes
	DigiTech	GNX2/GNX3	64/64	N/A	31	13	No	Y/Y	N/A	N/A	Yes	Yes



DISCRETE PROCESSING CHANNELS	ADC/DAC	OVERLOAD WARNING	INPUTS	OUTPUTS	POWER SUPPLY	SPECIAL FEATURES	PRICE
1	20-bit/20-bit/64x	N/A	1/4" mono	1/4" mono	9 VDC/4 AA batteries	Auto-chromatic tuner	\$149
2	24-bit/24-bit	N/A	Stereo RCA -10 dBV	Stereo RCA -10 dBV	Alesis P3	Axyz infrared controller	\$249
2	24-bit/24-bit	3-segment LED, clip light	(2) 1/4" TRS	(2) 1/4" TRS	50-60 Hz, 100-230 VAC	3 real-time parameter controls per program	\$299
1	20-bit/20-bit/64x	N/A	1/4" mono	1/4" mono	9 VDC/4 AA batteries	Auto-chromatic tuner	\$149
1	20-bit/20-bit/64x	N/A	1/4" mono	1/4" mono	9 VDC/4 AA batteries	Auto-chromatic tuner	\$139
2	24-bit/24-bit	Signal/clip LED	(2) 1/4"	(2) 1/4"	Alesis P3		\$199
2	18-bit/18-bit	4-seg LED	(2) 1/4"	(2) 1/4"	Alesis P3 adapter	Bypass/tap-tempo footswitch, 2 parameter knobs	\$249
2	18-bit/18-bit	18-seg LED, clip light	(2) 1/4"	(2) 1/4"	Alesis P3 adapter	Auto level sensing, tap tempo footswitch	\$299
1	24-bit/24-bit	N/A	1/4" TRS	1/4" TRS	9 VDC		\$129
1	24-bit/24-bit	N/A	1/4" TRS	1/4" TRS	9 VDC		\$129
1	24-bit/24-bit	N/A	1/4" TRS	1/4" TRS	9 VDC		\$129
1	24-bit/24-bit	N/A	1/4" TRS	1/4" TRS	9 VDC	Internal/external synth	\$129
1	24-bit/24-bit	N/A	1/4" TRS	1/4" TRS	9 VDC	Modulation	\$129
1	24-bit/24-bit	N/A	1/4" TRS	1/4" TRS	9 VDC	Modulation	\$129
1	24-bit/24-bit	N/A	1/4" TRS	1/4" TRS	9 VDC		\$129
1	18-bit/18-bit	Clip light	(2) 1/4"	(2) 1/4"	Alesis P3 adapter	Adjust knob, bypass footswitch	\$135
1	N/A	N/A	(3) 1/4"	(4) 1/4"	15VAC, 500 mA	Pure analog, based on Korg MS20 analog synth	\$325
1	20-bit/24-bit	6-seg LED	1/4" TRS, XLR	1/4", XLR	External	Speed control, learn scale from MIDI, tracks down to 25 Hz set note via MIDI	\$549
1	20-bit/20-bit	LED VU meter	1/4"	(2) 1/4"	60 Hz, 120/240V		\$599
4	20-bit	5-seg LED	(4) 1/4"	(4) 1/4"	External	Twin LCD editing interfaces	\$525
2	16-bit/16-bit	Clip light	(2) 1/4"	(2) 1/4"	External		\$139
2	20-bit/20-bit	N/A	1/4" TRS, XLR	1/4" TRS, XLR	Internal	Software for remote control via PC	\$109
2	24-bit/24-bit	Clip LED	XLR, 1/4" TRS	XLR, 1/4" TRS	60 Hz, 120 VAC	71 new algorithms, improved user interface, 64/128x oversampling	\$160
1	24-bit/24-bit	LED	1/4"	(2) 1/4", coax S/PDIF	14V, 800mA	30 COSM amp models, 15 COSM OD/DS models, 5 COSM wah models, 15 real-time control knobs, built-in programmable exp. ctrl pedal	\$495
1	24-bit/24-bit	LED	1/4"	(2) 1/4", (2) XLR, coax S/PDIF	14V, 800mA	Floor-unit, COSM modeled bass amps, cabs, mono bass synth, chorus, rev, sound-on-sound, 15 real-time knobs	\$495
2	24-bit	LED	(2) 1/4"	(2) 1/4"	AC adapter	S/PDIF digital output	\$595
1	N/A	Clip LED	1/4", S/PDIF	1/4", S/PDIF	AC adaptor	Remote jack; independent control of pitch and formants	\$395
2	24-bit/24-bit	N/A	2	2	N/A		\$200
4	24-bit/24-bit	N/A	4	4	N/A		\$300
2	1-bit/16-bit/64x	Signal/peak LED	(2) 1/4"	(2) 1/4"	External	Includes 32 presets	\$180
2	N/A	Signal/peak LED	(2) 1/4"	(2) 1/4"	External	Creates 3D surround from 2 speakers	\$130
2	N/A	LED	1/4" TRS	1/4" TRS	AC		\$1,400
2	N/A	N/A	(2) 1/4" TRS, XLR	(2) 1/4" TRS	50-60 Hz, 90-250 VAC	Deep freeze	\$1,500
1	N/A	N/A	(4) XLR	(8) XLR	Internal	GUI interface, optional remote controller	\$3,000
1	N/A	N/A	(4) euroblock connectors	(8) euroblock connectors	Internal	GUI interface, optional remote controller	\$2,400
1	N/A	N/A	(4) XLR	(8) XLR	Internal	GUI interface, optional remote controller	\$2,500
2	N/A	LED	1/4" TRS and 3-pin balanced inputs	1/4" TRS and 3 pin balanced outputs	Internal	Physical spring reverberation long or short decay times, low cut filter, phase switch, gain and mix controls, stereo or mono operation	\$700
2	24-bit	N/A	1/4" guitar	(2) 1/4"	9 VAC		\$150
2	24-bit	N/A	1/4" guitar, 1/8" CD jam along	(2) 1/4" TRS	9 VAC		\$450
2	24-bit	N/A	1/4" guitar	1/4", headphone	9 VAC		\$580
2	24-bit	N/A	1/4"	S/PDIF, (2) 1/4"	9 VAC included	8-track recorder	\$580/\$720

EFFECTS PROCESSORS

EFFECTS PROCESSORS

MANUFACTURER

PRODUCT

PRESETS
(FACTORY/USER)

ANALOG EFFECTS

DIGITAL EFFECTS

SIMULTANEOUS
EFFECTS

PROGRAMMABLE
WET/DRY MIX

COMPARE/
BYPASS

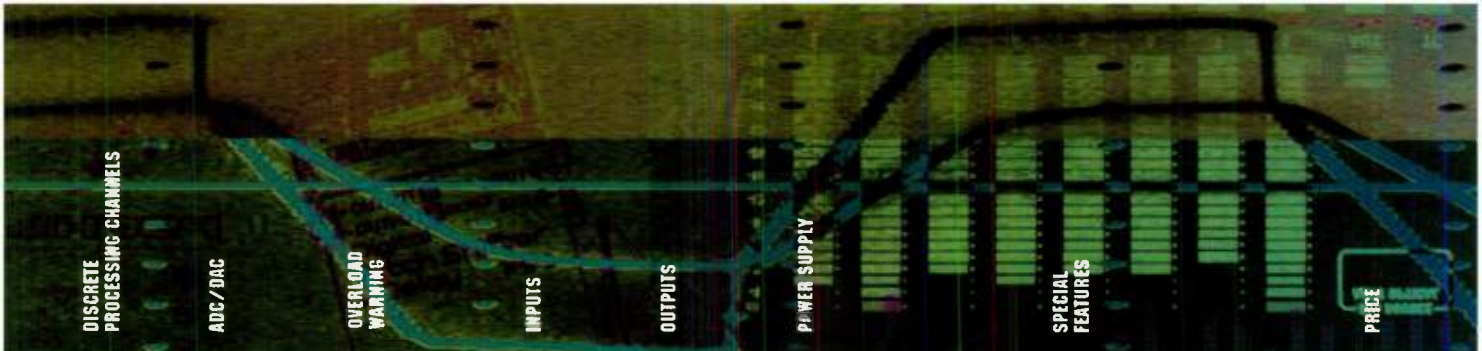
MAXIMUM
DELAY TIME

MAXIMUM PITCH SHIFT
RANGE

MIDI REAL-
TIME CONTROL

SIMULTANEOUS MIDI
CONTROLLERS

DigiTech	GNX 3	64/64	N/A	31	3	No	Y/Y	N/A	N/A	Yes	Yes
DigiTech	StudioQuad 4	100/100	N/A	57	4	Yes	N/Y	5 sec	±2 octaves	Yes	8
DigiTech	Studio S-100	99/99	N/A	25	2	Yes	N/Y	2 sec	-1 octave/+2 octaves	Yes	1
DigiTech	Studio S-200	99/99	N/A	25	2	Yes	N/Y	2 sec	-1 octave/+2 octaves	Yes	15
Dynatron	D255	Programmable	N/A	Digital reverb EMT 250	1	No	N/N	140 ms	N/A	No	No
Eventide	DSP 7000/DSP 7500	500+	N/A	All	N/A	Yes	Y/Y	N/A	8 octaves	Yes	Yes
Eventide	Eclipse	200+	N/A	Dozens	2	Yes	Y/Y	20 sec	±4 octaves	Yes	Yes
Eventide	Princeton Digital Reverb2016	N/A	N/A	Reverb	1	Yes	Y/Y	N/A	N/A	Yes	Yes
Fostex	DE-1	121	N/A	Yes	2	Yes	N/N	N/A	N/A	No	No
Korg	AX100G	40/40	N/A	63	7	No	N/Y	2 sec	±24	No	No
Korg	AX1500G	48/48	N/A	56	8	Yes	N/Y	2,000 ms	±2 octaves	No	No
Korg	Kaoss Pad KP-2	100/100	N/A	26	3	Yes	N/Y	1,000 ms	± octave	Yes	Yes
Korg	PX4	50/50	N/A	124	7	Yes	Y/Y	N/A	±2 octaves	No	No
Korg	PX4B	50/50	N/A	124	7	Yes	Y/Y	N/A	±2 octaves	No	No
Kurzweil	Mangler	192/64	N/A	Chrs; flng; phs; trmlo; rtry; pan; dly; fltr; hi-trq; stimulator; enh; LaserVerb; Pitcher	2	Yes	Y/Y	16 sec	N/A	Yes	Yes
Kurzweil	Rumour	192/64	N/A	Rvrb; gated; rev; rvrb/comp combos; LaserVerb; chrs/flng; dly+rvrb combos	2	Yes	Y/Y	2.5 sec	N/A	Yes	Yes
Kurzweil	KSP8	636/999	N/A	Rvrb; dly; chrs; flng; phs; enh; fltr; distrin; comp; lim; exp; gt; rng md; cab sim; spltr; rtry; trmlo; EQ	16	Yes	Y/Y	21.5 sec	N/A	Yes	Yes
Lexicon	MPX 1	200/50	N/A	56 pitch, chorus, EQ, modulation, delay, and reverb effects	6	Yes	Y/Y	2 sec	2 voices -4/+2.5 octaves	Yes	24
Lexicon	MPX 110	240/16	N/A	Reverb; delay; chorus; pitch; detune; flange; rotary; tremolo; echo	2	Yes	Y/Y	5.5 sec	+1, -2 octaves	Yes	Yes
Lexicon	MPX 200	240/64	N/A	Comp; reverb; delay; chorus; detune; flange; rotary; tremolo; echo	3	Yes	Y/Y	5.5 sec	+1, -2 octaves	Yes	Yes
Lexicon	MPX 550	240/30	N/A	Reverb; tremolo; rotary; chorus; flange; detune; pitch; delay; echo; dual algorithms; comp	3	Yes	Y/Y	5.5 sec	+1, -2 octaves	Yes	24
Lexicon	PCM 81	300/50	N/A	Reverb; delay; pitch shift; EQ; pitch correct	3	Yes	Y/Y	20 sec	±5 octaves	Yes	Yes
Lexicon	PCM 91	450/100	N/A	Reverb; delay	2	Yes	Y/Y	1,250 ms	N/A	Yes	Yes
Line 6	AM4 Amp Modeler	16/4	N/A	16 digital models of classic amps	1	No	N/Y	N/A	N/A	No	No
Line 6	Bass POD	36/36	N/A	16 bass amp models, 16 effects (incl. envelope follower, octave, down)	3	Yes	Y/Y	N/A	N/A	Yes	Yes
Line 6	Bass POD Pro	36/36	N/A	16 bass amp models, 16 effects (incl. Envelope follower, octave down), 15 cabinet models	3	Yes	Y/Y	N/A	N/A	Yes	Yes
Line 6	DL4 Delay Modeler	15/3	N/A	Digital modeling of 16 vintage delays and echo; loop sampler	1	Yes	N/Y	2.5 sec	N/A	No	No
Line 6	DM4 Distortion Modeler	16/4	N/A	Digital modeling of 16 vintage distortion	1	No	N/Y	N/A	N/A	No	No
Line 6	Echo Pro	99	N/A	Digital modeling of 16 vintage delays and echo; loop sampler	1	Yes	Y/Y	2.576 sec	N/A	Yes	Yes
Line 6	Filter Pro	99	N/A	Digital modeling of new and vintage filter effects	1	Yes	Y/Y	N/A	±2 octaves	Yes	Yes
Line 6	FM4 Filter Modeler	16/4	N/A	Digital modeling of new and vintage filter effects	1	Yes	N/Y	N/A	±2 octaves	No	No
Line 6	GuitarPort	N/A	N/A	Modulation, delays, compression, reverbs, 10 guitar amps, 10 cabinet models	4	Yes	Y/Y	3 sec	N/A	No	No



DISCRETE PROCESSING CHANNELS	ADC/DAC	OVERLOAD WARNING	INPUTS	OUTPUTS	POWER SUPPLY	SPECIAL FEATURES	PRICE
2	24-bit	N/A	1/4" guitar	1/4", headphone	9 VAC	8-track recorder	\$720
4	20-bit	Clip (each input)	(4) 1/4"	(4) 1/4"	AC	Programmable signal routing, LFOs, dynamic filters	\$480
2	20-bit	Clip LED	(2) 1/4"	(2) 1/4"	AC	User-selectable effects/signal routing configurations	\$220
2	20-bit	Clip LED	(2) 1/4"	(2) 1/4"	Internal	User-selectable configurations; large display	\$340
1	24-bit/96 kHz	Clip LED	XLR	(3) XLR	50-60 Hz, 100-240 VAC	EMT 250 reverb program w/surround sound outputs	\$3,995
2	24-bit/24-bit	LED	(2) XLR analog, XLR dig	(2) XLR analog, XLR digital	50-60 Hz, 90-250 VAC		\$3,995
2	24-bit	7-seg LED	1/4", XLR, AES/EBU, S/PDIF	XLR, AES/EBU, S/PDIF	AC	24-bit/96 kHz processing, word clock, ADAT lightpipe	\$2,995
2	24-bit/24-bit	LED	(2) XLR	(2) XLR	50-60 Hz, 90-250 VAC		\$2,245
2	20-bit	Peak LEDs	(2) 1/4"	(2) 1/4"	DC9V (exclusive AC adapter)	Half rackspace, rotary controls	\$199
1	N/A	N/A	1/4", 1/8"	(2) 1/4"	4 AA batteries or adapter	Virtual feedback function, phrase sampler, rhythm trainer mode	\$250
1	N/A	N/A	(2) 1/4"	(2) 1/4"	9 VAC	Built-in tuner, assignable pedal, record/phrase trainer feature	\$350
2	20-bit linear	Clip LED	(2/2) RCA line/phone; 1/4" mic	(2) RCA line	DC 12 VAC	Real-time FX processing w/touch-sensitive pad, onboard synth, drum samples	\$350
1	N/A	N/A	1/4"	1/4" TRS/phone	4 AAA batt or adapter	Can work w/infrared headphones, phrase trainer, "jamalong" feature	\$250
1	N/A	N/A	1/4"	1/4" TRS/phone	4 AAA batt or adapter	Can work w/infrared headphones, phrase trainer, "jamalong" feature	\$275
2	24-bit	Clip LED	(2) 1/4" TRS, S/PDIF	(2) 1/4" TRS, S/PDIF	External 9V 2 amp AC	Flash ROM upgradeable via MIDI	\$695
2	24-bit/24-bit	Clip LED	(2) 1/4" TRS, S/PDIF	(2) 1/4" TRS, S/PDIF	External 9V 2 amp AC	Flash ROM upgradeable via MIDI	\$695
8	24-bit	Br grph/multi-stg mtr, (4) clip LED	(4) 1/4" TRS; AES/EBU S/PDIF coax	(4) 1/4" TRS, AES/EBU S/PDIF coax	50-60 Hz, 100-240 VAC	Optional I/O cards 4-ch analog, 8-ch AES/EBU or S/PDIF w/word clock, 8-ch ADAT/TDIF w/word clock, 8-ch mLAN, Flash ROM, Smartmedia, 5.1	\$2,995
2	24-bit/24-bit	N/A	(2) 1/4", (2) XLR, S/PDIF	(2) 1/4", (2) XLR, S/PDIF	Internal, switching	Discrete reverb processor and separate effects processor elaborate patching and routing system	\$899
2	24-bit	2-seg LED, clip light	(2) 1/4"	(2) 1/4", S/PDIF (coax)	9 VAC (wall transformer provided)	Dual stereo, mono split, cascade, and dual mono configurations	\$299
2	24-bit	3-seg LED, clip light	(2) 1/4" TS, RCA S/PDIF	(2) 1/4" TS, RCA S/PDIF	50-60 Hz, 100-240 VAC and 220-240VAC	Dual stereo, mono split, cascade, and dual mono configurations	\$399
2	24-bit/24-bit	LCD display	(2) 1/4", (2) XLR, S/PDIF	(2) 1/4", (2) XLR, S/PDIF	Internal, switching	Tap tempo input, 16 adjustable parameters, stand-alone 24-bit A/D converter	\$649
2	24-bit	5-seg LED, clip light	(2) 1/4" TRS, XLR, AES/EBU, S/PDIF	(2) 1/4" TRS, XLR, AES/EBU, S/PDIF	50-60 Hz, 100-240 VAC	Unlimited user program storage via PCM CIA card slot, dynamic MIDI patching	\$2,995
2	24-bit	5-seg LED, clip light	1/4" TRS, (2) XLR, AES/EBU, S/PDIF	1/4" TRS, (2) XLR, AES/EBU, S/PDIF	50-60 Hz, 100-240 VAC	Unlimited user program storage via PCM CIA card slot, dynamic MIDI patching	\$2,995
1	24-bit	N/A	1/4" guitar	1/4" guitar input	Battery/AC	True bypass switching, expression pedal input, real-time control	\$350
1 in/2 out	20-bit	Clip light	1/4"	(2) 1/4"	External	Fully parametric EQ, effects crossover, phase-accurate DI and amp model output	\$520
1 in/2 out	24-bit	Clip light	1/4"	(2) 1/4", (2) XLR, S/PDIF, AES/EBU, headphone	Internal	Live and studio modes, fully parametric EQ, effects crossover, dual outputs for phase-accurate DI and amp model, full-time compressor, tuner, cabinet select, Mix 'n Match amps/cabs	\$900
1	24-bit	N/A	(2) 1/4"	(2) 1/4"	Battery/AC	Tap tempo, 14-second loop sampler, real time control	\$350
1	24-bit	N/A	1/4" guitar input	1/4" guitar input	Battery/AC	True bypass switching, expression pedal input, real time control	\$350
1	24-bit	5-segment LED, clip light	(2) 1/4" TRS, (2) XLR	(2) 1/4" TRS, (2) XLR	50-60 Hz, 100-240 VAC	Effects include tape, tube, analog echo, loop sampler, expression pedal input, MIDI clock sync	\$700
1	24-bit	5-segment LED, clip light	(2) 1/4" TRS, (2) XLR	(2) 1/4" TRS, (2) XLR	50-60 Hz, 100-240 VAC	Synth and filter effects, expression pedal input, MIDI clock sync	\$700
1	24-bit	N/A	(2) 1/4"	(2) 1/4"	Battery/AC	True bypass switching, expression pedal input, real time control	\$350
1	24-bit	Tri-color clip LED	1/4" guitar input	RCA, 1/8" stereo mini	USB bus	Mix-and-match cabs, full-function audio transport, online membership (tracks, tones, tools), 32-bit processing	\$230

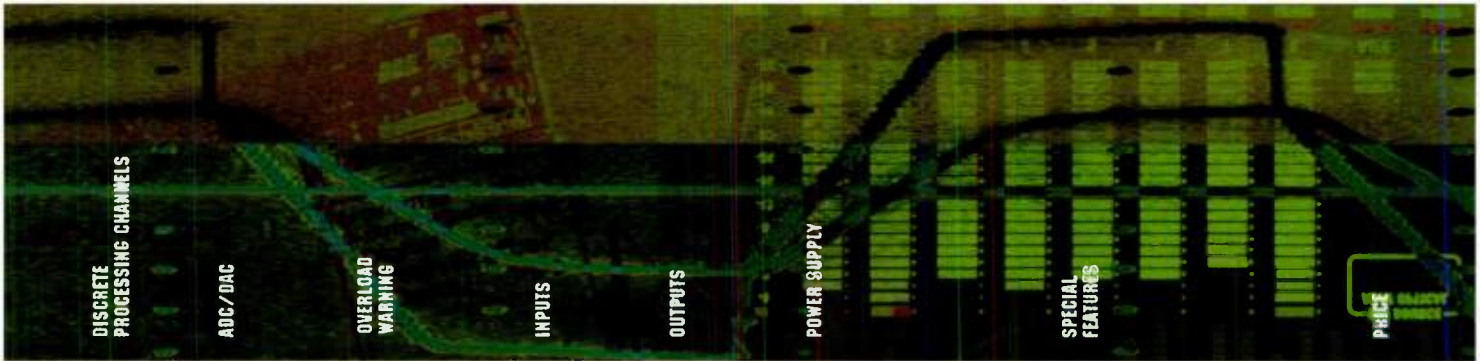
EFFECTS PROCESSORS

EFFECTS PROCESSORS	MANUFACTURER	PRODUCT	PRESETS (FACTORY / USER)	ANALOG EFFECTS	DIGITAL EFFECTS	SIMULTANEOUS EFFECTS	PROGRAMMABLE WET / DRY MIX	COMPARE / BYPASS	MAXIMUM DELAY TIME	MAXIMUM PITCH SHIFT RANGE	MIDI REAL-TIME CONTROL	SIMULTANEOUS MIDI CONTROLLERS
	Line 6	Mod Pro	99	N/A	16 digital models of chorus, phase, flange, tremolo, rotary	1	Yes	Y/Y	N/A	N/A	Yes	Yes
	Line 6	MM4 Modulation Modeler	16/4	N/A	16 digital models of chorus, phase, flange, tremolo, rotary	1	Yes	N/Y	N/A	N/A	No	No
	Line 6	POD 2.0	36/36	N/A	32 guitar amp models, 16 effects (incl. delay, chorus, reverb, flanger, tremolo, rotary); 15 cabinet models	3	Yes	Y/Y	3.2 sec	N/A	Yes	Yes
	Line 6	POD Pro	36/36	N/A	32 guitar amp models; 16 effects (incl. delay, chorus, reverb, flanger, tremolo, rotary); 15 cabinet models	3	Yes	Y/Y	3.2 sec	N/A	Yes	Yes
	Line 6	PODxt	46/46	N/A	Amp, cab modeling, comp, distortion, wah, chrs, flngr, phsr, rtry, dly, rvtb	8	Yes	Y/Y	2 sec	N/A	Yes	Yes
	MAM	AFB 8	N/A	8-ch analog filter bank	N/A	1	Yes	Y/Y	N/A	N/A	No	No
	MAM	CF 1	N/A	Analog chorus/flanger	N/A	1	Yes	Y/Y	N/A	N/A	No	No
	MAM	Phase 2	N/A	Analog phaser	N/A	1	Yes	Y/Y	N/A	N/A	No	No
	MAM	RS 3	N/A	3-band modulated resonance filter	N/A	1	No	N/Y	N/A	N/A	No	No
	MAM	Warp 9	0/32	Multimode filter	N/A	1	No	Y/Y	N/A	N/A	Yes	Yes
	Metasonix	TM-1	N/A	Waveshaper, ring mod	N/A	1	No	Y/Y	N/A	N/A	No	No
	Metasonix	TM-2	N/A	Dual BP filter/VCA	N/A	1	No	Y/Y	N/A	N/A	No	No
	Miles Technology	M44 Multisonic Imager	N/A	L/C/R sweet-spot enlarger w/surround	N/A	2	No	N/N	N/A	N/A	No	No
	Miles Technology	M86 Multisonic Imager	N/A	L/C/R sweet-spot enlarger w/surround	N/A	2	No	Y/Y	N/A	N/A	No	No
	Moog Music	Moogerfooger MF-101 Lowpass Filter	N/A	Moog filter w/envelope follower	N/A	1	Yes	Y/Y	N/A	N/A	No	No
	Moog Music	Moogerfooger MF-102 Ring Modulator	N/A	Ring modulation	N/A	1	Yes	Y/Y	N/A	N/A	No	No
	Moog Music	Moogerfooger MF-103 Twelve-Stage Phaser	N/A	Six-stage/twelve-stage phaser	N/A	1	No	Y/Y	N/A	N/A	No	No
	Mutronics	Mutator	N/A	Envelope follower	N/A	1	No	Y/Y	N/A	N/A	Yes	No
	Peavey	CEL-2A	N/A	Comp, lim, exp	N/A	N/A	No	Y/Y	N/A	N/A	No	No
	Peavey	Deltaflex	16/0	N/A	Reverb, delay, flange, chorus, phase shift, rotary speaker	1	Yes	Y/Y	225 ms	N/A	No	No
	Peavey	Kosmos Pro	N/A	Audio enhancer	N/A	N/A	No	Y/Y	N/A	N/A	No	No
	Phonic Hi-Tech	Verbiflex	256/0	N/A	Yes	1	Yes	Y/Y	N/A	N/A	No	No
	Quantec	Yardstick	30/0	N/A	Reverb	1	Yes	Y/Y	200 ms	N/A	No	No
	Radial Engineering	2D-7 Injector	N/A	Yes, drag control	N/A	1	Yes	Y/Y	N/A	N/A	No	No
	Roger Linn Design	Adrenalin	100/100	N/A	Guitar amp modeling, synched modulation effects, delay	3	No	Y/Y	1,000 ms	N/A	Yes	No
	Roland	V-Bass	100/100	N/A	Modeled electric, acoustic, fretless basses, cabs, amps, effects	12	Yes	Y/Y	1,800 ms	±2 oct/string	Yes	Yes
	Roland	VF-1	200/200	MFx	MFx	9	Yes	Y/Y	2,800 ms	±2 octave	Yes	Yes
	Roland	VG-88 V-Guitar System	160/100	N/A	COSM modeling, digital effects	11	Yes	Y/Y	1,800 ms	±2 oct/string	Yes	Yes
	Roland	VT-1	32/4	N/A	Voice transfer	2	Yes	N/Y	N/A	±1 octave	No	4
	Sony	DPS-V55	200/200	N/A	45 algo, rvtb, dly, flngr, chrs, ptch, EQ, comp, rtry	4	Yes	N/Y	2.72 sec	± 2.4 octaves	No	No
	Spatializer	Retro	N/A	3-D audio	N/A	1	No	N/Y	N/A	N/A	No	No
	SPL Electronics	Charisma 2	N/A	Tube saturation	N/A	1	No	N/Y	N/A	N/A	No	No
	SPL Electronics	Charisma 8	N/A	Tube saturation	N/A	1	No	N/Y	N/A	N/A	No	No
	Technosaurus	Effexon	N/A	2-band parametric EQ, ring modulator, distortion	N/A	3	No	Y/Y	N/A	N/A	No	No
	TC Electronic	1210 Spatial Expander + Stereo Chorus Flanger	N/A	Flngr, ptch mod, expndr	N/A	3	No	N/N	22 ms	N/A	No	No

DISCRETE PROCESSING CHANNELS	ADC/DAC	OVERLOAD WARNING	INPUTS	OUTPUTS	POWER SUPPLY	SPECIAL FEATURES	PRICE
1	24-bit	5-segment LED; clip light	(2) 1/4" TRS; (2) XLR	(2) 1/4" TRS, (2) XLR	50-60 Hz, 100-240 VAC	Modeled effects; expression pedal input; MIDI clock sync	\$700
1	24-bit	N/A	(2) 1/4"	(2) 1/4"	Battery/AC	True bypass switching, expression pedal input, real time control	\$350
1 in/2 out	20-bit	Clip light	1/4" guitar input	(2) 1/4" TRS, headphone	External	Direct (A.I.R.) amp modes, MIDI, tap tempo, tuner, cabinet select, Mix 'n Match amps/cabs, FB4/Floor Board support, Emagic SoundDriver editor/librarian (2.0 upgrade available for POD owners)	\$360
1 in/2 out	24-bit	Clip light	1/4"	(2) 1/4", (2) XLR, S/PDIF, AES/EBU, headphone	Internal	Live and studio modes, re-amping, effects loop, word clock in, noise gate, software incl.	\$900
1 in/2 out	24-bit/24-bit	Clip light	1/4"	(2) 1/4" TRS, USB, headphone	External	Next generation modeling technology; direct/live modes, MIDI, tap tempo, tuner, FBV/shortboard support, digital output via USB	\$570
1	N/A	N/A	1/4"	1/4"	12 VAC		\$139
1	N/A	N/A	1/4"	(2) 1/4"	12 VAC		\$219
1	N/A	N/A	(2) 1/4"	(2) 1/4"	12 VAC		\$219
1	N/A	N/A	1/4"	(2) 1/4"	12 VAC	Modulation TU	\$299
1	N/A	N/A	1/4" TRS	1/4" TRS	12 VAC	Trigger IN	\$239
1	N/A	N/A	1/4" TS aud, (3) 1/4" TS cntrl vltg	1/4" TS audio	10-12 VAC	All vacuum tube waveshaper and ring mod, AC adapter for 120V incl.	\$399
1	N/A	N/A	1/4" TS aud, (2) 1/4" TRS cntrl vltg	1/4" TS audio	10-12 VAC	All vacuum tube, AC adapter for 120V incl.	\$399
2	N/A	Signal/clip LED	(4) XLR, (6) RCA	(4) XLR	50-60 Hz, 120-240 VAC	Creates left, center, right, sub outputs from standard 2-ch. L/R sources	\$799
2	N/A	Signal/clip LED	(4) XLR; (12) RCA	(6) XLR	50-60 Hz, 120-240 VAC	Creates left, center, right, sub, (2) surround outputs from 2-ch. L/R sources; also handles 5.1 sources	\$899
1	N/A	Level LED	1/4"	1/4"	Wall transformer	(4) control inputs accept expression pedals or CVs; envelope follow CV output	\$299
1	N/A	Level LED	1/4"	(3) 1/4"	Wall transformer	(4) control inputs accept expression pedals or CVs, (2) CV outputs, carrier oscillator, LFO, carrier input—ring modulator any two signals	\$299
1	N/A	Level LED	1/4"	1/4"	Wall transformer	(4) control inputs accept expression pedals or CVs, Aux sweep in—acpts CVs for duo FLO phasing, LF CV out	\$399
2	N/A	N/A	1/4"	1/4"	AC	Stereo panning	\$1,315-\$1,425
2	N/A	Yes	1/4" TRS, XLR	1/4" TRS, XLR	120V	Low-cut filter, de-esser, ext. sidechain	\$300
2	16-bit/16-bit	Bi-color clip LED	1/4"	1/4"	External		\$160
2	24-bit/24-bit	Clip LED	(2) 1/4" TRS, XLR	(2) 1/4" TRS, XLR	120V	Quake, thud, xpanse, stratos, S/PDIF I/O, auto select for clock	\$600
2	16-bit	Dual color peak LEDs	1/4"	1/4"	Internal		\$269
2	N/A	Clip LED	AES/EBU	AES/EBU	Internal	Optional remote	\$2,999
7	N/A	Clip LED	1/4", XLR	XLR, (7) 1/4"	15V DC	Allows guitar to be routed to 7 amps, 2 effects loops; variable drag control	\$799
1	24-bit/24-bit	Clip LED	1/4" TS	(2) 1/4" TS	50-60 Hz, 70-140 VAC	Assignable mod/filter effects w/6 filter types and 10 mod sources, LFO, seq, MIDI, synched to internal drum machine or clock	\$395
1	24-bit/20-bit	LED	13-pin, 1/4"	(2) 1/4", (2) XLR, 1/4" direct out	100-120 VAC	COSM bass, amp, cab, effect modeling, polyphonic bass synthesis w/no tracking delay; alternate tunings, manual mode, true bypass	\$1,395 w/GK-2B pickup
2	24-bit/24-bit	3-segment LED; clip light	1/4"	1/4"	AC	S/PDIF output, all Roland effects	\$495
1	24-bit/20-bit	LED	13-pin, 1/4"	(2) 1/4", (2) XLR, 1/4" direct guitar	100-120 VAC	Guitar modeling, amp, spkr cab, mic modeling, preset, user-definable alt tunings, icon-based display, digital effects, built-in exp/ctl pedal	\$1,195 w/GK-2AH pickup
1	16-bit/16-bit	Clip light	1/4"	1/4", (2) RCA	AC	Realtime control over pitch and formant	\$395
4	20-bit	Clip light	(4) 1/4"	(4) 1/4"	Internal	52-bit DSP engine; surround sound and other presets	\$600
2	N/A	LED	1/4" TRS	1/4" TRS	Internal	3-D audio, mono compatible	\$999
2	N/A	LED	(2) 1/4" TRS-XLR combo	(2) 1/4" TRS-XLR combo	100-120 V/60 Hz, 220-240 V/50 Hz	Drive control for amount of tube saturation, charisma control for character	\$749
8	N/A	LED	(8) 1/4" TRS	(8) 1/4" TRS	100-120 V/60 Hz, 220-240 V/50 Hz	Drive control for amount of tube saturation, charisma control for character	\$1,699
1	N/A	LED for clip light	1/4"	1/4"	50-60Hz, 100-115VA	True analog	\$329
2	N/A	LED	1/4", XLR	1/4", XLR	AC	Utilizes Haas principle to create expansion	\$1,684

EFFECTS PROCESSORS

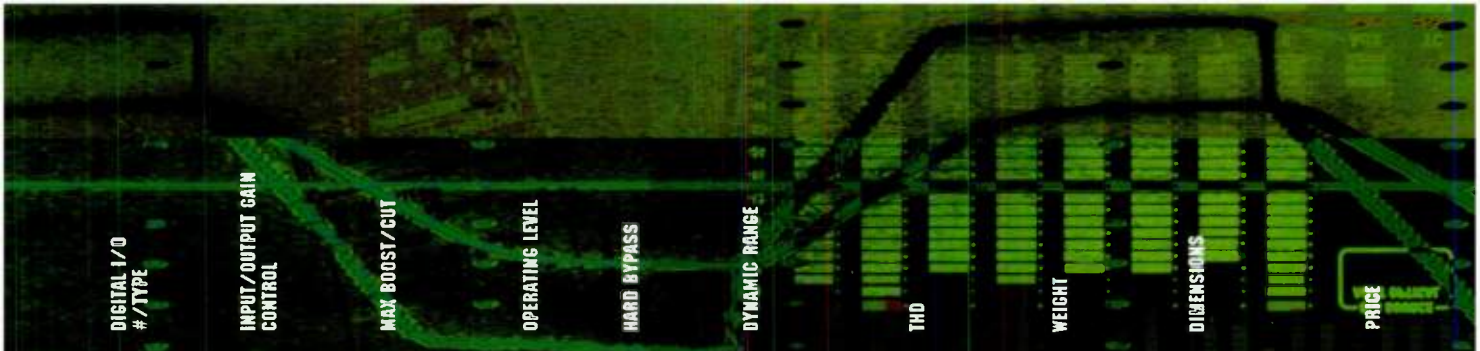
EFFECTS PROCESSORS	MANUFACTURER	PRODUCT	PRESETS (FACTORY/USER)	ANALOG EFFECTS	DIGITAL EFFECTS	SIMULTANEOUS EFFECTS	PROGRAMMABLE WET/DRY MIX	COMPARE/BYPASS	MAXIMUM DELAY TIME	MAXIMUM PITCH SHIFT RANGE	MIDI REAL-TIME CONTROL	SIMULTANEOUS MIDI CONTROLLERS
	TC Electronic	1280 Stereo Digital Audio Delay	4/4	N/A	2 sep delay chans	2	No	Y/Y	2.5 sec with chip exp	N/A	Yes	1
	TC Electronic	1360 Multitap Digital Audio Delay	4/4	N/A	1	1	No	Y/Y	5 sec with chip exp	N/A	Yes	1
	TC Electronic	2290	100/100	N/A	1	2	Yes	Y/Y	8 sec	N/A	Yes	1
	TC Electronic	D•Two	50/100	N/A	Stereo/mono, dynamic, rhythm, reverse, chorus, filter, spatial, ping-pong	1	Yes	Y/Y	10 sec	N/A	Yes	Yes
	TC Electronic	FireworX	200/100	N/A	35	DSP space dependent	Yes	Y/Y	3 sec	±2 octaves	Yes	Yes
	TC Electronic	G-Force	200/100	N/A	Rvrb, dly, pch, flngr, comp, pan/trml, mod, etc.	8	Yes	Y/Y	1,480 ms	2 octaves	Yes	8
	TC Electronic	G-Major	100/100	N/A	Rvrb, dly, pch, chrs, flngr, comp, gate, filter/mod, etc.	7	Yes	Y/Y	N/A	N/A	Yes	Yes
	TC Electronic	M•One	100/100	N/A	20+ effects	2	Yes	Y/Y	4,000 ms	1,200 cents	Yes	Yes
	TC Electronic	M2000	256/256	N/A	Rvrb, dly, chrs, flngr, comp, pan, trml, limg, de-es, exp, str enhnc	2	Yes	Y/Y	1,200 ms	2 octaves	Yes	16
	TC Electronic	M3000	250/200	N/A	Rev, dly, chr, fln, EQ, comp, pan, trml, lfm, de-es, exp, gate, str enhnc	2	Yes	N/Y	1,200 ms	2 octaves	Yes	16
	TC Electronic	P22	4/20	N/A	Delay	1	Yes	Y/Y	2,600 ms	N/A	Yes	Yes
	TC Electronic	R4000	N/A	N/A	Reverb	1	Yes	Y/Y	>5 sec	N/A	Yes	Yes
	TC Electronic	Stereo Chorus Flange	N/A	Chorus, flange, pitch	N/A	1	Yes	N/N	N/A	N/A	No	No
	TC Electronic	Unity	100/200	N/A	Rev, dly, chr, fln, comp, pan, trml, lfm, de-es, exp, ster enhnc	3	Yes	Y/Y	1,200 ms	2 octaves	Yes	16
	TC Helicon	Quintet	50/50	N/A	Reverb	5	Yes	Y/Y	N/A	±2 octaves	Yes	Yes
	TC Helicon	VoiceWorks	100/100	N/A	Comp/gate, EQ, rvrb, tap tempo delay, hrmny, pitch correct	8	Yes	Y/Y	1,800 ms	±2 octaves	Yes	Yes
	TC Helicon	VoiceOne	100/50	N/A	Harmonization, voice modeling	6	Yes	Y/Y	N/A	0-600/infinite cents	Yes	Yes
	TC Helicon	Voice Prism Plus	128/128	N/A	Harmony, reverb, comp, EQ, delay, flange, chorus, lead voice modeling/doubling	7	Yes	Y/Y	799 ms	±2 octaves	Yes	Yes
	Tech 21	SansAmp GT2	N/A	Tube amp emulation	N/A	1	No	N/Y	N/A	N/A	No	No
	Tech 21	SansAmp TRI-A.C.	3	Tube amp emulation	N/A	1	No	N/Y	N/A	N/A	No	No
	Tech 21	SansAmp Classic	N/A	Tube amp emulation	N/A	1	No	N/Y	N/A	N/A	No	No
	Tech 21	SansAmp RBI	N/A	Bass tube amp emulation	N/A	1	No	N/Y	N/A	N/A	No	No
	Tech 21	SansAmp PSA-1	49/49	Tube amp emulation	N/A	1	No	N/Y	N/A	N/A	No	No
	Vermona	Action Filter	N/A	Stereo multimode filter	N/A	1	No	Y/Y	N/A	N/A	No	No
	Vermona	RM-1	N/A	Ring mod	N/A	1	No	Y/Y	N/A	N/A	No	No
	Vermona	DAF1	N/A	Multimode filter	N/A	1	No	Y/Y	N/A	N/A	No	No
	Vermona	PH16	N/A	Phaser	N/A	1	No	Y/Y	N/A	N/A	No	No
	Vermona	Retroverb	N/A	Spring reverb	N/A	1	Yes	Y/Y	N/A	N/A	No	No
	Voce	Spin II	N/A	Various	N/A	1	No	N/Y	N/A	N/A	No	No
	Yamaha	ProR3	90	N/A	Rvrb, rm sim, ech, chrs, symphnc, flngr, pch	3	Yes	Y/Y	N/A	±1 octave	Yes	2
	Yamaha	REV100	99	N/A	Ster rvrb, rvrb, dly, flngr, chrs, symphnc	1	Yes	Y/Y	N/A	N/A	Yes	2
	Yamaha	REV500	100	N/A	Rvrb, rm sim, ech	1	Yes	Y/Y	200 ms	N/A	Yes	4
	Yamaha	SPX990	80	N/A	Rvrb, dly, ech, erly ref, mod, pch, pan, frz, chrs, symphnc	3	Yes	Y/Y	1,480 ms	±2 octaves	Yes	4
	Zoom	RFX-1000	121/0	N/A	3J	1	No	N/Y	1486 ms	±1 octave	No	No
	Zoom	RFX-2000	616/100	N/A	48	2	No	Y/Y	2972 ms	±2 octaves	Yes	No



DISCRETE PROCESSING CHANNELS	ADC/DAC	OVERLOAD WARNING	INPUTS	OUTPUTS	POWER SUPPLY	SPECIAL FEATURES	PRICE
2	18-bit	Overload LED	XLR	XLR	AC	1 MHz sample rate	\$2,446
1	18-bit	Overload LED	XLR	XLR	AC	1 MHz sample rate	\$2,446
1	1-bit	LED	XLR, 1/4"	XLR, 1/4"	AC	1 MHz sample rate	\$1,995
2	24-bit	Yes	S/PDIF, (2) XLR	(2) XLR, S/PDIF	Internal, auto-sensing	Rhythm tap, programmable number of repeats	\$699
2	24-bit	Overload LED	XLR	XLR	AC	Includes vocoder	\$2,195
2	24-bit	Clip light	(2) 1/4", S/PDIF	(2) 1/4", S/PDIF	Internal	Intelligent pitch shifting, large 5 x 14 LED display	\$1,795
1	24-bit/24-bit	8-seg LED	1/4"	1/4"	100V-240V, 50-60 Hz	Built-in tuner	\$699
2	24-bit	Yes	S/PDIF, (2) XLR	(2) XLR, S/PDIF	Internal, auto-sensing	Dual engine routings, serial, parallel, stereo linked, dual mono, dual send/return	\$699
2	20-bit	LED	(2) XLR, AES/EBU, S/PDIF	(2) XLR, AES/EBU, S/PDIF	Internal	Dynamic morphing, preset glide control	\$1,500
2	24-bit	LED	(2) XLR, AES/EBU, S/PDIF, ADAT, Toslink	(2) XLR, AES/EBU, S/PDIF, ADAT, Toslink	Internal	Dynamic morphing, preset glide control	\$2,495
1	24-bit/24-bit	8-seg LED	XLR, S/PDIF, AES/EBU	XLR, S/PDIF, AES/EBU	Auto sensing 100V-240V, 50-60 Hz	Real-time, glitch free delay updates	\$1,999
2	24-bit	Clip LED	XLR, AES/EBU, ADAT, Toslink, S/PDIF	XLR, AES/EBU, ADAT, Toslink, S/PDIF	50-60 Hz, 100-240 VAC	Mac/PC icon-editor program	\$2,999
1	N/A	N/A	1/4"	1/4"	Internal	Pedal	\$399
3	24-bit	Meter	AES/EBU, S/PDIF, ADAT, Toslink	AES/EBU, S/PDIF, ADAT, Toslink	Internal	Software interface within the Yamaha 02R (see software license \$795)	\$1,495
1	24-bit/24-bit	Clip LED	XLR, 1/4" TRS pedal in	(2) 1/4" TRS, S/PDIF	50-60 Hz, 100-240 VAC	4 harmony	\$599
1	24-bit/24-bit	Clip LED	XLR, S/PDIF, 1/4" TRS aux in, pedal in	(2) 1/4" TRS, S/PDIF	50-60 Hz, 100-240 VAC	4 harmony, 2 lead doublers	\$799
2	24-bit/24-bit	Clip LED	(2) XLR, S/PDIF pedal in	(2) XLR, S/PDIF	50-60 Hz, 100-240 VAC	Voice modeling, hybrid pitch shifting, pitch correction, phrase naturalization	\$1,299
1	24-bit	Clip LED	1/4" TRS, XLR, S/PDIF, AES/EBU	XLR, 1/4" TRS, S/PDIF, AES/EBU	50-60 Hz, 100-240 VAC	Formant corrected harmonics, human voice modeling, 4 auto harmony modes	\$1,299
1	N/A	N/A	1/4"	1/4"	9V battery, adapter	Streamlined version of SansAmp Classic, select amp/modification/speaker cab	\$195
1	N/A	N/A	1/4"	1/4"	9V battery, adapter	Fully programmable, incl. 3-band active EQ, 100% analog circuitry	\$225
1	N/A	N/A	1/4"	1/4"	9V battery, adapter	Multi preamp styles, 8-character switches, 4 contour knobs	\$345
1	N/A	N/A	(2) 1/4"	(2) 1/4", (2) XLR	Internal	100 % analog, 3-band active EQ, use as preamp, in mixdowns, live "direct box"	\$395
1	N/A	N/A	(2) 1/4"	(2) 1/4", (2) XLR	Internal	Fully programmable, 100 % analog circuitry, use as preamp, in mixdowns, live "direct box"	\$795
2	N/A	Clip LED	(2) RCA unbal.	(2) RCA unbal.	12 VAC	Turntable ground terminal	\$324
1	N/A	Clip LED	(2) 1/4" unbal.	(2) 1/4" unbal.	12 VAC	Internal carrier oscillator generates sine, square waves, LFO w/4 wave forms, envelope follower, C.V. inputs	\$329
2	N/A	Clip LED	(2) 1/4" unbal.	(2) 1/4" unbal.	12 VAC	48 dB/octave slope in serial mode	\$329
2	N/A	N/A	1/4"	1/4"	VAC		\$339
1	N/A	Clip LED	1/4"	1/4"	Internal	3-band EQ w/parametric mids	\$329
1	N/A	N/A	1/4"	(2) 1/4"	Internal	4 knobs to control speed	\$525
2	20-bit	Clip light	(2) XLR	(2) XLR	Internal		\$1,299
2	16-bit	Clip light	(2) 1/4"	(2) 1/4"	External		\$299
2	20-bit/20-bit	Clip light	(2) 1/4", (2) XLR	(2) 1/4", (2) XLR	Internal	Audition switch	\$499
2	20-bit/20-bit	Clip light	(2) XLR	(2) XLR	Internal		\$1,179
2	18-bit/18-bit	4-seg LED	(2) 1/4"	(2) 1/4"	External	Vocoder, mix effects	\$250
2	20-bit/20-bit	6-seg LED	(2) 1/4"	(2) 1/4", (2) S/PDIF	External	PC editing software included for Macintosh & Windows	\$375

EQUALIZERS

EQUALIZERS	MANUFACTURER	PRODUCT	ANALOG/DIGITAL	PROGRAMMABLE	TYPE/ BANDWIDTH	# OF CHANNELS/ # OF BANDS	FREQUENCY RANGE (PARAMETRIC)	CONSTANT Q	FILTERS	ANALOG I/O #/TYPE
dbx		231	Analog	No	Graphic	2/31	<10 Hz to >50 kHz	No	N/A	(2) XLR, (2) 1/4"
dbx		1215 Dual 15 Band	Analog	No	Graphic	2/15	N/A	No	No	1/4" XLR
dbx		1231 Dual 31 Band	Analog	No	Graphic	2/3	20 Hz-20 kHz	No	No	1/4" XLR
dbx		2031 Single 31 Band	Analog	No	Graphic	1/31	N/A	No	No	1/4" XLR
dbx		2215 Dual 15 Band	Analog	No	Graphic	2/1	25 Hz-16 kHz	No	No	1/4" XLR
dbx		2231 Dual 31 Band	Analog	No	Graphic	2/3	N/A	No	No	1/4" XLR
dbx		1EQ 15	Digital	No	Graphic/15	2/15	10 Hz-22 kHz	Yes	LP, AFS feedback suppress	(2) XLR, (2) 1/4", (2) Euroblock
dbx		1EQ 31	Digital	No	Graphic/31	2/31	10 Hz-22 kHz	Yes	LP, AFS feedback suppress	(2) XLR, (2) 1/4", (2) Euroblock
DDD		SR 2310X	Analog	No	1/3 octave	2/31	N/A	Yes	ISO	1/4"
DDD		SR 4300X	Analog	No	2/3 octave	2/15	N/A	Yes	ISO	1/4"
DDD		SR 8300X	Analog	No	2/3 octave	2/15	N/A	Yes	ISO	1/4"
DDD		SR 8310X	Analog	No	1/3 octave	1/31	N/A	Yes	ISO	1/4"
D.W. Fearn		VT-4	Analog	No	LC Passive	5	N/A	No	HP, LP	(2) XLR
D.W. Fearn		VT-4 Vacuum Tube LC Equalizer	Analog	No	LC/5	1/5	N/A	No	HP, LP	(2) XLR
Focusrite		Red 2 Dual Channel	Analog	No	Parametric shelving	2/4	5 Hz-200 kHz	Yes	HP, LP	(2) XLR
Langevin		Pultec EQ	Analog	No	High/low	1/2	20 Hz-20 kHz	Yes/variable	No	XLR, 1/4"
MAM		EQ 2	Analog	No	2 fixed, 1 parametric	2/3 or 1/6	5 Hz-15 kHz	No	HP	(2) 1/4" pairs
Manley Labs		EOP1-A	Analog	No	High/low	1/2	20 Hz-20 kHz	No	No	XLR, 1/4"
Manley Labs		Enhanced Pultec EQ	Analog	No	Passive parametric/1.5 to 3	2/5	22 Hz-27 kHz	Variable	HP, LP	(2) XLR
Manley Labs		Massive Passive	Analog	No	Parametric	1/3	200 Hz-5 kHz	Yes	No	XLR, 1/4"
Manley Labs		MD EQ	Analog	No	Parametric	2/3	20 Hz-20 kHz	No	No	(2) XLR, (2) 1/4"
Manley Labs		Stereo Pultec EQ	Analog	No	Parametric	2/4	10 Hz-200 kHz	Yes/variable	No	(4) XLR
Millennia		NSEQ-2	Analog	No	Parametric	2/6	10 Hz-125 kHz	No	No	XLR
Nightingale		EQ3D	Analog	No	Dimensional	2/15	N/A	Yes	No	XLR, 1/4" TRS
Peavey		EQ215FX	Analog	No	Graphic/2/3 octave	2/15	N/A	Yes	No	XLR, 1/4"
Peavey		EQ31FX	Analog	No	Graphic/1/3 octave	15/2	20 Hz-20 kHz	Yes	Low cut	(2) XLR, (2) 1/4"
Peavey		Q 1311	Analog	No	Graphic dual 15-band	15/2	20 Hz-20 kHz	Yes	Low cut	(2) XLR, (2) 1/4"
Peavey		Q 215i	Analog	No	Graphic dual 15-band	1/31	N/A	Yes	No	XLR, 1/4"
Peavey		QF131	Analog	No	Graphic/1/3 octave	2/15	N/A	Yes	No	XLR, 1/4" TRS
Peavey		QF215	Analog	No	Graphic/2/3 octave	2/31	N/A	Yes	HP, LP	XLR, 1/4" TRS, barrier strip
PreSonus		DEQ 624	Digital	Yes	Graphic (1/3 octave)	2/30	N/A	Perfect/Proportional	HP, LP	XLR, TRS, Euroblock
Rane		DEQ 60	Digital w/analog controls	No	Graphic/30	1/30	N/A	Yes	Hi and lo cut	XLR, screw term
Rane		GE 30 1/3 oct	Analog	No	Graphic	2/30	N/A	Yes	Hi and lo cut	XLR, 1/4" TRS, screw term
Rane		GE 60	Analog	No	Graphic	2/15	N/A	Yes	No	XLR, 1/4" TRS
Rane		ME 15B	Analog	No	Graphic	1/30	N/A	Yes	No	XLR, 1/4" TRS
Rane		ME 30B	Analog	No	Graphic	2/30	N/A	Yes	Hi and lo cut	XLR, 1/4" TRS, RCA
Rane		ME 60	Analog	No	Graphic	1/5	20-300 Hz, 60 Hz-1 kHz, 150-2.5 kHz, 450-8 kHz, 1-20 kHz	No	Low shelf	XLR, 1/4" TRS
Rane		PE 15	Analog	No	Parametric	1/5	20 Hz-20 kHz	No	Hi and lo cut	XLR, 1/4" TRS
Rane		PE 17	Analog	No	Parametric	1/5	30 Hz-10 kHz	Yes	No	(4) 1/4" TRS
Raven Labs		True Blue EQ	Analog	No	Semi-parametric	2/31	20 Hz-20 kHz	Yes	HP, LP	(4) XLR, 1/4" TRS
Sabine		GRAPHI-Q	Digital	Yes	Multigratic	1/31	20 Hz-20 kHz	Yes	HP, LP	(3) XLR, (2) 1/4"
Sabine		GRO3102 comp/lim	Digital	Yes	1/3 oct ISO, para. 12 fltrs	2/31	20 Hz-20 kHz	Yes	HP, LP	(3) XLR, (3) 1/4" TRS
Sabine		GRAPHI-Q	Digital	Yes	Multigratic	2/31	20 Hz-20 kHz	Yes	HP, LP	(3) XLR, (3) 1/4" TRS
Sabine		GRO3101 comp/lim	Digital	Yes	1/3 oct ISO, para. 12 fltrs	2/31	20 Hz-20 kHz	Yes	HP, LP	(3) XLR, (3) 1/4" TRS
Sabine		Power-Q	Digital	Yes	Multigratic	2/31	20 Hz-20 kHz	Yes	HP, LP	(3) XLR, (3) 1/4" TRS
Sabine		ADF4000 comp/lim RTA	Digital	Yes	1/3 oct ISO, para. 12 fltrs	2/31	20 Hz-20 kHz	Yes	HP, LP	(3) XLR, (3) 1/4" TRS
Sabine		Real-Q2 comp/lim RTA	Digital	Yes	Multigratic	2/15	N/A	Yes	Parallel	XLR, 1/4" TRS
Samson		S-Curve 215	Analog	No	Graphic 2/3 octave	1/31	N/A	Yes	Parallel	XLR, 1/4" TRS
Samson		S-Curve 131	Analog	No	Graphic 1/3 octave	2/31	N/A	Yes	Parallel	XLR, 1/4" TRS
Samson		S-Curve 231	Analog	No	Graphic 1/9 octave	1/4	20 Hz-25 kHz	No	LF shelf	(2) XLR, (2) 1/4" TRS
Speck		Model ASC	Analog	No	Q: 0.5-4	1/4	20 Hz-25 kHz	No	LF shelf	(2) XLR, (2) 1/4" TRS
Speck		Model ASC-T	Analog	No	Q: 0.5-4	2/3	20 Hz-50 kHz	No	No	(4) XLR, 1/4" TRS
SPL Electronics		Classic Vitalizer	Analog	No	Program EQ	2/3	10 Hz-100 kHz	No	HP, LP	(4) XLR, 1/4" TRS
SPL Electronics		Qure	Analog	No	Parametric 3-band w/tubes & LC filter	2/3	10 Hz-100 kHz	No	No	(4) XLR, (4) 1/4" TRS
SPL Electronics		Stereo Vitalizer MK2	Analog	No	Program EQ	2/3	20 Hz-100 kHz	No	No	(4) XLR, (4) 1/4" TRS
SPL Electronics		Stereo Vitalizer MK2-T	Analog	No	Tube Program EQ	2/3	10 Hz-100 kHz	N/A	N/A	(4) XLR, (4) 1/4" TRS
SPL Electronics		Tube Vitalizer	Analog	No	Tube program EQ w/comp/lim	2/15	20 Hz-20 kHz	Yes	Butterworth	XLR, (4) 1/4" TRS
Studiomaster		SEQ 152	Analog	No	Graphic	1/31	20 Hz-20 kHz	No	Butterworth	XLR, 1/4" TRS
Studiomaster		SEQ 311	Analog	No	Graphic	2/0	5 Hz-100 kHz	No	HP	(4) XLR
Summit Audio		EOP-200B	Analog	No	Program EQ	2/4	20 Hz-20 kHz	No	No	(2) XLR
TC Electronic		2240	Analog	Yes	Parametric	2/4	30 Hz-20 kHz	No	No	(4) XLR, 1/4"
TL Audio		5013	Analog	No	Parametric/Q range 0.5-5	2/4	60 Hz-12 kHz	Yes	No	(2) XLR, 1/4"
TL Audio		EQ-1	Analog	No	Switchable frequency/4	2/4	30 Hz-20 kHz	Yes/variable 0.5-5	High/low cut	XLR, 1/4" TRS
TL Audio		EQ-2	Analog	No	Parametric	1/3	5 Hz-40 kHz	No	No	XLR
Tube Tech		ME-1B	Analog	No	Mid EQ	1/3	5 Hz-40 kHz	No	No	XLR



DIGITAL I/O #/TYPE	INPUT/OUTPUT GAIN CONTROL	MAX BOOST/CUT	OPERATING LEVEL	HARD BYPASS	DYNAMIC RANGE	THD	WEIGHT	DIMENSIONS	PRICE
N/A	Y/W	+6, ±12 dB	+4/-0 dB	Yes	108 dB	<0.004%	6	19x3.5x6	\$280
N/A	Y/Y	Yes	+4/-0 dB	Yes	<112 dB unweighted	<0.02% typical @ 1 kHz, +4 dBu	8.5	19x3.5x7.9	\$380
N/A	Y/N	Low cut	+4/-10 dB	Yes	115 dB	<0.005%	10.6	19x5.25x7.9	\$520
N/A	Y/N	Low cut	+4/-10 dB	Yes	>108 dB unweighted	<0.02% typical @ 1 kHz, +4 dBu	8.5	19x3.5x7.9	\$550
N/A	Y/N	Low cut	+4/-10 dB	Yes	>112 dB unweighted	<0.02% typical @ 1 kHz, +4 dBu	8.5	19x3.5x7.9	\$600
N/A	Y/N	Low cut	+4/-0 dB	Yes	>108 dB unweighted	<0.02% typical @ 1 kHz, +4 dBu	N/A	19x5.25x7.9	\$750
N/A	Y/Y	+6, ±15 dB	+4/-0 dB	Yes	>118 dB	<0.005%	9	19x5.25x7.9	\$499
N/A	Y/Y	+6, ±15 dB	+4/-10 dB	Yes	>118 dB	<0.005%	11	19x5.25x7.9	\$599
N/A	Y/Y	+12 dB	+4/-10 dB	Yes	N/A	0.004%	N/A	19x3.5x6	\$300
N/A	Y/Y	+12 dB	+4/-10 dB	Yes	N/A	0.004%	N/A	19x1.75x6	\$220
N/A	Y/Y	+12 dB	+4/-10 dB	Yes	N/A	0.004%	N/A	19x1.75x6	\$220
N/A	Y/Y	+12 dB	+4/-10 dB	Yes	N/A	0.004%	N/A	19x3.75x6	\$220
N/A	Y/Y	+16 dB	+4 dB	No	>90 dB	0.15%	18	19x5.25x18	\$3,900
N/A	Y/N	+16 dB	+4 dB	No	>90 dB	<0.08%	16	19x5.25x14	\$3,900
N/A	Y/Y	+18 dB	+4 dB	Yes	110 dB	0.002%			\$3,295
N/A	Y/Y	+10 dB (-17 HF boost)	+4/-10 dB	Yes	127 dB	<0.04%	11	19 x1.75x10	\$1,275
N/A	Y/N	+18 dB	+4 dB	Yes	>90 dB	0.005%	1	19x3.5x9	\$179
N/A	Y/Y	+10 dB to +17 dB	+4/-10 dB	Yes	130 dB	<0.04%	11	19 x1.75x10	\$2,150
N/A	Y/Y	+20 dB	-10 or +4 dB	Yes	120 dB	<0.00%	127	19x5.25x10	\$4,800
N/A	N/N	+10 dB	+4 dB	Yes	116 dB	<0.04%	12	19x1.75x10	\$1,750
N/A	N/N	+17 dB	+4 dB	Yes	116 dB	<0.04%	16	19x3.5x10	\$3,300
N/A	N/N	+20 dB	+29 dBu	Yes	115 dB	0.002%	27	19x12x3.5	\$3,295
N/A	N/N	N/A	N/A	No	N/A	0.005%	7	19x1.75x7.5	\$1,050
N/A	N/Y	+15 dB	+4 dB	Yes	N/A	0.005%	10.4	19x9.87x3.5	\$400
N/A	N/Y	+15 dB	+4 dB	Yes	N/A	0.005%	9.8	19x10.37x3.5	\$400
N/A	N/Y	+12 dB	+4 dB	Yes	N/A	0.002%	8	1.75x19x9.25	\$200
N/A	N/Y	+12 dB	+4 dB	Yes	N/A	0.002%	8	1.75x19x9.25	\$200
N/A	N/Y	+12/-18 dB	+4/-10 dB	Yes	N/A	0.002%	7.8	19x7.37x3.5	\$285
N/A	N/Y	+12/-18 dB	+4/-10 dB	Yes	N/A	0.002%	7.8	19x7.37x3.5	\$285
N/A	N/Y	+12/-24 dB	+4 dB	Yes	N/A	0.005%	14	19x3.5x9	\$799
N/A	Y/Y	+12 dB	+4 dB	Yes	>106 dB	0.02%	7.3	19x5.25x3.5	\$999
N/A	Y/N	+12 dB or -20 cut	+4 dB	Yes	>111 dB	0.0015%	7	19x3.5x8.5	\$799
N/A	Y/N	+12 dB	+4 dB	Yes	>108 dB	0.002%	11	19x5.25x8.5	\$899
N/A	Y/N	+12 dB	+4 dB	Yes	>107 dB	0.002%	5	19x1.75x5.25	\$439
N/A	Y/N	+12 dB	+4 dB	Yes	>107 dB	0.002%	5	19x1.75x5.25	\$429
N/A	Y/N	+12 dB	+4 dB	Yes	>107 dB	0.002%	9	19x3.5x8.5	\$699
N/A	Y/N	+15/-20 dB	+4 dB	Yes	>108 dB	0.01%	5	19x1.75x5.3	\$399
N/A	Y/Y	+12 dB/-15 dB	+4 dB	Yes	>117 dB	0.001%	5	19x1.7 x5.3	\$549
N/A	N/N	+15 dB	6v RMS	Yes	N/A	0.005%	3	2.25x6x6.7	\$349
RS 232 serial	Y/Y	Graphic, ±6 or ±12 dB, parametric, +12/-84 dB	+29 dB	Yes	>110 dB	<0.01% @ 1 kHz	9	19x3.5x9.5	\$1,099 and up
RS 232 serial	Y/Y	Graphic, ±6 or ±12 dB, parametric, +12/-84 dB	+29 dB	Yes	>110 dB	<0.01% @ 1 kHz, +22 dBv	9	19x1.75x9.5	\$700 and up
RS 232 serial	Y/Y	Graphic, ±6 or ±12 dB, parametric, +12/-84 dB	+29 dB	Yes	>110 dB	<0.01% @ 1 kHz, +22 dBv	9	19x3.5x9.5	\$1,799
RS 232 serial	Y/Y	Graphic, ±15 dB	+29 dB	Yes	>110 dB	<0.02% @ 1 kHz, +22 dBv	9	19x3.5x9.5	\$2,000
N/A	Y/Y	+12 dB	+4 dB	Yes	N/A	N/A	4.95	19x1.75x7.5	\$200
N/A	Y/Y	+12 dB	+4 dB	Yes	N/A	N/A	4.95	19x1.75x7.5	\$200
N/A	Y/Y	+12 dB	+4 dB	Yes	N/A	N/A	9.9	19x3.5x7.5	\$290
N/A	Y/Y	+15 dB/band	4 dBu/28 dBu	Yes	>120 dB	0.0014% @ 24 dBu	5	1/2 rack	\$645
N/A	Y/Y	+15 dB/band	4 dBu/28 dBu	Yes	>120 dB	0.0014% @ 24 dBu	5	1/2 rack	\$749
N/A	Y/N	+20 dB	+6 dB	Yes	110 dB	0.002%	7.5	19x1.7x9.3	\$799
N/A	Y/Y	±15 dB, MF +15/-30 dB	+6 dB	Yes	119 dB	0.018%	10.8	19x3.5x9.7	\$1,949
N/A	Y/N	N/A	+6 dB	Yes	110 dB	0.002%	7.5	19x9.3x1.7	\$699
N/A	Y/N	N/A	+6 dB	Yes	110 dB	0.0185%	7.5	19x9.3x1.7	\$999
N/A	Y/Y	N/A	+6 dB	Yes	119 dB	0.002%	10.8	19x3.5x9.3	\$2,899
N/A	Y/N	+15 dB	-10/+4 dB	Yes	110 dB	>0.1%	10	19x3.5x10	\$349
N/A	Y/N	+15 dB	-10/+4 dB	Yes	110 dB	>0.1%	10	19x3.5x10	\$329
N/A	N/N	+20 dB	+4 dB	Yes	105 dB	0.05%	19	19x3.5x10	\$2,500
N/A	Y/Y	N/A	N/A	Yes	>116 dB	0.015%	7.7	19x3.5x10	\$1,288
S/PDIF (optional)	Y/Y	+15 dB	+4/-10 dB	Yes	106 dB	0.05%	13	19x3.5x7.9	\$749
N/A	Y/N	+12 dB	+4/-10 dB	Yes	105 dB	0.02%	15.5	19x8x3.5	\$1,599
N/A	Y/Y	+15 dB	-10/+4 dB	No	100 dB	0.05%	N/A	19x5.25x10	\$2,499
N/A	N/N	N/A	N/A	Yes	N/A	0.15%	12.3	19x5.25x10	\$1,819

EQUALIZERS

EQUALIZERS	MANUFACTURER	PRODUCT	ANALOG/DIGITAL	PROGRAMMABLE	TYPE/ BANDWIDTH	# OF CHANNELS/ # OF BANDS	FREQUENCY RANGE (PARAMETRIC)	CONSTANT Q	FILTERS	ANALOG I/O #/TYPE
	XTA	DP202	Digital	Yes	Parametric, 1/32-2 octave	2/8+	20 Hz-20 kHz	Yes/variable	HP, LP	XLR
	XTA	E2 Digital Parametric	Digital	Yes	Parametric, variable	2/4	20 Hz-20 kHz	Variable	HP, LP	XLR
	XTA	G0600	Analog	No	Graphic 1/3 octave	2/30	N/A	No	No	2
	Yamaha	G0 1031C	Analog	No	Graphic, 1/3 octave	1/31	N/A	Yes	HP	XLR, 1/4"
	Yamaha	G0 2015A	Analog	No	Graphic, 2/3 octave	2/15	N/A	Yes	HP	(2) XLR, (2) 1/4"
	Yamaha	Q2031B	Analog	No	Graphic, 1/3 octave	2/31	N/A	Yes	HP	(2) XLR, (2) 1/4"
	Yamaha	YDP2006	Digital	Yes	Parametric	2/6	20 Hz-20 kHz	Yes	HP, LP	(2) XLR
	Yamaha	YDG 2030	Digital	Yes	Graphic, 1/3 octave	2/30	N/A	Yes	HP, LP	(2) XLR
	Z-Systems	Z-Equalizer	Digital	Yes	Parametric, shelving	2/6	20 Hz-20 kHz	Yes	No	N/A

KEYBOARD SYNTHESIZERS & SAMPLERS

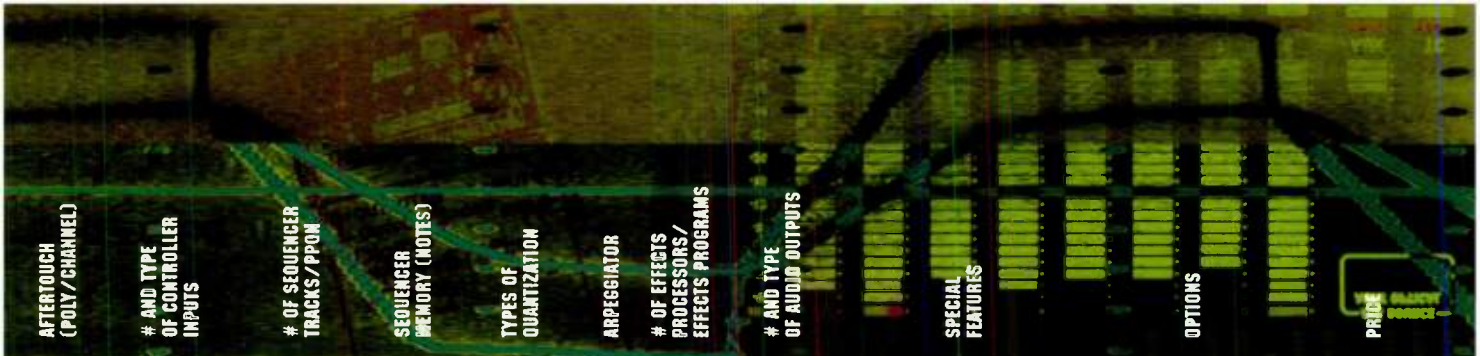
KEYBOARD SYNTHESIZERS & SAMPLERS	MANUFACTURER	PRODUCT	POLYPHONY/ MULTITIMBRAL PARTS	WAVEFORM MEMORY ROM/RAM	FILTER TYPES/ RESONANCE	SINGLE PROGRAMS ROM/RAM	MULTITIMBRAL PERFORMANCES ROM/RAM	PORTAMENTO	GM/BS/XG COMPATIBLE	BUILT-IN COMPUTER INTERFACE/TYPE	DISK DRIVE TYPE	NUMBER OF KEYS	# OF KEYBOARD ZONES (MAX)	LEFT-HAND CONTROLLERS
	Access	Virus Indigo 2	32	N/A	LP, HP, BP, BS/Y	768/256	128	Yes	N/N/N	N/A	N/A	37	16	Pitch, mod wheel
	Access	Virus KC	32	N/A	LP, HP, BP, BS/Y	768/256	128	Yes	N/N/N	N/A	N/A	61	16	Pitch, mod wheel
	Alesis	QS6 2	64/16	6/0 MB	LP/N	512/128	400/100	Yes	Y/N/N	N/A	N/A	61	16	Pitch and mod wheels
	Alesis	QS8 2	64/16	16/0 MB	Y/N	512/128	400/100	Yes	Y/N/N	N/A	N/A	88	16	Pitch and mod wheel
	Alesis	Ion	8/8	16/0 MB	16/Y	512/128	4	Yes	Y/N/N	N/A	N/A	49	16	Pitch, (2) mod
	Analogue Solutions	Black Coffee Mono- Synthesizer	1/1	2/0 MB	LP/Y	N/A	N/A	Yes	N/N/N	N/A	N/A	0	0	0
	Clavia	Nord Electro 261	146/1	0/32 MB	LP/N	0/40	N/A	No	N/N/N	USB	N/A	61	2	N/A
	Clavia	Nord Electro 273	146/1	0/32 MB	LP/N	0/40	N/A	No	N/N/N	USB	N/A	73	2	N/A
	Clavia	Nord Lead2x	16/4	N/A	BP, HP, LP/Y	0/1024	0/300	Yes	N/N/N	N/A	N/A	49	2	Pitch stick, mod wheel
	Clavia	Nord Lead3	24/4	N/A	LP, BP, HP, Notch, dual, classic/Y	0/1024	0/128	Yes	N/N/N	N/A	N/A	49	2	Pitch stick, mod wheel
	Clavia	Nord Modular G2	16/4	4 MB	15/Y	0/500	200	Yes	N/N/N	USB	N/A	37	0	Pitch stick, mod wheel
	E-mu Systems	MK-6	64/16	32 (exp. to 128)	50+/Y	640/512	0/64	Yes	N/N/N	N/A	N/A	61	4	Pitch wheel; mod wheel
	E-mu Systems	PK-6	64/16	32 (exp. to 128)	50+/Y	640/512	0/64	Yes	N/N/N	N/A	N/A	61	4	Pitch wheel, mod wheel
	E-mu Systems	XK-6	64/16	32 (exp. to 128)	50+/Y	640/512	0/64	Yes	N/N/N	N/A	N/A	61	4	Pitch wheel; mod wheel
	E-mu Systems	Vintage Keys	64/16	32/0 MB	21/Yes	512/512	64	Yes	N/N/N	N/A	N/A	61	4	Pitch, mod
	E-mu Systems	Halo	61/16	32 (exp. to 128)	50+/Y	640/512	0/64	Yes	N/N/N	N/A	N/A	61	4	Pitch wheel; mod wheel
	GeneralMusic	Genesys Pro	64/32	64/16 all flash	LP/HP/BP/Y	1,300/800	256/256/128 RAM +	No	Y/Y/N	Yes/SCSI optional	Floppy, HD, CD-RW	61	32	Pitch/mod
	Korg	Karma	62/16	32 MB	HP, LP/Y	0/640	0/512	Yes	Y/N/N	N/A	3.5" HD/DD	61	16	(2) switch; X/Y joystick; (4) assignable/fixd knobs
	Korg	PA60	62/62	32/0 MB	LP, HP/Y	0/660	304	Yes	Y/N/N	N/A	3.5" HD/DD	61	16	Joystick
	Korg	PA80	62/16	32/0 MB	HP, LP/Y	0/660	0/up to 304	Yes	Y/N/N	Serial PCI/F	3.5" HD/DD	61	2	X/Y joystick
	Korg	Microkorg	4/4	N/A	LP, BP, HP/Y	128/128	0/0	Yes	N/N/N	N/A	N/A	37 mini	2	Pitch bend, mod wheel

DIGITAL I/O # / TYPE	INPUT/OUTPUT GAIN CONTROL	MAX BOOST/CUT	OPERATING LEVEL	HARD BYPASS	DYNAMIC RANGE	THD	WEIGHT	DIMENSIONS	PRICE
AES/EBU	Y/Y	-25/+155 dB	±4 dB	No	105 dB	0.2%	8	19x1.75x11.8	\$2,475
AES/EBU (optional)		-25/+15 dB	±4 dB	Yes	>110 dB	0.02%	8	19x1.18x1.75	\$1,795
N/A	Y/Y	+10 dB	+23 dB	Yes	117 dB	0.01%	14	199x5.25x9.3	\$1,650
N/A	N/N	+12 dB	+4 dB	No	94 dB	0.05%	6	19x9x1.75	\$415
N/A	N/N	+12 dB	+4 dB	No	96 dB	0.05%	6.5	19x9x1.75	\$449
N/A	Y/N	+12 dB	+4 dB	Yes	94 dB	<0.05%	9	19x9x3.5	\$769
N/A	Y/Y	+12 dB	-20 dB/+4 dB	No	>110 dB	0.01%	9	19x13.25x1.75	\$1,399
N/A	Y/Y	+12 dB	-20 dB/+4 dB	No	>110 dB	0.01%	9	19x13.25x1.75	\$1,399
AES/EBU	Y/Y	N/A	0 dB	Yes	>135 dB	0.00001%	N/A	N/A	\$1,250

AFTERTOUCH (POLY/CHANNEL)	# AND TYPE OF CONTROLLER INPUTS	# OF SEQUENCER TRACKS/PPON	SEQUENCER MEMORY (NOTES)	TYPES OF QUANTIZATION	ARPEGGIATOR	# OF EFFECTS PROCESSORS/ EFFECTS PROGRAMS	# AND TYPE OF AUDIO OUTPUTS	SPECIAL FEATURES	OPTIONS	PRICE
Y/Y	(1) vol. pedal; (1) sustain pedal	N/A	N/A	N/A	Yes	98	6	Blue LEDs; aluminum side panels		\$2,595
Y/Y	(1) vol. pedal; (1) sustain pedal	N/A	N/A	N/A	Yes	98	6			\$2,595
Y/Y	(1) pedal; (4) slider	N/A	N/A	N/A	No	1/20	(2) 1/4"	Sound Bridge software allows user to create their own soundcards	Q Card sound ROM expansion	\$899
Y/Y (via MIDI only)	(1) pedal; (4) slider	N/A	N/A	N/A	No	1/20	(2) 1/4"	Sound Bridge software allows the user to create their own soundcards	Q Card sound ROM expansion	\$1,499
Y/Y	(1) pedal	N/A	N/A	N/A	Yes	512	(4) analog TRS	500 M.I.P.S. sound engine; 3 oscillators; continuously variable wave shapes		\$999
N/N	(1) pedal	N/A	N/A	N/A	No	N/A	(2) 1/4"	Discrete component analog monosynth; small, portable. Moog-style filter	Pedal; silver finish	\$399
N/N	(3) pedal	N/A	N/A	N/A	No	1/12	(2) 1/4"	Modeled B-3; sampled elec. pianos; USB port to update sounds		\$1,799
N/N	(3) pedal	N/A	N/A	N/A	No	1/12	(2) 1/4"	Modeled B-3; sampled elec. pianos; USB port to update sounds		\$2,199
N/N	(1 each) switch; exp. pedal	N/A	N/A	N/A	Yes	N/A	(4) 1/4"	Analog modeling synth—no waveforms		\$1,499
N/Y	(2) pedals	N/A	N/A	N/A	Yes	N/A	(4) 1/4"	Subtractive synth w/4 operator FM synth		\$2,399
N/Y	(2) pedal	Step sequencer	N/A	N/A	Yes	4/40	(4) 1/4"	Editor for computer; 100+ synth building blocks; 4 audio ins 2/XLR; mic preamp		\$2,299
N/Y	(1) pedal; (1) footswitch	N/A	N/A	N/A	Yes	2/70	(4) 1/4" TRS	Super beats	Expansion sound ROMs	\$795
N/Y	(1) pedal; (1) footswitch	N/A	N/A	N/A	Yes	2/70	(4) 1/4" TRS	Super beats	Expandable soundset sounds	\$795
N/Y	(1) pedal; (1) footswitch	N/A	N/A	N/A	Yes	2/70	(4) 1/4" TRS	Super beats	Expansion sound ROMs	\$795
N/Y	(1) pedal; (1) footswitch	N/A	N/A	N/A	Yes	2/30+	(4) 1/4"	Expandable soundset; (12) peak filters; real-time controls	Expansion ROMs	\$795
N/Y	(1) pedal; (1) footswitch	N/A	N/A	N/A	Yes	2/70	(4) 1/4" TRS	Super beats	Expansion sound ROMs	\$795
Y/Y	(4) pedal	32/192	250,000	12	No	4/57+3	(4) 1/4"	CDR, MP3 player	SCSI	TBA
N/N	Damper; assign switch/pedal	16/192	200,000	Hr, 32, 32T, 16, 16T, 8, 8T, 4, 4T	No	8/102	(4) 1/4"; headphone	Variable performance modeler; chord trigger buttons	E&B expansion boards (up to 2); physical modeling	\$2,250
N/Y	(1) damper; (1) assignable pedal/switch	16/192	50,000	Hr, 32, 16T, 16, 8T, 8, 4T, 4	No	4/90	(2) 1/4"	Large LCD screen; "cross-fadeable" dual-playback sequencer	Internal hard drive	\$1,600
N/N	EC5 input; damper; assign switch/pedal	40/192	50,000	Hr, 32, 32T, 16, 16T, 8, 8T, 4, 4T	No	4/89	(4) 1/4"; headphone; speaker	2 inputs for electric guitars and vocals; lyric display for SM	Internal HD; output for lyric display	\$2,500
N/N	N/A	N/A	N/A	N/A	Yes	2/6	(2) 1/4"	Vocoder w/ mic; MS2000 sound engine in smaller package; can be battery powered		\$500

KEYBOARD SYNTHESIZERS & SAMPLERS

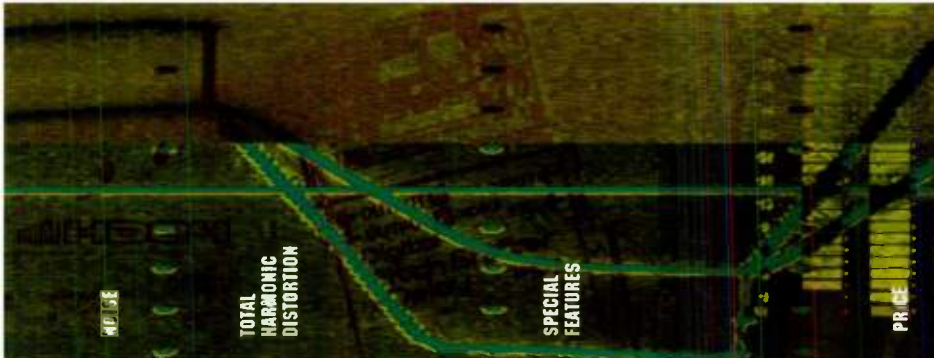
MANUFACTURER	PRODUCT	POLYPHONY/ MULTITIMBRAL PARTS	WAVEFORM MEMORY ROM/RAM	FILTER TYPES/ RESONANCE	SINGLE PROGRAMS ROM/RAM	MULTITIMBRAL PERFORMANCES ROM/RAM	PORTAMENTO	GM/ES/IG COMPATIBLE	BUILT-IN COMPUTER INTERFACE/TYPE	DISK DRIVE TYPE	NUMBER OF KEYS	# OF KEYBOARD ZONES (MIDI)	LEFT-HAND CONTROLLERS
Korg	MS2000	4/1	N/A	LP/BP/HP/Y	0/128	N/A	Yes	N/N/N	/A	N/A	44	2	Pitch and mod wheels
Korg	Triton	62/16	32/32 MB	HP, LP/Y	0/640	0/512	Yes	Y/N/N	Korg PCI/F	3.5" HD/DD	61	16	X/Y joystick; ribbon; (2) switch; (4) assignable/ fixed knobs
Korg	Triton LE (LE 76)	62/16	32/0 MB	LP/LP+HP/Y	512/512	384/384	Yes	Y/N/N	Optional SCSI	Smart media	61 (76)	16	SS/SW1/SW2
Korg	Triton Pro	62/16	32/32 MB	HP, LP/Y	0/640	0/512	Yes	Y/N/N	Yes/serial; Mac/PC; Korg PCI/F	3.5" HD/DD	76	16	X/Y joystick; ribbon; (2) switch; (4) assignable/ fixed knobs
Korg	Triton Pro X	62/16	32/32 MB	HP, LP/Y	0/640	0/512	Yes	Y/N/N	Yes/serial; Mac/PC; Korg PCI/F	3.5" HD/DD	88 weighted	16	X/Y joystick; ribbon; (2) switch; (4) assignable/ fixed knobs
Korg	Triton Studio (Studio 76, Studio 88)	62/16	48/96 MB	LP/LP+HP/Y	512/1,536	512/1,536	Yes	Y/N/N	4/SCSI	Floppy	61 (76, 88)	16	SS/SW1/SW2/ribbon
Kurzweil	K2600X	48/16	8/64 MB	LP, HP, BP, notch; AP/Yes	231/1,000	100/1,000	Yes	Y/N/N	Yes/SCSI	3.5" HD/DD	88	8	Pitch/mod wheel; (2) ribbon; (10) buttons; (8) sliders
Kurzweil	K2600XS	48/16	8/64 MB	LP, HP, BP, notch; AP/Yes	231/1,000	100/1,000	Yes	Y/N/N	Yes/SCSI	3.5" HD/DD	88	8	Pitch/mod wheel; (2) ribbon; (10) buttons; (8) sliders
Kurzweil	K2600	48/16	8/64 MB	LP, HP, BP, notch; AP/Yes	231/1,000	100/1,000	Yes	Y/N/N	Yes/SCSI	3.5" HD/DD	76	8	Pitch/mod wheel; (2) ribbon; (10) buttons; (8) sliders
Kurzweil	K2600S	48/16	8/64 MB	LP, HP, BP, notch; AP/Yes	231/1,000	100/1,000	Yes	Y/N/N	Yes/SCSI	3.5" HD/DD	76	8	Pitch/mod wheel; (2) ribbon; (10) buttons; (8) sliders
Kurzweil	PC2	64/16	16/0 MB	LP, HP, BP, notch/Yes	400/128	64/128	Yes	Y/N/N	N/A	N/A	76 semi-weighted	4	(2) wheels; (4) sliders; (5) buttons
Kurzweil	PC2X	64/16	16/0 MB	LP, HP, BP, notch/Yes	400/128	64/128	Yes	Y/N/N	N/A	N/A	76 semi-weighted	4	(2) wheels; (4) sliders; (5) buttons
Moog Music	Minimoog Voyager	1/1	N/A	Dual LP, HP/Y	0/128	N/A	Yes	N/N/N	MIDI	N/A	44	0	Pitch, mod wheel, release, glide
Oberheim	OB12	12/4	N/A	LP, BP, HP/Y	256/256	256/256	Yes	N/N/N	N/A	N/A	49	4	Ribbon controller; pitch wheel, mod wheel
Quasimidi	Sirius	28/7	192/0 MB	LB, HP/Y	672/480	N/A	Yes	N/N/N	N/A	N/A	49	0	2
Roland	Discover-5	64/16	N/A	LP/Y	1,466/N/A	0/128	Yes	Y/Y/N	N/A	3.5" HD/DD; Smartmedia	61	2	Bender/mod lever, D-beams; balance knob
Roland	Fantom-S	64/16	64-320/32- 288 MB	LP, BP, HP, peak/Y	937/288 + card	64/64 + card	Yes	Y/Y/N	Yes/USB	Smartmedia	61	16	Bender/mod lever, D-beam; (4) knobs
Roland	Fantom-S88	64/16	64-320/32- 288 MB	LP, BP, HP, peak/Y	937/288 + card	64/64 + card	Yes	Y/Y/N	Yes/USB	Smartmedia	88	16	Bender/mod lever, D-beam; (4) knobs
Roland	RS-50	64/16	32/0 MB	LP/Y	532/144	N/A	Yes	Y/Y/N	N/A	N/A	61	2	Bender/mod lever, D-beam
Roland	RS-70	64/16	64/0 MB	LP/Y	798/144	N/A	Yes	Y/Y/N	Yes/USB	3.5" HD/DD	61	2	Bender/mod lever, D-beam
Roland	VA-76	128/32	48/8 MB	LP/Y	3,762/N/A	N/A	Yes	Y/Y/N	N/A	Zip, 3.5" HD/DD	76	3	Bender/mod lever, ribbon; D-beam; (2) knobs
Roland	VR-760	128/4	96/0 MB	LP/Y	0/64	0/64	No	N/N/N	N/A	Compact Flash	76	2	Bender/mod; (9) drawbars, D-beam
Roland	V-Synth	24/16	0/50 MB	15 COSM	0/512	0/512	Yes	N/N/N	Yes/USB	PC card	61	16	Bender/mod, time trip pad; D-beam; (2) knobs
Roland	RS-9	64/16	32 MB	LP/Y	512/128	128/128	Yes	Y/N/N	N/A	N/A	88	2	Mod/pitch lever 6 real time control knobs
Voce	Key5	147/147	N/A	N/A	2/manual	3	No	N/N/N	Yes/MIDI	N/A	122	2	(38) draw bars, pitch/mod
Waldorf	Q	16/16	N/A	LB, BP, HP, comb/Y	0/300	0/100	Yes	N/N/N	N/A	Smartcard	61	16	(2) wheels, (2) buttons
Yamaha	CS6x	64/19	28/28 MB	12/Y	256/128	0/128	Yes	Optional	Yes/serial; Mac; Win	SmartMedia	61	4	PB; mod, ribbon
Yamaha	MOTIF 6	64/16 (32 option)	85/4 (64 max)	21 (LP, HP, BP, N)/Y	384/128	0/128	Yes	Y/N/N SCSI	Y/USB;	Smart Media	61	4	PB/mod wheel
Yamaha	MOTIF 7	64/16 (32 option)	85/4 (64 max)	21 (LP, HP, BP, N)/Y	384/128	0/128	Yes	Y/N/N	Y/USB, SCSI	Smart Media	76	4	PB/mod wheel
Yamaha	MOTIF 8	64/16 (32 option)	85/4 (64 max)	21 (LP, HP, BP, N)/Y	384/128	0/128	Yes	Y/N/N	Y/USB, SCSI	Smart Media	88	4	PB/mod wheel
Yamaha	S03	64/16	25/0 MB	LP/Y	608/128	0/32	Yes	Y/Y/Y	Y/serial	N/A	61	16	PB/MV
Yamaha	S08	64/16	25 2/0 MB	LP/4	621/128	0/32	Yes	Y/N/Y	Y/USB	Smart Media	88	16	PB/mod wheel
Yamaha	S30	64/17	43/43 MB	12/Y	256/128	0/128	Yes	Optional	Yes	SmartMedia	61	4	PB, mod
Yamaha	S90	64/16	110 MB	21 LP, HP, BP, N/Y	384/128	0/128	Yes	Y/N/N	Yes/USB	Smartmedia	88	4	PB/mod wheel



AFTERTOUCH (POLY/CHANNEL)	# AND TYPE OF CONTROLLER INPUTS	# OF SEQUENCER TRACKS/PPOH	SEQUENCER MEMORY (NOTES)	TYPES OF QUANTIZATION	ARPEGGIATOR	# OF EFFECTS PROCESSORS/ EFFECTS PROGRAMS	# AND TYPE OF AUDIO OUTPUTS	SPECIAL FEATURES	OPTIONS	PRICE
N/N	Pedal; switch	Motion sequencer	16 steps	N/A	Yes	2	(8) 1/4"	16 band vocoder, 3 part motion sequencer		\$1,100
N/Y	(1 ea) damper, switch, pedal	16/192	200,000	Hr: 32; 32T: 16; 16T: 8; 8T: 4, 4T	Yes	8/102	(6) 1/4"; headphone	Sampler, touch screen, user expandable	SCSI, physical modeling; sound RAM expansion for sampling (up to 64 MB)	\$2,995
N/Y	(1) assign pedal; (1) assign FS; (1) damper	16/192	200,000	4, 8, 8T, 16, 16T, 32, 32T, hi	Yes	3/89	(4) 1/4"; headphone	Same sounds, arpeggiators, sequencing capabilities as Triton	EXBSMPL sampling options w/SCSI	\$1,600; \$1,800 (76)
N/Y	(1 ea) damper, switch, pedal	16/192	200,000	Hr: 32; 32T: 16; 16T: 8; 8T: 4, 4T	Yes	8/102	(6) 1/4"; headphone	Sampler, touch screen, user expandable	SCSI, physical modeling; sound RAM expansion for sampling (up to 64 MB)	\$3,495
N/Y	(1 ea) damper, switch, pedal	16/192	200,000	Hr: 32; 32T: 16; 16T: 8; 8T: 4, 4T	Yes	8/102	(6) 1/4"; headphone	Sampler, touch screen, user expandable	SCSI, physical modeling; sound RAM expansion for sampling (up to 64 MB)	\$4,160
N/Y	(1) assign pedal; (1) assign FS; (1) damper	16/192	200,000	4, 4T, 8, 8T, 16, 16T, 32, 32T, hi	Yes	3/89	(6) 1/4"; headphone	Touch screen; up to 120 notes polyphonic w/exp; sampling in every mode; onboard CD burner w/exp	Seven program set exp; physical modeling; 8x CDRW/ADAT optical output, MLAN I/O	\$3,400; \$3,800 (76); \$4,200 (88)
Y/Y	(4) switch pedal; (2) CC pedal; breath	32/768	60,000- 180,000	N/A	Yes	5/480	(10) 1/4" TRS; AES/EBU, S/PDIF XLR, KDS 8-ch. dig.	Reads Akai, Roland, Ensoniq, AIFF, Wave samples; Flash ROM upgrd, Ram-Tracks	128 MB sample RAM; 1.5 MB P/RAM; various instrument ROM	\$4,595
Y/Y	(4) switch pedal; (2) CC pedal; breath	32/768	60,000- 180,000	N/A	Yes	5/480	(10) 1/4" TRS; AES/EBU, S/PDIF XLR, KDS 8-ch. dig.	Reads Akai, Roland, Ensoniq, AIFF, Wave samples; Flash ROM upgr; Ram-Tracks	128 MB sample RAM; 1.5 MB P/RAM; various instrument ROM	\$5,190
Y/Y	(4) switch pedal; (2) CC pedal; breath	32/768	60,000- 180,000	N/A	Yes	5/480	(10) 1/4" TRS; AES/EBU, S/PDIF XLR, KDS 8-ch. dig.	Reads Akai, Roland, Ensoniq, AIFF, Wave samples; Flash ROM, install mem; Ram-Tracks	128 MB sample RAM; 1.5 MB P/RAM; various instrument ROM	\$4,230
Y/Y	(4) switch pedal; (2) CC pedal; breath	32/768	60,000- 180,000	N/A	Yes	5/480	(10) 1/4" TRS; AES/EBU, S/PDIF XLR, KDS 8-ch. dig.	Reads Akai, Roland, Ensoniq, AIFF, Wave samples; Flash ROM, install mem; Ram-Tracks	128 MB sample RAM; 1.5 MB P/RAM; various instrument ROM	\$4,815
N/Y	(3) switch pedal; (2) CC pedal; breath; ribbon	N/A	N/A	N/A	Yes	2/172	(2) 1/4" TRS; AES/EBU, S/PDIF RCA, headphone	Stereo grand piano; tone wheel organ mode; Flash ROM upgradeable OS	Polyphony/orchestral/GM/vintage keyboard expansion card	\$2,330
N/Y	(3) switch pedal; (2) CC pedal; breath; ribbon	N/A	N/A	N/A	Yes	2/172	(2) 1/4" TRS; AES/EBU, S/PDIF RCA, headphone	Stereo grand piano; tone wheel organ mode; Flash ROM upgradeable OS	Polyphony/orchestral/GM/vintage keyboard expansion card	\$2,730
N/Y	(10) pedal/CV; (4) footswitch/gate	N/A	N/A	N/A	No	N/A	(2) 1/4"	Authentic analog synth with external audio input, pre-filter effects loop, hinged central panel, 3D touch surface controller	Blue blacklit pitch and mod wheels (\$149); VX-351 Voyager CV expander (\$240)	\$3,195
N/Y	(2 each) pedals; exp pedals	1/96	30,000	N/A	Yes	1/4	(4) 1/4"	Screen draws out edited parameters		\$1,999
N/N	(1) FS	7/24	N/A	N/A	Yes	2	(2) RCA	Built-in vocoder		\$1,299
N/N	(3) pedal	N/A	99,999 songs on card	N/A	No	4/94	(4) 1/4"; composite video	Real-time SWF arranging; vocal harmonizer; lyric display vocoder; vocal EFX, touch LCD	Smartmedia; DP-2/DP-8	\$2,195
Y/Y	(2) pedal	16/480	400,000	32nd swing	Yes	6/86	(4) 1/4" S/PDIF coax, optical	16 dynamic pad bank; skipback sampling, realtime time stretching	SRX series; 256 MB DIMM; Smartmedia; DP-2/DP-8	\$2,495
Y/Y	(2) pedal	16/480	400,000	32nd swing	Yes	6/87	(4) 1/4" S/PDIF coax, optical	16 dynamic pad bank; skipback sampling, realtime time stretching	SRX series; 256 MB DIMM; Smartmedia; DP-2/DP-8	\$3,495
N/N	(2) pedal	N/A	N/A	N/A	Yes	3/63	(2) 1/4"	Chord memory	DP-2/DP-8	\$895
N/A	(2) pedal	N/A	N/A	N/A	Yes	3/63	(2) 1/4"	EZ tracks; chord memory	DP-2/DP-8	\$1,295
N/Y	(3) pedal, FC-7 input	16/N/A	N/A	1/64	No	5/116	(4) 1/4"	Variphase sampling; style orchestrator; 500 styles on Zip, style morphing, touch screen	FC-7 foot controller; DP-2/DP-8	\$2,995
N/Y	(3) pedal	N/A	N/A	N/A	No	4/46	(2) XLR; (2) 1/4"	VK-organ; master EQ; waterfall keybd; V link; (2) SRX slots	SRX series expansion compact Flash DP-2/DP-8	\$2,495
N/Y	(3) pedal	N/A	N/A	N/A	Yes	3/43	(4) 1/4" coax, optical	Many	PC card storage; compact Flash; micro drive; Smartmedia; DP-2/DP-8	\$2,695
Y/Y	Assign, sustain	N/A	N/A	N/A	Yes	3/51	(2) 1/4"	Dedicated piano button, XV waveforms; category search; favorite bank	DP-2/6 damper pedal, EV-5 exp pedal	\$1,295
N/A	(1) sustain; (1) expression	N/A	N/A	N/A	No	2	(1) out	Double manual organ w/2 sets drawbars, manual w/2 pedal drawbars	Expression pedal; stand; 3 different bass pedal options	\$4,999
Y/Y	(2) switch; (2) CV	Step sequencer	100 patterns	N/A	Yes	2	(3) 1/4", S/PDIF	Stereo analog in; software updates via MIDI	32-voice upgrade; RAM-cards	\$3,495
N/Y	(2) FS; (2) foot; (1) breath	16/80	N/A	N/A	Yes	2/135	(4) 1/4"	Phrase clip sampling; 4MB save/load to SmartMedia	PLG series expansion boards x 6 types	\$1,795
N/Y	(2) switch, control, breath	16/480	111,000 notes	32d note	Yes	5/108 plus master EQ	(4) 1/4"	Integrated sampling sequencer, modular synthesis, plug-in system	Real-time ext control surface; AIEB2 output exp, mLAN8E, SIMMs	\$2,250
N/Y	(2) switch, control, breath	16/480	111,000 notes	32d note	Yes	5/108 plus master EQ	(4) 1/4"	Integrated sampling sequencer, modular synthesis, plug-in system	Real-time ext control surface; AIEB2 output exp, mLAN8E, SIMMs	\$2,750
N/Y	(2) switch, control, (1) breath	16/480	111,000 notes	32d note	Yes	5/108 plus master EQ	(4) 1/4"	Integrated sampling sequencer, modular synthesis, plug-in system	Real-time ext control surface; AIEB2 output exp, mLAN8E, SIMMs	\$3,250
N/N	(2/1) switch; (1) pedal	N/A	N/A	N/A	No	3/64	N/A			\$630
N/N	(1) switch; (1) control	16/480	Direct from Smart Media	N/A	No	3/64	(2) 1/4"	Voice editor, sequencing software included		\$1,495
Y/Y	(2) FS	16/480	N/A	N/A	Yes	4/127	(2) 1/4"	MIDI master keyboard functions	PLG series plug-in boards 5 types	\$1,295
N/Y	(2) FS; (2) foot; (1) breath	16/480	Smartmedia	N/A	Yes	5/108+EQ	(4) 1/4"	A/D input, MIDI master keyboard functions w/128 setups	PLG series expansion x 3; 32 multitimbral parts	\$2,350

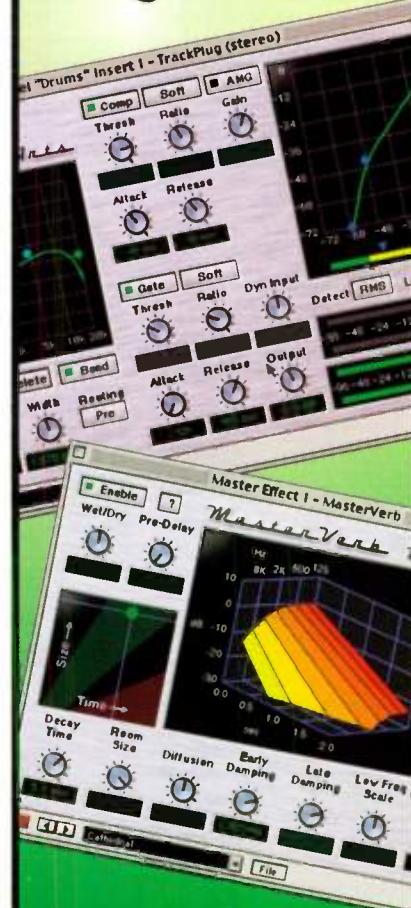
MICROPHONE & INSTRUMENT PREAMPS

MANUFACTURER	PRODUCT	TYPE	CHANNELS	EQ	OUTPUT LEVEL CONTROL	INSTRUMENT/LINE INPUT	OVERLOAD WARNING	FREQUENCY RESPONSE
A-Designs	MP-1	Tube	1	Polarity switch	Yes	XLR/1/4"	Analog VU	15 Hz-60 kHz
A-Designs	MP-2	Tube	2	Polarity switch	Yes	XLR/1/4"	Analog VU	15 Hz-60 kHz
Agular	DB680 Tube Bass Preamp	Tube	1	Dual fully-parametric	Yes	Yes	No	20 Hz-20 kHz
Alto	A-1ha	Tube	2	N/A	Yes	Yes	(2) 8-seg LED	20 Hz-20 kHz
Amek	9098 EQ	TLA (Transformer Like Amplifier)	1	4-band para, vari HP/LP	No	Yes	No	10 Hz-110 kHz, -1.5 dB
Amek	DMA	TLA (Transformer Like Amplifier)	2	HP filter	No	Yes	2x8-seg LED	10 Hz-110 kHz
Aphex Systems	1100	Tube	2	Low-cut filter	Yes	No	No	N/A
API	212L	Discrete solid state	1	N/A	Yes	No	5-seg LED	30 Hz-20 kHz
API	512C	Discrete solid state	1	No	Yes	Yes	7-seg LED VU	30 Hz-20 kHz
ART	Artcessories Dee Jay Pre	Phono	1	RIAA	No	RCA	N/A	N/A
ART	Artcessories Micro Mix	Solid state	1	N/A	Yes	Yes	Clip LED	20 Hz-20 kHz
ART	Digital MPA	Tube	2	N/A	Yes	Yes	LED	15 Hz-80 kHz
ART	DPS	Tube	2	No	Yes	Yes	LED	5 Hz-50 kHz
ART	(DIO Preamp System) ART Pro Channel	Tube	1	4-band, low-mids/mids sweepable	Yes	XLR, 1/4"	Yes	10 Hz-20 kHz, +/- 0.5 dB
ART	TPS	Tube	2	No	Yes	Yes	Yes	5 Hz-50 kHz
ART	(Tube Preamp System) ART Tube Channel	Tube	1	4-band, low-mids/mids sweepable	Yes	XLR, 1/4"	Yes	10 Hz-20 kHz, +/- 0.5 dB
ART	Dual MP	Tube	2	No	Yes	Yes	3-seg LED, clip LED	10 Hz-20 kHz
ART	Pro MPA	Tube	2	No	Yes	Yes	Bar meter	20 Hz-40 kHz
ART	TPS2 Tube Preamp System	Tube	2	No	No	Yes	Analog meter	20 Hz-20 kHz
ART	Tube MP	Tube	1	No	Yes	Yes	LED	10 Hz-20 kHz
ART	Tube MP OPL	Tube	1	No	Yes	Yes	LED	10 Hz-20 kHz
ART	Tube MP Studio	Tube	1	No	Yes	Yes	LED	10 Hz-20 kHz
ART	Tube MP Studio V3	Tube	1	No	Yes	Yes	2x10-seg LED	20 Hz-20 kHz
ATI	8MX2	Solid state	8	No	Yes	Yes	Yes	1 Hz-120 kHz
Avalon Design	AD2022	Discrete (Class A)	2	HP filter	Yes	Yes	Analog VU; (2) LED	5 Hz-120 kHz
Avalon Design	M5	Discrete (class A)	1	HP filter	Yes	Yes	Analog VU; (2) signal peak LEDs	10 Hz-30 kHz
BBE	BMAX	Solid state bass	1	3-band passive, quasi-parametric mid	Yes	(2) 1/4"	No	10 Hz-30 kHz
BBE	BMAX-1	Tube bass	1	3-band passive, quasi-parametric mid	Yes	(2) 1/4"	No	10 Hz-30 kHz
Behringer	UltragrainPro MIC2200	Tube	2	Parametric, low-cut	Yes	Yes	Yes	10 Hz-200 kHz, ±3 dB
Behringer	Tube Ultragrain T1953	Tube	2	Tuneable HP filter	Yes	Yes	Clip LED	18 Hz-30 kHz
Bellari	MP110 Direct Drive	Tube	1	No	Yes	Yes	Yes	20 Hz-40 kHz
Bellari	RP220	Tube	2	No	Yes	Yes	5-seg LED, clip LED	20 Hz-40 kHz
Bellari	RP520	Tube	2	No	Yes	Yes	Clip LED	20 Hz-40 kHz
Benchmark	Mic-Man Jr.	Solid state	2	No	No	No	No	1 Hz-300 kHz
Benchmark	MPS-400	Solid state	2	No	No	Yes	No	0.2 Hz-500 kHz
beyerdynamic	MV100	Solid state	4	No	No	Yes	Clip LED	18 Hz-22 kHz
Crest Audio	iPro Two	Solid state	2	HP filter	Yes	Yes	(2) 12-seg LED	20 Hz-35 kHz
Crest Audio	ST2	Solid state	2	(2) full parametric	Yes	Yes	(2) 10-seg LED	20 Hz-20 kHz
Curtis Technology	Opre2	Solid state	2	(2) full parametric	Yes	No	No	10 Hz-0 KHz
D.W. Fearn	VT-1/VT-2	Tube	2	No	Yes	No	VU meter	5 Hz-28 KHz
DACS	MicAmp	Solid state	2	Low-cut filters	Yes	Yes	LED	<20 Hz-55 kHz
Daking	Mic PreEQ	Solid state	1	4-band "A" range	Yes	Yes	Yes	20 Hz-20 kHz
dbx	dbx386	Tube	2	N/A	Yes	Yes	12-seg LED	<10 Hz-75 kHz
Demeter	VTMP-2c Stereo	Tube	2	Low-cut filter	Yes	Yes	LED meter	10 Hz-40 kHz
Demeter	VTBP-201 S	Tube	1	Treble; mid; bass (w/rel freq), presence	No	Yes	No	N/A
Demeter	Tube Bass Preamp	Tube	2	Low-cut filter	Yes	Yes	LED meter	10 Hz-40 kHz
Demeter	VTMP-2cx Stereo	Tube	2	Low-cut filter	Yes	Yes	10-seg LED	10 Hz-80 kHz
Demeter	H MP-1 Stereo	Tube	2	Low-cut filter	Yes	Optional	No	10 Hz-20 kHz
Denecke	AD20	Solid state	2	No	Yes	Optional	No	10 Hz-21 kHz
Denecke	Zefiro In Box Preamp	Solid state	2	No	Yes	Optional	No	10 Hz-21 kHz
Digidesign	PRE	Solid state	8	Hi-pass filter	Yes	Yes	Peak Meter (14-seg), Ch Status (6-seg)	10 Hz-100 kHz, -3 dB
Drawmer	TS1	Tube	1	Variable HP filter, hi-freq. contour	Yes	Yes	Clip LED (8-seg)	20 Hz-20 kHz
Drawmer	TS1D	Tube	1	Variable HP filter, hi-freq. contour	Yes	Yes	Clip LED (8-seg)	20 Hz-20 kHz



-120 dB	0.08% @ 1kHz	Jensen input transformer, custom wound output transformer, tube in and out	\$1,150
-120 dB	0.08% @ 1kHz	Jensen input transformer, custom wound output transformer, tube in and out	\$1,499
-80 dB	0.4%	Selectable inputs; passive/active inputs; tuner out; footswitch, balanced out; crossover	\$1,895
N/A	<0.5%	Dual serve phase, phatom, pad switch	\$114
-100 dBu	<0.01%	Phantom; notch fillers, Neve glow and sheen	\$1,995
-104 dBu S/N	<0.01%	Phantom, MS surround	\$1,710
-135 dBu EIN	@+15 dBu 0.12% @+4 dBu 0.05%	Mic limiter, 24-bit/96 kHz digital out	\$2,495
-125 dBu	0.02% (+4 dB @ 2 kHz)	Phantom, 20dB pad, transformer-coupled in/out	\$695
-129 dB	@ +4 dbu <0.05%	Mic/hi 2 in phantom; phase, 7-seg LED	\$795
N/A	N/A	RIAA EQ	\$50
<0.01%	N/A	Phantom switch; power switch	\$70
-134 dB (A-weighted)	0.005%	AES/EBU, S/PDIF, ADAT, selectable plate voltage; variable input impedance	\$749
-129 dBu EIN	0.01%	V3 variable valve voicing; ADAT, TOSLINK, and S/PDIF outputs; phase; phantom power	\$319
-130 dBu (XLR to XLR, "A" weighted)	0.01%	Tube parametric EQ, switchable optical/variable mu tube comp	\$799
-129 dBu EIN	<0.01%	Output protection limiter, VU meters, variable valve voicing; phase; phantom power	\$219
-129 dBu (XLR to XLR, "A" weighted)	<0.01%	Tube parametric EQ, optical comp	\$525
-129 dBu EIN	<0.1%	Phase; phantom; +20 dB gain switch	\$349
-132 dBu EIN	<0.1%	VU meters; HPF (7 Hz-150 Hz)	\$457
N/A	N/A	V3 variable valve voicing; phantom power; 20 dB phase switch	\$219
-129 dBu EIN	0.1%	Phase; phantom power	\$99
-129 dBu EIN	0.1%	Output protection limiter phase; phantom power	\$114
-129 dBu EIN	0.1%	Output protection limiter; VU meter, phase; phantom power	\$129
-129 dBu EIN	0.1%	VU meter, variable valve voicing; phase; phantom power	\$149
-129 dBm EIN	0.006%	Limiter on each input (8); phase; phant and grnd lift on each channel; 8x2 mixer with 8 outs	\$1,899
-126 dB EIN	0.05%	Selectable mic input impedance, bal., unbal. outputs; -20dB pad, ext. B2T power supply	\$3,000
-126 dB EIN	0.05%	Ext B2T power supply (100/240V); polarity; 20 dB pad; DI in, opt B&K 130V phantom power	\$1,600
N/A	N/A	BBE Sonic Maximizer; opt. comp, transformerless bal. output	\$499
N/A	N/A	BBE Sonic Maximizer; Groove Tubes 12AX7; opt. comp, Jensen transformer bal. output	\$999
N/A	0.011%	12AX7 vacuum tube, phantom power, phase reverse	\$199
>108 dB S/N	N/A	Phantom power, line driver; phase, balanced I/O	\$399
90 dB	0.1%	Transformer-balanced inputs, phase, pad	\$230
107 dB S/N	0.1%	Transformer-balanced inputs, phase, pad	\$500
107 dB S/N	0.1%	Analog VU meters; transformer-balanced inputs; phase, pad	\$600
1 dB noise figure	0.001%	Portable AC/DC operation, gain range: +26 to +76 dB	\$435
-130 dB EIN	0.0009%	48V phantom power, 500 kHz bandwidth at all settings; +28 dBu max output	\$1,125
-128 dB EIN	0.03%	Headphone monitoring	\$799
88 dBu S/N, -129 dBu EIN	0.005%	Phantom, 20 dB pad	\$649
86 dBu S/N, -129 dBu EIN	0.005%	Two mic/line inputs on front and rear	\$699
-129 dB	0.03%	Lundahl input transformer	\$1,295
-124 dBu EIN	0.2%	Phantom, phase, 20 dB pad, low impedance in for transformerless mics	\$2,000/\$3,500
-133 dB	0.0002%	Phantom power	\$2,250
-128 dB EIN	<0.01%	Discrete class A circuitry, HP & LP filters, 48V, 20 dB pad, mute & bypass	\$1,995
-120 dBu @ 150 Ω 20-20 kHz BW	0.35% @ 1kHz, 40dB gain	A/D conversion, selectable 96, 88.2, 48, 44.1 kHz samp. rate, 48V phantom, phase reverse	\$600
-124 dB EIN	0.016%	Jensen input transformers, phase, LC, pad, variable tube gain	\$2,299
N/A	N/A	Jensen DBE mic level output transformer, effects loop, balanced out	\$799
-124 EdB IN	0.016%	Phantom, Jensen in/out transformers, phase, ILC, pad, variable tube gain	\$2,549
-124 dB EIN	0.012%	Jensen input transformer, phase, LC, pad, variable tube gain	\$1,299
99 dB S/N (A/D) 125.4 dBm EIN	0.0016%	20-bit A/D, S/PDIF optical/coax out	\$325
99 dB S/N, -125.4 dB EIN	0.008%	20-bit A/D, S/PDIF optical/coax out	\$395
-128 dB @ 66 dB of gain, EIN	0.0005% THD + N @ 1 kHz, 0 dB gain	Remote controllable; soft-clip limiter, standalone capability, phase reverse, 48V phantom power, MIDI in/Out/Thru	\$2,495
-130 dB EIN	<0.03%	48V, phase rev., stereo comp, tube drive, analog	\$850
-130 dB EIN	<0.03%	48V, phase rev., stereo comp, tube drive, 24/96k output, digital	\$1,150

POWER COUPLE



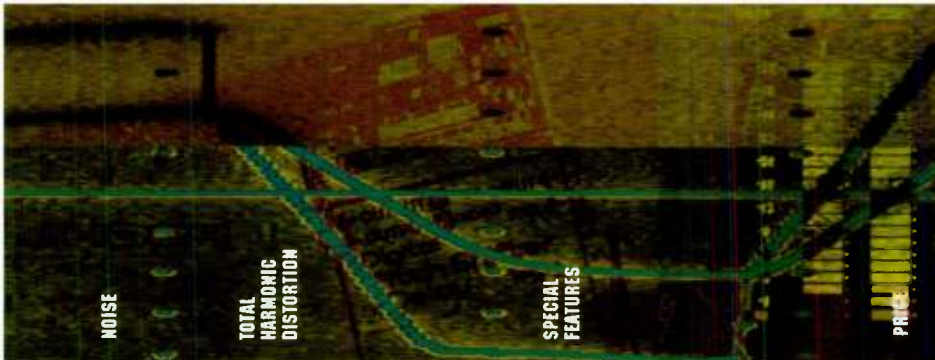
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MICROPHONE & INSTRUMENT PREAMPS

MANUFACTURER	PRODUCT	TYPE	CHANNELS	EQ	OUTPUT LEVEL CONTROL	INSTRUMENT/ LINE INPUT	OVERLOAD WARNING	FREQUENCY RESPONSE
Drawmer	1960	Solid state-tube hybrid	2	Low-cut filters	Yes	Yes	VU meters	20 Hz-20 kHz
Drawmer	969	Solid state	2	Low cut (50-100 Hz)	Yes	Yes	VU meters	20 Hz-20 kHz
Earthworks	1021/1022/1024	Solid state	1	No	Yes	No	Clip LED	2 Hz-100 kHz, ± 0.1 dB
Fishman	Acoustic Blender/ Acoustic Bass Blender	Solid state	2	Active shelving style, bass, treble, low-cut filter	Yes	Yes	No	20 Hz-20 kHz
Fishman	B II Acoustic Bass Preamp	Solid state	1	Treble, bass	Yes	Yes	No	N/A
Fishman	G-II Acoustic Guitar/ Instrument Preamp	Solid state	1	Treble, bass	Yes	Yes	No	N/A
Fishman	Pocket Blender	Solid state	2	Active shelving style, bass, treble, high-low-cut filters	Yes	Yes	No	20 Hz-20 kHz
Fishman	Pro-EQ II	Solid state	1	4-band graphic	Yes	Yes	No	N/A
Fishman	Pro EQ Platinum Bass	Solid state	1	5-band, low-cut filter (depth control)	Yes	Yes	Clip LED	20 Hz-20 kHz
FMR Audio	RNP8380	Tube/solid state hybrid	2	No	No	Yes	Signal, clip	10 Hz-100 kHz ± 1 dB
Focusrite	ISA428 PrePack	Solid state (Class A)	4	No	No	Yes	Yes 8	20 Hz-200 kHz
Focusrite	OctoPre	Discrete (Class A)	8	No	Yes	Yes	Clip LED	10 Hz-200 kHz
Focusrite	Red 1 Quad	Solid state	4	No	No	No	VU meter	10 Hz-140 kHz
Focusrite	Red 7	Solid state	1	High-pass filter	Yes	Yes	VU meter	10 Hz-140 kHz
Focusrite	Red 8 Dual	Solid state	2	No	No	No	VU meter	10 Hz-140 kHz
George Massenburg Labs	8302	Solid state	2	No	No	No	Clip LED	1 Hz-200 kHz
George Massenburg Labs	8304	Solid state	4	No	No	No	Clip LED	1 Hz-200 kHz
Grace Design	Lunatec V3	Solid state/AD	2	2-position HP filter	Yes	No	(2) 8-seg dot mode LED	6 Hz-250 kHz -3 dB ± 60 dB gain
Grace Design	Model 101	Solid state	1	Low-cut filter @ 75 Hz	Yes	Yes	(2) VU	4.5 Hz-400 kHz, ± 3 dB @ 40 dB gain
Grace Design	Model 201	Solid state	2	No	Yes	No	Yes	4.5 Hz-1.0 MHz, ± 3 dB
Grace Design	Model 801	Solid state	8	No	Optional	No	Yes	4.5 Hz-1 MHz, ± 3 dB
Grace Design	Model 801R	Solid state	8	No	No	No	Full digital metering/ peak hold and reset	4.5 Hz-1 MHz, ± 3 dB
Great River Electronics	ME-INV	Solid state	1	No	Yes	Yes	(2) LED	10 Hz-40 kHz ± 1 dB @ 40dB gain
Great River Electronics	MP-2	Solid state	2	No	No	Yes	Overload LED	10-60 kHz ± 0.5 dB
Great River Electronics	MP-2MH	Solid state	2	No	No	Yes	Overload LED	10 Hz-60 kHz, ± 0.5 dB
Great River Electronics	MP-2NV	Solid state	2	No	Yes	Yes	2 LED meters per channel	10 Hz-30 kHz, ± 1 dB @ 40 dB gain
Great River Electronics	DITTO	Tube (Class A)	1	No	Yes	Yes	N/A	6 Hz-200 kHz
Groove Tubes	VIPRE	Tube (Class A)	1	Low-cut filter	Yes	Yes	VU, LED	4 Hz-100 kHz ± 1.5 dB
HDB Audio	TMA 2	Tube	2	No	Yes	No	Tube plasma display	20 Hz-20 kHz
K & K	Dual-Channel Preamp	Solid state	2	Bass, treble, gain	Yes	Yes	No	10 Hz-30 kHz
K & K	PreAmp 97	Solid state	1	Bass, treble, gain	Yes	Yes	No	20 Hz-20 kHz
K & K	Powerpack Preamp	Acoustic instr. solid state	1	Treble, bass, gain	Yes	Yes	No	20 Hz-20 kHz
K & K	Pure Guitar Preamp	Solid state	1	Bass, mid, hi range gain	Yes	Yes	No	10 Hz-30 kHz
K & K	Quantum Blender	Solid state	2	Bass, mid, treble	Yes	Yes	No	10 Hz-35 kHz
K & K	Trinity Preamp	Solid state	2	Treble, bass, gain	Yes	Yes	No	20 Hz-20 kHz
Langewin	Dual Mono	Solid state	2	High and low shelving	No	Yes	No	10 Hz-20 kHz
Manley Labs	Dual Mono	Tube	2	No	No	Yes	No	10 Hz-60 kHz
Manley Labs	MIC/EQ 500	Tube	1	Stepped LF and HF, passive vintage EQ	Yes	Yes	VU meter	5 Hz-60 kHz
Manley Labs	Mono Mic Pre	Tube	1	No	No	Yes	No	10 Hz-20 kHz
Martech	MSS-10	Solid state	1	No	Yes	Yes	VU meter	10 Hz-20 kHz
M-Audio	DMP3	Solid state	2	No	Yes	Yes	(2) VU meters, clip light	20 Hz-100 kHz
M-Audio	MobilePre USB	Solid state	2	No	Yes	Yes	Clip LED	20 Hz-20 kHz ± 1.2 dB
M-Audio	Tampa	Solid state	1	Low cut	Yes	Yes	VU meter, clip light	20 Hz-20 kHz
M-Audio	Audio Buddy	Solid state	2	No	No	Yes	Yes	5 Hz-50 kHz
Millennia	HV-3B	Solid state	2	No	Yes	No	LED	2 Hz-300 kHz
Millennia	HV-3C	Solid state	2	No	Yes	No	LED	2 Hz-300 kHz
Millennia	HV-3D	Solid state	8	No	Yes	No	LED	2 Hz-300 kHz
Millennia	M-2B	Tube	2	No	Yes	No	No	10 Hz-100 kHz
Millennia	MSD-2 "Matrix"	Solid state	2	No	Yes	Yes	LED	10 Hz-200 kHz
Neotek	Martinsound MicMAX	Solid state	2	No	No	No	No	5 Hz-150 kHz $\pm 0/-3$ dB



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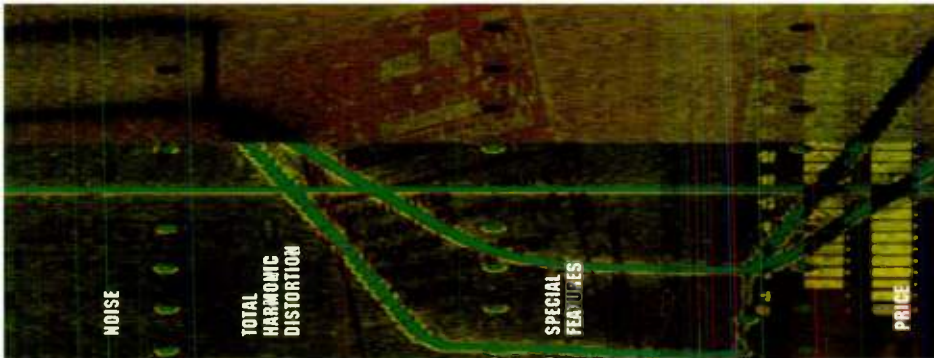
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-128 dB EIN	<0.01%	Phantom, stereo tube comp, active tube DI	\$2,700
-134.5 dB EIN	<0.1%	Tube output stage, twin FET compressors	\$3,100
EIN: -125 dBv @ 20 dB of gain, -133 dBv @ 40 dB gain	0.0001%	Multiple outs per channel, phase, phantom, standby	\$1,200-\$3,500
81 dB (A-weighted, ref to nom -20 dBv input)	0.2%	Separate mic/piezo transducer channels with dedicated effects loops/phase reverse, phantom	\$500
N/A	N/A	Input trim, injection molded case, suitable as floor unit, belt/strap pack or with mic-stand adapter	\$110
N/A	N/A	Input trim, injection molded case, suitable as floor unit, belt/strap pack or with mic-stand adapter	\$110
87 dB (A-weighted, ref to nom -20 dBv input)	0.7%	Separate mic/piezo transducer channels with dedicated effects loops/phase reverse, phantom	\$420
N/A	N/A	Sub bass trim, input trim, injection molded case	\$160
89 dBu (91 dBv)	105%	Phantom power, comp (1 knob), phase, tuner out, XLR (with ground lift), 1/4" out	\$250
-120 dB EIN, >118dB S/N	0.001%	RNP = "really nice preamp," +48V slow ramp w/out mute during phantom, 0-66dB gain switch	\$499
96 dB	0.003%	Variable impedance optional 192kHz A-D	\$1,999
-128 dB @ 60 dB gain	0.002%	Digital options	\$1,169
-128 dB EIN	0.003%	Phantom power, phase on each channel, stepped gain	\$2,795
-128 dB EIN	0.006%	Transformer-balanced I/O mic-preamp with mono channel dynamics optimised for vocals	\$2,395
-128 dB EIN	0.003%	Phantom power, phase on each channel, stepped gain	\$1,895
-127 dBu EIN	0.0008%	Phantom, all-discrete class-A, +15-70 dB gain in 5 dB increments, upgradable to 4 channels	\$2,100
-127 dBu EIN	0.0008%	Phantom, all-discrete class-A, +15-70 dB gain in 5 dB increments	\$2,900
<-130 dB @ 60 dB gain 50Ω	0.0011%	48V phantom, A/D conversion @ 44.1-192 kHz, ANSR analog noise shape dithering	\$1,695
<-130 dB @ 60 dB gain	0.001%	Phantom power, XLR and 1/4" outputs	\$695
<-130 dB @ 60 dB gain	0.0015%	24-position gold contact rotary gain controls	\$1,995
<-130 dB @ 60 dB gain	0.001%	24-position gold contact rotary gain controls	\$4,795
<-130 dB @ 60 dB gain	0.001%	Fully remote control, up to 64 channels from 1000" full MIDI control, optional desktop controller (\$995)	\$5,495
-125 dB EIN 150 source @ 40dB gain	<0.02%	Phantom, polarity, 1A port impedance, 5dB stepped input gain	\$1,299
0129 dB EIN 150 source @ 40 dB gain	<0.007%	Phantom, polarity, pad, 2 dB stepped gain	\$1,799
-129 dB EIN 150 source @ 40 dB gain	<0.007%	Phantom, polarity, pad switches, 2 dB stepped gain	\$2,299
-125 dB EIN 150 source @ 40 dB gain	<0.02%	Phantom, polarity, 1A port impedance, 5 dB stepped input gain	\$2,499
-90 dBu EIN (A weighted)	0.013%	±30dB all-tube preamp avail., gain signal ground lift, custom output transformer output	\$399
-129 dBu (600 Ω A weighted)	0.06%	75 dB avail. gain in bal signal path, 4 variable transformer ins, direct balanced bridge, 5 variable rise times	\$2,999
>80 dB S/N	0.2%		TBA
Low noise	N/A	± 20dB filters	\$149
Low noise	N/A	9V battery, DC power supply, ± 20 dB	\$109
Low noise	N/A	± 20dB filters, belt clip	\$99
Low noise	N/A	9V battery for acoustic guitar	\$109
S/N -85 dB	<0.005%	Mic power 9 V, power, DC 12V auto polarization	\$399
Low noise	N/A	Provides power for condenser mic, 9V battery	\$167
80 dB S/N	0.05%	All discrete, two channels	\$1,475
80 dB S/N	0.05%	High headroom	\$2,400
100 dB S/N	0.025%	Fully-differential circuitry	\$2,900
80 dB S/N	0.05%	High headroom	\$1,600
-129.5 dBu typical	<-0.0015%		\$1,995
>110 dB	0.002%	Phase reverse option	\$250
101 dB	0.00199%	Phantom power, USB powered	\$180
>110 dB	N/A	Digital converters with sample rates to 96 kHz	\$800
-122 dBu	0.1%		\$120
-131 dB EIN	0.0005%	Phantom power	\$1,895
-131 dB EIN	0.0005%	24-bit A/D converter	\$2,495
-131 dB EIN	0.0005%	Phantom power	\$3,995
-118 dB EIN	0.02%	Transformer-less	\$3,495
-130 dB EIN	0.002%		\$4,500
N/A	<0.001%	Microphone impedance matching via switch selection	\$1,495

MICROPHONE & INSTRUMENT PREAMPS

MICROPHONE & INSTRUMENT PREAMPS

MANUFACTURER	PRODUCT	TYPE	CHANNELS	EQ	OUTPUT LEVEL CONTROL	INSTRUMENT/LINE INPUT	OVERLOAD WARNING	FREQUENCY RESPONSE
Neumann	P2 Analog	Solid stage	2	Highpass filters at 40, 80 Hz	Yes	Yes (2)	No	1.5 Hz-500 kHz
Nightpro	PreQ3	Solid state	2 or 4	1-band (sel freq), broad-band shelving, LF rolloff	No	Yes	Peak LED 3 db before clip	15 Hz-40 kHz
Oram Pro	Octasonic	Solid state	8	No	No	Yes	Preclip LED	20 Hz-40 kHz
Pendulum	MDP-1	Tube (class A)	2	10-position low-cut filter	Yes	Yes	VU meter	5 Hz-300 kHz
Pendulum	SPS-1 Preamp for Acoustic Instruments	Solid state (class A)	2	3-band parametric on each ch.	Yes	Yes	Signal, peak LEDs	20 Hz-100 kHz
Phoenix Audio UK	DRS1	Solid state	1	HP filters	Yes	Yes	LED	20 Hz-20 kHz
Phoenix Audio UK	DRS2	Solid state	2	HP filters	Yes	Yes	LED	20 Hz-20 kHz
Phoenix Audio UK	GTQ2	Solid state	2	3-band, sweep mids	Yes	Yes	No	20-20 kHz, ± 1 dB
Phonic	T8100 VocalMax	Tube	2	3-band, low-cut filter	Yes	Yes	VU	20 Hz-20 kHz
PreSonus	Acoustic-Q	Tube	2	1-band parametric	Yes	Yes	15-seg LED	10 Hz-50 kHz
PreSonus	Blue Tube	Tube/solid state hybrid	2	No	Yes	Yes	Clip LED	20 Hz-40 kHz
PreSonus	Digimax	Discrete (class A) with digital outputs	8	Yes	Yes	Yes	Clip LED	20 Hz-40 kHz
PreSonus	DigiMAX LT	Solid state	8	No	Yes	Yes	(8) 3-seg LED	20 Hz-50 kHz
PreSonus	Digitube	Tube	1	3-band (sweepable); low-cut filter	No	Yes	8-seg LED	10 Hz-50 kHz
PreSonus	M80 and MP20	Discrete (class A)	2 or 8	Low-cut filter	Yes	Yes	Clip LED	10 Hz-30 kHz
Radio Design Labs	RU-MX5	Solid state	5	No	Yes	No	3-seg LED	70 Hz-30 kHz
Radio Design Labs	ST-MMX3	Solid state	3	No	Yes	No	No	10 Hz-18 kHz
Radio Design Labs	ST-VCA1	Solid state	1	No	Yes	Yes	No	20 Hz-22 kHz
Radio Design Labs	STM-1	Solid state	1	No	No	No	No	50 Hz-30 kHz
Radio Design Labs	STM-2	Solid state	1	No	Yes	No	No	50 Hz-25 kHz
Radio Design Labs	STM-2X	Solid state	1	No	Yes	No	No	50 Hz-25 kHz
Radio Design Labs	STM-3	Solid state	1	No	Yes	No	No	50 Hz-25 kHz
Rane	AP 13 Acoustic Instrument Preamp	Solid state	2	(2) low cut, 7-band graphic	Yes	Yes	No	20 Hz-20 kHz
Rane	DMS22	Solid state	2	3-band with sweepable parametric mid	Yes	No	Clip LED	20 Hz-200 kHz
Rane	MS1b	Solid state	1	No	Yes	No	Clip LED	20 Hz-20 kHz
Raven Labs	PMB-1 Master Blender	Solid state	2	Bass, mid, treble for each channel	Yes	Yes	No	30 Hz-30 kHz
Requisite Audio	Y7s MkIII	Tube (with ribbon input)	1	Feedback control	Yes	Yes	VU meters	10 Hz-100 kHz
RME	OctaMic	Discrete (Class A)	8	Low cut	Yes	(8) XLR	LED	5 Hz-200 kHz
RME	QuadMic	Discrete (Class A)	4	Low cut	Yes	(4) XLR	LED	5 Hz-200 kHz
Roland	MMP-2	Solid state	2	4-band parametric; lo-cut filter	Yes	Yes	2-line LCD	20 Hz-40 kHz (96 kHz)
	Mic Modeling Preamp						LED	N/A
Samson	C-Valve	Tube	1	enh/lim switch	Yes	Yes	10-seg LED	10 Hz-200 kHz ± 3 dB
Speck Electronics	Micpre 5.0	Discrete transistor	1	Variable HP filter	Yes	Yes	VU	10 Hz-100 kHz
SPL Electronics	Gold Mike	Tube	2	Low-cut filter & "flair"	Yes	Yes		
Studio Projects	VTB-1	Tube	1	Yes	Yes	Yes	5-segment LED	20 Hz-20 kHz
Summit Audio	2BA-221	Tube/solid state hybrid	1	HPF, sweepable 20-200 Hz	Yes	Yes	2 LED	10 Hz-50 kHz
Summit Audio	MPC-100A	Tube/solid state hybrid	1	No	Yes	Yes	Clip LED, VU meter	5 Hz-65 kHz
Symetrix	302 Dual	Solid state	2	No	Yes	No	Clip LED	20 Hz-20 kHz
Sylek	EQ4B-1M	Solid state	1	4-band parametric	No	Yes	Peak LED	10 Hz-85 kHz
Sylek	MPT-1A	Tube	1	No	Yes	No	Peak LED	10 Hz-75 kHz
Sylek	MPT-1B	Tube	1	No	No	No	No	20 Hz-22 kHz
Sylek	MPX-4A ii	Solid state	4	No	Yes	No	Peak LED	10 Hz-85 kHz
Sylek	MPX-4Aiii	Solid state	4	No	No	No	No	2 Hz-85 kHz
TC Electronic	1140 Parametric Equalizer Mic Preamp	Solid state	1	2-band parametric	Yes	Yes	Overload LED	N/A
The John Hardy Co.	Jensen	Solid state (class A)	1-4 (expandable)	No	No	No	20-seg LED; clip LED	N/A
The John Hardy Co.	Twin Servo 990	Solid state (class A)	1-4 (expandable)	No	No	No	20-seg LED, clip LED	N/A
The John Hardy Co.	M-1	Solid state (class A)	1	No	No	No	No	N/A
The John Hardy Co.	M-2	Solid state (class A)	1	No	No	No	No	N/A
TL Audio	5001	Tube	4	HP filter; low-cut	Yes	Yes	Drive/signal LEDs	10 Hz-40 kHz
TL Audio	Classic PA1 Pentode Preamp	Tube	2	Low- and high-cut filters	Yes	Yes	Drive and peak LED, VU	30 Hz-40 kHz
True Systems	P2A	Solid state; TLM	2	HP filters	Yes	Yes	N/A	1.5 Hz-500 kHz
True Systems	Precision 8	Solid state	8	No	No	Yes	OL light, peak meters	1.5 Hz-500 kHz
Tube Tech	MP-1A	Tube	2	No	Yes	Yes	No	15 Hz-60 kHz
Tube Tech	PE-1C	Solid state	1	No	No	No	No	N/A
Universal Audio	2108	Solid state (Class A)	2	No	Yes	Yes	3-stage variable LED	20 Hz-20 kHz
Universal Audio	2-610	Tube	2	HF, LF shelf, corner freq.	Yes	Yes	No	20 Hz-20 kHz
Universal Audio	M-610	Tube	1	Boost/low-cut filter	Yes	Yes	No	20 Hz-20 kHz



-132 dB EIN	0.0008%	M/S decoding, two premium performance DIs	\$1,750
-126 dBu EIN	0.003%	Var air-band EQ	\$1,675-\$2,675
-127.5 dB EIN	0.005%	Phase, phantom per ch, 2 high-level inputs	\$2,118
-125 dBu EIN	0.03%	All-tube signal path; transformerless out, fully-regulated power supply with soft-start, phase, -20 dB pad	\$2,495
<116 dB EIN (instrument)	<0.01%	Phantom power	\$1,395
-128 dB EIN	<0.01%	Phantom, Class A output stage, +24dB headroom	\$1,495
-128 dB EIN	<0.01%	Phantom, Class A output stage, +24dB headroom	\$2,495
-45 dBu at 80 dB gain (22 Hz-22 kHz filter)	<0.075%	All discrete, class A circuitry	\$1,995
>90 dB S/N, -122 dB EIN	0.0005%	Relay-controlled auto bypass, adjustable tube warmth	\$260
>90 dB	0.005%	Phantom power, insert, optional footswitch	\$299
-94 dB	<0.05%	Phase reverse, 1/4" and XLR I/O, 20 dB pad	\$200
-94 dB	<0.009%	Dual domain limiters on each channel, analog and digital ADAT, AES/EBU, S/PDIF	\$1,700
>98 dB	<0.009%	(8) inserts, BNC I/O, ADAT output, (8) pads, (8) 48V phantom power, adjustable sample rates	\$999
>90 dB	0.05%	Drive knob, S/PDIF out, BNC in, insert, 20 dB pad, phantom power	\$299
<-127.5 dB	0.001%-0.5%	Transformer-coupled input, dual-servo gain stage, mix bus assign, IDSS control	\$2,300/\$700
70 dB S/N	0.030%	5-channel active line mixer/mic pre with phantom	\$255
70 dB S/N	0.2%	Small size (about 0.5"x1.5"x3"), indiv gain adjustment	\$130
80 dB S/N	0.05%	Small (approx. 0.5"x1.5"x3"), control via external potentiometer	\$116
70 dB S/N	0.05%	Small (approx. 0.5"x1.5"x3"), phantom, fixed gain of 50 dB	\$99
75 dB S/N	0.05%	Phantom, small (approx. 0.5"x1.5"x3"), adjustable gain	\$136
75 dB S/N	0.05%	Gating via external control, phantom, small (approx. 0.5"x1.5"x3")	\$153
70 dB S/N	0.05%	Phantom, small (approx. 0.5"x1.5"x3"), adjustable gain	\$156
81 dB S/N	0.001%	Separate EQ and FX BU for each pickup, dual-mono signal path	\$569
97 dB S/N	0.009%	Stereo with pan, phantom	\$549
102 dB S/N	0.007%	Phantom	\$199
-85 dB, unweighted	0.005%	Record all electric/acoustic instruments direct to tape	\$399
N/A	0.03%	48V phantom	\$3,500
129 dB EIN @ 150 Ω	0.006%	100% hum free, phase reversal, phantom power	TBA
129 dB EIN @ 150 Ω	0.006%	100% hum free, phase reversal, phantom power	TBA
-132 dB EIN/105 dBu S/N	N/A	Dyn proc incl. solid state, tube comp modeling, exp w/key, de-esser/enh, mic mdlng algorithms, 9 preamp models, USB	\$695
N/A	N/A	48V phantom power, phase control, analog VU meters	\$160
-126 dBu	0.002%	Transformer, active output select, expandable mix section	\$998
85.6 dBu, A-weighted, 135 dBu EIN	0.175%	Phase rev., phantom power (filtered), tube warm-up, 30 dB pad, illuminated VU's	\$999
-121 dBu	0.0001%	Phantom and tube drive	\$299
98 S/N, -94 dB EIN	0.08%	Sweepable input impedance, stackable design, multiple inputs, outputs, insert	\$695
-84 dBu, 108 dB S/N	0.05%	"Clean" to "saturated" valve sounds, Jensen transformer, +4 dBu/-10 dBV outs, Hi-Z variable impedance	\$2,290
95 dB S/N, -128 dB EIN	0.007%	L/R mix output	\$299
96 dB S/N, -129 dBu EIN	0.0015%	Class A hybrid	\$1,860
96 dB S/N, -110 dBu EIN	0.0115%	Internally balanced	\$2,450
-90 dB	0.015%		\$1,540
96 dB S/N, -134 dBu EIN	0.0015%	Class A hybrid	\$1,680
-129 dB EIN	0.0015%	48V phantom each channel	\$1,685
N/A	N/A		\$760
N/A	N/A	(2) discrete op amps per ch (990C), Jensen transformers, no caps in signal path	\$1,550-\$4,250
N/A	N/A	990 discrete op amp, Jensen input transformer, no caps in signal path, optional Jensen JT-11-BMQ output trans	\$875-\$2,905
N/A	N/A	990 discrete op amp, Jensen input transformer, no caps in signal path, optional Jensen JT-11-BMQ output trans	\$920-\$3,085
-127 dB EIN	N/A	48V phantom, phase, 30 dB pad, optional 24-bit S/PDIF output	\$749
-122 dBu	0.05%	Phantom power, phase reverse	\$1,499
-132 dB	0.0008%	M/S decoder, stereo phase correlation display	\$1,750
-132 dB	0.0008%	MS decoder on ch. 1/2, 25-pin D connector outputs	\$2,850
-85 dB	0.2%		\$2,395
N/A	0-70 dB		\$1,850
-165 dB EIN @ 65dB gain		Phantom power	\$1,695
-84 dBu, -145 dB EIN	0.03%	Phantom power, variable mic/hi-Z impedance	\$2,295
-84 dBu, -145 dB EIN	0.03%	Phantom power, variable mic/hi-Z impedance	\$1,295

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MICROPHONES

MICROPHONES

MANUFACTURER

PRODUCT

TYPE

POLAR PATTERNS

INTERNAL ROLL-OFF

INTERNAL PAD

MAX. SPL

ADK	A-48	Tube condenser	9 polar pattern	N/A	N/A	100 dB
ADK	A-51	Condenser	Cardioid	Yes	N/A	130 dB
ADK	A-51s	Condenser	Cardioid	N/A	N/A	140 dB
ADK	Area 1 Commemorative Edition	Tube condenser	9 patterns	N/A	N/A	125 dB
ADK	A-51SC	Condenser	Cardioid	N/A	N/A	144 dB
ADK	A-51SL	Condenser	Cardioid	N/A	N/A	125 dB
ADK	A-51TC	Tube condenser	Cardioid	N/A	N/A	125 dB
ADK	A-51TL	Condenser	Cardioid; hypercardioid; omni, fig-8	N/A	N/A	135 dB
ADK	A-51TT	Tube condenser	9 patterns	N/A	N/A	125 dB
ADK	Model LE	Condenser	Cardioid	100 Hz	-10 dB	140 dB
ADK	Model S	Condenser	Cardioid	100 Hz	-10 dB	140 dB
ADK	ST	Condenser	Cardioid; omni, figure-8	100 Hz	-10 dB	140 dB
AEA	R 84 Studio	Large ribbon	Figure-8	N/A	N/A	168 dB
AKG	C 411/C 411 B/C 411 L	Condenser	Figure 8 (vibration pickup)	N/A	N/A	100 dB
AKG	C 414B/TLII	Condenser	Cardioid; hypercardioid; omni, figure-8	75/150 Hz	-10/-20 dB	160 dB
AKG	C 414B/ULS	Condenser	Cardioid; hypercardioid; omni, figure-8	75/150 Hz	-10/-20 dB	160 dB
AKG	C 416/C 416 B	Condenser	Hypercardioid	N/A	N/A	130 dB
AKG	C 418/C 418 B	Condenser	Hypercardioid	N/A	N/A	140 dB
AKG	C 419/C 419 B/C 419 L	Condenser	Hypercardioid	N/A	N/A	130 dB
AKG	C 430	Condenser	Cardioid	N/A	N/A	130 dB
AKG	C 451 B	Condenser	Cardioid	75/150 Hz	-10 dB, 0, -20 dB	155 dB
AKG	C 480B-CK 61	Condenser	Cardioid	70/150 Hz	6/0/-10 dB	144 dB
AKG	C 535EB	Condenser	Cardioid	100 Hz	-14 dB	130 dB
AKG	C 900	Condenser	Cardioid	N/A	N/A	142 dB
AKG	C 1000S	Condenser	Cardioid; hypercardioid (with PPC 1000)	N/A	-10 dB	137 dB
AKG	C 2000B	Condenser	Cardioid	500 Hz	-10 dB	140-150 dB
AKG	C 3000 B	Condenser	Cardioid	500 Hz	-10 dB	150 dB
AKG	C 4000 B	Condenser	Omni; cardioid; hypercardioid	100 Hz	-10 dB	155 dB
AKG	C 4500 B-BC	Condenser	Cardioid	120 Hz	-20 dB	165 dB
AKG	CK77 WR	Condenser	Omnidirectional	N/A	N/A	133 dB
AKG	CK 91 (w/SE 300B)	Condenser	Cardioid	75 Hz	-10 dB	142 dB
AKG	D 112	Dynamic	Cardioid	N/A	N/A	N/A
AKG	D 409	Dynamic	Hypercardioid	N/A	N/A	128 dB
AKG	D 440	Dynamic	Cardioid	N/A	N/A	156 dB
AKG	D 440	Dynamic	Cardioid	N/A	N/A	156 dB
AKG	D 550	Dynamic	Cardioid	N/A	N/A	150 dB
AKG	D 660S	Dynamic	Hypercardioid	N/A	N/A	156 dB
AKG	D 770	Dynamic	Cardioid	N/A	N/A	156 dB
AKG	D 880/D 880S	Dynamic	Supercardioid	N/A	N/A	147/156 dB
AKG	D 3700/D 3700S	Dynamic	Hypercardioid	N/A	N/A	156 dB
AKG	D 3800	Dynamic	Hypercardioid	N/A	N/A	156 dB
AKG	SOLID TUBE	Condenser	Cardioid	100 Hz	-20 dB	130/145 dB
Apex	110	Condenser	Hypercardioid	N/A	N/A	140 dB
Apex	120	High SPL instrument	Hypercardioid	N/A	N/A	130 dB
Apex	125	High SPL instrument	Hypercardioid	N/A	N/A	165 dB
Apex	126	High SPL instrument	Cardioid	N/A	N/A	145 dB
Apex	130	Condenser	Semi-cardioid	N/A	N/A	130 dB
Apex	140	Condenser	Cardioid	N/A	N/A	131 dB
Apex	145	Condenser	Cardioid	N/A	N/A	130 dB
Apex	150	Condenser	Cardioid	N/A	N/A	130 dB
Apex	160	Condenser	Omni	N/A	N/A	131 dB
Apex	165	Condenser	Cardioid	N/A	N/A	135 dB
Apex	170	Electret condenser	Cardioid	N/A	N/A	115 dB
Apex	175	Condenser	Supercardioid	N/A	N/A	120 dB
Apex	190	Pencil condenser	Cardioid	N/A	N/A	135 dB
Apex	191	Pencil condenser	Cardioid	N/A	N/A	135 dB
Apex	350	Dynamic	Cardioid	N/A	N/A	N/A
Apex	380	Dynamic	Cardioid	N/A	N/A	N/A
Apex	410	Condenser	Cardioid	N/A	N/A	135 dB
Apex	420	Condenser	Cardioid	N/A	N/A	130 dB
Apex	430	Condenser	Cardioid; omni	N/A	N/A	130 dB
Apex	450	Condenser	Cardioid	N/A	N/A	125 dB
Apex	750	Dynamic	Omni; cardioid; fig-8; 6 intermediate	N/A	N/A	N/A
Apex			Cardioid	N/A	N/A	N/A

20 Hz-20 kHz	Vocals, instruments	Flight cs, pwr, ring/shock mnt, 5-micron capsule	\$1,299
20 Hz-20 kHz	Vocals, guitar, reeds	Vintage curve	\$199
20 Hz-20 kHz	High SPL sources	Vintage curve. Matched pair with silver bodies and deluxe flight case available (\$699)	\$299
20 Hz-20 kHz	All vintage mic applications	GE N/O stock 6072A tube, special grille, remote polar pattern controller	\$1,899
20 Hz-20 kHz	Instruments, hi-hats, drum overheads		\$299
20 Hz-20 kHz	Grand piano, trumpet, timpani		\$599
20 Hz-20 kHz	Acoustic instruments, vocals, broadcast		\$799
20 Hz-20 kHz	Orchestral instruments, strings, choir		\$699
20 Hz-20 kHz	Acoustic instruments, vocals, broadcast	Remote polar pattern controller	\$1,099
20 Hz-20 kHz	High SPL sources	Limited edition matched pair version of Model S	\$1,199
20 Hz-20 kHz	High SPL sources	5-micron 1.07" capsul, new European mod	\$299
20 Hz-20 kHz	Vocals, instruments	Flight case, shock mount, new 5-micron capsule	\$695
20 Hz-20 kHz	Vocals, V/O, brass, perc, wind, strings	Cushion mount, Starguad cable, padded soft case	\$999
10 Hz-18 kHz	Stringed instruments		\$254/\$155/\$155
20 Hz-20 kHz	Multipurpose, esp. vocals, strings	Incl. H100 shock-mount	\$1,250
20 Hz-20 kHz	Multipurpose studio	Incl. H100 shock-mount	\$1,122
20 Hz-20 kHz	Instrument, amplifier	Perm or temp mount	\$338-\$258
50 Hz-20 kHz	Percussion	Clip-on mount	\$338-\$258
20 Hz-20 kHz	Horn, brass	Clip-on mount	\$338-\$258
20 Hz-20 kHz	Instrument, percussion	Low profile	\$238
20 Hz-20 kHz	Studio	Comes with individual frequency plot	\$548
20 Hz-20 kHz	Premium recording		\$1,007
20 Hz-20 kHz	Premium hand-held vocal		\$384
20 Hz-20 kHz	Vocals	PB 1000 Presence Boost Adapter provides a 3-4 dB peak between 5 and 13 kHz	\$250
50 Hz-20 kHz	Personal studio, field recording, stage	Battery powered option	\$322
30 Hz-20 kHz	Personal studio	Incl. H100 shock-mount	\$304
20 Hz-20 kHz	Studio, stage	Incl. H100 shock-mount	\$536
20 Hz-20 kHz	Studio	Includes H100 shock-mount	\$665
30 Hz-20 kHz	Bass drum, studio vocals, horns	H100 shock mount included	\$665
20 Hz-20 kHz	Church, theater, broadcast	Water-resistant	\$307
20 Hz-20 kHz	General purpose		\$472
20 Hz-17 kHz	Bass drums, bass instruments		\$299
50 Hz-17 kHz	Instrument	Clip-on	\$198
60 Hz-20 kHz	Instrument		\$202
20 Hz-20 kHz	Bass instrument		\$244
70 Hz-20 kHz	Vocal	On/off switch	\$100
60 Hz-18 kHz, 20 Hz-20 kHz	Vocal, instrument		\$133
60 Hz-18 kHz, 20 Hz-20 kHz	Vocal	S version has switch	\$147/\$159
60 Hz-18 kHz, 20 Hz-18 kHz	Vocal, instrument	On/off switch	\$195/\$210
60 Hz-18 kHz, 20 Hz-18 kHz	Vocal, instrument		\$282
20 Hz-20 kHz	Vocal, acoustic guitar	Carrying case	\$965
70 Hz-18 kHz	Live vocals	Hand held	\$169
50 Hz-18 kHz	Drums, instrument amps	Mic clip	\$109
50 Hz-16 kHz	Kick drum	Mic clip	\$129
50 Hz-18 kHz	Snare, toms, percussion	Detachable rubberized drum rim mount, clip	\$79
50 Hz-18 kHz	Orchestral, operatic, live sound	Surface mount (boundary)	\$209
80 Hz-16 kHz	Speech, lecterns, podium	Shock mount	\$99
100 Hz-12 kHz	Speech	Desktop mic	\$129
30 Hz-18 kHz	Overhead	Hangul guide	\$189
20 Hz-20 kHz	Broadcast, mobile recording	Sub-miniature lavaliere mic	\$299
30 Hz-18 kHz	Brass, wind, acoustic guitar, drum	Gooseneck/shock mount clip, windsock	\$169
80 Hz-15 kHz	Acoustic guitar, strings, drums overhead	Mic clip	\$109
80 Hz-15 kHz	Stage, broadcast, electronic news gathering	Shotgun type, mic clip, windsock	\$139
70 Hz-17 kHz	Choirs, strings, brass, drum overhead	Stubby pencil condenser, mic clip, windsock	\$129
70 Hz-18 kHz	Multi-use	Mic clip, windsock, phantom/battery	\$125
50 Hz-15 kHz	Instruments, vocals		\$99
50 Hz-18 kHz	Vocals, instruments		\$119
40 Hz-19 kHz	Vocals, instruments	Suspension mount	\$249
20 Hz-20 kHz	Vocals, instruments	Suspension mount	\$319
20 Hz-20 kHz	Vocals, instruments	Suspension mount	\$159
20 Hz-20 kHz	Vocals, instruments	Shock-mnt clip, case, cable, windsock, pwr supply	\$749
50 Hz-15 kHz	Vocals		\$65

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AT3060 phantom-powered tube microphone

Never satisfied to rest on their laurels, our engineers were inspired to improve upon the technical excellence and coveted sound of valve design. How? By making it *simpler*.

The new **AT3060** tube microphone offers the convenience and easy setup of a standard studio condenser by operating exclusively on 48V phantom power – no dedicated power supplies and special cables required. Add to that an all-new large diaphragm cardioid capsule design and you get the warm sound of a vintage tube mic combined with the exceptional quality and consistency you count on from Audio-Technica.

The result is, quite simply, something special, for a lot less than you'd expect.

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MICROPHONES

MICROPHONES	MANUFACTURER	PRODUCT	TYPE	POLAR PATTERNS	INTERNAL ROLL-OFF	INTERNAL PAD	MAX. SPL
Apex		770	Dynamic	Cardioid	N/A	N/A	N/A
Apex		850	Dynamic	Cardioid	N/A	N/A	N/A
Apex		880	Dynamic	Hypercardioid	N/A	N/A	130 dB
Apex		950	Dynamic	Cardioid	N/A	N/A	N/A
Audio-Technica		AE2500	Condenser/dynamic	Cardioid	80 Hz	-10 dB	148 dB
Audio-Technica		AE3000	Condenser	Cardioid	80 Hz	-10 dB	148 dB
Audio-Technica		AT3060	Tube condenser	Cardioid	N/A	N/A	134 dB
Audio-Technica		AE3300	Condenser	Cardioid	80 Hz	-10 dB	147 dB
Audio-Technica		AE5100	Condenser	Cardioid	80 Hz	-10 dB	148 dB
Audio-Technica		AE5400	Condenser	Cardioid	80 Hz	-10 dB	147 dB
Audio-Technica		AT815ST	Condenser	Line-cardioid, figure-eight	80 Hz	N/A	127 dB
Audio-Technica		AT822	Condenser	Cardioid stereo	150 Hz	N/A	125 dB
Audio-Technica		AT825	Condenser	Cardioid stereo	150 Hz	N/A	126 dB
Audio-Technica		AT835ST	Condenser	Line-cardioid, figure-eight	80 Hz	N/A	127 dB
Audio-Technica		AT3031	Condenser	Cardioid	80 Hz	-10 dB	148 dB
Audio-Technica		AT3032	Condenser	Omnidirectional	80 Hz	-10 dB	148 dB
Audio-Technica		AT3035	Condenser	Cardioid	80 Hz	-10 dB	148 dB
Audio-Technica		AT4041	Condenser	Cardioid	80 Hz	N/A	145 dB
Audio-Technica		AT4047/SV	Condenser	Cardioid	80 Hz	-10 dB	149 dB
Audio-Technica		AT4050	Condenser	Cardioid; omni; figure-8	80 Hz	-10 dB	149 dB
Audio-Technica		AT4051a	Condenser	Cardioid	80 Hz	N/A	146 dB
Audio-Technica		AT4060	Tube condenser	Cardioid	N/A	N/A	150 dB
Audio-Technica		ATM10a	Condenser	Omnidirectional	N/A	N/A	137 dB
Audio-Technica		ATM23HE	Dynamic	Hypercardioid	N/A	N/A	N/A
Audio-Technica		ATM25	Dynamic	Hypercardioid	N/A	N/A	N/A
Audio-Technica		ATM31a	Condenser	Cardioid	N/A	N/A	137 dB
Audio-Technica		ATM33a	Condenser	Cardioid	N/A	N/A	137 dB
Audio-Technica		ATM35	Condenser	Cardioid	150 Hz	N/A	145 dB
Audio-Technica		KP-STUDIO	Condenser	Cardioid	N/A	N/A	128 dB
Audio-Technica		MB4000C	Condenser	Cardioid	N/A	N/A	128 dB
Audio-Technica		PRO 37R	Condenser	Cardioid	N/A	N/A	141 dB
Audio-Technica		ADX-20-i	Condenser	Cardioid	N/A	N/A	130 dB
Audix		ADX-51	Condenser	Cardioid	150 Hz	10 dB	132/142 dB
Audix		CX111	Condenser	Cardioid	N/A	-10 dB	145 dB
Audix		D1	Dynamic	Hypercardioid	N/A	N/A	144 dB
Audix		D2	Dynamic	Hypercardioid	N/A	N/A	144 dB
Audix		D3	Dynamic	Hypercardioid	N/A	N/A	144 dB
Audix		D4	Dynamic	Hypercardioid	N/A	N/A	144 dB
Audix		D6	Dynamic	Cardioid	N/A	N/A	144 dB
Audix		M1245	Condenser	Cardioid	N/A	N/A	140 dB
Audix		M1290	Condenser	Cardioid	N/A	N/A	140 dB
Audix		Micro-D	Condenser	Hypercardioid	N/A	N/A	140 dB
Audix		OM2	Dynamic	Hypercardioid	N/A	N/A	140 dB
Audix		OM3-xb	Dynamic	Hypercardioid	N/A	N/A	144 dB
Audix		OM5	Dynamic	Hypercardioid	N/A	N/A	144 dB
Audix		OM6	Dynamic	Hypercardioid	N/A	N/A	144 dB
Audix		OM7	Dynamic	Hypercardioid	N/A	N/A	144 dB
Audix		SCX-25	Condenser	Cardioid	N/A	N/A	135 dB
Audix		SCX1-0	Condenser	Omni	N/A	N/A	130 dB
Audix		SCX1-HC	Condenser	Hypercardioid	N/A	N/A	130 dB
Audix		SCX1-C	Condenser	Cardioid	N/A	N/A	130 dB
Audix		TR40	Condenser	Omni	N/A	N/A	128 dB
Audix		VX10	Condenser	Cardioid	N/A	N/A	140 dB
Audix		B-1	Condenser	Cardioid	75 Hz	-10 dB	138 dB
Behringer		B-2 Pro	Condenser	Cardioid, omni, figure-8	N/A	N/A	137-149 dB
Behringer		ECM8000	N/A	Omnidirectional	N/A	N/A	N/A
Behringer		Ultravoice XM8500	Dynamic	Cardioid	N/A	N/A	N/A
Behringer		XM1000S	Dynamic	Supercardioid	N/A	N/A	N/A
Behringer		XM2000S	Dynamic	Supercardioid	N/A	N/A	N/A
Behringer		B2	Condenser PZM	Cardioid	N/A	N/A	141 dB
Benson Audio Labs		BA 30	Dynamic	Cardioid	N/A	N/A	145 dB
Benson Audio Labs		ND 90	Dynamic	Hypercardioid	N/A	N/A	145 dB
Benson Audio Labs		ND 90	Dynamic	Hypercardioid	N/A	N/A	120 dB
beyerdynamic		M-88TG	Dynamic	Hypercardioid	N/A	N/A	116 dB
beyerdynamic		M-130	Dynamic ribbon	Figure-8	N/A	N/A	

FREQUENCY
RESPONSESUGGESTED
APPLICATIONSSPECIAL
FEATURES

PRICE

50 Hz-15 kHz	Instruments		\$49
80 Hz-12 kHz	Vocals		\$39
80 Hz-12 kHz	Vocals		\$39
80 Hz-12 kHz	Vocals		\$26
20 Hz-17 kHz (condenser)	Kick drum, bass guitar, toms	Cable, isolation clamp	\$699
20 Hz-20 kHz	Guitar amp, percussion, overheads	Isolation clamp	\$379
50 Hz-16 kHz	Vocals, general purpose	Operates on phantom power, AT8458 shock mnt	\$599
30 Hz-18 kHz	Vocals, general purpose	Features AT4033 element	\$439
20 Hz-20 kHz	Instruments, acoustic guitar, strings	Isolation clamp	\$379
20 Hz-20 kHz	Vocals, general purpose	Features AT4050 element	\$579
30 Hz-20 kHz	Studio audio acquisition	Carrying case	\$999
30 Hz-20 kHz	Stereo recording		\$399
30 Hz-20 kHz	Stereo recording	Battery or phantom power	\$525
40 Hz-20 kHz	Studio audio acquisition	Carrying case	\$899
30 Hz-20 kHz	General purpose		\$259
30 Hz-20 kHz	Group vocals, instruments		\$259
20 Hz-20 kHz	Vocals, instruments, general purpose	AT 8459 Shock-mount	\$349
20 Hz-20 kHz	Instruments, acoustic guitar		\$395
20 Hz-18 kHz	Vocals, instruments, general purpose	AT8449/SV shock-mount	\$745
20 Hz-18 kHz	Vocals, instruments, general purpose	AT449 shock-mount	\$895
20 Hz-20 kHz	Instruments		\$700
20 Hz-20 kHz	Vocals, general purpose	AT8560 power supply, AT8447 shock-mount	\$1,495
20 Hz-18 kHz	Group vocals, instruments	Battery or phantom power	\$210
70 Hz-16 kHz	Snare, toms, instruments		\$235
30 Hz-15 kHz	Kick drum, toms		\$275
30 Hz-20 kHz	Vocals, general purpose	Battery or phantom power	\$250
30 Hz-20 kHz	Instruments, general purpose	Battery or phantom power	\$290
30 Hz-20 kHz	Horns, drums, instruments	Battery/phantom power, clip-on mount	\$350
100 Hz-18 kHz	Strings, vocals, overheads	2 studio mics, ATH-M3X headphones & case	\$300
100 Hz-18 kHz	General purpose	Battery or phantom power	\$125
30 Hz-15 kHz	Instrument, general purpose		\$175
40 Hz-20 kHz	Instrument	High-tension spring clamp, flexible gooseneck	\$199
40 Hz-18 kHz	Group vocals, overheads, perc, acoustic inst	Brass housing, 9-52 Volts phantom	\$299
20 Hz-20 kHz	Vocals, drum overheads, acoustic instr, room	Shock-mount, flight case	\$499
46 Hz-18 kHz	Snare, percussion		\$219
44 Hz-18 kHz	Toms, congas, percussion		\$219
50 Hz-19 kHz	Snare, timbale, trumpet, electric guitar		\$219
38 Hz-19 kHz	Kick drum, acoustic bass, piano, sax		\$329
30 Hz-15 kHz	Kick drum, bass cabs	1-piece machined aluminum, pre-emphasized bass	\$349
80 Hz-20 kHz	Percussion, choir, vocals, acoustic inst	Tiny condenser mic, preamp, detachable cable	\$379
80 Hz-20 kHz	Percussion, overheads, field recording	Tiny condenser mic, preamp, detachable cable	\$399
40 Hz-20 kHz	Toms, snare, congas	Rim mount clip w/shock-mount suspension	\$259
50 Hz-16 kHz	All-purpose vocals	Spring steel grill ball, gain before feedback	\$149
50 Hz-18 kHz	General purpose		\$199
48 Hz-19 kHz	Vocals		\$299
40 Hz-19 kHz	Vocals		\$329
45 Hz-19 kHz	Vocals		\$349
20 Hz-20 kHz	Vocals, instrument	Suspension mounting system	\$799
20 Hz-20 kHz	Acoustic instruments	Wide dyn range, low noise, matched pairs avail	\$599
40 Hz-20 kHz	Hi-hat, acoustic instruments	Wide dyn range, low noise, matched pairs avail	\$599
40 Hz-20 kHz	Acoustic instruments	Wide dyn range, low noise, matched pairs avail	\$599
20 Hz-20 kHz	Room analysis	Works w/RTA systems, room analysis software	\$249
40 Hz-20 kHz	Vocals	Vocal sound for both live and studio	\$599
20 Hz-20 kHz	Vocal and general use	1" gold-plated diaphragm	\$129
20 Hz-20 kHz	Instruments, vocals	A switchable figure-8 pattern	\$190
15 Hz-20 kHz		+15V/+48V phant pwr. clip/stand adapter	\$43
5 Hz-200 kHz	General purpose	Pop filter, hard case with clip/adapter	\$49
80 Hz-15 kHz	General purpose	Bundled in 3 w/mic clips, carrying case	\$40
50 Hz-15 kHz	Vocals	Pop filter, hard case with clip/adapter	\$49
30 Hz-20 kHz	Piano, acoustic instruments, group vocals	Battery or phantom power	\$260
50 Hz-15 kHz	Drums, guitar amps, female vocals	Windscreen	\$170
50 Hz-18 kHz	Vocals		\$350
30 Hz-20 kHz	General purpose		\$399
40 Hz-18 kHz	Digital recording, ambient, piano, strings		\$750

technical precision
artistic inspiration



(40) SERIES

AT4040 cardioid condenser microphone

A marriage of technical precision and artistic inspiration, the **AT4040** features an advanced large diaphragm tensioned specifically to provide smooth, natural sonic characteristics. Designed as a multi-purpose performer, this true condenser microphone offers exceptionally low noise, wide dynamic range and high-SPL capability for greatest versatility.

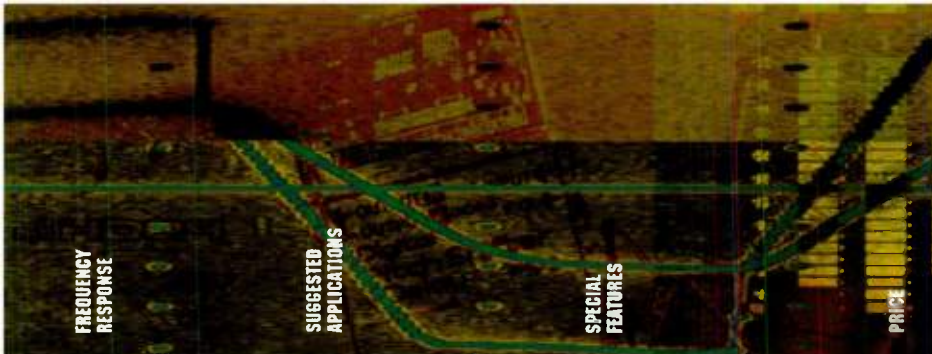
A passion to achieve the highest quality inspires every aspect of 40 Series design and manufacturing. Employing the latest technological innovations in the quest for superior performance, unerring dependability and sonic consistency, the **AT4040** continues the tradition of excellence embodied in every 40 Series microphone.

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SEE PAGE 140 FOR A COMPLETE LISTING OF MANUFACTURERS' CONTACT INFORMATION

MICROPHONES

MICROPHONES	MANUFACTURER	PRODUCT	TYPE	POLAR PATTERNS	INTERNAL ROLL-OFF	INTERNAL PAD	MAX. SPL
	beyerdynamic	M-160	Dynamic ribbon	Hypercardioid	N/A	N/A	116 dB
	beyerdynamic	M-201TG	Dynamic	Hypercardioid	N/A	N/A	120 dB
	beyerdynamic	MC-740	Condenser	Wide cardioid; cardioid; hypercardioid; omni; figure-8	N/A	-10 dB	134/144 dB
	beyerdynamic	MC-834	Condenser	Cardioid	80/160 Hz	-10 dB	180/140/150 dB
	beyerdynamic	MCD 100	Digital condenser	Cardioid	Yes	Yes	150 dB
	beyerdynamic	MCE-92	Electret condenser	Dual cardioid	120 Hz	N/A	120 dB
	beyerdynamic	MCE-83	Electret condenser	Cardioid	N/A	N/A	138 dB
	beyerdynamic	MCE-90	Condenser	Cardioid	100 Hz	-15 dB	154 dB
	BLUE	Baby Bottle	Condenser	Cardioid	N/A	N/A	133 dB
	BLUE	Ball	Dynamic	Cardioid	N/A	N/A	162 dB
	BLUE	Blueberry	Condenser	Cardioid	N/A	N/A	133 dB
	BLUE	Dragonfly	Condenser	Cardioid	N/A	N/A	132 dB
	BLUE	Dragonfly Deluxe	Condenser	Cardioid	N/A	N/A	133 dB
	BLUE	Kiwi	Condenser	Cardioid; omni; fig-8 and in between	N/A	N/A	133 dB
	BLUE	Mouse	Condenser	Cardioid	N/A	N/A	134 dB
	Brauner	Phantom C-US	Condenser (FET)	Cardioid	N/A	N/A	140 dB
	CAD	22A	Dynamic	Cardioid	N/A	N/A	N/A
	CAD	25A	Dynamic	Supercardioid	N/A	N/A	N/A
	CAD	C195	Condenser	Cardioid	N/A	N/A	132 dB
	CAD	D189	Dynamic	Supercardioid	N/A	N/A	N/A
	CAD	E350	Condenser	Cardioid; figure-8; omni	80 Hz	-20 dB	148 dB
	CAD	KBM412	Dynamic	Cardioid	N/A	N/A	N/A
	CAD	M-177	Condenser	Cardioid	80 Hz	-20 dB	148 dB
	CAD	M179	Condenser	Variable	N/A	N/A	143 dB
	CAD	M9EH	Condenser	Cardioid	N/A	N/A	154.5 dB
	CAD	TSM411	Dynamic	Cardioid	N/A	N/A	N/A
	CAD	VSM1	Single-valve condenser	Cardioid	80 Hz	-8 / -16 dB	149 dB
	CAD	VX2	Dual-valve condenser	Cardioid; figure-8; omni	80 Hz	-8 / -16 dB	145 dB
	Carvin	CM30D	Dynamics x 3	Cardioid	75 Hz	N/A	140 dB
	Carvin	CM50	Dynamic	Cardioid	N/A	N/A	N/A
	Carvin	CM67	Dynamic	Cardioid	N/A	N/A	N/A
	Carvin	CM68	Dynamic	Cardioid	N/A	N/A	N/A
	Carvin	CM87S	Condenser	Cardioid	40/80 Hz	-6dB/-10dB	145 dB
	Carvin	CM90E	Condenser	Cardioid	N/A	N/A	132 dB
	Carvin	CM98ST	Tube condenser	9 patterns	120 Hz	10 dB	133 dB
	Coles	4038	Ribbon	Figure-8	N/A	N/A	125 dB/150 dB
	Coles	4104	Ribbon	Figure-8	50 Hz	N/A	120 dB
	Countryman	Isomax Headset Microphone	Condenser	Hypercardioid; cardioid	N/A	N/A	150 dB
	Countryman	Isomax II	Condenser	Hypercardioid; cardioid; omni; bidirectional	N/A	N/A	150 dB
	Crown	CM-150	Condenser	Omnidirectional	N/A	N/A	130 dB
	Crown	CM 200A	Condenser	Cardioid	N/A	N/A	151 dB
	Crown	CM-700	Condenser	Cardioid	80/150 Hz	N/A	151 dB
	Crown	GLM 100	Condenser	Omni	N/A	N/A	150 dB
	Crown	GLM 200	Condenser	Hypercardioid	N/A	N/A	131 dB
	Crown	PZM 6D	PZM	Hemispherical	N/A	N/A	150 dB
	Crown	SASS-PMKII	Condenser	Stereo PZM	100 Hz	N/A	154 dB
	DPA	4006	Condenser	Omni	N/A	N/A	155 dB
	DPA	4007	Pre-polarized condenser	Omnidirectional	N/A	N/A	158 dB
	DPA	4011	Condenser	Cardioid	N/A	N/A	134 dB
	DPA	4060	Pre-polarized condenser	Omnidirectional	N/A	N/A	144 dB
	DPA	4065	Pre-polarized condenser	Omnidirectional	N/A	N/A	145 dB
	Earthworks	Flex Series	Condenser	Cardioid	N/A	N/A	132 dB
	Earthworks	M30BX	Condenser	Omni	N/A	N/A	142 dB
	Earthworks	QTC1	Condenser	Omnidirectional	N/A	N/A	145 dB
	Earthworks	SR69	Condenser	Cardioid	N/A	N/A	145 dB
	Earthworks	SR77	Condenser	Cardioid	N/A	N/A	145 dB
	Earthworks	SR78	Condenser	Hypercardioid	N/A	N/A	145 dB



FREQUENCY RESPONSE	SUGGESTED APPLICATIONS	SPECIAL FEATURES	PRICE
40 Hz-18 kHz	Stringed instruments, strings		\$750
40 Hz-18 kHz	Percussion, drums		\$300
20 Hz-20 kHz	Vocals, piano, perc, overhead		\$1,899
20 Hz-20 kHz	Vocal, piano, strings, brass, perc, sampling, voice-overs		\$999
20 Hz-20 kHz	Studio recording	AES/EBU out (requires MPD 200 power supply)	\$2,500
50 Hz-20 kHz	Drum overhead, piano, vocals		\$800
50 Hz-18 kHz	Brass, percussion		\$300
30 Hz-20 kHz	General purpose		\$700
20 Hz-20 kHz	Voice, instrument, general applications	Cherrywood box, blue velvet bag, mic clip	\$649
35 Hz-16 kHz	Studio, live applications	Phantom powered dynamic mic	\$279
20 Hz-20 kHz	Voice, Acoustic Guitars, Piano	Cherrywood box	\$1,299
20 Hz-20 kHz	Voice, Gtr Amps, Drum Overheads	Shock-mount, rotating capsule grill	\$1,099
20 Hz-20 kHz	Voice, guitar amps, drum overheads	Cherrywood box, lim prod of 275 units, shock-mount	\$1,699
20 Hz-20 kHz	Voice, instruments, ambient	9 patterns, Shock-mount	\$2,395
20 Hz-20 kHz	Voice, Bass Amp, Kick Drum	Rotating capsule grill, cherrywood box	\$1,699
20 Hz-20 kHz	Vocals, guitars	Studio grade shock mount, hand made	\$1,750
60 Hz-15 kHz	Vocals	On/off switch, recorded or live vocals	\$69
50 Hz-16 kHz	Vocals	On/off switch, recorded or live vocals	\$89
50 Hz-18 kHz	Vocals	Multi-stage pop filter, live/recorded vocals	\$199
50 Hz-16 kHz	Vocals	Internal multi-stage pop filter	\$169
10 Hz-20 kHz	Vocals, v/o, acoustic instruments, overhead and room monitoring	8 hours on 2 NiCad batteries	\$899
30 Hz-15 kHz	Bass drum, other low frequency sources		\$129
10 Hz-20 kHz	Vocals, acoustic and amplified instruments, overhead	High-speed, low noise, discrete power supply circuit	\$249
10 Hz-20 kHz	Vocals	Adj polar pattern, 24k gold sputtered 1.1" diaph	\$399
10 Hz-20 kHz	Vocals, instruments	Shock/swivel mounts, 30' cable, single tube	\$599
50 Hz-15 kHz	Snare, toms, percussion instruments, amp miking		\$89
10 Hz-20 kHz	Vocals, strings, guitar	Suspension mount	\$999
10 Hz-20 kHz	All recording applications	Interchangeable capsule/head screen assembly	\$1,999
30 Hz-15 kHz	Drums	Set of 3 with case, adjustable stand mount	\$140
50 Hz-14 kHz	Vocals	On/off switch	\$50
40 Hz-15 kHz	Vocals		\$90
45 Hz-15 kHz	Vocals		\$90
30 Hz-20 kHz	Instrument, amp, vocal	Adjustable shock mount	\$220
30 Hz-20 kHz	General purpose	Battery or phantom power	\$115
20 Hz-20 kHz	Instrument, amp, vocal	Suspension mount, flight case, power supply	\$500
30 Hz-15 kHz	Drum overheads, sax, string instruments, brass, voice, electric guitar, bass	Custom rigid mic mount	\$1,250
60 Hz-12 kHz	On-location, high noise environment	Lip bar for flat voice response	\$750
20 Hz-20 kHz	Vocals	Phantom version has pop-free switch	\$308
Isomax II H, C, B, 50 Hz-20 kHz/Isomax II O: 20 Hz-20 kHz	General instrument/SR and exotic (acoustical measurements)	Miniature size, opt 18V battery power module	\$279
20 Hz-20 kHz	General purpose, acoustical measurement applications		\$899
80 Hz-15 kHz	Instruments, vocals		\$269
30 Hz-20 kHz	Drums, brass, strings, guitar		\$299
20 Hz-20 kHz	Instruments	Universal mount	\$219
60 Hz-20 kHz	Instruments	Universal mount	\$249
20 Hz-20 kHz	Piano, overhead, conference table		\$349
20 Hz-20 kHz	Orchestra, church ensemble, marching band		\$995
10 Hz-20 kHz	General recording	Low noise	\$1,650
20 Hz-40 kHz	Close-miking drums, percussion, brass		\$1,650
40 Hz-20 kHz	Live, general recording	Very low distortion	\$1,850
20 Hz-20 kHz	General purpose	5.4 mm size	\$400
20 Hz-20 kHz	Theater, stage, broadcast	5.4 mm size	\$475
50 Hz-20 kHz	Podium, general purpose	Flexible performance lengths: 360, 500, 720 mm	\$400
9 Hz-25 kHz	Field recording, sound effects measurement	14 dB of gain available, low handling noise	\$695
4 Hz-40 kHz	Classical location recording	Time-coherent sound, matched pair (\$2,300)	\$1,100
50 Hz-20 kHz	Stage vocals, instrument	Red, black or silver finish	\$535
30 Hz-30 kHz	Voice, guitar, drums, concert tapers	Excellent rejection, matched pair (\$1,600)	\$750
30 Hz-30 kHz	Stage spot, location film, Foley	Optional windscreen, matched pair (\$1,735)	\$835



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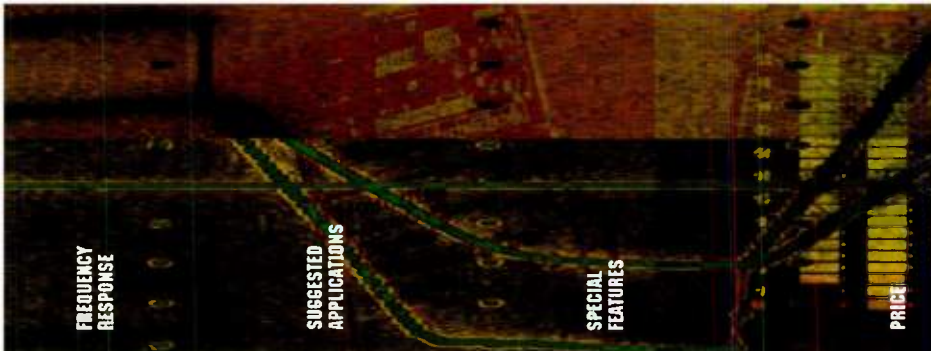
Microphones

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MICROPHONES

MICROPHONES	MANUFACTURER	PRODUCT	TYPE	POLAR PATTERNS	INTERNAL ROLL-OFF	INTERNAL PAD	MAX. SPL
	MBHO	MBNM-440	Condenser	Cardioid	N/A	N/A	126 dB
	MBHO	MBNM-540 EL	Measurement	Omni	N/A	N/A	128 dB
	MBHO	MBNM-550 EL	Condenser	Omni	N/A	N/A	128 dB
	MBHO	MBNM-608	Condenser	Omni, cardioid, figure-8	N/A	N/A	133 dB
	MBHO	MBNM-622	Electret condenser	Omni	N/A	N/A	130 dB
	MBHO	MBNM-630	Condenser P2M	Half cardioid/axial	N/A	N/A	130 dB
	MBHO	MBP-603	Condenser	Separate capsules	N/A	N/A	Various
	MBHO	MBP-648	Condenser	Cardioid, omni (dep. on capsule)	N/A	N/A	Various
	MBHO	MBP-648A	Condenser	Various	N/A	N/A	N/A
	MBHO	MBP-680	Condenser	N/A	N/A	N/A	N/A
	MBHO	MBNM-440 CLS	Condenser	Cardioid	N/A	N/A	126 dB
	MBHO	MBP-603-A	Condenser	Capsule dependent	N/A	N/A	N/A
	MBHO	Jecklin Disc	Disc for OSS	Various	N/A	N/A	N/A
	MicroTech Gefell	M300	Condenser	Cardioid	N/A	N/A	135 dB
	MicroTech Gefell	M930	Condenser	Cardioid	N/A	N/A	N/A
	MicroTech Gefell	MT 711S	Condenser	Cardioid	90 Hz	-10 dB	144 dB
	MicroTech Gefell	UMT 70S	Condenser	Cardioid	90 Hz	-10 dB	149 dB
	MXL	MXL 600	Condenser	Cardioid, omni, figure-8	N/A	N/A	134 dB
	MXL	MXL 603s	Condenser	Cardioid	N/A	N/A	130 dB
	MXL	MXL 1006	Condenser	Cardioid	N/A	N/A	130 dB
	MXL	MXL 2003	Condenser	Cardioid	150 Hz	-10 dB	140 dB
	MXL	MXL V67 Gold	Condenser	Cardioid	N/A	N/A	130 dB
	MXL	MXL V77S Tube	Tube condenser	Cardioid	N/A	N/A	122 dB
	MXL	V69M-Edt	Tube	Cardioid	N/A	N/A	140 dB
	Neumann	KM 120	Condenser	Figure-8	N/A	-10 dB	138 dB
	Neumann	KM 130	Condenser	Omni	N/A	-10 dB	(w/pad) 148 dB
	Neumann	KM 140	Condenser	Cardioid	N/A	-10 dB	140 dB
	Neumann	KM 150	Condenser	Hyper-cardioid	N/A	-10 dB	(w/pad) 150 dB
	Neumann	KM 183	Condenser	Omni	N/A	+10 dB	152 dB
	Neumann	KM 184	Condenser	Cardioid	N/A	N/A	140 dB
	Neumann	KM 185	Condenser	Hypercardioid	N/A	N/A	138 dB
	Neumann	KMS 105	Condenser	Supercardioid	120 Hz	N/A	142 dB
	Neumann	TLM 103	Condenser	Cardioid	N/A	N/A	150 dB
	Neumann	TLM 193	Condenser	Cardioid	N/A	N/A	138 dB
	Pearl Labs	CC22	Condenser	Cardioid	N/A	N/A	140 dB
	Pearl Labs	C022	Condenser	Omni	N/A	N/A	126 dB
	Pearl Labs	TL66	Condenser	Cardioid, omni	N/A	N/A	126 dB
	Pearl Labs	TLC 90	Condenser	Cardioid	N/A	N/A	132 dB
	Peavey	PVM 22	Dynamic	Cardioid	N/A	N/A	144 dB
	Peavey	PVM 46	Dynamic	Hypercardioid	N/A	N/A	140 dB
	Peavey	PVM 480	Condenser	Super cardioid	N/A	N/A	140 dB
	Peavey	Studio Pro M1	Condenser	Cardioid	150 Hz	-10 dB	128 dB
	Peavey	Studio Pro M2	Condenser	Cardioid, figure 8, omni	150 Hz	-10 dB	140 dB
	Rode	Classic II	Condenser	Switchable in nine steps	Dual	-10 dB and -20 dB	145 dB
	Rode	NT1-A	Condenser	Cardioid	N/A	N/A	131 dB
	Rode	NT2	Condenser	Cardioid, omni	150 Hz	-10 dB	137 dB
	Rode	NT3	Condenser	Hypercardioid	N/A	N/A	130 dB
	Rode	NT4	Condenser	Cardioid per capsule	N/A	N/A	140 dB
	Rode	NT5	Condenser	Cardioid	N/A	N/A	143 dB
	Rode	NT1000	Valve condenser	Cardioid	N/A	N/A	140 dB
	Rode	NTK	Valve condenser	Cardioid	N/A	N/A	158 dB
	Roland	DR-10	Dynamic	Hypercardioid	N/A	N/A	130 dB
	Roland	DR-20	Dynamic	Hypercardioid	N/A	N/A	130 dB



The Presession Checklist

recording, the recording device must be in excellent working order. For analog recorders, this means cleaning the recording and playback heads and checking the alignment. In digital recording, it translates into several paths depending on the media you are using.

For MDMs, follow the manufacturer's suggested guidelines regarding regular cleaning of recording heads and of the transport mechanism. Be sure to use a tape brand recommended by the manufacturer. It is not necessary to clean the heads before every session, but keep a log of the time the deck has been running and follow the manufacturer's suggested guidelines for cleaning. This information is in the owner's manual.

For removable media, make sure there is plenty of room on the disk so the session is not interrupted by the disk filling to capacity. Keep a fresh disk available just in case the disk you are using fills up during a long session. For the computer's hard disk, clear as much storage space as possible. Back up or delete any old files left from previous sessions that are not needed for the current session.

Which microphones will be needed for the session? Select the microphones for whatever instruments or vocals you are planning to record. Make sure they are clean and in good working order. Test each mic before setting up for the session. Make sure selector switches on the mic such as pad, roll off, or pickup patterns are in the proper position. If the microphone requires an internal battery, be sure to have a spare on hand.

How many microphone stands are required? The mic stands need to be sturdy so they will not fall over if accidentally bumped. Boom stands must also be secure so they do not fall down or completely off whenever they are adjusted. Make sure any extensions used are securely tightened at the proper height and are firmly held. Nothing is more annoying to a musician than a perpetually sinking mic stand. If all you'll ever do is record one musician at a time, then get one quality stand. If your studio is large enough for several musicians,

FREQUENCY RESPONSE	SUGGESTED APPLICATIONS	SPECIAL FEATURES	PRICE
40 Hz-20 kHz	Overhead; choir, acoustic guitar, percussion		\$439
20 Hz-20 kHz	Drum overhead, measurement, percussion, guitar	Clean impulse response; low handling noise	\$299
10 Hz-20 kHz	Measurements; percussion, overhead, acoustic guitar	Neutral frequency response	\$510
5 Hz-20 kHz	Voice recording; piano, acoustic bass, acoustic guitar	Vintage design with double diaphragm, gold-sputtered capsule and brass back plate	\$1,355
10 Hz-26 kHz	Stereo recordings; ambience; drums	Pressure zone; 2 condenser cartridges	\$572
20 Hz-20 kHz	Bass drum, as a directed pressure zone mic, broadcast	Nextel finish	\$792
Various		Uses capsules: KA-100 (\$249), KA-200 (\$249), KA-1000 (\$764)	\$390
Various	General studio, broadcast	Low-cut filter, low consumption, DIN-approved	\$277
N/A	General	Identical to MBP-648; 10" capsule-to-mic cable	\$399
N/A	General studio, broadcast	Volt converter best at 12-48 volts, low consumption	\$355
40 Hz-20 kHz	Overhead; acoustic guitar, small condenser	Switchable HP filters, -10dB pad	\$439
N/A	Remote, hidden placement	Bal out prevents audio signal loss; 36" cable ext	\$565
N/A	Orchestral, chamber, church	Provides stereo picture of OSS recordings	\$229
40 Hz-18 kHz	Drums; guitar, chorus	Small capsule	\$495
N/A	Vocal; drums; acoustic instruments		\$795
40 Hz-18 kHz	Vocals	Cable; windscreen; stand-mount	\$795
40 Hz-18 kHz	General purpose	Cable; windscreen; stand-mount	\$1,100
30 Hz-20 kHz	Instrument; acoustic; overhead; percussion	Mic stand adapter	\$199
30 Hz-20 kHz	Vocal; overheads; drums; amplifier	Mic stand adapter	\$155
30 Hz-20 kHz	Vocal; overheads; drums; amplifier	Mic stand adapter	\$99
20 Hz-23 kHz	Vocals; piano, acoustic; high spl; strings	3-micron diaphragm; shock-mount	\$149
30 Hz-20 kHz	Vocals; brass; overheads; percussion	Mic stand adapter	\$99
20 Hz-20 kHz	Vocals; strings; piano; orchestra; acoustic	3-micron diaphragm; shock-mount; wind screen	\$349
20 Hz-20 kHz	Vocals	Large diaph; mogami; cable; shock mnt; screen; pwr	\$299
20 Hz-20 kHz	One of stereo pair for midside/Blumlein recording		\$1,545
20 Hz-20 kHz	Room; strings; piano; choir		\$1,260
20 Hz-20 kHz	Acoustic guitar, overheads; piano; hi-hat; percussion; orchestra		\$1,260
20 Hz-20 kHz	XY stereo pair; instrument; speech	Standmount SG21/17	\$1,275
20 Hz-20 kHz	Room; piano; overheads; sampling; strings	16 dB (A) self noise	\$975
20 Hz-20 kHz	Acoustic guitar, overheads; hi-hat; strings; perc; piano	16 dB (A) self noise; available in stereo pairs	\$935
20 Hz-20 kHz	Hi-hat; acoustic guitar; drums; percussion	18 dB (A) self noise	\$935
20 Hz-20 kHz	Vocals; broadcast; home studio		\$780
20 Hz-20 kHz	Vocals; acoustic guitar; strings; Foley; acoustic bass; piano	7 dB (A) self noise; available in stereo pairs	\$1,299
20 Hz-20 kHz	Vocals; drum overheads; acoustic guitar; strings; sax; percussion; piano	Available in stereo pairs	\$1,550
20 Hz-25 kHz	Vocals; instruments	Dual membrane	\$1,050
20 Hz-25 kHz	Instruments; vocals	Dual membrane	\$1,166
20 Hz-20 kHz	Percussion		\$490
20 Hz-20 kHz	Vocal		\$517
50 Hz-16 kHz	Vocals; instruments		\$170
45 Hz-16 kHz	Vocals; instrument miking	Diamond-coated diaphragm	\$200
40 Hz-20 kHz	Vocals; acoustic instruments; hi-hats; overhead cymbals		\$300
30 Hz-20 kHz	Vocals; instruments	Optional shockmount	\$250
30 Hz-20 kHz	Vocals; instruments	Optional shockmount	\$370
20 Hz-20 kHz	Vocals; instruments; general purpose	6072 twin triode; Jensen transformer; shockmount; flight case	\$1,999
20 Hz-20 kHz	General purpose; vocals; guitar	5 dBA self noise shock mount	\$349
20 Hz-20 kHz	Vocals; acoustic guitar; woodwinds; piano; overheads	Dual pressure-gradient transducer	\$649
20 Hz-20 kHz	Vocal; instruments; drums	Internal shockmount; transformerless output; battery or phantom powered	\$199
20 Hz-20 kHz	Drum overheads; inst; room; studio; location	Custom case; windscreen; stand mnt; stereo XY	\$899
20 Hz-20 kHz	Acoustic gtr; drum overheads; hat; ride; perc	Matched pair	\$599
20 Hz-20 kHz	Vocal; instrumental	Transformerless circuitry	\$599
20 Hz-20 kHz	Vocal; instrumental	Hand selected; graded twin triode valve	\$999
60 Hz-15 kHz	General purpose	On/off switch; wind screen; case	\$95
60 Hz-15 kHz	General purpose	On/off switch; wind screen; case	\$150

MICROPHONES

MICROPHONES

MANUFACTURER

PRODUCT

TYPE

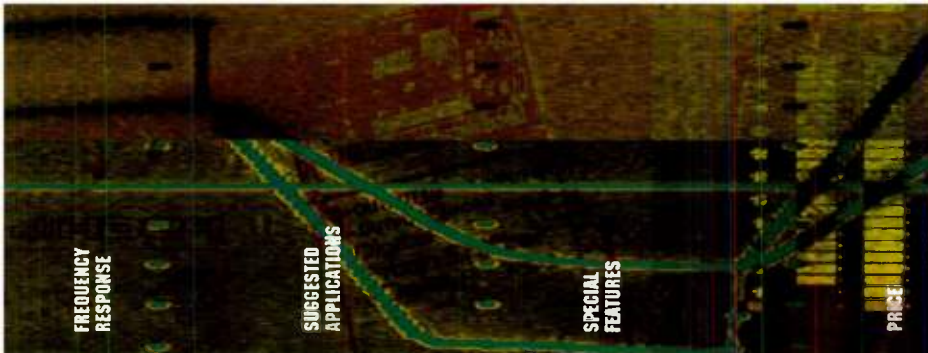
POLAR PATTERNS

INTERNAL ROLL-OFF

INTERNAL PAD

MAX. SPL

Royer Labs	R-121	Ribbon	Figure-8	N/A	N/A	>135 dB
Royer Labs	R-122	Active ribbon	Figure-8	N/A	N/A	>185 dB
Royer Labs	SF-1	Ribbon	Figure-8	N/A	N/A	130 dB
Royer Labs	SF-12 Stereo	Ribbon	Figure-8	N/A	N/A	130 dB
Samson	C01	Studio condenser	Cardioid	N/A	N/A	N/A
Samson	C02	Pencil condenser	Focused cardioid	N/A	N/A	N/A
Samson	C03	Condenser	Cardioid, omni, figure-8	N/A	N/A	N/A
Samson	C05	Condenser	Cardioid	N/A	N/A	N/A
Samson	HM40P	Condenser	Cardioid	N/A	N/A	134 dB
Samson	Q1	Condenser	Cardioid	N/A	N/A	137 dB
Samson	Q2	Dynamic	Cardioid	Switchable	Switchable	137 dB
Samson	Q3	Dynamic	Hypercardioid	Switchable	Switchable	137 dB
Samson	Q7	Dynamic	Cardioid	N/A	N/A	N/A
Samson	Q Kick	Dynamic	Cardioid	N/A	N/A	N/A
Samson	Q Mic	Dynamic	Hypercardioid	N/A	N/A	137 dB
Samson	Q Snare	Dynamic	Cardioid	N/A	N/A	N/A
Samson	Q Tom	Dynamic	Cardioid	N/A	N/A	N/A
Samson	S11	Dynamic	Cardioid	N/A	N/A	130 dB
Samson	S12	Dynamic	Hypercardioid	N/A	N/A	130 dB
Samson	CMS-2	Condenser	MS stereo	N/A	N/A	145 dB
Sanken	COS-11s	Condenser	Pure omni	N/A	N/A	127 dB
Sanken	CO2	Condenser	Omni	N/A	N/A	137 dB
Sanken	CS-3e	Condenser	Supercardioid	N/A	N/A	120 dB
Sanken	CU-31	Condenser	Cardioid	N/A	N/A	148 dB
Sanken	CU-41	Double condenser	Cardioid	N/A	N/A	140 dB
Sanken	CU-44x	Double condenser	Perfect cardioid	N/A	N/A	145 dB
Sanken	CCM 4	Condenser	Cardioid	N/A	N/A	132 dB
Schoeps	CCM4V Lg	Condenser	Cardioid, lateral pickup	N/A	N/A	132 dB
Schoeps	CMB1	Condenser	All available	N/A	-15 dB	132 dB
Schoeps	CMC64 (U.S. Set)	Condenser	Cardioid	N/A	N/A	132 dB
Schoeps	CMC64 ST (U.S. Stereo)	Condenser	(2) cardioid	N/A	N/A	132 dB
Schoeps	CMXY 4V-X/Y Stereo	Condenser	(2) cardioid	N/A	N/A	132 dB
Schoeps	M222 Tube	Tube	All available	150 Hz	10 dB	Capsule specific
Sennheiser	E 835	Dynamic	Cardioid	N/A	N/A	150 dB
Sennheiser	E 845	Dynamic	Supercardioid	N/A	N/A	150 dB
Sennheiser	E 855	Dynamic	Supercardioid	N/A	N/A	150 dB
Sennheiser	E 865 Sting	Electret condenser	Supercardioid	N/A	N/A	150 dB
Sennheiser	E 602	Dynamic	Cardioid	N/A	N/A	160 dB
Sennheiser	E 604	Dynamic	Cardioid	N/A	N/A	160 dB
Sennheiser	E 609 Silver	Dynamic	Cardioid	N/A	N/A	150 dB
Sennheiser	MD441	Dynamic	Supercardioid	N/A	N/A	160 dB
Sennheiser	MD 421 II	Dynamic	Cardioid	N/A	N/A	160 dB
Sennheiser	MD431II	Dynamic	Supercardioid	N/A	N/A	150 dB
Sennheiser	ME 64/K 6	Electret condenser	Cardioid	120 Hz	N/A	130 dB
Shure	Beta 52A	Dynamic	Supercardioid	N/A	N/A	174 dB
Shure	Beta 87A	Condenser	Supercardioid	N/A	N/A	142 dB
Shure	Beta 87C	Condenser	Cardioid	N/A	N/A	142 dB
Shure	PG81	Condenser	Cardioid	N/A	N/A	131 dB
Shure	KSM27/SL	Condenser	Cardioid	Switchable: flat, 18 dB cut, 6 dB roll	-15 dB	138 (153) dB (ATT on)
Shure	KSM32/SL	Condenser	Cardioid	Switchable	-15 dB	139 dB
Shure	KSM44	Condenser	Cardioid, omni, bidirectional	115 Hz	15 dB	156 dB
Shure	KSM109	Condenser	Cardioid	N/A	0/15 dB	165 dB
Shure	KSM 137	Condenser	Cardioid	80/115 Hz	0/15/25 dB	164 dB
Shure	KSM 141	Condenser	Cardioid, omni	18/115 Hz	0/15/25 dB	N/A
Shure	SM7B	Dynamic	Cardioid	N/A	N/A	N/A
Shure	SM57	Dynamic	Cardioid	N/A	N/A	N/A
Shure	SM58	Dynamic	Cardioid	N/A	N/A	N/A
Shure	SM81	Condenser	Cardioid	80/100 Hz	-10 dB	146/136 dB
Shure	SM86	Condenser	Cardioid	N/A	N/A	147 dB
Shure	SM94	Condenser	Cardioid	N/A	N/A	141 dB
Shure	VP88	Stereo condenser	Mid: cardioid; side: bidirectional	80 Hz	N/A	129 dB



The Presession Checklist

have a stand for every mic you own.

How many microphone cables are required and which lengths should be used? Check the mic cables to make sure they are working properly. Always try to make the cable runs as short as possible, but not at the risk of creating safety hazards that could cause someone to trip and fall. Remember to secure the excess cord around the microphone stand.

Will any other cables be required? Keep a stock of quarter-inch cables in varying lengths on hand. It may be better to use your own cables in the studio with visiting musicians, since their cables may have been in the back of their van too long and may be a bit worn and thus prone to be noisy.

How many power cords will need to be plugged in? Here's one of the often forgotten details of setting up, especially if recording on location. Get into the habit of having a power strip or two on hand at all times, and don't leave home without them! A few long, heavy duty extension cords are also recommended.

Are there any other materials needed? For all long cable runs, it helps to have plenty of duct tape to secure the cables wherever there may be foot traffic. Duct tape is like *The Force* in *Star Wars*: it has a light and a dark side, and it binds the universe together. Even better than duct tape is *gaffer's* tape, which won't leave a sticky residue on your cables or damage your floor.

How many music stands are needed? As with mic stands, quality equipment will help make the session run smoothly. A quality metal music stand will not fall over easily in the middle of a take. To reduce noise, place a piece of felt, a towel, or a piece of carpet on the stand to quiet the shuffling of papers and the natural ring of the metal stand. This material can be glued to the stand or secured by other means, such as butterfly clamps.

How many chairs are needed? Even if a musician stands for playing or

—continued on page 104

FREQUENCY RESPONSE	SUGGESTED APPLICATIONS	SPECIAL FEATURES	PRICE
30 Hz–15 kHz	General purpose	High SPL handling, lifetime warranty; natural tone and feel, low self noise	\$1,195
30 Hz–15 kHz	General purpose studio recording	Phantom powered active electronics	\$1,695
30 Hz–15 kHz	Strings, acoustic instruments, piano, woodwinds, flute, vocals	Lifetime warranty, extremely low self noise, high SPL handling	\$1,395
30 Hz–15 kHz	Single-point stereo recordings	X-Y and M-S recording, high SPL handling, lifetime warranty, low self noise	\$2,495
N/A	Acoustic instruments, vocals	Suspension mount available	\$175
N/A	Overhead, cymbals, acoustic guitar, piano	Shock mount, sold as stereo pair	\$299
N/A	Room, vocals, instruments	Switchable pickup pattern, 10dB pad, HP filters	\$250
N/A	Stage vocals, amps, handheld	Shock mounted element	\$175
N/A	Horns, woodwinds	Micro-condenser element, clip-on w/gooseneck	\$550
50 Hz–20 kHz	Project studio vocals		\$400
50 Hz–15 kHz	Vocal, instruments	Gold-plated XLR, case, clip, Eurometric adapter	\$150
50 Hz–15 kHz	Drums, instruments	Gold-plated XLR, case, clip, Eurometric adapter	\$225
N/A	Instruments, vocals, handheld	All-purpose dynamic for stage or studio	\$200
N/A	Kick drum	High SPL, large diaphragm, shock mounted	\$200
20 Hz–18.5 kHz	Vocals		\$200
N/A	Snare drum	Rim clip for drum-mounting, voiced for snare	\$150
N/A	Tom-tom drums	Rim clip, voiced for toms	\$150
60 Hz–18 kHz	Vocals	Case, clip	\$100
60 Hz–18 kHz	Vocals	Case, clip	\$150
20 Hz–18 kHz	Critical stereo recording	Titanium diaphragm	\$2,595
20 Hz–20 kHz	Speech, vocal, instrument	Back-electret lav, clips, rubber mnts, outdoor screens	\$399
20 Hz–20 kHz	Critical recording, orchestral	Perfect-Omni™, omni pattern at high frequencies	\$1,599
60 Hz–20 kHz	Location & sound recording	High directivity	\$1,350
20 Hz–18 kHz	High-pressure sources, brass, drums, critical recording	Right-angle version available	\$899
20 Hz–20 kHz	Vocals, instruments	Dual titanium diaphragm	\$2,695
20 Hz–20 kHz	General purpose for critical recording	Transformerless, flat, even, off-axis low prox effect	\$2,295
18 Hz–22 kHz		15' cable	\$1,470
40 Hz–20 kHz	All critical recording	Miniature	\$1,355
18 Hz–22 kHz	Portable recording	Internal battery, 15' cable	\$400
40 Hz–20 kHz	All critical recording	Includes CMC64 microphone, SG20 mount, B5 popscreen, custom wood box	\$875
40 Hz–20 kHz	All critical recording	Includes 2 ea CMC64, A20 suspension; B5 popscreen, custom wood box	\$1,845
40 Hz–20 kHz	All critical recording	Elegant and unobtrusive	\$2,985
Capsule specific	All critical recording	Choice of 20 MK capsules must be ordered separately	\$1,435
10 Hz–16 kHz	Vocal, all around	Comes with mic clip and pouch	\$159
40 Hz–16 kHz	Vocals	Comes with mic clip and pouch	\$229
40 Hz–18 kHz	Vocals	Comes with mic clip and pouch	\$299
40 Hz–20 kHz	Vocals	Phantom 48V powered	\$399
20 Hz–16 kHz	Bass drums, bass guitar cabs, tuba	Glass-composite housing	\$319
40 Hz–18 kHz	Drums (esp toms & snares)	Glass-composite housing	\$249
40 Hz–18 kHz	Guitar amp	Flat profile design	\$199
30 Hz–20 kHz	Vocals, piano, guitar	Comes with case/clip	\$895
30 Hz–17 kHz	Drums, vocals, guitar, amps	5-position low-frequency rolloff switch	\$485
40 Hz–16 kHz	Lead vocals	Comes with case	\$495
40 Hz–20 kHz	Acoustic guitar, drum overhead	Interchangeable capsules	\$515
20 Hz–10 kHz	Kick drum, bass amp, acoustic bass	Bass instruments	\$370
50 Hz–18 kHz	Vocals, live, studio	High gain before feedback	\$463
50 Hz–20 kHz	Vocal		\$463
40 Hz–18 kHz	Guitar, cymbals, strings, vocals, piano	Battery or phantom power	\$260
20 Hz–20 kHz	Vocals, instrument, amp	Includes shock mount	\$575
20 Hz–20 kHz	Vocal, instrument	Shock-mount, case	\$1,070
20 Hz–20 kHz	Vocals	Shurelock swivel mount or elastic shock mount	\$1,394
20 Hz–20 kHz	Instruments		\$305
20 Hz–20 kHz	Instruments	Available in stereo pairs	\$575
20 Hz–20 kHz	Instruments	Switchable dual-pattern, avail. in stereo pairs	\$770
50 Hz–20 kHz	Vocals, bass amp		\$620
40 Hz–15 kHz	Guitar amp, drums, guitar, vocals		\$146
50 Hz–15 kHz	General purpose		\$188
20 Hz–20 kHz	Guitar, cymbals, strings, vocals, piano		\$562
50 Hz–18 kHz	Vocals		\$300
40 Hz–16 kHz	Guitar, cymbals, strings, vocals, piano	Battery or phantom power	\$297
40 Hz–20 kHz	Single-point stereo	Internal matrix or MS out	\$1,267

MICROPHONES

MICROPHONES	MANUFACTURER	PRODUCT	TYPE	POLAR PATTERNS	INTERNAL ROLL-OFF	INTERNAL PAD	MAX. SPL
	Sony	C48	Condenser	Unidirectional; omni; bidirectional	Yes	-10 dB	128 dB
	Sony	ECM-23F3PR	Electret condenser	Unidirectional	Yes	N/A	134 dB
	Sony	ECM-MS5	Electret condenser	Variable (stereo)	Yes	N/A	130 dB
	Sony	ECM-MS957	Stereo condenser	m-s, x-y	N/A	N/A	115 dB
	Sony	F740/9X	Dynamic	Unidirectional	N/A	N/A	N/A
	Sony	F780/9X	Dynamic	Unidirectional	N/A	N/A	N/A
	Soundelux	ifet7	Condenser (FET)	Cardioid	N/A	N/A	140 dB
	Soundelux	U195	Condenser (FET)	Cardioid	80 Hz	10 dB	125 dB
	Soundman/OKM	CX	Condenser	Omni	N/A	N/A	125 dB
	SPL Electronics	Nugget	Condenser	Cardioid	60 Hz	-10 dB	145 dB
	Stedman	C15	Condenser	Cardioid	N/A	N/A	132 dB
	Stedman	LD23	Dynamic	Supercardioid	N/A	N/A	157 dB
	Stedman	LD50	Dynamic	Supercardioid	N/A	N/A	152 dB
	Stedman	Transonic-TR1	Dynamic	Cardioid	80 Hz	N/A	152 dB
	Studiomaster	KM-81	Dynamic	Cardioid	N/A	N/A	119 dB
	Studio Projects	B1	Condenser	Cardioid	N/A	N/A	136 dB
	Studio Projects	B3	Condenser	Cardioid; omni; figure-8	150 Hz	-10 dB	136 dB
	Studio Projects	C1	Condenser	Cardioid	150 Hz	10 dB	131 dB
	Studio Projects	C3	Condenser	Cardioid; omni; figure 8	150 Hz	-10 dB	142 dB
	Studio Projects	C4	Condenser	Cardioid; omni	150 Hz	-10 dB	148 dB
	Studio Projects	LSD-2	Stereo condenser	(2) cardioid; omni; fig-8	150 Hz	-10 dB	142 dB
	Studio Projects	T3	6072 dual triode	Cardioid; omni; figure 8	N/A	N/A	125 dB
	Studio Projects	TB1	Tube	Cardioid	N/A	N/A	136 dB

The Presession Checklist

From page 103, *The Presession Checklist*

singing, it's nice to have a chair to rest in during playbacks. If the musician is going to play while seated, make sure the chair does not squeak. Office chairs with casters are a bad idea for the studio. Proper mic placement in relation to the instrument is essential for maintaining proximity to the mic. If the musician can easily move, the sound will change, making overdubs difficult. A basic, padded armless chair, similar to those used in hotel conference rooms, will do nicely. Having a stool available is also a good idea, since it is often the best thing for acoustic guitarists.

What additional equipment belonging to the studio will be required for the session? This can include musical instruments, specific pieces of out-board gear, or a PlayStation. Whatever it is, make sure it is in good working order

before the client arrives.

Did you remember to clean the bathroom? 'Nuff said!

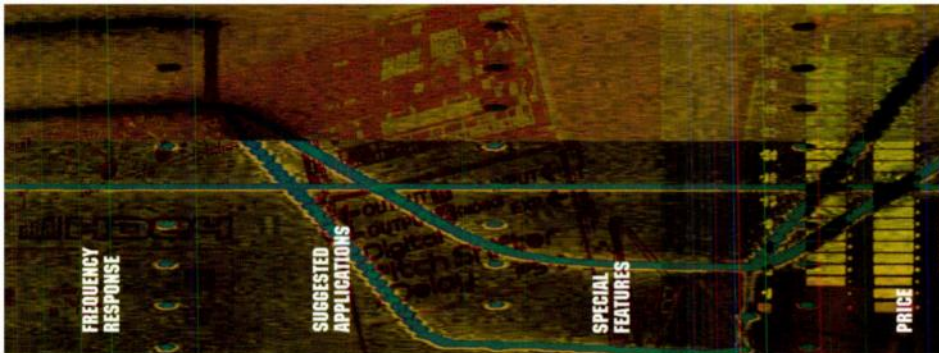
I forgot my tuner; do you have one? Portable tuners are a staple for electric guitar and bass players. Occasionally a player may arrive without one. Having an electronic tuner on hand will help speed the session along. Some digital recorders can generate an A-440, which will do in a pinch. If overdubs of acoustic instruments are planned, record some tuning notes from a keyboard or tuner so the instrumentalist can tune to the notes on the tape. Drums need tuning too! Have a drum key on hand for drum tweaking.

Do you have any water? Singers and voiceover readers need to keep their throats from drying out during the session. Many bring a supply of bottled water with them, but have a glass or bottle of water handy for them just in case. Keep it at room temperature; do not chill it. Warm water is better for the

throat than cold. Some performers may request hot water. Fill a mug and heat it in the microwave, as you would water for a cup of tea.

Can I write on this? Oh, can I borrow your pencil? If sheet music, lead sheets, or lyric sheets are being used, make sure every musician has a copy he or she can write on and provide each musician with a pencil. Even if you've given the musicians copies in advance, have extra copies ready for the session just in case someone forgot their copy. After all, these are musicians we are talking about. Pick up a box of No. 2 pencils so time is not wasted while one pencil, usually yours, makes the rounds every time notes are given.

How many instruments and vocals will be needed on the song? Musical preproduction can take place long before the musicians arrive or while they are setting up, but it is a good idea to review the requirements for each song. The most important consideration is the



30 Hz–16 kHz	Vocals; guitar	48V phantom or 9V internal battery	\$1,550
20 Hz–20 kHz	Instrument; vocal	Off switch	\$296
70 Hz–20 kHz	Stereo recording of live performances and ambient sounds	Phantom power	\$1,550
50 Hz–18 kHz	Stereo DAT; overhead piano; guitar; drum	1000-hour battery; rotating caps; x-y/m-s switch; stand; windscreen; cable; bag	\$299
50 Hz–15 kHz	Vocals; guitar		\$234
50 Hz–18 kHz	Vocals; guitar	Enhanced isolation and feedback rejection	\$375
20 Hz–20 kHz	Vocals; instruments	Dual electronics w/switch; vocals/instruments modes	\$2,100
20 Hz–20 kHz	Close mic situations	1" capsule; "fat" bass switch	\$1,350
20 Hz–20 kHz	Binaural; environmental/sample collecting; live	Discrete; ear-bud; A3 adapter w/pad, low freq. roll off	\$247
20 Hz–20 kHz	Vocals; instruments; studio; broadcast; live	Suspension mtnt; 1" diaph; ext polarized; brass alloy	\$428
25 Hz–19 kHz	Vocal; instrument	Buffered output; optional Proscreens	\$599
38 Hz–18 kHz	Live vocals; instruments	Optional Proscreen pop screens \$49/\$59	\$139
37 Hz–19 kHz	Live instruments	Large diaphragm; optional Proscreens	\$139
33 Hz–19 kHz	General purpose	Switchable stage/studio EQ settings	\$159
50 Hz–15 kHz	Personal studio; live performance	20' cable; adapter; case	\$60
20 Hz–20 kHz	Vocal; instrument	Permanent or temporary mount	\$100
20 Hz–20 kHz	Vocal; instrument	Permanent or temporary mount	\$200
20 Hz–20 kHz	Vocals; overhead; broadcast; instruments; production	FET 1" 6 µm capsule	\$299
20 Hz–20 kHz	Vocals; overhead; broadcast; instruments	FET 1" 6 µm capsule	\$499
20 Hz–20 kHz	Stereo X-Y; instruments; vocals	Road case; shock mount	\$599
20 Hz–20 kHz	Coincident stereo recording; X-Y	Suspension mount; road case; dedicated cable	\$999
20 Hz–20 kHz	Vocals; overhead; broadcast; instruments	1" 6 µm capsule	\$799
20 Hz–20 kHz	Vocal; instrument	Permanent or temporary mount	\$400

number of available tracks in a small studio. It is usually limited, so it is very easy to end up painted into a corner once the ideas begin flowing.

In a 24-track or 48-track environment, the drum set alone can take up to ten tracks. Even with 24-tracks, a complex song can still cause some problems with track space before recording is complete. Be sure to ask about solos, additional guitar tracks, vocals, double lead vocals, background vocals, and any effects. There is always the chance someone will want to "try something" without erasing a previous track. With virtual tracks on most hard-disk systems, this is very easy. On tape-based systems, it may not be possible to keep both tracks. Allocating tracks in advance will prevent a lot of frustration. Send a stereo mix of the drum set to tape instead of a track for each mic. Synchronize any MIDI tracks to the recorder so that they play in time with tracks recorded on the tape. This frees up tracks on the tape for live instruments and vocals.

Instead of recording an instrument in stereo, try recording it on one track, panning it to one side and routing it to a digital delay set for a 10 millisecond delay. Pan the return from the delay to the opposite side of the mix. Part of the challenge of the project studio is finding ways around limits. Be creative!

If budget is a consideration, determining the number of hours required and the number of musicians to be paid should also be worked out up front.

What additional keyboard sounds will be needed? Keyboard players with large collections of sounds need to organize before a session so the exact sounds required are easily located and loaded. The keyboard player should prepare a list of required sounds and which disks, cards, or cartridges are needed. It may also be helpful to keep a list of favorite sounds such as leads, pads, and keyboards in case a new sound is requested during the session.

What samples will be needed? If

samples or loops are being used for the session, ready them in the same way as the keyboard sounds. If it is possible to edit or process them in advance, do it. If there is a question about obtaining legal clearance for use of a copyrighted sound sample, this should also be done well in advance of the session.

Will a click or click track be needed? This can be a touchy subject unless the musicians are experienced in playing to a click. If you are recording an ensemble or rhythm section together, there may not be as great a need for a click track unless the musicians are having difficulty keeping time. If the recording is being constructed by overdubbing each instrument, then a click track is usually necessary to keep the tempo constant while each track is added.

A click track will be necessary if MIDI tracks are to be combined with live performances. MIDI sequences can be programmed for small fluctuations in the tempo to make the overall speed more natural, but they still require that the musicians play in a strict and perfect time to sound correct. A click track will also be necessary if the material will be performed live with a taped accompaniment. The click can come from a metronome, drum machine, MIDI sequencer, or digital-audio software. In most cases, only the drummer will need to play to the click; everyone else will play to the drum recording.

Remember to always record a count-off, whether or not you are using a click. Without one, any overdubbing instrumentalist will be guessing where the first beat of the track is, and the tempo will most likely be tentative for the first few bars. Use the 1-2-3-4-1-2 count where the last two numbers are silent, so there is no extraneous noise on the track. Be careful with the volume of the click, because if it is too loud it will bleed from the headphones back into the mics and on to all live tracks. ■

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MIDI INTERFACES, PATCH BAYS & PROCESSORS

MANUFACTURER	PRODUCT	COMPUTER INTERFACE	# OF MIDI INS/OUTS	MERGING	FILTERING	KEY HANDLING	CONTROLLER REMAPPING	KEYBOARD SPLIT/ZONES	# OF PATCHES	SYNCHRONIZATION TYPE	SPECIAL FEATURES	PRICE
DACS	MIDI Patch Bay	N/A	10/10	No	No	No	No	No	40	N/A	Uses 1/4" patch cords	\$295
Digidesign	MIDI I/O	Win, Mac	10/10	Yes	Yes	Yes	No	No	N/A	N/A	USB-powered, Full OMS/WDW compatibility, Hardware Thru mode, super accurate time-stamping	\$595
Doepler	MCV4	MIDI	1/1	No	No	No	No	No	N/A	Cntrl volt/gate-analog synths	Two MIDI assignable CV outputs	\$138
Doepler	MCV24	MIDI	1/2	No	No	No	No	No	16	MIDI, cntrl volt, gate	Four high res. CV outs for pitch and 20 outs for gate or cv	\$595
Doepler	MSYII	MIDI	1/2	No	No	No	No	No	N/A	MIDI, Sync24, clock out	MIDI to Sync24, clock output	\$110
Edirol	D UM-2	USB	2/2	No	No	No	No	No	N/A	MTC	Power supplied by USB bus	\$75
Edirol	UM-550	USB, Win, Mac	5/5	Yes	Yes	Yes	No	No	N/A	MTC	Drivers, OMS, Free MIDI Included, software/hardware control	240
Edirol	UM-880	USB, Win, Mac	8/8	Yes	Yes	Yes	No	No	N/A	MTC	Drivers, OMS, Free MIDI Included, software/hardware control	\$399
Edirol	UM-1	USB	1/1	No	No	No	No	No	N/A	MTC	Power supplied by USB bus	\$69
Edirol	UM-1S	Win, Mac	1/1	No	No	No	No	No	N/A	N/A	FPT: fast processing technology	\$45
Ego Sys	Miditeminal 4140	Printer port	4/4	No	No	No	No	No	N/A	MTC, SMPTE (LTC)	SMPTE generator/reader, optional connection to Waveterminal	\$150
Ego Sys	MIDI Terminal M8U	Win, Mac	8/8	No	No	No	No	No	N/A	N/A	Connects via USB	\$400
Ego Sys	MIDI Terminal M4U	Win, Mac	4/4	No	No	No	No	No	N/A	N/A	Connects via USB	\$150
Ego Sys	MIDI Terminal 8180FS	Win, Mac	8/8	No	No	No	No	No	N/A	N/A	Connects via Firewire	\$500
Ego Sys	ROMIO	Win, Mac	1/2	No	No	No	No	No	N/A	N/A	Connects via USB	\$60
Emagic	AMT 8	USB, Serial	8/8	Yes	Yes	No	No	No	32	N/A	Expandable to 192 MIDI I/O, Mac/PC	\$499
Emagic	MT4	USB	2/4	Yes	Yes	No	No	No	32	N/A	Software included for patch bay programming, Mac/PC	\$199
Emagic	Unitor 8 MkII	USB, Serial	8/8	Yes	Yes	No	No	No	32	SMPTE, VITC	VTC burn-in, click in, OMS, Mac/PC	\$799
Encore Electronics	Expressionist 2 MIDI/CV interface	Win, Mac	1/1	Yes	Yes	No	No	6	100	MIDI clock	16-bit D/A all channels	\$499
Friend Chip	DMX12/8	Win, Mac	1/1	No	No	No	No	No	N/A	N/A	6 optical in/out, 6 coaxial in/out, S/PDIF and ADAT	\$500
Frontier Design Group	Sierra MIDI/SMPTE	PCI	8/8	No	No	No	No	No	N/A	MTC, SMPTE (LTC)	Dedicated SMPTE I/O	\$299
Infusion Systems	I-CubeX	N/A	1/1	No	No	No	No	No	1	N/A	Use with our Sensors to create alternate MIDI controllers	\$625
JL Cooper	9 Pin/MMC	Win, Mac	1/1	No	No	No	No	No	N/A	GVG, ESAM2, MIDI, MMC	Control MMC via VTR 9-pin control	\$500
JL Cooper	MLA-1/MLA-10	N/A	4/4	No	No	No	No	No	N/A	N/A	Extends MIDI cable runs over 1,000'	\$370/\$500
JL Cooper	MLA-XLR	N/A	1/1	No	No	No	No	No	N/A	N/A	Extends the range of MIDI cables to over 1000'	\$200
JL Cooper	MMC/9 Pin +	Win, Mac	1/1	No	No	No	No	No	N/A	Output	VTR 9-pin control	\$500
JL Cooper	PPS-Z	Win, Mac	1/1	No	No	No	No	No	N/A	SMPTE, MTC, MIDI clock	Allows MIDI clock seq like Triton, Kurweil to sync to recorders/tape/HD	\$170
M-Audio	Macman	Mac	1/3	No	No	No	No	No	N/A	N/A	Passive thru, serial thru (geo port)	\$60
M-Audio	Merge 2x2	N/A	2/2	Yes	No	No	No	No	N/A	N/A		\$100
M-Audio	Thru 1x4	N/A	1/4	No	No	No	No	No	N/A	N/A		\$60
M-Audio	Thru 3x8	N/A	3/8	No	No	No	No	No	N/A	N/A		\$100
M-Audio	USB MidiSport 1x1	USB	1/1	No	No	No	No	No	N/A	N/A	USB cable included, Mac/PC	\$70
M-Audio	USB MidiSport 2x2	USB	2/2	No	No	No	No	No	N/A	N/A	USB cable included, Mac/PC	\$90
M-Audio	USB MidiSport 4x4	USB	4/4	No	No	No	No	No	N/A	N/A	USB cable included, Mac/PC	\$200
M-Audio	USB MidiSport 8x8	USB	8/8	Yes	No	No	No	No	N/A	SMPTE, MTC	USB and serial cable included, Mac/PC	\$399
MiDlator	LD1	N/A	1/1	No	No	No	No	No	N/A	N/A	MIDI long cable driver, up to 1,000 ft.	\$82
MiDlator	MP-128EP	Parallel	1/2	No	No	No	No	No	N/A	N/A		\$80
MiDlator	MP-128NP	Parallel	2/4	No	No	No	No	No	N/A	N/A		\$110
MiDlator	MP-128SP	Parallel	2/8	No	No	No	No	No	N/A	SMPTE	SMPTE in and out	\$180
MiDlator	MS-101	Serial	1/1	No	No	No	No	No	N/A	N/A		\$70
MiDlator	MS-124	Serial	1/4	No	No	No	No	No	N/A	N/A		\$100
MiDlator	MS-124W	UNIX, serial	1/4	No	No	No	No	No	N/A	No		\$160
MiDlator	UM1	N/A	1/1	No	No	No	No	No	N/A	N/A	Keyboard encoder, solenoid low side driver up to 128 lines	\$215-\$345
MiDlator	UM2	N/A	1/1	No	No	No	No	No	N/A	N/A	Solenoid high-side driver up to 128 lines	\$195-\$330
MiDlator	UMO	N/A	1/1	No	No	No	No	No	N/A	N/A	Solenoid low-side driver, up to 128 lines, no case	\$177
MIDI Solutions	Mapper	N/A	1/1	No	No	No	Yes	No	N/A	N/A	MIDI-powered, prog via SysEx	\$149
MIDI Solutions	Merger/Quadra Merge/M8	N/A	2/1, 4/1, 8/1	Yes	No	No	No	No	N/A	N/A	MIDI-powered	\$79/\$129/\$279
MIDI Solutions	Relay R8	N/A	1/1	No	No	No	No	No	128	N/A	MIDI-powered	\$149/\$479
MIDI Solutions	Router	N/A	1/2	No	Yes	Yes	No	10	N/A	N/A	MIDI-powered, prog via SysEx	\$149
MIDI Solutions	Thru, Quadra Thru/T8	N/A	1/2, 1/4, 1/8	No	No	No	No	No	N/A	N/A	Messages appearing at In sent to all outs, MIDI-powered	\$49/\$59/\$199
MIDI Solutions	Velocity Converter	N/A	1/1	No	No	No	No	No	40	N/A	Applies velocity curves to MIDI data, MIDI-powered, prog via SysEx	\$149
MIDItemp	Multiplayer MP88-CDW 4.30	SCSI	8/8	Yes	Yes	Yes	Yes	Yes/16	1024	MIDI clock	MIDI file player, wave player, CD-ROM, harddisk, remote controller	\$1,500

MIDI INTERFACES, PATCH BAYS & PROCESSORS

MANUFACTURER	PRODUCT	COMPUTER INTERFACE	# OF MIDI INS/OUTS	MERGING	FILTERING	RECHANNELIZING	CONTROLLER REMAPPING	KEYBOARD SPLIT/ZONES	# OF PATCHES	SYNCHRONIZATION TYPE	SPECIAL FEATURES	PRICE
MIDitemp	Multistation 2.0	USB	8/8	Yes	Yes	Yes	Yes	Yes/16	16384	MIDI clock; MTC	MIDI file player; MP3 player; 8 tracks Wave player; remote controller with touch	\$2,600
MOTU	FastLane Serial	Mac serial	1/3	No	No	No	No	No	N/A	N/A	Powers off computer; bypass for use when computer is off	\$59
MOTU	Micro Express-USB	USB; serial	4/6	Yes	Yes	Yes	No	No	16	SMPTE; MTC	Operates w/o computer; supps MMC; converts click to MIDI; 2 pedal ins	\$295
MOTU	MIDI Express XT-USB	USB; serial	8/9	Yes	Yes	Yes	No	No	16	SMPTE; MTC	Operates w/o computer; supps MMC; converts click to MIDI; 2 pedal ins	\$395
MOTU	MIDI Timepiece AV-USB	USB; serial	8/8	Yes	Yes	Yes	No	No	128	SMPTE; MTC; video; word clock	Operates w/o computer; MIDI time stamping; many A/V sync features	\$595
MOTU	PC MIDI Flyer	Parallel	2/2	No	No	No	No	No	N/A	N/A	Powers off computer; bypass for use when computer is off	\$89
MOTU	Pocket Express	Serial; Parallel	2/4	No	No	No	No	No	N/A	SMPTE; MTC	Operates w/o computer; SMPTE free-wheeling over drop-outs	\$165
MOTU	FastLane USB	USB	2/2	No	No	No	No	No	N/A	N/A	5 colors + charcoal; thru button passes MIDI in to out w/computer off	\$79
Roland	GI-20	USB Win; Mac	1/1	Yes	Yes	Yes	Yes	Yes/6	50	MIDI	Guitar-MIDI; 13-pin div pickup; USB; tuner; transposer; direct guitar out; 1/2U	\$395
Rolls	RFX MP1288 MIDI Wizard	N/A	1/1	Yes	No	No	Yes	No	128	N/A	MIDI song select & str/strp; up to 8 program changes on 8 MIDI chans w/1 switch; 8 CCs	\$200
Steinberg	Midex 3	Win; Mac	1/3	Yes	Yes	No	No	No	128	LTB linear	Time base technology	\$150
Steinberg	Midex 8	Win; Mac	8/8	Yes	Yes	No	No	No	128	LTB	USB; cable checker; MIDI thru	\$499
Yamaha	UW 500	Win; Mac	1/1	No	No	No	No	No	N/A	MIDI	20-bit A/D stereo record and playback; optical I/O; software suite	\$400
Yamaha	UX 16	Win; Mac	1/1	No	No	No	No	No	N/A	N/A	(2) status LED	\$50
Yamaha	UX 96	Win; Mac	1/1	No	No	No	No	No	N/A	MIDI	USB powered; to host serial port	\$90
Yamaha	UX 256	USB	6/6	Yes	No	No	No	No	N/A	N/A	Bundled patch bay software for Mac and PC; self powered	\$300

DIGITAL ZERO

By Thomas E. Rudolph
and Vincent A. Leonard, Jr.

When setting the gain for digital recording, there is one absolute barrier that cannot be broken: the top indicator on a digital recorder, 0 dB. With analog recorders, wandering into the red zone means analog tape compression or some distortion. Both have been used as effects in many pop and rock recordings. However, pinning the meters on a digital recorder results in an unpleasant noise sounding like a combination of static and feedback. Unlike loud analog signals that can be brought down by compressors and fader controls, there is no way of fixing this once it is on tape. The digital rule of thumb is to err on the conservative side with your levels when recording someone live. The same goes for mixing to a digital 2-track machine unless the mix is automated. Tracking sequenced sounds provides the safety net of backing up

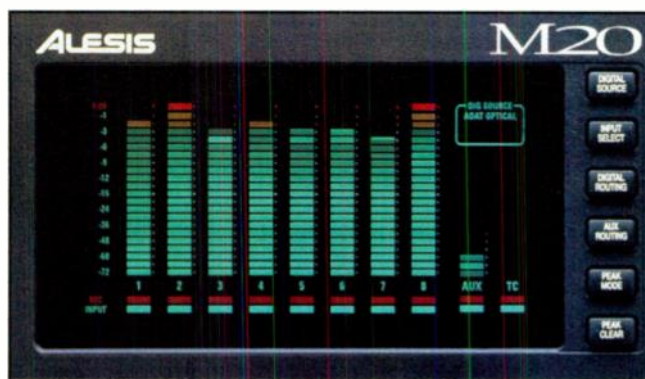


FIG. 1: The levels shown on this Alesis ADAT M20's LED display are fine, but going much further into the red would probably cause nasty sonic artifacts.

and trying again if you peak.

The relative accuracy of your meters is something you'll become aware of using your equipment. In my experience there are certain sounds that will occasionally light up the red LED on my ADAT M-20 that do not result in digital noise (see Fig. 1). These sounds contain a lot of high frequencies, like cymbals, or low frequencies, like synth basses. There is a small amount of headroom built in to many recorders. Think of it as the extra

few gallons in your car's gas tank after the indicator hits "E." You can survive an occasional peak, but don't make a habit of living on the edge, because sooner or later it will get you. During mixdown I've experienced DAT decks that have metered a perfectly safe

level during a trial mix but peaked during the actual mixdown with no change in volume. Playing back the DAT usually indicates the recording is fine. Once again, don't assume. Listen carefully, and maybe back the level down a hair. ■

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MODULAR HARD-DISK RECORDERS

COMPANY MODEL # OF TRACKS # OF VIRTUAL TRACKS LEVELS OF UNDO # OF LOCATE POINTS ANALOG INPUTS ANALOG OUTPUTS DIGITAL I/O BACKUP OPTIONS JOE/SHUTTLE CONTROL

Akai	DR16 Pro	16	5 takes-includes all tracks	1	108	(8) 1/4"	(16) 1/4"	AES/EBU; S/PDIF	SCSI, DVD-RAM	Yes
Boss	VSR-880	8	28	999	1,032	8 + 2 balanced	8	S/PDIF coax/optical I/O	CD-RW software included	Yes
Edirol	A-6 Digital Multi Audio Station	4	32	99	N/A	1/4" mic, RCA	RCA	S/PDIF I/O optional	Zip	Yes
Fostex	D2424LV	24	32	99	99+6	(24) 1/4" TRS	(24) 1/4" TRS	ADAT, S/PDIF	ADAT, DAT, SCSI; DVD RAM	Yes
Genex Audio	GX9000	8	8	99	100	(8) XLR	(8) XLR	SDIF3, AES3; AES 3id	SCSI; Firewire	Yes
Genex Audio	GX9048	48	48	99	100	(48) XLR	(48) XLR	SDIF3, AES3; AES 3id	SCSI; Firewire	Yes
iZ Technology	RADAR 24:ProjectD	24	0	99	99, RTZ	24-ch. optional	24-ch. optional	AES/S/PDIF; ADAT/TDIF	Int IDE; Ethernet; ext SCSI; DVD-RAM/R option	Yes
iZ Technology	RADAR 24:Project	24	0	99	99, RTZ	(24) bal In Ivl 25-p D-sub	(24) bal In Ivl 25-p D-sub	AES/S/PDIF	Int IDE; Ethernet; ext SCSI; DVD-RAM/R option	Yes
Mackie Designs	HDR 24/96	24	192	999	2 front panel, 49 on-screen	(3) DSNB-25 (24 total)	(3) DSNB-25 (24 total)	AES/EBU; TDIF; Lightpipe w/option card	UDMA IDE HD; orb drive; FTP via Ethernet	Yes
Mackie Designs	SDR 24/96	24	192 (8 per track)	99	4	(3) DSHB-25 (24 total)	(3) DSHB-25 (24 total)	(8) ADAT lightpipe (3 in, 3 out)	Removable HDM IBE; orb drive; USB remote 24; remote 48	Yes
Tascam	MX-2424	24	999	100	100	Optional: 24 ch of I/O D-sub	Optional: 24 ch of I/O D-sub AES/EBU; ADAT, TDIF	TDIF; ADAT optical; AES/EBU	Travan tape drive; DVD-RAM; SCSI	Yes
Tascam	MX-2424SE	24	999	100	100	Optional: 24 channels of I/O (IF-AN24 24)	Optional: 24 channels of I/O (IF-AN24 24)	AES/EBU; S/PDIF; ADAT	SCSI; DVD; Travan tape	Yes

PORTABLE DIGITAL STUDIOS

MANUFACTURER PRODUCT # OF PHYSICAL/VIRTUAL TRACKS # OF SIMULTANEOUS RECORD TRACKS DATA COMPRESSION BUILT-IN STORAGE RECORD/BACKUP TO EXTERNAL DEVICE MARKERS/LOCATORS UNDO LEVELS CD-R/RW SUPPORT

Akai	DPS24	24/250	60 (24 in transfer mode)	No	30 GB HD	HD/HD	CD-RW; DAT; MO	2/100	250	Yes
Boss	BR-532	4/32	2	Yes	No	SmartMedia	N/A	0/1	1	No
Boss	BR-864	8/64	2	Yes	No	Compact flash	CD-W; DAT	1	1	Yes
Boss	BR-1180/BR-1180CD	10/80	2	Yes	60 GB HD	HD/int CD-RW	N/A	100/999	20	No (Yes BR-1180CD)
Fostex	MR-8	8/0	2	No	128 MB flash	USB port	USB port	2/2	N/A	Yes
Fostex	VF-160	16/8	16	No	137 GB HD	HD/int CD-RW; SCSI; DAT; MO	DAT	N/A	1	Internal
Fostex	VF-80	8/16	2	No	20 GB HD	HD/ (optional) CD-RW	DAT	0/16	1	Internal
Korg	D1200CD	12/96	4	No	40 GB HD	HD/CD-RW	HD; CD-RW	100/4	99	Atapi; SCSI
Korg	D1600 V40	16/128	8	No	40 GB HD	HD/CD-RW	HD; CD-RW	100/4	99	Atapi; SCSI
Korg	PXR4	4/8	2	Yes	No	SmartMedia	USB	99/0	1	No
Roland	VS-1824CD	18/288	8	No	10 GB HD	Internal CD-RW	N/A	N/A	N/A	Internal
Roland	VS-2480/VS-2480CD	24/384	16	No	80 GB HD (expandable to 128 GB)	Internal CD-RW	N/A	1000/100	999	Yes (onboard VS-2480CD)
Roland	VS-24000CD	24/384	16	Yes	40 GB HD	HD/CD-RW	N/A	1,000/100	999	Yes
Tascam	788	8/250	6	No	10 GB HD	HD/HD; SCSI; CD-RW	CD-RW; MO	0/999	999	Yes
Tascam	PocketStudio 5	4/0	1	Yes	32 MB flash	Compact flash	USB	8/N/A	1	No
Xylar Digital Systems	Traveler 232	32/unlimited	2	No	40 GB HD	HD/HD; ORB; CD-RW; Xylar ntwk	ORB; Xylar ntwk	Unlimited	Unlimited	CD-RW
Xylar Digital Systems	Traveler 432	32/unlimited	4	No	80 GB HD	HD/HD; ORB; CD-RW; Xylar ntwk	ORB; Xylar ntwk	Unlimited	Unlimited	CD-RW
Xylar Digital Systems	Traveler 832	32/unlimited	8	No	160 GB HD	HD/HD; ORB; CD-RW; Xylar ntwk	ORB; Xylar ntwk	Unlimited	Unlimited	CD-RW
Yamaha	AW16G	16/194	8	No	20 GB HD	CDRW	N/A	99/5	N/A	Yes
Yamaha	AW2816	16/128	8	No	20 GB HD (exp to 64 GB)	N/HD; CD-RW; SCSI	DAT; MO; SCSI	98/8	16	Internal
Yamaha	AW4416	18/128	16	No	12 GB HD	N/HD; CD-RW	DAT; MO	98/8	16	Yes
Zoom	MRS-4	4/38	2	Yes	Smartmedia	Smartmedia	Smartmedia	50	N/A	External PC
Zoom	MRS-1266	10/100	6	No	20 GB HD	HD/CD-R	Any	100	N/A	Yes

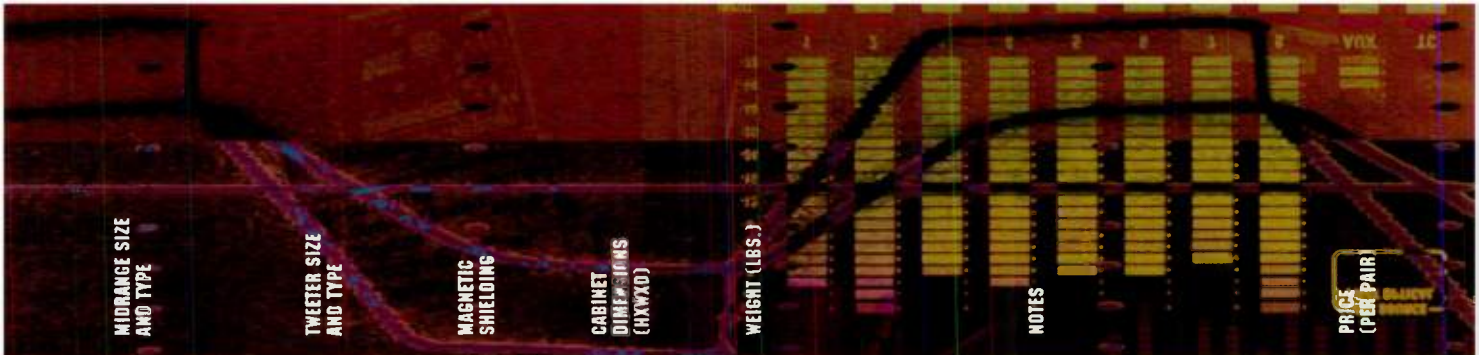
CHANNEL EQ	SYNCHRONIZATION	TIME-CODE RATES	# OF EXPANSION PORTS	ADC	DA	SAMPLE RATES	SCSI	MAXIMUM ADDRESSABLE HARD DRIVE SIZE	OPTIONS	PRICE
3-band parametric or HS/LS with parametric midband	MIDI clock w/SPP, MTC, SMPTE, RS422 serial TC	24, 25, 29.97 29.97d, 30, 30d	6	24-bit/128x	20-bit/8x	32, 44.1, 48, 96 kHz	Yes	2 terabyte	SMPTE, MIDI, RS422 intrincs, ADAT, TDIF, AES/EBU 16 ch I/O, EQ	\$4,295
3-band	MTC, MMC, SPP	N/A	1	24-bit	24-bit	32, 44.1, 48 kHz	Yes	6 GB	VS8F-2 card for 2 stereo effects with COSM	\$1,795
Yes	MIDI MTC/MMC (master, slave)	N/A	1	20-bit/64x	20-bit/128x	44.1 kHz	Optional	2.1 GB	OP-1 expansion board	\$695-\$795
No	MIDI clock with SPP, MTC, SMPTE	24, 25, 29.97, 29.97d, 30, 30d	3	24-bit/128x	24-bit/128x	32, 44.1, 44,066, 48, 88, 96 kHz	Yes	137 GB	DVD RAM, Ethernet, time code	\$2,495
No	SMPTE	24, 25, 29.97, 29.97d, 30	2	24/192 DSD	24/192 DSD	44.1-192 kHz; DSD	Yes	182 GB	MADI, Super Mac, mLAN	\$4,400 and up
No	SMPTE	24, 25, 29.97, 29.97d, 30	2	24/192 DSD	24/192 DSD	44.1-192 kHz; DSD	Yes	182 GB	MADI, Super Mac, mLAN	\$4,400 and up
No	Word, video, SMPTE, MTC, AES, TDIF, ADAT	All	2	N/A	N/A	32-192 kHz	Yes	120 GB	KC-24 remote/controller, meter bridge opt, opt 24-ch. analog I/O 48-192 kHz, opt AES	\$3,995
No	Word, video, SMPTE, MTC, AES	All	2	24-bit/128x	24-bit/128x	32-48 kHz an, 32-192 kHz dig	Yes	120 GB	KC-24 remote, opt session controller, meter bridge, opt 24-ch. digital I/Os	\$5,995
No	SMPTE, MTC	24, 25, 29.97, 29.97 D, 30, 30 D	N/A	24-bit with card option	24-bit with A/D 8 card option	44.1, 48, 96 kHz	No	32 GB	M90 removable 20 GB HD Mackie media project orb drive, remote 48, remote 24	\$4,999
No	SMPTE, MTC, ADAT, Sony 9-pin	24, 25, 29.97, 29.97 DF, 30, 30 DI	N/A	24-bit/128x	24-bit/128x	44.1, 48, 96 kHz	No	128 GB	Removable 20 GB ORB drive; micro remote	\$2,499
No	SMPTE, word clock, video sync, MIDI, TL-Bus	30 (NDF)/30, (DF)/30, 25, 29.97	3 (for I/O)	24-bit	24-bit	44.1, 48, 88.2, 96 kHz	Yes	36 GB	Audio I/O, back-up media, remote	\$3,999
No	SMPTE, word clock, MTC, video sync, MMC	30 (NDF)/30, (DF)/30, 25, 29.97	3 (for I/O)	24-bit	24-bit	44.1, 48, 88.2, 96 kHz	Yes	36 GB	Audio I/O, back-up media, remote	\$4,499

MIXER CHANNELS	XLR MICROPHONE INPUTS	FADERS	DYNAMIC AUTOMATION ONBOARD/MIDI	SCENES	EFFECTS PROCESSORS	MTC SEND/RECEIVE	MIDI SEND/RECEIVE	WAVEFORM DISPLAY	OPTIONS	PRICE
44	12	12, 1 stereo master	Y/Y	24	4	Y/Y	Y/Y	s	IB24-LTC: SMPTE read/gen, IB24 ADT: 16 ch ADAT I/O, IB24 SCSI: wide SCSI	\$4,199
4	1	5, 1 stereo master	N/N	N/A	1	Y/Y	Y/Y	No		\$495
10	1	6, 1 stereo master	N/Y	N/A	2	Y/N	Y/N	No	EV-5 expression, FS-5U punch-in, extra compact Flash, AC adapter	\$595
46	2	8, 1 stereo master	N/N	99	3	Y/Y	Y/N	No	BR-1180CD features built-in CD-RW drive, FS-5U footswitch, EV-5 expression pedal	\$845/\$1,245
8	2	7, 1 stereo master	N/Y	N/A	6	Y/Y	Y/Y	Yes	Foot control	\$429, MAD \$299
16	2	16, 1 stereo master	N/N	99	2	Y/Y	Y/Y	Yes		\$1,399
10	2	7, 1 stereo master	N/N	99	1	Y/Y	N/N	Yes	CD-1A CD-R/RW burner, 8340 SCSI card	\$699
12	2	9, 1 stereo master	N/Y	100	11	Y/Y	Y/Y	Yes		\$1,250
16	4	16, 1 stereo master	N/Y	100 per song	11	Y/Y	Y/Y	Yes	HDC-1 hard drive caddy allows user to swap multiple hard drives	\$2,000
4	0	5, 1 stereo master	N/N	N/A	1	N/N	N/N	No		\$500
28	2	12, 1 stereo master	N/A	N/A	1 (2 optional)	N/A	N/N	No	VS8F-2 effects card	\$2,495
64	8	16, 1 stereo master (motorized)	Y/Y	100 per project	2 (expandable to 8)	Y/Y	Y/Y	Yes	R-BUS 16-channel A/D or D/A I/O	\$3,995/\$4,695
48	8	12, 1 stereo master	Y/Y	100	9	Y/Y	Y/Y	Yes	VS8F-2 board, mastering FX, COSM modeling, control surfaces	\$3,295
8	0	6 mono, 1 stereo, 1 stereo master	N/Y	10	2	Y/Y	Y/Y	Yes	CD-RW788	\$1,149
4	0	4, 1 master	N/Y	N/A	1	N/N	N/N	No	PS-P55	\$499
32	2	5, 1 stereo master	Y/N/A	Unlimited	2	Y/Y	N/N	Yes	Incl. 15" LCD, 125 hrs, CDR-W mic mixer, Opt: ORB, Xyitar nbw, 17" LCD mon	\$1,799
32	4	7, 1 stereo master	Y/N/A	Unlimited	4	Y/Y	N/N	Yes	Incl. 15" LCD, 125 hrs, CDR-W mic mixer, Opt: ORB, Xyitar nbw, 17" LCD mon	\$1,999
32	8	13, 1 stereo master	Y/N/A	Unlimited	8	Y/Y	N/N	Yes	Incl. 15" LCD, 125 hrs, CDR-W mic mixer, Opt: ORB, Xyitar nbw, 17" LCD mon	\$2,299
36	2	12, 1 stereo master	N/Y	96	2	Y/Y	Y/Y	Yes	FC-5 footswitch	\$1,299
28	2	16, 1 stereo master	Y/N	96	2	Y/Y	Y/Y	Yes	Mini-YGDAI I/O exp cards	\$2,399
44	2	16, 1 stereo master	Y/N	96	2	Y/Y	Y/Y	Yes	Mini-YGDAI I/O exp cards	\$3,799
5	0	4, 1 stereo master	N/Y	N/A	3	Y/N	N/N	No	Smartmedia cards, matched Zoom MRT-3 integrates w/MIDI cable	\$385
10	2	11, 1 stereo master	N/Y	100	130	Y/N	N/N	No	Built-in drum, bass machine w/chromatic scale pad bank, sounds & patterns	\$1,900

REFERENCE MONITORS

REFERENCE MONITORS

MANUFACTURER	PRODUCT	ENCLOSURE TYPE	POWERED / UNPOWERED	FREQUENCY RESPONSE	SENSITIVITY	CROSSOVER FREQUENCY	WOOFER SIZE AND TYPE
Electro-Voice	EVID Premium 6.2	Dual ported reflex	Unpowered	6.2 Hz-20 kHz	92 dB	1.6 kHz	Dual 6"
Electro-Voice	S-40	Vented	Unpowered	85 Hz-20 kHz	85 dB	3.5 kHz	5.25"
Event Electronics	20/20	Ported	Unpowered	50 Hz-20 kHz, ± 2 dB	88 dB	2.2 kHz, 2nd-order	8" mineral-filled polypropylene cone
Event Electronics	Direct Field Monitor	Ported	Powered	35 Hz-20 kHz, ± 3 dB (-2 dB @ 38 Hz)	N/A	2.6 kHz, active fourth order	8" mineral-filled polypropylene cone
Event Electronics	20/20 S250 System Subwoofer	Ported	Powered	28 Hz-120 Hz (-3 dB)	N/A	-3 dB (@120 Hz)	15" coated paper cone
Event Electronics	Studio Precision 6 Passive	Ported	Unpowered	50 Hz-20 kHz (± 3 dB)	86 dB @ 1W	2.2 kHz	6.5" mineral-filled polypropylene cone
Event Electronics	Studio Precision 6 Active	Ported	Powered	40 Hz-20 kHz (± 3 dB)	N/A	2.6 kHz	8" mineral-filled polypropylene cone
Event Electronics	Studio Precision 8 Passive	Ported	Unpowered	40 Hz-20 kHz (± 3 dB)	88 dB @ 1W	2.2 kHz	8" mineral-filled polypropylene cone
Event Electronics	Studio Precision 8 Active	Ported	Powered	32 Hz-20 kHz (± 3 dB)	N/A	2.6 kHz	8" mineral-filled polypropylene cone
Event Electronics	Tuned Reference 5	Ported	Powered	53 Hz-19 kHz (± 3 dB)	N/A	2.6 kHz	5.25" mineral-filled polypropylene cone
Event Electronics	Tuned Reference 6	Ported	Powered	45 Hz-20 kHz (± 3 dB)	N/A	2.6 kHz	6.5" mineral-filled polypropylene cone
Event Electronics	Tuned Reference 8	Ported	Powered	35 Hz-20 kHz (± 3 dB)	N/A	2.6 kHz	8" mineral-filled polypropylene cone
Event Electronics	Tuned Reference 8XL	Ported	Powered	35 Hz-20 kHz (± 3 dB)	N/A	2.6 kHz	8" mineral-filled polypropylene cone
FBT	J-5b	Ported reflex	Unpowered	80 Hz-20 kHz	93 dB	3.5 kHz	5"
FBT	J-5 RA	Ported reflex	Powered	80 Hz-20 kHz	89 dB	3.5 kHz	5"
FBT	J-8b	Ported reflex	Unpowered	70 Hz-20 kHz	96 dB	3 kHz	8"
FBT	J-8 RA	Ported reflex	Powered	70 Hz-20 kHz	95 dB	3 kHz	8"
FBT	Jolly 3	Ported	Unpowered	80 Hz-20 kHz	93 dB	3.5 kHz	5" polypropylene-coated paper cone
FBT	Jolly 3A	Ported	Powered	80 Hz-20 kHz	93 dB	3.5 kHz	5" polypropylene-coated paper cone
FBT	Esprit 3.0	Ported	Unpowered	70 Hz-19 kHz	97.5 dB	3.5 kHz	10" polypropylene-coated paper cone
FBT	Esprit 3.0A	Ported	Powered	70 Hz-19 kHz	97.5 dB	3.5 kHz	10" polypropylene-coated paper cone
Fostex	6301BEA	Sealed	Powered	80 Hz-13 kHz	84 dB	N/A	N/A
Fostex	NF-1	Ported bass reflex	Unpowered	50 Hz-40 kHz	89 dB	10 kHz	6.5" cone
Fostex	NF-1A	Ported bass reflex	Powered	50 Hz-40 kHz	89 dB	10 kHz	6.5" cone
Fostex	PM-1	Dual ported	Powered	50 Hz-20 kHz (± 2 dB)	Max >118 dB ELM	3 kHz	6.5"
Fostex	PM0.5	Dual ported	Powered	50 Hz-20 kHz	90 dB	N/A	5" cone
Fostex	PS-3.1	Sub. ported bass reflex; sealed	Powered	80 Hz-20 kHz	60 mV	N/A	5.25" cone in sub
Fostex	SPA-11	Sealed, dual cone	Powered	60 Hz-18 kHz	92 dB/1W	N/A	N/A
Genelec	1029AP	Ported	Powered	68 Hz-18 kHz (± 2.5 dB)	110 dB peak/pair	3.3 kHz electronic	5" coated cone
Genelec	1030AP	Ported	Powered	52 Hz-18 kHz (± 2.5 dB)	115 dB peak/pair	3.5 kHz electronic	6.5" polymer composite
Genelec	2029A	Ported	Powered	68 Hz-18 kHz (± 2.5 dB)	110 dB	3.3 kHz electronic	5" coated cones
Genelec	Digital Monitor System 2029B	Ported	Powered	68 Hz-20 kHz	110 dB peak/pair	3.3 kHz	5" coated paper
Genelec	7050A Subwoofer	Laminar spiral	Powered	38-85 Hz	N/A	85 Hz	8"
Genelec	7060A Subwoofer	Laminar spiral	Powered	28-85 Hz	N/A	85 Hz	10"
Genelec	7070A Subwoofer	Laminar spiral	Powered	18-85 Hz	N/A	85 Hz	12"
Genelec	7071A Subwoofer	Laminar spiral	Powered	18-85 Hz	N/A	85 Hz	Dual 12"
Hafler	M5	MDF cabinet	Unpowered	N/A	N/A	3.2 kHz	5.25" polypropylene cone
Hafler	TRM6.1	Bass reflex	Powered	55 Hz-21 kHz ± 2 dB	N/A	3.2 kHz	6" polypropylene cone
Hafler	TRM8.1	Bass reflex	Powered	45 Hz-21 kHz ± 2 dB	N/A	2.5 kHz	8" polypropylene cone
Hafler	TRM10.1	Bass reflex	Powered	30-110 Hz ± 2 dB	N/A	Variable 40-110 Hz	Down firing 10" cellulose fiber cone
Hafler	TRM12.1	Bass reflex	Powered	25-110 Hz ± 2 dB	N/A	Variable 40-110 Hz	Down firing 12" cellulose fiber cone



MIDRANGE SIZE AND TYPE	TWEETER SIZE AND TYPE	MAGNETIC SHIELDING	CABINET DIMENSIONS (HxWxD)	WEIGHT (LBS.)	NOTES	PRICE (PER PAIR)
N/A	1" titanium dome	Yes	16.5x9x11.75	12	Shielded, dual woofer	\$580
N/A	1"	Yes	9.8x7.0x5.9	5.7		\$418
N/A	1" ferrofluid-cooled silk dome	Yes	14.75x10.25x11.75	22	Front-mounted lrg-diam port, 5-wy binding posts	\$399
N/A	1" ferrofluid-cooled silk dome	No	14.75x10.25x11.75	30	200W per side, low/high freq & trim controls, subsonic filter, RF prot, gold 1/4"/XLR combo	\$999
N/A	N/A	Yes	20.25x17.5x17	64	LFE input sensitivity, polarity invert, phase delay, monitor group input sensitivity disable/monitor-sub crossover tuning	\$599
N/A	1" soft dome	Yes	13.63x10.75x10	46	Dual large-diameter linear-flow bass ports	\$599
N/A	1" soft dome	Yes	16x12.5x11.88	50	Continuously variable input sensitivity/high-freq. trim/low-freq. trim, switchable 80 Hz second-order high-pass filter	\$1,299
N/A	1" soft dome neodymium	Yes	16x12.5x11.88	58	Dual large-diameter linear-flow bass ports	\$799
N/A	1" soft dome neodymium	Yes	16x12.5x11.88	66	Continuously variable input sensitivity/high-freq. trim/low-freq. trim, switchable 80 Hz second-order high-pass filter	\$1,499
N/A	1" silk dome	Yes	7.5x10.5x9	32	RF interference, output current limiting, subsonic filter, internal fuse, combination power on/off LED	\$399
N/A	1" silk dome	Yes	8.25x12.5x10.25	54	RF interference, output current limiting, over temperature, turn on/off transient, subsonic filter, internal fuse	\$499
N/A	2.5mm soft dome neodymium	Yes	10.25x14.75x11.75	61	RF interference, output current limiting, over temperature, turn on/off transient, subsonic filter, internal fuse	\$599
N/A	1" silk dome	Yes	10.25x14.75x11.75	61	RF interference, output current limiting, over temperature, turn on/off transient, subsonic filter, internal fuse	\$699
N/A	0.75" mylar dome	Yes	N/A	6	Can be mounted on mic stand, optional wall mount	\$279
N/A	0.75" mylar dome	Yes	N/A	7.5	Volume control, bal. XLR, 1/4" TRS, 1/4" input, ground lift switch, can be mounted on mic stand or wall	\$479
N/A	1"	Yes	N/A	10	80W RMS, wall mountable w/optional mounts	\$419
N/A	1" mylar dome	Yes	N/A	16.5	Biamped system -80W RMS -20W RMS, volume control, ground lift switch, bal. XLR, 1/4" TRS, 1/4" jack	\$739
N/A	.75" Mylar cone	Yes	10.1x6.4x6.2	7	Available in 4 or 16 Ω models, white or dark grey finish, wall-/mic stand-mountable w/opt mounts	\$1,299
N/A	.75" Mylar cone	Yes	10.1x6.4x6.2	9	Built power 60W power amp, 1/4" TRS bal input jack, aux out, gain/vol/tone control, white or dark grey, wall/mic stand mountable, w/opt mounts	\$189
N/A	1.25" Mylar cone w/aluminum flat wound voice coil	Yes	16.9x11.4x11.2	23	1/4" TRS balanced input jacks, white or dark grey	\$339
N/A	1.25" Mylar cone w/aluminum flat wound voice coil	Yes	16.9x11.4x11.2	33	1/4" TRS balanced input jacks, 1/4" aux out jack, gain/volume control, 2-band EQ, ground lift switch, white or dark grey	\$419
4" full-range	N/A	Yes	6.5x4x5	7	Amplifier may be used independently	\$189 each
N/A	1" soft dome	Yes	13.4x10.8x10.8	20	'Hyperbolic parabolic' diaphragm for woofer, URD tangential diaphragm edge, push-pull damper, time-aligned encl	\$1,198
N/A	1" soft dome	Yes	13.4x5x12.6	24	Biamped w/2 60W amps, adj. boost/cut @ 60 Hz & 10 kHz, 3 dB attenuator at 3 kHz, tweeter level adj. $\pm$ 3dB	\$1,998
N/A	1" soft dome	Yes	15x8.5x10	24	75-45W biamplified, shielded	\$499
N/A	0.75" soft dome	No	7x11x10	14.3		\$349
3" full-range cone in each satellite	N/A	Yes	10x11.25x8.25 (subwoofer), 7.25x6.56x4.69 (satellites)	14	Woofer contains 15W amp, x-over, 5W amps x2 for satellites	\$349 (for entire system)
2x 4" full-range cones	N/A	No	7x12x7	16.75	100W internal amplifier, mic and line inputs, level control, daisy-chainable and stackable	\$499 each
N/A	0.75" metal dome	Yes	10x6x7.25	12.5	XLR ins, power indicator, input-sens controls, amp/driver-prot, x-overs, EQ	\$1,080
N/A	0.75" metal dome	Yes	12.5x8x9.5	15	XLR ins, power indicator, input-sens controls, amp/driver-prot, x-overs, EQ	\$2,098
N/A	0.75" metal dome	Yes	10x6x7.25	12.5	S/PDIF and XLR ins, all features of 1029A	\$1,325
N/A	0.75" metal dome	Yes	9.75x6x7.25	12.5	24-bit/96 kHz digital interface	\$1,375
N/A	N/A	Yes	16.13x13.75x12.38	33	For use with 1029A/2029A	\$790 each
N/A	N/A	Yes	20.75x18.19x14.19	57	Integrated 6.1 bass manager	\$1,650 each
N/A	N/A	Yes	24.63x21.89x19.31	110	Integrated 6.1 bass manager	\$2,250 each
N/A	N/A	Yes	28.75x31.63x19.31	178	Integrated 6.1 bass manager	\$3,650 each
N/A	Proprietary 25mm silk dome	Yes	12.25x6.75x7	10	4th order Butterworth vented 2-way	\$249
N/A	1" soft dome	Yes	13.25x8.875x11.5	25	150W + 33W trans*ana amps	\$998
N/A	1" soft dome	Yes	15.716x10.25x13	35	150W + 75W trans nova amps	\$1,438
N/A	N/A	No	14.75x16x16	60	200W class G trans*ana ampl, XLR, RCA ins, 90/180/270 dgr phsng	\$599 each
N/A	N/A	No	18x19.5x19.25	96	200W class G trans*ana ampl, XLR, RCA ins, 90/180/270 dgr phsng	\$699 each

REFERENCE MONITORS

REFERENCE MONITORS

MANUFACTURER

PRODUCT

ENCLOSURE TYPE

POWERED/
UNPOWERED

FREQUENCY RESPONSE

SENSITIVITY

CROSSOVER FREQUENCY

WOOFER SIZE AND TYPE

HBB	HBB Circle 3	2-way non-ported	Active & passive	70 Hz-20 kHz	83 dB	3.5 kHz	4.5" NRSC cone
HBB	HBB Circle 5	Ported	Active & passive	48 Hz-20 kHz	87 dB	2.6 kHz	8" polymer cone
HBB	HBB Circle Sub	Twin chamber reflex	Powered	33 Hz-120 kHz	1V	5 main ch use Sallen & Key filters @ 120 Hz	12" double magnet
Hot House	ASB 310	Multiple passive radiator	Powered	20-80 Hz (± 1 dB)	N/A	80 Hz	10" ultra-high excursion w/2x10" passive radiators
Hot House	PRM 165	Reflex, rear ported	Unpowered	49 Hz-20 kHz (± 1.75 dB)	91 dB	2.4 kHz	6.5" long throw
JBL Professional	4206	Bass reflex	Unpowered	65 Hz-20 kHz (± 2 dB)	87 dB	2.8 kHz	6.5" woofer
JBL Professional	4208	Bass reflex	Unpowered	60 Hz-20 kHz (± 2 dB)	89 dB	2.8 kHz	8"
JBL Professional	4408A	Bass reflex	Unpowered	50 Hz-20 kHz (± 2 dB)	89 dB	2.5 kHz	8" cast frame
JBL Professional	4410A	Bass reflex	Unpowered	45 Hz-20 kHz (± 2 dB)	90 dB	900 Hz, 4 kHz	10" cast frame
JBL Professional	4412A	Bass reflex	Unpowered	45 Hz-20 kHz (± 2 dB)	89 dB	850 Hz, 4 kHz	12" cast frame
JBL Professional	Control 1	Bass reflex	Unpowered	70 Hz-20 kHz (± 1 dB)	87 dB	6 kHz	5.25"
JBL Professional	LSR12P	Subwoofer	Powered	28-80 Hz (± 6 dB)	96 dB	85 Hz	12" neodymium differential drive
JBL Professional	LSR25P	Die-cast aluminum	Powered	70 Hz-20 kHz (± 1 , -2dB)	96 dB @ +4 dBu-10 dBv	2.3 kHz	5.25 SFG
JBL Professional	LSR28P	Bass reflex	Powered	50 Hz-20 kHz (± 1 , -1.5 dB)	89 dB	1.7 kHz	8" differential drive
JBL Professional	LSR32	Bass reflex	Unpowered	60 Hz-20 kHz (± 1 , -1.5 dB)	90 dB	250 Hz, 2.2 kHz	12" neodymium differential drive
KRK	M6000/S	Tuned port	Unpowered	62 Hz-20 kHz	89 dB	2.4 kHz	6" polyglass
KRK	M7000B/BS	Tuned port	Unpowered	50 Hz-20 kHz	91 dB	3 kHz	7" Kevlar
KRK	S8	Slotted port	Powered	N/A	N/A	N/A	8" coated paper
KRK	S10	Tuned port	Powered	30 Hz-50 kHz -130 kHz (variable) ± 2 dB	+6 to -30 dB	80 kHz fixed	10" woven kevlar
KRK	S12	Slotted port	Powered	31 Hz-50 kHz (variable) ± 2 dB	N/A	N/A	12" woven kevlar
KRK	ST 6	Tuned port	Unpowered	62 Hz-20 kHz	89 dB	2.5 kHz	8" DLDA aluminum
KRK	ST 8	Tuned port	Unpowered	52 Hz-20 kHz	90 dB	2.5 kHz	8" DLDA aluminum
KRK	E8T	Tuned port	Powered	42 Hz-21 kHz	N/A	1.96 kHz	8" poly Kevlar
KRK	V4	Slotted port	Powered	N/A	N/A	N/A	4" coated
KRK	V6	Tuned port	Powered	30 Hz-50 kHz -130 kHz (variable) ± 2 dB	+6 to -30 dB	80 Hz fixed	10" woven kevlar
KRK	V8	Tuned port	Powered	47 Hz-23 kHz (± 2 dB)	+6 to -30 dB	1.66 kHz	8" woven kevlar
KRK	V88	Tuned port	Powered	35 Hz-2 kHz (± 2 dB)	+6 to -30 dB	1.83 kHz	8" woven kevlar
Mackie Designs	HRS 120 Studio Subwoofer	N/A	Powered	21-150 Hz ± 1.5 dB	N/A	55-110 Hz @ 24 dB	12" RCF precision with 4" voice coil
Mackie Designs	HR624	Bass reflex/passive radiator	Powered	52 Hz-QQO	N/A	3 kHz	6.7"
Mackie Designs	HR626	Sealed/passive radiator	Powered	40 Hz-20 kHz	89 dB	3 kHz	(2) 6.7"
Mackie Designs	HR824	Sealed	Powered	39 Hz-20 kHz (± 1.5 dB)	>120 dB 1W/1m	2 kHz	8.75" mineral-filled polypropylene cone
Mackie Designs	HRS150	Sealed/passive radiator	Powered	20 Hz-500 Hz	96 dB	55 Hz-110 Hz @ 24 dB	15" RCF Precision
M&K Professional	MPS-300	In-wall	Unpowered	80 Hz-22 kHz (± 2 dB)	N/A	1.2 kHz	(2) 5.25" polypropylene mid-woofers
M&K Professional	MPS-1525 Tripole Surround	Sealed	Unpowered	80 Hz-20 kHz	90 dB	1.8 kHz	(2) 5.25"
M&K Professional	MPS-1625 Tripole Surround	Sealed	Unpowered	80 Hz-20 kHz	90 dB	1.8 kHz	6.5"
M&K Professional	MPS-1625P Tripole Surround	Sealed	Powered	77 Hz-20 kHz	90 dB	1.8 kHz	6.5"
M&K Professional	MPS-1510	Sealed	Unpowered	80 Hz-20 kHz	90 dB	1.8 kHz	5.25"
M&K Professional	MPS-1520 Center Channel	Sealed	Unpowered	80 Hz-20 kHz	90 dB	1.8 kHz	(2) 5.25"
M&K Professional	MPS-1610	Sealed	Unpowered	80 Hz-20 kHz	90 dB	1.8 kHz	6.5"
M&K Professional	MPS-2510	Sealed	Unpowered	77 Hz-20 kHz (± 2 dB)	90 dB	1.5 kHz	(2) 5.25"
M&K Professional	MPS-2510 Powered	Sealed	Powered	77 Hz-20 kHz (± 2 dB)	90 dB	1.5 kHz	(2) 5.25"
M&K Professional	MPS-2525 Tripole Surround	Sealed	Unpowered	80 Hz-20 kHz	90 dB	1.8 kHz	(2) 5.25"
M&K Professional	MPS-2525P Tripole Surround	Sealed	Powered	77 Hz-20 kHz	90 dB	1.8 kHz	(2) 5.25"
M&K Professional	MPS-2550	Sealed	Unpowered	77 Hz-20 kHz (± 2 dB)	90 dB	200 Hz, 1,500 Hz	(2) 6.5"



MIDRANGE SIZE AND TYPE	TWEETER SIZE AND TYPE	MAGNETIC SHIELDING	CABINET DIMENSIONS (HxWxD)	WEIGHT (LBS.)	NOTES	PRICE (PER PAIR)
N/A	1" softdome neodymium magnet	Yes	10.6x6.9x7.8	8.1 passive, 11 active	Active amp w/anti thump circ	\$799 active, \$429 passive
N/A	1" softdome with damping chamber	Yes	16.5x10x11.8	10 passive, 12.6 active	Active version: 2 ch amp Class AB	\$1,490 active, \$749 passive
N/A	N/A	No	18.3x16.3x16.3	47.3	Built in 5 ch active filtering	\$1,399
N/A	N/A	No	15x15x16	58	Stereo x-over w/ XLR & RCA I/O, HP outs, sens./vlt mitchng, pk SPL 118 dB	\$2,499
N/A	1" recessed soft dome	Yes	12.5x8.5x13	25	Req 100-300W of hi qly amplification for ruler-flat mastering performance	\$1,299
N/A	1" titanium	Yes	15.375x9x9.5	15	Multiradial baffle	\$424
N/A	1" titanium	Yes	17.75x11.25x9.5	20.5	Multiradial baffle	\$558
N/A	1" titanium dome	No	17.25x11.625x12	26	Mirror image pairs	\$798
5" cast frame	1" titanium dome	No	23.5x14.25x11.25	43	Mirror image pairs	\$1,098
5" cast frame	1" titanium dome	No	14.25x23.5x11.25	47	Mirror image pairs in horizontal configuration	\$1,658
N/A	0.75" polycarbonate	Yes	9.25x6.25x5.625	4	Multimedia brackets and adapters available	\$338
N/A	N/A	No	15.5x25x11.5	50	Integrated bass management system	\$1,279
N/A	1" titanium composite with waveguide	Yes	10.6x6.8x9.5	17		\$798
N/A	1" titanium composite on waveguide	No	13x16x12.75	50	Carbon fiber composite baffle	\$2,358
5" neodymium w/2" voicecoil	1" titanium composite on waveguide	No	15.5x25x11.5	47	Carbon fiber composite baffle	\$2,358
N/A	1" kevlar	Optional	13x9x10	36		\$1,050 (\$1,200 shielded)
N/A	1" kevlar	Optional	14.25x11x11	50		\$1,500 (\$1,800 shielded)
N/A	N/A	No	N/A	N/A		\$850
N/A	N/A	No	13x18.75x17	53 (pair)		\$1,200
N/A	N/A	No	15x22x20	72		\$1,499
N/A	1" silk dome	Yes	13x8.75x9.75	21	Max SPL 104 dB	\$400
N/A	1" silk dome	Yes	15.25x9.75x10.5	26	Max SPL 110 dB	\$500
N/A	1" trioxid 5 inverted dome	Yes	17.5x14.75x14.5	61	Dual discrete amps, low freq. amp-120W, high freq. amp 120W	\$2,500 each
N/A	1" titanium dome	Yes	N/A	N/A		\$1,000
N/A	N/A	No	13.017x18.75x17	53 (pair)		\$1,200
N/A	1" silk dome	Yes	N/A	38 (pair)		\$1,800
N/A	1.25" silk dome	Yes	N/A	50 (pair)		\$2,400
N/A	N/A	No	21x18x21.3	94	Biampified	\$1,499
N/A	1" viscous edge-damped aluminum dome	Yes	13x8.25x10.3	51	Biampified	\$1,198
N/A	1" aluminum dome	Yes	8.8x19.6x12.4	31	Tweeter viscous edge damped aluminum dome	\$1,798
N/A	1" alumin-alloy, ferrofluid cooled coil	Yes	15.75x10x10.5	32	Rear mass-loaded passive radiator	\$1,698
N/A	N/A	No	24x23.7x23.6	117	Includes 4" voice coil	\$2,499 each
N/A	(2) 1" soft dome, 1" ferrofluid open-back transmission line	No	12.1x10.5x3.1	N/A	In-wall studio monitor with white metal grill	\$999 each
(2) 3.5"	1" soft dome	Yes	10.5x8.5x6	11	Switchable power response	\$1,399
(4) 3.5"	1" soft dome	Yes	12.6x10.5x8	14	Switchable power response	\$1,998
(4) 3.5"	1"	Yes	12.6x10x9	18	Switchable power response	\$2,499
N/A	1" soft dome	Yes	10.5x6.25x7.4	9		\$499 each
N/A	1" soft dome	Yes	5.6x6.18.5x8.25	17	Horizontal center channel monitor	\$699 each
N/A	1" soft dome	Yes	12.6x18.4x7.5	12		\$650 each
N/A	(3) 1" soft dome	Yes	12.5x10.5x12	24	THX PM3 appr, user selectable wide/narrow vertical directivity	\$899 each
N/A	(3) 1" soft dome	Yes	12.5x10.5x12	24	THX PM3 appr, user selectable wide/narrow vertical directivity	\$1,999 each
(4) 3.5"	(3) 1" soft dome	Yes	12.5x10.5x12	26	Tripole surround monitor, switchable power response	\$1,399
(4) 3.5"	(3) 1"	Yes	12.5x10.5x14	26	Switchable power response	\$2,999
(2) 5.25"	(3) 1"	Yes	12.5x10.5x14	32	User selectable vertical directivity	\$1,399 each

REFERENCE MONITORS

REFERENCE MONITORS

MANUFACTURER

PRODUCT

ENCLOSURE
TYPE

POWERED/
UNPOWERED

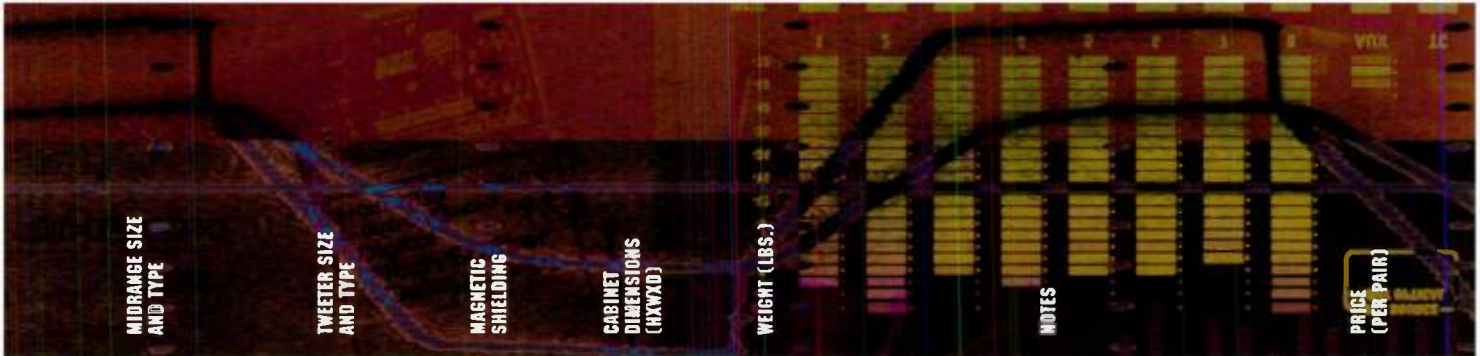
FREQUENCY
RESPONSE

SENSITIVITY

CROSSOVER
FREQUENCY

WOOFER SIZE
AND TYPE

M&K Professional	MPS-2575 Tripole Surround	Sealed	Unpowered	30 Hz-20 kHz	90 dB	1.8 kHz	(2) 6.5"
M&K Professional	MPS-2810 Subwoofer	Sealed	Powered	20-125 Hz	N/A	N/A	(2) 8"
M&K Professional	MPS-5150 Subwoofer	Sealed	Powered	20-125 Hz	N/A	N/A	(2) 12"
M&K Professional	MPS-5310 Subwoofer	Sealed	Powered	20-125 Hz	N/A	N/A	(2) 12"
M&K Professional	MPS-5410 x Subwoofer	Sealed	Powered	18-125 Hz	N/A	N/A	(2) 12"
M-Audio	BK5	Ported reflex	Powered	56 Hz-20 kHz	200 mV	3 kHz	5.25" polypropylene
M-Audio	BK8	Ported reflex	Powered	37 Hz-20 kHz	200 mV	1.25 kHz	8" mineral-filled polypropylene cones
NHT Pro	A-20	Sealed	Dedicated outboard amplifier	40 Hz-20 kHz	117 dB	2 kHz	6.5" paper cone
NHT Pro	B-20	Air suspension	Powered	29-100 Hz	N/A	5 position variable 70, 85, 95, 105, bypass (230 Hz)	(2) 10" ultra long throw (1" linear peak-peak)
NHT Pro	C-20	Acoustic suspension	Powered	48 Hz-20 kHz	N/A	N/A	6.5" treated paper (shielded)
NHT Pro	M-00	Sealed, cast aluminum	Powered	80 Hz-20 kHz	111 dB	N/A	4.5" paper cone
NHT Pro	S-00	Acoustic suspension	Powered	39 Hz-90 Hz	N/A	Variable 50-90 Hz	8" long throw, treated paper
Paradigm Reference	Mini Monitor	Bass reflex	Unpowered	43 Hz-20 kHz (± 2 dB)	89 dB	2 kHz	6.5" injection molded copolymer polypropylene
Paradigm Reference	Monitor 3	Bass reflex	Unpowered	36 Hz-20 kHz (± 2 dB)	90 dB	2 kHz	8" injection molded copolymer polypropylene
Paradigm Reference	Studio/20	Bass reflex	Unpowered	38 Hz-22 kHz (± 2 dB)	89 dB	1.5 kHz	6.5" mica-polymer cone
Phonic	P8A	Ported front-load	Powered	45 Hz-22 kHz	88 dB/SPL	N/A	8.75" polypropylene
PMC	IB-1	Transmission line	Unpowered	25 Hz-25 kHz	91 dB	380 Hz, 3.8 kHz	10" flat carbon fiber, Nomex piston driver
PMC	PMC IB-1S	Transmission line	Option	25 Hz-25 kHz	89 dB	380 Hz, 3.8 kHz	10" flat carbon fiber, Nomex piston driver
PMC	PMC LB-1	Transmission line	Option	35 Hz-25 kHz	87 dB	2.5 kHz	4.5" 1 kw pulse with 4" voice coil
PMC	TB-2S	Transmission line	Powered (unpowered avail)	35 Hz-25 kHz	90 dB	3 kHz	6.5" domed-cast magnesium
PMC	XB-1P Subwoofer	Transmission line	Powered (unpowered avail)	25-200 Hz	90 dB	100 Hz	Die-cast 10" dual voice coil
Precision Systems	T16 Active	Ported	Powered	80 Hz-20 kHz	83 dB	2.8 kHz	6" ATC proprietary
Quested	F5	Infinite baffle	Powered	75 Hz-20 kHz (± 3 dB)	N/A	N/A	5" high excursion cast chassis
Quested	F 11a	Bass reflex	Powered	65 Hz-20 kHz (± 2 dB)	N/A	N/A	6.5" custom
Quested	H108	Bass reflex	Unpowered	55 Hz-18 kHz	90.5 dB	N/A	8" custom
Quested	VH3208	Bass reflex	Unpowered	45 Hz-20 kHz (± 2 dB)	92 dB	N/A	2x8" custom
Quested	VS2108	Bass reflex	Powered	55 Hz-19 kHz (± 2 dB)	N/A	N/A	8" custom
Quested	VS2205	Bass reflex	Powered	75 Hz-19 kHz	N/A	N/A	2x5" custom
Requisite	Eighty One	Ported reflex	Passive	33 Hz-40 kHz	87 dB	2.7 kHz	8" magnesium cone
Requisite	Eighty One	Ported reflex	Active	33 Hz-40 kHz	87 dB	2.7 kHz	8" magnesium cone
Roland	DS-30A 24-bit Digital	Ported bass reflex	Powered	78 Hz-20 kHz (± 3 dB)	N/A	2.3 kHz active 3rd order	5" foamed polypropylene cone
Roland	DS-50A 24-bit Digital	Ported bass reflex	Powered	68 Hz-22 kHz (± 3 dB)	N/A	2.3 kHz active 3rd order	5" foamed polypropylene cone
Roland	DS-90 24-bit Digital	Bass reflex	Powered	Flat, w/user- adjustable settings	0 dBm (0.775 Vrms)	2.6 kHz active 4th order	6.5" polypropylene cone
Samson	Resolv 50a	Tuned, slotted port	Powered	60 Hz-30 kHz (± 5 dB)	N/A	2.1 kHz	5" polypropylene
Samson	Resolv 65	Tuned, slotted port	Unpowered	45 Hz-30 kHz (± 5 dB)	87 dBc	2.5 kHz	6.5" polypropylene
Samson	Resolv 65a	Tuned, slotted port	Powered	54 Hz-30 kHz (± 5 dB)	N/A	2.1 kHz	6.5" polypropylene
Samson	Resolv 80a	Tuned, slotted port	Powered	50 Hz-26 kHz (± 5 dB)	N/A	2 kHz	8" polypropylene
Samson	Resolv 120a	Ported reflex	Powered	24 Hz-200 kHz (± 5 dB)	N/A	40 Hz-180 Hz	10" treated paper
Studer	Active A1	Ported	Powered	58 Hz-22 kHz	0.775V for 100 dB SPL @1m	3.5 kHz	5.6"
Studer	A3 Active	Ported	Powered	43 Hz-23 kHz	0.775V for 100 dB SPL @1m	2.2 kHz	8.5"



MIDRANGE SIZE AND TYPE	TWEETER SIZE AND TYPE	MAGNETIC SHIELDING	CABINET DIMENSIONS (HxWxD)	WEIGHT (LBS.)	NOTES	PRICE (PER PAIR)
(2) 5.25", (2) 3.5"	(5) 1" soft dome	Yes	12.375x10.5x14	36	Tripole surround monitor, switchable power response	\$1,799 each
N/A	N/A	Yes	14.5x17.5x12.125	41	Dual driver push-pull, headroom maximizer, backfire design	\$1,499 each
N/A	N/A	Yes	23.25x15.5x19.625	72	Dual driver push-pull, headroom maximizer, XLR in, THX PM3 appr	\$1,499
N/A	N/A	Yes	23.25x15.5x19.625	82	Dual driver push-pull design, headroom maximizer, XLR in, THX PM3 appr	\$1,999
N/A	N/A	Yes	23.25x15.5x26	115	Dual driver push-pull design, headroom maximizer, XLR in, THX PM3 appr	\$2,999
N/A	1" natural silk	Yes	9.85x6.54x7.88	11		\$400
N/A	1" natural silk	Yes	14.97x9.85x11.82	20.32		\$599
N/A	1" ferro fluid cooled, metal dome	Partial	3.5x19x12.75 (2u)	17	XLR/TRS in, output (amp-monitors)-XLR cables; controls listening position-NF/MF, wall prox-0/1, input sensi-10/-3/+4,+11 dBu, mute, LED readout-SPL, VAC, heat sink temp	\$1,700
N/A	N/A	No	(2) 14x14x16 (inc. grill)	38	Includes 250W/ch control amplifier	\$1,800
N/A	1" aluminum dome, fluid cooled, shielded	Partial	14x8x9.375	19	Center channel complement for A-20 system	\$1,000
N/A	1" ferrofluid cooled, soft dome	Full, including transformer	9x5.7x7.3	14	Inputs: XLR, TRS, RCA; controls-NF/MF, +4/-10 dBu, auto power	\$350 each
N/A	N/A	No	13.25x10.25x13	30	Optional footswitch bypass	\$700 each
N/A	1" pure titanium dome	Optional	13.25x8x11.25	15.5	Black ash, light cherry, and dark cherry laminates	\$369
N/A	1" pure titanium dome	Optional	20x9.19x11.37	24	Black ash, light cherry, and dark cherry laminates	\$449
N/A	1" pure aluminum dome	Optional	14.5x8.25x11.37	28	Black ash, light cherry, and rose nut laminate and wood veneer	\$650 laminate, \$900 veneer
N/A	1" silk dome	Yes	16.9x10.6x12.6	33		\$500
3" fabric dome	Silk soft dome with double chamber	Optional	30x13x21	65	Available in several finishes	\$5,900
5.5" dome fabric	3.5" silk dome w/double chamber	Optional	29x18x13	76	Optional Bryston power modules	\$4,950
N/A	Silk soft dome w/double chamber	Yes	21x10x7	21	Optional Bryston power modules	\$2,360
N/A	Aluminum alloy phase shield ferrofluid	Optional	15.75x7.5x11.75	Powered: 30; unpowered: 20	Available in several finishes	\$900 and up
N/A	N/A	No	31x17x10.5	Powered: 71; unpowered: 60	Available in several finishes	\$1,250 and up
N/A	1"	Optional		40		\$3,800
N/A	0.75" soft dome	No	6.75x11x7.75	13		\$1,390
N/A	1.10" soft dome	Yes	12.5x8.5x11.25	24.5	Bass/treble boost/cut, level control	\$2,190
N/A	1.125" high frequency soft dome	Optional	15x9x9	26		\$1,990
3" custom midrange soft dome	1.125" high frequency soft dome	Optional	24x19x16.5	84		\$4,990
N/A	1.125" high frequency soft dome	Optional	16x13x13	48		\$3,990
N/A	1.125" high frequency soft dome	Yes	10x13x11	29		\$3,590
N/A	1" dual ring radiator	No	N/A	45	Cabinet - 1 inch MDF, available w/ powered stands	\$1,950
N/A	1" dual ring radiator	No	N/A	45	Cabinet - 1 inch MDF, available w/ powered stands	\$3,900
N/A	1" soft dome	Yes	6.93x9.88x11.06	13.5	Digital input up to 24/96 operation; coax, optical plus analog XLR, TRS, adjustable low, high freq. trims	\$490
N/A	0.75" soft dome	Yes	7.75x10.5x12.25	17.75	Digital input up to 24/96 operation; coax, optical plus analog XLR, TRS, adjustable low, high freq. trims	\$698
N/A	1" soft dome	Yes	19.6x9x12.7	24	24-bit digital ins (S/PDIF) on each speaker	\$1,190
N/A	1" titanium dome	Yes	12x8x9.5	14	-10 dBv unbal. input, RCA +4 dBu bal. input, 1/4"	\$280
N/A	1" titanium dome	Yes	13.75x9.25x10	12		\$279
N/A	1" titanium dome	Yes	13.75x9.25x10.75	17	Mid presence switch, -3, 0 +3, +6 dB, 3 inputs: -10dBv unbal., RCA +4dBu bal. XLR, 1/4"	\$399
N/A	1" titanium dome	Yes	16x11.25x13	21	Mid presence switch, -3, 0 +3, +6 dB, 3 inputs: -10dBv unbal., RCA +4dBu bal. XLR, 1/4"	\$539
N/A	N/A	Yes	15x14.75x18.5	32	Active, passive inputs; variable crossover; auto on; remote mute function, double rear ports	\$279
N/A	2.75"	Yes	9x6x7	11	Negative impedance and group delay compensation	\$1,590
N/A	4"	Yes	16x10x12	28	Negative impedance and group delay compensation	\$3,790

REFERENCE MONITORS

REFERENCE MONITORS

MANUFACTURER

PRODUCT

ENCLOSURE TYPE

POWERED/
UNPOWERED

FREQUENCY
RESPONSE

SENSITIVITY

CROSSOVER
FREQUENCY

WOOFER SIZE
AND TYPE

Sundholm Acoustics	Sundholm PS/8 Sub	Ported reflex	Powered	24-100 Hz [± 3 dB], 28-100 Hz (± 1 dB)	N/A	50-100 Hz variable	8" treated paper cone
Sundholm Acoustics	Sundholm PS/10T Powered Sub	Ported reflex	Powered	34 Hz-100 kHz (± 3 dB)	N/A	50-100 Hz variable	10" polycone
Sundholm Acoustics	SL 5.0	Ported reflex with wave guide	Unpowered	56 Hz-20 kHz (± 3 dB), 150 Hz-20 kHz (± 1 dB), 24-28 Hz-20 kHz (± 1 dB)	87dB	2 kHz	5.25" coated paper cone fully shielded
Sundholm Acoustics	SL 6.5	Ported reflex	Unpowered	45 Hz-20 kHz (± 2 dB)	88 dB	2.5 kHz	6.5" polycone
Sundholm Acoustics	SL 8.0	Ported reflex	Unpowered	40 Hz-20 kHz (± 3 dB)	88 dB	2.2 kHz	8" polycone
Tannoy	Eclipse 8	Ported	Powered	40 Hz-50 kHz	+4 dBu-10 dBu	1.7 kHz-14 kHz	N/A
Tannoy	Proto-J	Ported reflex	Unpowered	60 Hz-20 kHz	87 dB	3 kHz	6.5" pulp
Tannoy	PS110B	Ported reflex	Powered	31-150 Hz	N/A	Variable	10" pulp
Tannoy	PS350B	Ported reflex	Powered	29-300 Hz	N/A	Variable	15" treated pulp
Tannoy	Reveal	Ported reflex	Unpowered	65 Hz-20 kHz	87 dB	3 kHz	6.5" plastic
Tannoy	Reveal Active	Ported reflex	Powered	62 Hz-20 kHz	N/A	3 kHz	6.5" plastic
Tannoy	System 600	Ported reflex	Unpowered	52 Hz-20 kHz	90 dB	1.8 kHz	6.5" molded plastic
Tannoy	System 600A	Ported reflex	Powered	44 Hz-20 kHz	N/A	1.6 kHz	6.5" molded plastic
Tannoy	System 800	Ported reflex	Unpowered	47 Hz-20 kHz	92 dB	1.8 kHz	8" molded plastic
Tannoy	System 800A	Ported reflex	Powered	44 Hz-20 kHz	N/A	1.6 kHz	8" molded plastic
Tannoy	System 1000	Ported reflex	Unpowered	45 Hz-20 kHz	94 dB	1.5 kHz	10" molded plastic
Tannoy	System 1200	Ported reflex	Unpowered	40 Hz-20 kHz	95 dB	1.3 kHz	12" molded plastic
Triple P	Pyramid	Sealed	Unpowered	80 Hz-18 kHz	87 dB	N/A	N/A
Truth Audio	TA-1A	Ported reflex	Powered	48 Hz-24 kHz	88 dB	2 kHz	(2) 5" mineral-filled poly cone
Truth Audio	TA-1P	Ported reflex	Unpowered	48 Hz-24 kHz	88 dB	2 kHz	(2) 5" mineral-filled poly cone
Vienna Acoustics	Bach	Bass reflex	Unpowered	38 Hz-20 kHz (± 3 dB)	90 dB	N/A	7" paper cone
Vienna Acoustics	Haydn	Bass reflex	Unpowered	42 Hz-20 kHz (± 3 dB)	89 dB	N/A	5.5" XPP cone
Vienna Acoustics	Mozart	Bass reflex	Unpowered	35 Hz-22 kHz (± 3 dB)	90 dB	N/A	2x5.5" XPP cone
Westlake Audio	BBSM-4	Bass reflex	Unpowered	65 Hz-20 kHz	89 dB	1.5 kHz	4" polypropylene
Westlake Audio	BBSM-5	Bass reflex	Unpowered	55 Hz-20 kHz ± 3 dB	90 dB	1.2 kHz	5" polyglass
Westlake Audio	Lc265.1	Bass reflex	Unpowered	48 Hz-18 kHz	91 dB	180 Hz, 4 kHz	6.5" polypropylene
Westlake Audio	Lc3w10	Bass reflex	Unpowered	42 Hz-20 kHz	88 dB	160 Hz, 4.5 kHz	10" polypropylene
Westlake Audio	Lc3w12	Bass reflex	Unpowered	40 Hz-18 kHz	91 dB	160 Hz, 4.5 kHz	12" polypropylene
Westlake Audio	Lc 4.75	Bass reflex	Unpowered	60 Hz-20 kHz	85 dB	4.5 kHz	4" polypropylene
Westlake Audio	Lc 5.75	Bass reflex	Unpowered	60 Hz-20 kHz	86 dB	4.5 kHz	5" polyglass
Westlake Audio	Lc6.75	Bass reflex	Unpowered	60 Hz-18 kHz	87.5 dB	4 kHz	6.5" polypropylene
Westlake Audio	Lc8.1	Bass reflex	Unpowered	55 Hz-18 kHz	90.5 dB	3.6 kHz	8" polypropylene
Westlake Audio	Lc24.75	Ported	Unpowered	65 Hz-20 kHz	89 dB	5.5 kHz	4" treated paper
X-Vision Audio	Amber Active	N/A	Powered	38 Hz-2 kHz (± 2 dB)	91 dB 1W/1m @ 0.5% THD	N/A	10" dual coil, long excursion
X-Vision Audio	Amber HR Active	N/A	Powered	32 Hz-2 kHz (± 2 dB)	91 dB 1W/1m @ 0.5% THD	N/A	10" dual coil, long excursion
X-Vision Audio	Black HR Active	N/A	Powered	43 Hz-20 kHz (± 2.5 dB)	89 dB 1W/1m @ 0.35% THD	N/A	6.75" polypropylene
X-Vision Audio	Blue HR Active	N/A	Powered	37 Hz-20 kHz (± 2.0 dB)	90 dB 1W/1m @ 0.3% THD	N/A	(2) 7" carbon
X-Vision Audio	Cyan HR	N/A	Powered	36 Hz-20 kHz (± 2.5 dB)	91 dB 1W/1m @ 0.3% THD	N/A	(4) 7" carbon
X-Vision Audio	Orange HR	N/A	Powered	38 Hz-20 kHz (± 2.5 dB)	90 dB 1W/1m @ 0.32% THD	N/A	(2) 7" carbon
X-Vision Audio	Owl System	N/A	Powered	42 Hz-20 kHz (± 1.5 dB)	90 dB 1W/1m @ 0.3% THD	N/A	(2) 7" carbon
X-Vision Audio	Pink TV Active	N/A	Powered	58 Hz-19 kHz (± 2.5 dB)	89 dB 1W/1m @ 0.4% THD	N/A	5.5" paper carbon
X-Vision Audio	Violett HR Active	N/A	Powered	48 Hz-20 kHz (± 2.5 dB)	89 dB 1W/1m @ 31% THD	1.2 kHz	7" carbon
X-Vision Audio	Yellow HR	N/A	Powered	38 Hz-1 kHz (± 2 dB)	93 dB 1W/1m @ 0.5% THD	N/A	(2) 15" paper membrane
Yamaha	MSP5	Bass reflex	Powered	50 Hz-40 kHz	101 dB	2.5 kHz	5" paper cone w/rubber surround
Yamaha	MSP10 Studio	Bass reflex	Powered	40 Hz-40 kHz	-6 dB to +4 dB	2.0 kHz	8" poly w/rubber surround
Yorkville Sound	YSM1	Ported	Passive	40 Hz-20 kHz	90 dB	2.5 kHz	6.5" foam surround
Yorkville Sound	YSM1i	Ported	Unpowered	40 Hz-20 kHz	90 dB	2.5 kHz	6.5" foam surround
Yorkville Sound	YSM1l	Ported reflex	Unpowered	40 Hz-20 kHz	90 dB	2.5 kHz	6.5" foam surround
Yorkville Sound	YSM1p	Ported	Powered	40 Hz-20 kHz	90 dB	2.5 kHz	6.5" foam surround
Yorkville Sound	YSS1	Studio subwoofer	Powered	35 Hz-150 Hz	N/A	N/A	12" single long excursion



MIDRANGE SIZE AND TYPE	TWEETER SIZE AND TYPE	MAGNETIC SHIELDING	CABINET DIMENSIONS (HxWxD)	WEIGHT (LBS.)	NOTES	PRICE (PER PAIR)
N/A	N/A	No	15.25x15.25x15.25	50	Phase reversal switch, stacking outputs, level control	\$820 each
N/A	N/A	No	29x12x15.25	55	Pair serve as speaker stand for full-range monitors	\$899 each
N/A	1" aluminum dome, fully shielded	Yes	15x7.75x8	2 each	5.1 mixing system with PS/8 powered sub	\$795
N/A	1" silk dome	No	15.5x10.6x11.6	25	Bi-wire connector, time offset correction plate, assym technology	\$795
N/A	1" aluminum dome	No	15.5x12x14.25	35	Bi-wire connector, time offset correction plate, Assym technology	\$995
8" dual concentric	1" wideband	Yes	14.6x18.13x13.75	33	Midrange point source driver, super tweeter	\$3,595
N/A	0.75" soft dome	No	14x9x9	12		\$279
N/A	N/A	Option	18x12x16	33	110W subwoofer	\$499 each
N/A	N/A	Option	20x19x20	61	170W subwoofer	\$999 each
N/A	1" soft dome	Yes	14x9x11	15.4		\$399
N/A	1" soft dome	Yes	14x9x11	19	50W + 50W	\$899
N/A	1" aluminum dome	Option	9x15x11	17	Dual concentric	\$695
N/A	1" aluminum dome	Option	9x15x12	23	Dual concentric 70W + 70W	\$1,395
N/A	1" aluminum dome	Option	11x18x11	51	Dual concentric	\$995
N/A	1" aluminum dome	Option	11x18x12	22	Dual concentric 90W + 90W	\$1,895
N/A	1" aluminum dome	Option	13x22x12	37	Dual concentric	\$1,795
N/A	1" aluminum dome	Option	16x26x16	60	Dual concentric	\$2,495
3x5" paper	N/A	Yes	7.12x7.87x6.5	2.8	Emulates consumer systems	\$299
N/A	1" tuned chamber cloth dome	Yes	10x14x10	26		\$1,798
N/A	1" tuned chamber cloth dome	Yes	10x14x10	21		\$998
N/A	1" silk dome, ferrofluid	Yes	33.7x7.5x9.8	34		\$1,500
N/A	1" silk dome, ferrofluid	No	13.6x6.7x10.2	19		\$995
N/A	1" silk dome, ferrofluid	No	37x6.7x11.6	44		\$2,500
N/A	0.75" dome	No	8x15x10	31	Electro/mech/acoustical dampening; integrated passive cross-over for single/bi-amp operation	\$2,995
N/A	1" soft dome	No	10x18x11.75	42	Electro/mech/acoustical dampening; integrated passive cross-over for single/bi-amp operation	\$3,495
5"	1" dome	No	8.5x22x11	42	Electro/mech/acoustical dampening; integrated passive cross-over for single/bi-amp operation	\$1,899
5"	0.75" soft dome	No	12.25x21.5x13.37	69	Electro/mech/acoustical dampening; integrated passive cross-over for single/bi-amp operation	\$4,125
6"	1" dome	No	15x25x15.5	107	Electro/mech/acoustical dampening; integrated passive cross-over for single/bi-amp operation	\$5,087
N/A	0.75 soft dome	Optional	12x5.5x7.25	12		\$999
N/A	0.75" soft dome	Optional	14x6.5x9	18		\$1,398
N/A	0.75" soft dome	Optional	16x8x10.37	21.5	Electro/mech/acoustical dampening; align signal path	\$1,498
N/A	1" dome	Optional	18x10x11.62	31	Electro/mech/acoustical dampening; align signal path	\$1,948
N/A	0.750 fabric dome	Yes	6.25x16.5x7.13	18	Electro/mech/acoustical dampening; magnetically compensated/shielded drivers	\$2,250
N/A	N/A	No	11.5x16.5x12	52	Sub	\$1,199 each
N/A	N/A	No	15x19x13.75	63	Sub	\$1,399 each
N/A	1" textile dome	Yes	15x8.25x10	18	Biamped; shielded	\$1,730
N/A	1.1" silk dome	No	19x10x12	40	Biamped	\$3,598
(2) 5.5" polypropylene	1.1"	No	26.75x22x15.75	85	Triamped	\$6,798
(2) 3.12" paper	1.1"	No	20.5 x 13 x 13.75	50	Triamped	\$3,578
N/A	(2) 1.1" silk dome	No	15x15x12	45	Biamped	\$3,449
N/A	1" textile neodymium	Yes	11.5x6.75x7.75	11	Biamped; shielded	\$1,198
	1.1" silk dome	No	15x8.5x9.75	21	Biamped	\$2,650
N/A	N/A	No	26.75x31.5x15.75	85	Sub	\$1,599 each
N/A	1" titanium dome	Yes	11x6.62x8.75	16.5		\$598
N/A	1" titanium dome	Yes	16.5x10.5x13	44		\$1,998
N/A	1" soft dome (ferrofluid)	Yes	16x10x9	8	2" forward-firing port; binding posts, available in black or white	\$290
N/A	1" soft dome (ferrofluid)	Yes	16x10x9	8	Ship in mirrored pairs	\$320
N/A	1" dome	Yes	9x10x16	18		\$320
N/A	1" soft dome (ferrofluid)	Yes	11x10x16	25	Environmental processor w/switching optimization	\$640
N/A	N/A	Yes	16.75x13.75x20.5	20	Subwoofer designed for studio, control rooms; low pass filter; phase switch	\$459

SEQUENCERS

MANUFACTURER	PROGRAM	PLATFORM	SIMULTANEOUS MIDI TRACKS	MAXIMUM CLOCK RESOLUTION (PPQM)	QUANTIZATION TYPES	SEQUENCING METHOD	EDITING VIEWS	GRAPHIC FADERS	SYSEX EDITING	LOOPING	# OF AUDIO TRACKS
Cakewalk	Guitar Tracks Pro	Win 98/SE/ME/2000/XP	N/A	Sample accurate	N/A	Linear audio recording	Audio edit; mixer	Up to 42	No	Region; sequence	32
Cakewalk	Home Studio 2002	Win 98/SE/ME/2000/XP	Unlimited	960	Groove; swing %; tick offset	Linear; pattern	Piano roll; sysex; event; notation; console; studioware; tempo; markers	Unlimited	Yes	Region; groove-clips	Unlimited
Cakewalk	Plasma	Win 98/SE/ME/2000/XP	Unlimited	960	Groove; swing by %; tick offset	Linear; pattern	Piano roll; track; loop explorer; loop editor event; console; big time; video; temp	Unlimited	No	Region; groove clips	Unlimited
Cakewalk	Sonar 2.2	Win 98/SE/ME/2000/XP	Unlimited	960	Groove; swing by %; offset; randomize	Linear	Piano roll; event list; staff; drum editor; controller; console loop construction; loop explore lyrics; studioware	Unlimited	Yes	Region; clip	Unlimited
Emagic	Logic Audio 5	Mac OS 9, OS X	Unlimited	960	Swing %	Linear	Event list; matrix; hyper; score	Unlimited	No	Region; sequence	48 stereo
Emagic	Logic Gold 5	Mac OS 9, OS X	Unlimited	960	Groove templates; swing %	Linear	Event list; score; matrix; hyper; transform	Unlimited	Yes	Region; sequence	64 stereo
Emagic	Logic Platinum 6	Mac OS 9, OS X	Unlimited	960	Groove templates; swing by %; extended quantize parameters	Linear	Event list; score; matrix; hyper; transform	Unlimited	Yes	Region; sequence	255 stereo
Emagic	MicroLogic AV 4.7	Mac; Win 98/ME/2000/XP	Unlimited	960	Normal; swing	Linear	List; score; matrix	Yes	No	Yes	16
FASoft	n-Track Studio	Win 95/98/NT/ME/2000/XP	Unlimited	1920	Grid; swing; randomize	Linear	Timeline; piano roll; events list	Yes	Yes	Yes	Unlimited
Future Retro	Mobius	Hardware	1	16th note	Up to 16th note	Loop-based step	N/A	No	Yes (dumping)	Yes	0
Howling Dog Systems	Power Chords Pro	Win 3.1/9x/NT/2000/XP	N/A	96	Strum; humanize; roll/pick; quantize	Pattern; loop	Piano roll	No	No	Yes	999
Image-Line	Fruityloops	Win 95/98/2000/ME/XP	999	768	Groove; swing; percentage	Step; pattern	Piano roll; track/event	16	No	Yes	0
Mill Productions	Modularing	Mac	N/A	999	Real time steps shifting system	All	Analog; matrix; pad; controllers	Unlimited	Yes	Yes	0
miniMusic	BeatPad	Palm OS	12	N/A	N/A	Pattern	Melodic; drum	16	No	Yes	0
Midisoft	Studio Recording Session	Win 95-XP	Unlimited	1,000	Percentage	Linear	Notation; MIDI list	Yes	Yes	No	8
MOTU	Digital Performer 4.0	Mac	Unlimited	Configurable	Input; output; swing; groove; humanize	Linear; pattern	Track overview; graphic; drum editor; event list; notation	Yes	Yes	Yes	Unlimited
MOTU	FreeStyle 2.3 (Mac/PC)	Mac; Win	Trackless	960	Straight; offset	Linear; loop	Piano roll; notation; event list	No	Yes	Yes	0
MOTU	Performer 6	Mac	Unlimited	480	Input; output; swing; groove; humanize; GrooveEditor	Linear; pattern; chunk	Graphic; event list; notation	Yes	Yes	Yes	Up to 8
Musicator	Musicator Win 4.0	Win 95/98/ME/NT/2000/2002/XP	255	480	Swing; percentage	Linear	Track/passage/bar; roll view; notation; audio; effects	Yes	Yes	Yes	32
Personal Composer	Personal Composer	Win	8, 16, 44	1024	Note-on; note-off	Linear	Page; scroll; split-screen	Yes	No	No	0
PG Music	PowerTracks Pro	Win 9x/NT/2000/2002/XP	48	960	Swing; percentage; randomize	Linear; step	Tracks; audio; mixer; events; bars; roll notation; SysEx editor	Yes	Yes	Yes	Up to 48
Roland	MC-50mkII	Roland S-MRC	8 (32 chan)	96	Grid	Linear; step	Track; event	No	Yes	Yes	0
Steinberg	Cubase SL	Win 2000/XP, Mac OS X	Unlimited	Sample-level	N/A	Linear; loop	Key; drum; list; sysex; score; logical; loop	Unlimited	Yes	Yes	Unlimited (CPU dep.)
Steinberg	Cubase SX	Win 2000/XP, Mac OS X	Unlimited	Sample-level	Auto; custom; swing; groove	Linear; loop	Key; piano roll; list; drum; logical; sample; part; loop; score	Unlimited	Yes	Yes	200 +
Steinberg	Cubasis 4.0	Win 98/ME/2000/XP, Mac OS 8.6	+64	384	Normal; over	Linear	Key; list; score	Yes	Yes	Yes	48
Synapse Audio	Orion Platinum	Win 98/ME/2000/XP	128	768	Shuffle; groove; humanize	Pattern; step	Piano roll; pattern events; song events	128	No	yes	128
Technosaurus	Cyclodon	Hardware 16 step sequencer	N/A	N/A	N/A	16-step	N/A	No	No	Yes	0
Voyetra	Digital Orchestrator Pro	Win 3.1/95/NT 4.0	Unlimited	1,920	Intensity; sensitivity; offset; inside/outside range	Linear	Graphic controller; MIDI mixer; multitrack; notation; conductor	Yes	Yes	Yes	Unlimited
WinJammer	WinJammer Pro 5.0	Win 3.1/95/NT	256	960	Swing; groove; input; variable strength	Linear	Piano roll; event list; score; drum view	Yes	Yes	Yes	0
Yamaha	QY 100	Hardware	24	480	Percentage; swing	Linear; pattern	Event list	16	Yes	Pattern section	0
Yamaha	QY 700	Hardware	48	480	Percentage; swing; groove templates	Linear; pattern	Piano roll; event list	48	Yes	Track; pattern	0
Yamaha	RM1x	Hardware	16	480	Grid; percentage; groove templates	Step; real; pattern; linear	Event; track; pattern chain	Yes	Yes	Yes	0
Yamaha	RS 7000	Hardware	16	480	Percentage; swing; groove grid	Linear; pattern	Event list	16	Yes	Pattern section	16
Yamaha	XGworks 3.0	PC	100	480	Strength; sensitivity; swing; gate; velocity	Step; real; pattern; linear	Track view; piano roll; staff; drum; event list	Yes	Yes	Yes	6 stereo



INTEGRATED MIDI/AUDIO EDIT SCREEN	AUDIO EFFECTS	DYNAMICS PROCESSING	TIME COMPRESSION AND EXPANSION	PITCH-SHIFT TYPE	SAMPLE RATE CONVERSION	DSP PLUG-IN FORMATS	AUDIO-TO-MIDI CONVERSION	EXTRACT TIMING FROM AUDIO	SPECIAL FEATURES	PRICE
Audio only application	Amp sim, chorus, delay, flanger, dyn proc, lim, EQ, pitch shifter, reverb	Yes	No	Formant-preserving	Yes	DirectX	No	No	Import ACID wave files; Revalver SE amp simulator; delay time calc; tuner; support for multi-I/O audio hardware; support for 24-bit/96kHz audio; includes Fruity Loops Express 2.7	\$139
Yes	Reverb, chorus, flange, delay, parametric EQ	Yes	Yes	Yes	No	DirectX, DX	No	No	Input monitoring; DD wave loops; AU; slip editing; ACID file support	\$129
Yes	FX pad, parametric EQ, pitch shift, delay, reverb, flange, chorus	Yes	Yes	Yes	11025, 44100, 22050, 48000	DirectX, DXi	No	No	DD audio loops; WAV files; MIDI FX; input monitoring; ACID file support; extra CD of loop content	\$49
Yes	2-band EQ, amp sim, chorus, delay, flanger, tape sim, EQ, reverb, parametric EQ, pitch shifter, time stretch	Yes	Yes	Formant-preserving, traditional	On import (if necessary)	DirectX, DXi, MFX	No	Yes	Studioware, CAL; video; real-time MIDI plug-ins; SMPTE sync; ACID and ASIO support; OMFI and broadcast wave imp/exp	\$479
Yes	28 real time effects	Yes	Yes	Traditional	Yes	VST (OS9), AU (OSX)	No	No	3-step undo/redo; track based automation; 8 stereo busses; integrated stereo sample editor	\$399
Yes	42 real time effects	Yes	Yes	Formant preserving, traditional	Yes	VST (OS9), AU (OSX)	Yes	Yes	30-step undo/redo; track based automation; 16 stereo busses; integrated stereo sample editor	\$649
Yes	Over 50 real time effects, 3 included virtual synths	Yes	Yes	Formant preserving, traditional	Yes	TDM, VST (OS9), AU (OSX)	Yes	Yes	Unlimited undo/redo; freeze tracks; advanced automation; open TL; OMF support; integrated stereo sample editor	\$949
Yes	9 native plug-ins	Yes	No	N/A	Yes	ASIO	No	No	ASIO 2.0; Audiowerk8/2; Direct I/O; MME/Mac AV; real-time seq edit; supports E-magic, ESX24, ESI, EVP88	\$99
Yes	Reverb, echo, pitch shift, chorus, EQ	No	Yes	Formant	Yes	DirectX, VST, DXi, VSTi	No	No	Works with WDM and ASIO drivers; spectrum analyzer	\$45-\$64
No	N/A	No	No	N/A	No	N/A	No	No	Copy/paste pattern shifting; realtime pattern editing; MIDI to control voltage conversion	\$325
No	N/A	No	No	N/A	No	N/A	No	No	Configurable stringed instrument interface; chord+plucking/strumming pattern	\$60
No	Reverb, chorus, phaser, flanger	Yes	Yes	Formant and traditional	Yes	VST, VSTi, DX, DXi, Buzz	No	Yes	Integrated speech synthesizer	\$100
No	Reverb, delay, echo, chorus, saturator	Yes	No	Traditional	No	VST, direct connect	No	No	24 modular sequencers, synths and sample players; remote control of user interface	\$320
No	N/A	No	No	N/A	No	N/A	No	No	Touch screen interface on any Palm OS handheld	\$30
No	Delay, echo, chorus, flanger, EQ	Yes	No	Traditional	Yes	N/A	No	No	Multisequence playback; articulation marks; more	\$60
Yes	50+ native MIDI and audioplug-ins	Yes	Yes	Formant and traditional	Yes	TDM, MAS, Premiere	No	No	Supports Mac OSX CoreAudio/CoreMIDI; Mackie control surface; 3rd party plug-ins; software inst.	\$795
No	N/A	No	No	N/A	No	N/A	No	No	Sense tempo; note-spelling algorithms; step sequencing	\$195
Yes	EQ, dyn, chorus, flanger, delay, phase shifter, autopan, echo, trml	Yes	No	N/A	No	MAS	No	No	QuickTime support; Unisyn; custom consoles for Roland VS-880; window sets; WYSIWYG notation editing	\$495
Yes	N/A	No	No	N/A	Yes	N/A	No	No	Notation; front-panel controls for GS, XG, SC-88 PRO FX	\$299
No	NA	No	No	N/A	No	NA	No	No	Transpose, copy to WP and DTP apps	\$70-\$200
Yes	Comp, gate, dist, reverb, echo, chorus, flanger, ring mod, trem, tone, EQ, exciter	Yes	No	Traditional	Yes	Proprietary, DirectX	No	No	Detect chords from MIDI file; export to WMA and mp3; CD-RW software; guitar tuner	\$29-\$49
No	N/A	No	No	N/A	No	N/A	No	No	2 MIDI outs, 1.4 MB floppy drive, read/write, mid	\$795
Yes	Many	Yes	Yes	Traditional	Yes	VST, DXi	No	Yes	VST system link; video track; Rewire 2; CD grabbing; \$499 video track; unlimited undo/redo	\$799
Yes	Delays, dynamics, de-esser, overdrive, quadra fuzz, flange, phase, rotary, chorus, symphonic, reverb, vocoder, ring mod, SMPTE generator	No	Yes	Yes	Yes	VST, DirectX	No	Yes	Surround sound; unlimited undo/redo; VST system link technology; video track with thumbnail; Apogee UV22 dithering multiple bit depths; multiple projects open	\$799
Yes	Yes, realtime	Yes	Yes	N/A	No	VST, DirectX	No	No	VST instruments; built-in synth bass, drum, universal sound module; MP3 and RealAudio export; mastering and CDR software; surround simulation	\$125
Yes	Delay, reverb, dynamics, EQ, distortion, chorus, flanger, phaser, misc	Yes	Yes	Traditional	Yes	DX, VST	No	Yes	Groove Slicer, Genetics, Chord & Groove Templates, Event Editing Tools, MultiFX Control	\$199
No	N/A	No	No	Knobs	No	N/A	No	No	Analog 16-step sequencer	\$329
Yes	EQ, dly	Yes	Yes	Traditional	Yes	N/A	No	No	Mixdown; export to ACM-compatible; export to any avail codes	\$199
No	N/A	No	No	N/A	No	N/A	No	No		\$200
No	(3) hardware, (11) reverb, chorus, (43) variation	No	No	N/A	No	N/A	No	No	A/D input with effects for guitar and microphone	\$630
No	(3) processors, (63) effects	No	No	N/A	No	N/A	No	No	XG tone generator; phrase database; FDD 2 MIDI outs; pitch and modulation	\$1,495
No	(11) reverb, (11) chorus, (43) variation	Yes	Yes	Normal	No	N/A	No	No	654 normal voices; 46 drum kits; 3.5 FDD, SMF compatible; 8 realtime control knobs with 16 parameters	\$900
Yes	(4) hardware, (12) reverb, (2) delay/chorus, (100) variation, (8) master	No	Yes	Intelligent Slice Type X	Yes	N/A	Yes	No	Integrated sampling sequencer, AIEB2 output expander, SIMMs expansion	\$1,695
Yes	Hardware dependent	Yes	Yes	Normal	Via software (TWE)	Proprietary (hardware)	Yes	Yes	Guitar arranger; auto arranger; XG editor; Voice to score; multiple notation formats	\$100

SONIC TREATMENT

SONIC TREATMENT

MANUFACTURER

MODEL

TYPE

FIRE RATING

DIMENSIONS

SPECIAL FEATURES

PRICE

Acoustical Solutions	AAP Alpha Pyramid	Sound-absorbing foam	Class 2	2'x2' sheets; 2, 3, 4" thick	Matching pattern; variety of colors; NRC 0.70-1.05	\$180-\$215/box
Acoustical Solutions	AB10-NR Audio-Seal Sound Barrier	Sound-transmission blocker; high temperature-fused vinyl	N/A	54"x60"x0.125" roll	Stops noise from transmitting through walls, floors and ceilings	\$1.75-\$2.25/sq ft
Acoustical Solutions	AS1, AS2 AlphaSorb Panels	Fabric wrapped wall panels and hanging baffles	Class 1	Any size up to 4'x10'; 1" or 2" thick	NRC 0.80-1.05; 48 colors; custom shapes and cut-outs	\$39-\$280
Acoustical Solutions	Sonex Acoustical Foam UNX	Polyurethane	Class 2	2'x4' or 4'x4'; 2, 3, or 4" thick	Charcoal, beige, and brown	\$167 (3"); \$169 (2")
Acoustical Solutions	Sonex Acoustical Foam SOC-2	Melamine	Class 1/Class A	2'x4'x2"	White or colortec charcoal	\$213-\$299
Acoustical Solutions	Sonex Contour Ceiling Tiles	Drop in T-grid or surface mount	Class 1/Class A	2'x2'	White, gray, almond, or black hypalon finish	\$374
Acoustical Solutions	Soundtex, Linear II	Fabric wall covering	Class 1	Bolt: 54"x24 yards; linear yard: 54"x36"	35 colors; NRC 0.25; easy to install	\$432/bolt; \$24/yard
Acoustics First	1014 AcoustiKit	Acoustical room treatment	Class 3	Various	(24) 1'x1' and (6) 2'x2' sections of Cutting Wedge foam; (2) 2'x2' Art Diffusor Model F; (2) 2' Traps	\$398
Acoustics First	Art Diffusor Model C-ADCS	Styrene	N/A	24"x24"x4.5"	Custom colors	\$100
Acoustics First	Art Diffusor Model C-ADCT	Thermoplastic	Yes	24"x24"x4.5"	Custom colors	\$166
Acoustics First	Art Diffusor Model E	EPS plastic	N/A	15"x15"x9"	Custom colors	\$88
Acoustics First	Art Diffusor Model F-ADFS	Styrene	N/A	24"x24"x2"	Custom colors	\$100
Acoustics First	Art Diffusor Model F-ADFT	Thermoplastic	Yes	24"x24"x2"	Custom colors	\$166
Acoustics First	Art Diffusor Model W	Wood	N/A	15"x15"x9.5"	7 finish choices	\$170-\$260
Acoustics First	Art Transusor	2-Dimensional binary array diffusor	N/A	2'x2' ceiling grid	Translucent light and sound diffusion	\$166/unit
Acoustics First	Bermuda Broadband Triangle Trap	Corner absorber	Class 1/3	1'x1'x4'	Also avail as bermuda shorts (24") and stand-alone sound cylinder	\$42
Acoustics First	Cutting Wedge	Acoustic foam	Class 3	1'x1', 2'x4', 2'x8' sheets; 2", 3", 4" or 6" thickness	Pattern creates extra surface area; available in charcoal, brown, beige, blue, burgundy, and hunter green	\$3-\$11/sq ft
Acoustics First	Double Duty Diffusor	Polycylindrical diffusor/bass trap	Class A	2'x2'-4'x8'	Uniform high-frequency dispersion; increases the acoustic size of a mixing room	\$200
Acoustics First	Geometrix	Broadband	Class A	8" diam; up to 10' high	Formed fiberglass covered with 1.00 above Guilford FR701 fabrics; 84 absorption at 125 Hz	\$157
ASC	Acoustic Soffit System	Absorptive/diffusive soffit	Class 1	Custom	Broadband control	\$89/in ft
ASC	Attack Wall	Acoustic subspace	Class 1	Customized for console and room	Studio traps/monitor stands; creates accurate mix space in any room	\$4,000 and up
ASC	Mix Station	Room acoustic control package	Class 1	5'x5' arrays; 6"x60" panels	Low-frequency and reflection control	\$1,728
ASC	Monitor Stand/Acoustic Control Product	Reference monitor stand	Class 1	11, 13, 16, 20" diameters; height varies	Low-frequency control; reduces vertical mode problems	\$378-\$778
ASC	Quick Sound Field System	Sub-space	Class 1	(8) studio traps	Increase/decrease ambience via placement; adjustable for bright or dead recording	\$2,898 and up
ASC	Studio Trap	Adjustable/tunable floor-standing acoustic control device	Class 1	9" diameter x 4' tall; adjustable height	Diffusive side and absorptive side; adjustable	\$368
ASC	Tube Trap	Bass trap resonance	Class 1	9", 11", 13", 16", 20" diameters; 4' tall	Bass absorption down to 30 Hz with built-in diffusion above 400 Hz	\$288-\$928
ASC	Tube Trap Fractionals	Bass trap/diffusor	Class 1	9, 11, 13, 16, 20-inch diameter	Bass absorption down to 30 Hz w/built-in diffusion above 400 Hz	\$218-\$578
ASC	Sound Panel	Acoustic wall panel	Meets code	2'x8'x48"	Controls flutter echo, excess reverb and brightness while maintaining ambience and presence	\$450 (set of 8)
ASC	Sub-Stand Cube	Bass trap/resonant control	N/A	Standard 17"x17"x9"; 24"x24"x9"; custom sizes available	Decouples sub; controls vertical resonant mode; improves bass articulation	\$379-\$539
ASC	WallDamp IsoWall System	Soundproof wall and ceiling construction kit	Meets fire codes	N/A	Room soundproofing/isolation construction kit for new construction or remodeling	\$2-\$3/sq ft
Auralex Acoustics	ATOM-12 Corner Treatment Kit	Bass traps	Class B	12"x12"x17" LENRDS; 12"x12"x12" cubes	Kit contains 12 LENRD bass traps and 4 corner fill cubes; 12 colors	\$399/kit
Auralex Acoustics	D36 Roominator DST	Absorptive foam	Class B	1'x1'x2"	18 DST112s in charcoal; 18 DST114s (choice of 4 colors); 2 tubes Tubetak Pro liquid adhesive	\$119/kit
Auralex Acoustics	D108L Roominator-DST	Absorptive foam	Class B	1'x1'x2"; DST-LENRDS: 12x12x17" triangle; 24" long	54 DST112s in charcoal; 54 DST114s (choice of 4 colors); 8 DST-LENRDS in charcoal; 6 tubes Tubetak Pro	\$599/kit
Auralex Acoustics	D160HT Roominator DST	Absorptive foam	Class B	Various: DST, LENRDS	32 DST112s; 32 DST114s (4 colors); 12 DST422s; 8 DST-LENRDS (4 colors); 24 DST-Rs; 8 tubes adhesive	\$799/kit

SONIC TREATMENT

MANUFACTURER	MODEL	TYPE	FIRE RATING	DIMENSIONS	SPECIAL FEATURES	PRICE
Auralex Acoustics	D240Xi Roominator DST	Absorptive foam	Class B	Various DST, LENRDS, T'Fusor	48 DST-112s in charcoal; 96 DST-114s (4 colors); 12 DST-422s; 16 DST-LENRDS; 12 T'Fusors; 16 tubes Tubetak Pro; 1 GRAMMA	\$1,599/kit
Auralex Acoustics	GRAMMA (Gig & Recording Amplifier & Monitor)	Amp and monitor riser	N/A	Decking: 15"x23"x2.5"	Lightweight; portable; standard size fits most amps	\$59.95
Auralex Acoustics	MAX-Wall 211	Absorptive foam	Class B	20x48-inch panels, 4.37 inches thick	Portable, expandable; adaptable, interlocking panels, 3 colors, 2 panels, MAX stand, MAX-Wall window kit & clamps	\$249/kit
Auralex Acoustics	MAX-Wall 420	Absorptive foam	Class B	20"x48" panels, 4.37" thick	Portable, expandable, adaptable; interlocking panels, available in 3 colors; includes 4 panels 2 MAX stands & clamps	\$349/kit
Auralex Acoustics	MAX-Wall 521	Absorptive foam	Class B	20"x48" panels, 4.37" thick	Portable, expandable, adaptable; interlocking panels, available in 3 colors; incl. 5 panels, 2 MAX stands, 1 MAX-Wall Window kit & clamps	\$499/kit
Auralex Acoustics	MAX-Wall 633	Absorptive foam	Class B	20"x48" panels, 4.37" thick	Portable, expandable, adaptable; interlocking panels, available in 3 colors; incl. 6 panels, 3 MAX stands, 3 MAX-Wall Window kits & clamps	\$849/kit
Auralex Acoustics	MAX-Wall 831	Absorptive foam	Class B	20"x48" panels, 4.37" thick	Portable, expandable, adaptable; interlocking panels, available in 3 colors; incl. 8 panels, 3 MAX stands, 1 MAX-Wall Window kit & clamps	\$749/kit
Auralex Acoustics	MAX-Wall 1141VB	Absorptive foam	Class B	20"x48" panels, 4.37" thick	Portable, expandable, adaptable; interlocking panels, available in 3 colors; incl. 11 panels, 4 MAX stands, 1 MAX-Wall Window kit & clamps	\$999/kit
Auralex Acoustics	MAX-Wall Window Kit	Absorptive foam, plexiglas	Class B	20"x48" panel, 4.37" thick, window 8"x49"x25"	Portable, expandable, adaptable, interlocking panels, MAX-Wall panel with plexiglas window, 3 colors	\$99/kit
Auralex Acoustics	Mineral Fiber Insulation	Construction material	Class A	2x4" panels, 2, 4" thick	More dense than standard insulation, specifically designed for acoustical usage, 2" has 6 pieces per box, 4" has 3 pieces per box	\$80/box
Auralex Acoustics	MoPads	Monitor isolation pads	N/A	12x4x2 w/wedge adjuster	Charcoal, set of 4 monitor pads and 4 wedge adjusters	\$29.95/set
Auralex Acoustics	Platfoam	Isolation device	N/A	2x4x48	24 pieces per box; includes 3 tubes Tubetak Pro liquid adhesive; charcoal gray only	\$199/box
Auralex Acoustics	RC8-Resilient Channel	Construction materials	N/A	2.375"Wx8" Lx0.5" thick	Metal used to hang drywall; improves sound-transmission characteristics of wall or ceiling system, 24 pieces per tube	\$140/tube
Auralex Acoustics	Roominators Alpha-DST Kit	Absorptive foam	Class B	DST panels: 1"x1"x2"; DST LENRDS: 12x12x17" triangle, 24" long	32 DST-112s in charcoal; 32 DST-114s (choice of 4 colors); 4 DST-LENRDS in charcoal; 3 tubes Tubetak Pro liquid adhesive	\$319/kit
Auralex Acoustics	Roominators Project 2 Kit	Absorptive foam	Class B	Wedge panels: 1"x1"x2" LENRD: 12"x12"x17" triangle, 24" long	24 Studiofoam wedge panels; 8 LENRD bass traps and 5 tubes of Tubetak Pro liquid adhesive; charcoal gray only	\$499/kit
Auralex Acoustics	Roominators Deluxe Plus Kit	Absorptive foam	Class B	Wedge panels: 2"x2"x2"; LENRD: 12"x12"x17" triangle; T-Fusors: 23.75"x23.75"x5.5"	24 Studiofoam wedge panels; 8 LENRD bass traps and 6 T-Fusor 3D sound diffusers; 2 cans Foamtak spray adhesive; charcoal gray only	\$699/kit
Auralex Acoustics	Roominators Pro Plus Kit	Absorptive foam	Class B	Wedge panels: 2"x2"x2" LENRD: 12"x12"x17" triangle; T-Fusors: 24"x24"x5.5"	36 Studiofoam wedge panels; 12 LENRD bass traps and 8 T-Fusor 3D sound diffusers; 3 cans Foamtak spray adhesive; charcoal gray only	\$999/kit
Auralex Acoustics	Sheet Blok	Sound barrier	N/A	0.125" thick, 4'x10', 4'x30' rolls	Limp-mass vinyl material, approx. 6 dB more effective than lead at stopping transmission of sound; available in black	\$140 (4x10 roll); \$360 (4x30 roll)
Auralex Acoustics	Sheet Blok-Plus	Sound barrier	N/A	0.125" thick, 4'x30' rolls	Limp-mass vinyl material, incl. pressure sensitive adhesive on back; available in black	\$460/roll
Auralex Acoustics	Studiofoam	Absorptive foam	Class B	2"x4" panels, 1, 2, 3, 4" thick	12 colors, wedge cut, seamless installations; 6-12 pieces per box, overall NRC 0.50-1.10	\$239/box
Auralex Acoustics	Studiofoam-DST-112	Absorptive foam	Class B	1"x1" panels, 2" thick	Charcoal, designer cut, seamless installations; 24 or 96 pieces per box	\$79 (24); \$299 (96)
Auralex Acoustics	Studiofoam-DST-114	Absorptive foam	Class B	1"x1" panels, 2" thick	4 colors, designer cut, seamless installations; 24 or 96 pieces per box	\$79 (24); \$299 (96)
Auralex Acoustics	Studiofoam-DST-244	Absorptive foam	Class B	2"x4" panels, 2" thick	4 colors; designer cut; seamless installations; 12 pieces per box	\$299/box
Auralex Acoustics	Studiofoam-DST-422	Absorptive foam	Class B	2"x4" panels, 2" thick	4 colors; designer cut, seamless installations: 6 or 12 pieces per box	\$139 (6); \$229 (12)
Auralex Acoustics	Studiofoam Metro	Absorptive foam	Class B	2"x4" panels, 2, 4" thick	12 colors; unique "cityscape" profile, seamless installations; 6-12 pieces per box	\$239/box
Auralex Acoustics	Sunburst Broadband Absorbers	Broadband absorbers	Class B	Male: 12x48x7.5, female: 12x48x5/16	12 colors; wedge cut; 8 pieces per box, 32 linear feet per box	\$259/box
Auralex Acoustics	Sunburst 360	Stand-mounted absorber	Class B	Male: 12x48x15.5, female: 12x48x7	Available in charcoal, purple, burgundy, 2 MAX stands w/18" extensions per box, allowing height of 4'6" to 9'	\$289/box
Auralex Acoustics	T'Fusor	For floated drum risers	N/A	23.75" x23.75" square; 5.5" thick	Wall mountable; fits drop ceilings, easily painted, 4 pieces/box	\$280/box

SONIC TREATMENT

SONIC TREATMENT

MANUFACTURER

MODEL

TYPE

FIRE RATING

DIMENSIONS

SPECIAL FEATURES

PRICE

Auralex Acoustics	Stand-Mounted LEND Bass Traps	Bass traps	Class B	12"x12"x17" triangular; 48" long	12 colors, 4 pieces/box; 4 tripod-style mic stands included; overall NRC 1.35	\$319/box
Auralex Acoustics	Studiofoam Pyramids	Absorptive foam	Class B	2'x4' panels; 2, 4" thick	12 colors, pyramid cut; seamless installations; 6-12 pcs per box; overall NRC 0.70 to 0.95	\$289/box
Auralex Acoustics	U-Boats	Floor beam float channels	N/A	2.125Wx1.5Hx2L	Made of EPDM rubber; U-saped channels used to support and float framing members of surrounding structure, avail. in lots of 50 or more; black only	\$2 each
Auralex Acoustics	VersaTile	Broadband absorber	Class B	16x24x2"	12 colors; 3 different installation options; 6 or 24 pieces per box; overall NRC 0.80 to 1.05	\$99 (6); \$329 (24)
Clear Sonic	Flector	Acrylic personal monitor disc	N/A	8" and 12" diameter	Reflects, diffuses sound associated with brass instruments; reduces potential for feedback	\$12 (8"); \$14 (12")
Clear Sonic	Sorber	Absorbing panels	N/A	22x24x1.5, 48x44x1.5; 48x66x1.5	Portable; free standing, soaks up reflected sounds; 2 colors: dark gray, light gray	\$30; \$120; \$180
Clear Sonic	Sorber Lid	Absorbing lid for use w/Clear Sonic panels	N/A	6" W x 66" L	Portable; reduces sound that normally escapes upward; 2 colors: dark gray, light gray	\$260
Clear Sonic	Clear Sonic Panels	Acrylic drum shield	N/A	2', 4', 5.5' H; up to 14" W, 0.25" thick	Portable, durable; free standing; full-length transparent hinge	\$320 and up
illbruck	Sonexclassic	Willtec foam	Class1/Class A	2'x4'x2" thick	Natural (white), painted or colorlec	\$3.30/sq. ft and up
illbruck	Sonexfabritec	Fabric-wrapped acoustical panels	Class1/Class A	2'x2'; 2'x4'; custom; standard thickness: 1"	Made w/willtec foam core; installation quick w/adhesive only	\$8.25/sq. ft and up
illbruck	Sonexjuniors	Acoustical and sound absorptive foam	Class1/Class A	2'x2'x2" thick	For very small installations; each box contains 16 sq. ft	\$64/box
illbruck	Sonexone	Acoustical and sound absorptive foam	Class1/Class A	2'x4'; 2" or 3" thick	Natural (white), painted and hypalon-coated	\$4.67/sq. ft and up
illbruck	Sonexprospec	Acoustical barrier	Class1/Class A	54"x20"	STC of 26; can be used in staggered stud wall to stop noise	\$253/roll and up
illbruck	Sonexpyramids	Acoustical absorptive foam	Class1/Class A	2'x2'; thickness: 2", 3", 4", 6"	Seamless application; available in natural (white) and painted	\$4.64/sq. ft and up
illbruck	Sonexvaluefine	Acoustical absorptive foam	Class1/Class A	2'x4'; thickness: 1.5", 2", 2.5"	Natural (white) or painted	\$2.64/sq. ft and up
Middle Atlantic	Acoustical Panels	Acoustic panel	Class 1 (ASTM E-84)	24"x24", 24"x48", 30"x48", 30"x84"	Faced with 100% polyester fabric; available in grey or beige	\$150-\$402
Netwell Noise Control	Pyramids	Acoustic foam	Class 1/2	2'x2'x3"	Absorbs 90% of reflected sound	\$2-\$4/sq. ft
Noren	AcoustiLock	Noise reduction cabinets	Class 1	PC, 14, 24 space racks	DbI-pane glass; heavy duty casters; temp meter, cable case	\$1,500-\$3,800
RPG Diffusor Systems	Abflector	Absorptive Panel	Class A	48"x19"x6"	High and mid w/ extended low-mid frequency absorption	\$625/box of 4
RPG Diffusor Systems	Flatfusor	Absorptive/diffusive Panel	Class A	23.63"x23.63"x1"	Omnidirectional high frequency diffusion/absorption	\$138/box of 2
RPG Diffusor Systems	Modex Corner	Bass trap (membrane)	Class A	24"x24"x12.25"	Corner wall mount or freestanding; controls room modes; stackable, light	\$676/box of 2
RPG Diffusor Systems	ProCorner	Bass trap (foam)	Polyflex: Class B; Metaflex: Class A	48"x12"x6.27"	Optimized corner profile; integration w/ ProFoam; NRC=1.0, gray, purple (Polyflex); white (Metaflex)	\$271/ \$430/box of 4
RPG Diffusor Systems	ProFoam Polyflex	Absorptive Panel	Class B	4'x2'x2"; 2'x2'x2"; 1'x1'x2"	Nestable to any depth; Variable Depth Air Cavity (VDAC), white	\$260/\$137/ \$38/box of 12
RPG Diffusor Systems	ProFoam Metaflex	Absorptive Panel	Class A	4'x2'x2"; 2'x2'x2"; 1'x1'x2"	Nestable to any depth; Variable Depth Air Cavity (VDAC), white	\$460/\$242/ \$67/box of 12
RPG Diffusor Systems	Skyline	Diffusive Panel	Class B	23.625"x23.625"x7"	Patented primitive root reflection phase grating; omni diffusion, 400-4000 Hz+	\$298/box of 2
RPG Diffusor Systems	Studio in a Box Silver	Whole room package	Polyflex: Class B; Metaflex: Class A	14x10x8' room (customizable)	Comprehensive room treatment, incl. reflection, reverberation control, diffusion, bass mgmt. grey, purple (Polyflex), white (Metaflex)	\$550 (Polyflex), \$1,028 (Metaflex)
Silent Source	SoundSucker	Corner bass traps	Class A/CC	12"x24"; 12"x48"	Available in charcoal, beige, brown, blue, hunter green, burgundy; 8 and 4 units/box	\$200
Silent Source	Whisper Wedge	Absorptive foam	Class A/C	24"x48"x2, 3, 4, 6" thick	Many colors to choose from; 2-12 sheets/box (16-96 sq. ft); class 1 available	\$160-\$250/box
Soundsuckers	Acoustic Foam	Foam panels	Class 2	2'x4' to 4'x8'	Custom sizes, densities, thickness available; various colors; polyurethane and melamine foam	\$38 and up
Soundsuckers	Premium Barrier Panels	Soundproofing panels	Fire retardant	2'x4' / 4'x4' / 4'x8'	High-density panel with 2" acoustic foam fabric and foam color choices	\$69/\$138/\$276
Soundsuckers	Standard Barrier Panels	Soundproofing panels	Fire retardant	2'x4' / 4'x4' / 4'x8'	High-density panel with 2" acoustic foam fabric and foam color choices	\$55/\$110/\$220
Systems Development Group	Cutting Wedge 2000	Absorptive foam	Available upon request	Various	Sawtooth pattern across face and back for easy stacking	\$3/sq. ft and up
Systems Development Group	Bass Eraser	Broadband bass trap	Class A	24"x48"x10"	Mounts horizontally or vertically	\$360-\$450
Systems Development Group	Cutting Wedge Classic	Absorptive foam	Fire/smoke analysis available	Various	Sawtooth pattern for greatest absorption per sq. ft; tear resistant with shape memory	\$3/sq. ft and up

SONIC TREATMENT

MANUFACTURER	MODEL	TYPE	FIRE RATING	DIMENSIONS	SPECIAL FEATURES	PRICE
Systems Development Group	Model C	Diffusor	Full Class A	24"x24"x4.5"	Install on wall or drop into 24"x24" opening of a T-Bar grid; available with center cutout	\$97-\$166
Systems Development Group	Model E	Diffusor	Available	15"x15"x9"	Small footprint; light weight; simple install	\$88
Systems Development Group	Model F	Acoustic diffusor	Full Class A	2"x24"x1.75"	Specialized high-frequency diffusion on wall or ceiling	\$97-\$166
Systems Development Group	Reflektors	Absorptive face/reflective panel	N/A	24"x48"x8"	Creates reflection-free listening space	\$166
Systems Development Group	Sonora Panels	Absorptive fiberglass panel	Class A	Up to 48"x120"x2"	Molded fiberglass board non-resin chemically hardened edges; wrapped in Guilford fabrics	\$8-\$10/sq ft
Taytrix	Absorptive Panels	Absorptive panels	Class 1	2'x2', 2'x4', 2'x6'	Fiberglass absorption panels trimmed with decorator fabrics	\$129 and up
Taytrix	Stack It Gobo System	Gobo	Class 1	15"x48"x8"; 30"x8"x8"	Stackable, lightweight, modular, interlocking acoustical control panels	\$300-\$445
Vibrant Technologies	DF-24	Diffusor panel	Class A	23.75"x23.75"x6.25"	Available in 48 colors	\$79
Vibrant Technologies	CV-24/CX-24	Diffusor panel	Class A	23.75"x23.75"x4.25"		\$69-\$99
Wenger	Ceiling Diffusor	Acoustical panels	Class A	2'x2'; 4'x4'; 4'x2'	Convex shape; impact-resistant PVC/acrylic plastic	\$90-\$135
Wenger	Pyramidal Diffusor	Acoustical panels	Class A	2'x2'; 4'x4'	Offset pyramid shape; impact-resistant PVC/acrylic plastic	\$57-\$156
Wenger	Quadratic Diffusor	Acoustical panels	Class A	4'x4'	Based on quadratic theory; effective over freq range of 750 Hz to 3.3 kHz	\$452
Wenger	Trapezoidal Diffusor	Acoustical panels	Class A	2'x2'; 4'x4'	Offset trapezoid shape; fiberglass resin with white gel-coat finish	\$101; \$153
Wenger	V-Room Sound-Isolating Room	Modular studio with optional active LARES-based acoustics	N/A	From 5'8"x5'8" to 10'8"x13'2"	Provides acoustical simulations of 10 different environments	\$9,000 and up
Wenger	Wall Diffusor	Acoustical panels	Class A	4'x4'; 4'x8'; other sizes available	Convex shape; PVC/acrylic plastic with reinforced corners and fabric covering	\$276; \$550
Whisper Room	SE Series	Sound-isolation enclosures	N/A	Various sizes available	Portable; modular; easy assem; cable passage; ventilation sys; door window	\$2,185 and up

PUNCHING PRACTICES

—Not the Marquis du Queensbury Rules

By Thomas E. Rudolph
and Vincent A. Leonard, Jr.

The following tips apply to punching on any recorder format. Hard-disk recorders are a bit different since the punch will be assembled as a composite. However, the tips listed below still apply since they deal with getting the best musical and technical performance to edit.

1. Work with the performer on the amount of preroll before recording. Pre-roll is the amount of the track played before punching in. Too long of a preroll can cause the performer to lose focus before the recording starts; too little can catch the performer off guard or will not allow them to get into the proper feel. Determine what feels best before starting to record each section.

2. Make sure the performer maintains the same distance and proximity to the microphone as in the original recording, so that the sound of the performance will match the existing track.

3. Have the performer sing or play along with the track during the preroll and postroll to preserve the phrasing or breathing at the in and out points. This gives a more natural feel and helps match the dynamic, or volume, of the existing track.

4. If the performer is struggling with a particular phrase, frustration may set in. If you recognize this, take a break. Taking five minutes at the right time can save hours of studio time.

5. Both engineer and performer should rehearse punches when there is little space at the in and out points. The per-

former may have to pay particular attention to cutting off notes in order to match the existing track and allow the engineer time to punch out before the next phrase.

6. Tell the performer to always keep playing or singing until the music stops! Occasionally the engineer will miss a button and remain in Record. If the performer keeps going, the punch can be saved, and the engineer will get out at the next logical break in the performance. Dinner is usually on the engineer at this point. ■

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STUDIO FURNITURE

STUDIO FURNITURE

MANUFACTURER

PRODUCT

TYPE

DIMENSIONS
(INCHES)

SPECIAL
FEATURES

PRICE

Anthro	Console	Workstation for non-linear video editing, mixing, and post prod	72x23.5x37	Holds (3) 21" monitors; keyboard area adj for sitting/standing; shelves adj in 1" incr, lifetime warranty	\$999
Anthro	Console Station	Workstation for non-linear video editing, mixing, post production	72Wx59Dx31H	Holds (3) 21" monitors; keyboard area adj. For sitting/standing, shelves adj. In 1" incr., lifetime warranty	\$1,499
Anthro	AnthroBench	Studio furniture	48x60x72	Modular, open design, lifetime warranty, holds 600 lb.	\$999 and up
Anthro	RackCarts	Rack cart	13x17x21x29	Rack mounting on tapped mounting rails front/back, rack accessories avail	\$719-\$929
Anthro	Rack System	Rack cart	12U, 24U, 36U	Rack mounting on tapped mounting rails front/back, accommodates different depths of rack, rack accessories available	\$800 and up
Argosy Console	90 Series Studio Furnishings	Specialized enclosures for popular mixers	Starts at 89.5" wide, custom-expandable	Expandable enclosure w/full padded armrest; removable back panel; modular design; heavy gauge steel legs; casters and mahogany end panel available	\$1,476 and up
Argosy Console	90 Series for Digidesign ProControl	Specialized furnishings for Digidesign ProControl	Starts at 89.5" wide, custom-expandable	Houses Procontrol and rack gear; multiple configurations available	\$1,500 and up
Argosy Console	90 Series for Digidesign Control 24	Specialized furnishings for Digidesign Control 24	Starts at 89.5" wide, custom-expandable	Houses Control 24, monitor, and rack gear; multiple configurations available	\$1,780 and up
Argosy Console	90 Series for Mackie 8 Bus	Specialized furnishings for Mackie 8 Bus	Starts at 89.5" wide,	Houses Mackie 8 Bus, monitors and rack gear; multiple configurations available	\$1,476 and up
Argosy Console	90 Series for Mackie Digital 8 Bus	Specialized furnishings for Mackie Digital 8 Bus	Starts at 89.5" wide; customizable	Houses Mackie Digital 8 Bus, monitors and rack gear; multiple configurations available	\$1,516 and up
Argosy Console	90 Series for Sony DMX-R100	Specialized furnishings for Sony DMX-R100	Starts at 89.5" wide, custom-expandable	Houses Sony DMX-R100, monitors and rack gear; multiple configurations available	\$1,950 and up
Argosy Console	90 Series for Yamaha DM2000	Specialized furnishings for Yamaha DM2000	Starts at 89.5" wide; customizable	Houses Yamaha DM2000, monitors and rack gear; multiple configurations available	\$1,900 and up
Argosy Console	90 Series for Yamaha 02R	Specialized furnishings for Yamaha 02R	Starts at 89.5" wide, custom-expandable	Houses Yamaha 02R, monitors and rack gear; multiple configurations available	\$1,614 and up
Argosy Console	90 Series for Yamaha 02R96	Specialized furnishings for Yamaha 02R96	Starts at 89.5" wide; customizable	Houses Yamaha 02R96, monitors and rack gear; multiple configurations available	\$1,990 and up
Argosy Console	90V Series Universal System	Universal workstation	Starts at 89.5" wide; customizable	Choose from rack units, monitor inserts, desk area to customize workstation; full padded armrest; casters, mahogany end panels available	\$1,780 and up
Argosy Console	Nevis 70 Series Studio Furnishings	Specialized enclosures for popular mixers	68.2W x 45 x 30	Full padded armrest; multi-access bridge lids; steel legs, oak end panels and casters available	\$800 and up
Argosy Console	70 Series for Digidesign ProControl	Specialized furnishings for Digidesign ProControl	68.2W x 44.5D x 37H	Houses up to 24 channels of ProControl; 10 rack spaces available	\$800 and up
Argosy Console	70 Series for Digidesign Control 24	Specialized furnishings for Digidesign Control 24	68.2W x 42D x 40.1H	Houses Digidesign Control 24 and 12 rack spaces	\$900 and up
Argosy Console	70 Series for Mackie Digital 8-bus	Specialized furnishings for Mackie digital 8-bus	68.2W x 42D x 37H	Houses Mackie digital 8-bus with optional 8 rack spaces or 21" monitor insert	\$900 and up
Argosy Console	70 Series for Sony DMX-R100	Specialized furnishings for Sony DMX-R100	68.2W x 42D x 38H	Houses Sony DMX-R100 and 9 rack spaces	\$1,150 and up
Argosy Console	70 Series for Mackie 8-bus	Specialized furnishings for Mackie 8-bus	68.2W x 44.5D x 37H	Houses Mackie 8-bus and 11 rack spaces	\$800 and up
Argosy Console	70 Series for Yamaha 02R	Specialized furnishings for Yamaha 02R	68.2W x 44.5D x 40.1H	Houses Yamaha 02R and 13 rack spaces	\$880 and up
Argosy Console	70 Series for Yamaha 02R96	Specialized furnishings for Yamaha 02R96	68.2" w x 44.5" d	Houses Yamaha 02R96 and 14 rack spaces	\$950
Argosy Console	70V Series Universal System	Universal workstation	68.2" w x 47.25" d	Choose from rack units, monitor inserts, desk area to customize workstation; full padded armrest; casters; oak end panels available	\$1,080 and up
Argosy Console	Dual 15	Workstation for computer-based systems	94W x 50D x 43H	Holds two 21" computer monitors; houses 38 spaces; alternative rack modules available; mahogany end panels and casters available	\$1,200 and up
Argosy Console	Dual 15-K	Workstation for keyboard-based systems	94W x 50D x 43H	Holds two 21" monitors and up to 57" full size keyboard; houses 38 rack spaces; alternative rack modules available; mahogany end panels and casters available	\$1,220 and up
Argosy Console	Spire Rack Enclosures	Single, double, triple and quad rack bays, 14 or 28 spaces high	22-82x33x24	Optional finishes; producers desk attachments; removable access doors, optional shelves, casters available	\$300 and up
Argosy Console	Spire Speaker Stands	42" speaker stand	Base: 16x16, top: 12x12	Optional finishes	\$55-\$140
Argosy Console	Spire V Series Rack Enclosures	Rack bays	22 6-82 25x41.5-86.5x30	Optional finishes; removable access doors; optional front doors available	\$890 and up
Boutique Audio	Rack	Racks for vintage modules	5.25x19x14	Steel enclosure; internal shielded power supplies; 1/4" instrument input on front panel, XLRs on rear panel	\$995
Bryco Products	CD60, CDB60	Solid oak CD racks	21.63x11 25x4.88	Table or wall mount, holds 60 CDs	\$59
Bryco Products	CDP-60	Thick plastic CD rack	15.75x13.88x4.25	Wall or table mount, holds 60 CDs	\$25
Bryco Products	CP-48	Cassette tape storage racks	18.5x11.5x2	Wall or table mount, holds 48 cassettes	\$22
Bryco Products	DLT-18	DLT storage rack	14x8.5x2.5	Holds 18 DLT tapes	\$20
Bryco Products	DR-60 DATRAX, DRB-60 DATRAX	DAT tape holder—solid oak (natural or black)	21.25x9.5x2	Wall or table mount; holds 60 DATs	\$55
Bryco Products	DRP-40	DAT tape holder	17.38x7.38x2	Wall or table mount, holds 40 DATs	\$22
Bryco Products	DSD-320/DSD 320L	DAT tape storage cabinet	19.5x21.75x15.5	Stores 320 DATs, 320L is locking unit	\$349/\$399
Bryco Products	MD-80	Minidisc holder	17.38x7.38x2	Wall or table mount, holds 80 Minidiscs	\$22
Bryco Products	MDV-24	Mini DV tape rack	9.5x7.38x1.75	Wall or table mount, holds 24 mini DV tapes	\$14
Bryco Products	MDV-50	Mini DV tape rack	15.88x8.88x1.75	Holds 50 mini DV tapes; wall or table mount	\$21
Bryco Products	PDLV-18	DV tape storage rack	17x6 25x2 38	Holds 18 tapes; holds DV cam, full size DV and DVC pro, disks and cases; wall or table mount	\$19
Bryco Products	V8-36 & V8-36 Pro	8 mm tape storage racks	Reg: 17.5x10 25x2 38 Pro: 18.25x9.63x2.19	Wall or table mount, holds 36 8mm tapes; Pro holds 8mm and DV cam	\$22

STUDIO FURNITURE

MANUFACTURER	PRODUCT	TYPE	DIMENSIONS (INCHES)	SPECIAL FEATURES	PRICE
HSA	Oak Rolltop Desks and Racks	Oak rolltop desks and racks	Variable	Locking tambour doors, cover racks, and work surface	\$1,995 and up
Lightrite	LED Lite	Gooseneck task lamp w/LED illumination	12", 18" length	New LED technology	\$77-\$116
Lightrite	Task Lamp	Task lamp	6, 12, or 18 goosenecks	Flexible task lamp avail in 5W or 2.5W	\$25-\$160
Middle Atlantic	MultiDesk Video Modular Furniture System	Recording/mixing workstation	Custom	Choice of four desks, side racks, and connecting wedge	\$488-\$840
Middle Atlantic	OBRK Series Racks	Oak laminate rack	Various heights, 18" deep	Deep, concealed fasteners	\$169-\$238
Middle Atlantic	RK/BRK Series Racks	Black laminate rack	Various heights, 18" deep	Deep, concealed fasteners	\$108-\$184
Omnirax	C2	Keyboard/composing/mixing workstation	45.75x43.4x107.25	Holds up to 88-note keyboards, two computer monitors, near fields, computer keyboard & 58 rack spaces	\$2120-\$2420
Omnirax	CMDR	Commander keyboard/composing/mixing workstation	48x44.5x88	Holds up to 88-note keyboards, room for computer/near field monitors, computer keyboard, 60 rack spaces	\$1720-\$2020
Omnirax	CODA	Compact mixing/digital editing workstation	38.75x38.5x67.9	Workstation for computer/peripherals, fits Mackie Control, HUI other mixers/controllers, 8 rack spaces	\$990-\$1230
Omnirax	CODA2480	Mixing/digital editing workstation desk for Roland VS-2480	38.3x37.4x47.8	Compact workstation for Roland 2480 & peripherals, wrist pad, computer keybd, shelf, 10 rack spaces	\$750-\$850
Omnirax	CODAD8	Mixing/digital editing workstation desk for Mackie d8b	38.5x36.6x71.38	Compact workstation for Digidesign d8b & peripherals, computer keyboard shelf plus 18 rack spaces	\$1060-\$1360
Omnirax	F2	Keyboard composing/mixing workstation	42.1x52.8x104.3	Two sliding work surfaces for mixers, controllers and video mon., 54 rack spaces	\$3200-\$3800
Omnirax	FORTE	Keyboard composing/mixing workstation	42x52.25x101.25	Sliding work surface for placing mixers, controllers and video monitors, includes 64 rack spaces	\$2600-\$3200
Omnirax	FRC12	Force 12 mixing/digital editing/audio video workstation	36x52.3x86	Room for controllers, full keyboard and video/near field monitors, 12 rack spaces, computer keyboard	\$1590-\$1890
Omnirax	FRC24	Force 24 mixing/digital editing/audio video workstation	39.7x39x94	Room for controllers or full keyboard and video/near field monitors, 24 rack spaces, computer keyboard	\$1590-\$1890
Omnirax	FRC36	Force 36 mixing/digital editing/audio video workstation	39.5x40.31x91.94	Room for controllers or full keyboard and video/near field monitors, 12 spaces above, 24 below, 16 in back	\$1990-\$2500
Omnirax	FRC40	Force 40 mixing/digital editing/audio video workstation	39.5x40.31x91.94	Room for controllers or full keyboard and video/near field monitors, 16 spaces above, 24 below, 16 in back	\$2190-\$2700
Omnirax	FUSION	Keyboard composing / mixing workstation	38.6x53.9x93.8	Hold up to 88-note keyboards and up to 63 rack spaces in a variety of configurations	\$1650-\$1950
Omnirax	KMS	Adjustable computer keyboard/mouse shelf	0.75x11x28.5	Two styles, with a variety of shapes to accessorize	\$90-\$190
Omnirax	MIXRAX	Compact console housing w/ upper & lower rack bays	40.2x35x51	Fits Tascam DM24 and a variety of similar small format mixers, 22 rack spaces, space for CPU	\$749-\$870
Omnirax	MXC24	MixStation for Digidesign Control 24 mixer	40x46.2x89	Ergonomic multi-level workstation with a total of 56 rack spaces	\$1790-\$1990
Omnirax	MXDM24	MixStation for Tascam DM24 mixer	43x37.9x81.6	Ergonomic multi-level workstation with a total of 42 rack spaces	\$1790-\$1990
Omnirax	MXQ2R	MixStation for Yamaha Q2R	43.4x39x70.75	Ergonomic multi-level workstation with a total of 42 rack spaces	\$1590-\$1770
Omnirax	MXQ2R96	MixStation for Yamaha Q2R96	42.25x40.78x70.75	Ergonomic multi-level workstation with a total of 42 rack spaces	\$1790-\$1990
Omnirax	MXM24	MixStation for Mackie 24 8-bus mixer	43x37.9x81.6	Ergonomic multi-level workstation with a total of 42 rack spaces	\$1590-\$1770
Omnirax	MXM32	MixStation for Mackie 32 8-bus mixer	43x37.9x90.5	Ergonomic multi-level workstation with a total of 42 rack spaces	\$1650-\$1830
Omnirax	NOVA	Compact audio video desk with riser	32.37x29x52.56	Compact computer desk with monitor bridge and 4 rack spaces	\$550-\$750
Omnirax	NT	Keyboard composing/mixing workstation	42.12x54.34x83.65	Fits any keyboard controller, sliding main surface sized for controllers or keyboards, 26 rack spaces	\$2300-\$3590
Omnirax	NT2	Keyboard composing/mixing workstation	42.12x54.34x83.65	Fits any keyboard controller, sliding main surface sized for controllers or keyboards, 26 rack spaces	\$2990-\$3800
Omnirax	OMNI	OmniDesk audio/video editing desk	35.5x34.6x77.6	Curved work surface with 1-piece monitor bridge, total of 29 spaces or space for CPU	\$1150-\$1450
Omnirax	OM13	13 space rack cabinet	29.4x24x31.6	Companion piece to OmniDesk, ordered left or right	\$330-\$460
Omnirax	OM13D	13 space rack cabinet with CPU cubby	29.4x24x42.3	Companion piece to OmniDesk, ordered left or right, includes door covering rack & CPU cubby	\$550-\$680
Omnirax	PRO316	48 space producer's rack	34.56x27.6x62	On casters with generous work surface, 3 rack bays of 16 spaces each	\$790-\$970
Omnirax	PS	ProStation audio/video editing workstation	44x36x72.25	Keyboard composing or mixing consoles, holds computer & near field monitors, 26 rack spaces	\$1390-\$1690
Omnirax	PSJRM/C	ProStation Junior mixing/composing workstation	43x29.5x60.4	For keyboard composing - holds computer & near field monitors, 14 rack spaces	\$950-\$1290
Omnirax	PSM/C	ProStation mixing/composing workstation	45.5x36x72.25	Digital audio workstation; holds computer & near field monitors, 30 rack spaces	\$1350-\$1650
Omnirax	SONIX	Sonix for Digidesign Control 24	40x45.13x88.25	All HD system hardware with a sound insulated cabinet	\$3495-\$3795
Omnirax	S600	Synergy 600 mixing console housing	41.12x41.7x83.5	Adaptable console housing for most mixers, padded wrist rest, 12 space rack bay, requires additional kit	\$1300-\$1570
Omnirax	S800	Synergy 800 mixing console housing	41.37x41.7x101.1	Adaptable console housing for most mixers, padded wrist rest, 12 space rack bay, requires additional kit	\$1720-\$2020
Omnirax	S1000	Synergy 1000 mixing console housing	41.37x41.7x121.5	Adaptable console housing for most mixers, padded wrist rest, 12 space rack bay, requires additional kit	\$2120-\$2420
Omnirax	Synergy Kits	Add-on kits for Synergy series console housings	Varies according to mixer	Mixer specific kits including additional rack bays, writing surfaces and filler panels for S600, 800 & 1000	\$110-\$370
Omnirax	S62480	Dedicated console housing for Roland VS-2480	41.12x41.7x83.5	Kit Included with 2 rack bays, filler panels & hinged wrist pad	\$1650-\$1920

STUDIO FURNITURE

STUDIO FURNITURE

MANUFACTURER

PRODUCT

TYPE

DIMENSIONS
(INCHES)

SPECIAL
FEATURES

PRICE

Omnirax	S6C24	Dedicated console housing for Digidesign Control 24	40x42.7x87.5	Kit included with 2 rack bays	\$1500-\$1770
Omnirax	S6D8	Dedicated console housing for Mackie d8b	41.12x41.7x83.5	Complete: kit Included with 2 rack bays	\$1590-\$1860
Omnirax	S6DM2000	Dedicated console housing for Yamaha DM2000	41.7x47.2x86.7	Complete: kit Included with 24 rack spaces	\$1990-\$2290
Omnirax	S8R100	Dedicated console housing for Sony R-100	38.2x41.6x91.1	Complete: kit Included with 2 rack bays	\$1990-\$2290
Per Madsen Design	RACKIT System 19 Base 19	Foundation for System 19 units	20.75x16x1.5	Provides a foundation for stacking System 19 units	\$40
Per Madsen Design	RACKIT System 19 Cassette 19	Media storage drawers (3 drawers)	15x20.75x16	Modular, stackable oak or birch drawer units hold DAT, 8 mm, minidiscs, floppy discs	\$275-\$295
Per Madsen Design	RACKIT System 19 Cassette 19-10	Media storage cabinet (2 drawers)	20.75x16x10	Stores audio, video, and DAT tapes, two drawers	\$225 (birch)/\$245 (oak)
Per Madsen Design	RACKIT System 19 CD 19 unit	Media storage drawers	15x20.75x16	Modular, stackable oak or birch drawer units hold CD, Minidisc, and ZIP	\$245-\$265
Per Madsen Design	RACKIT System 19 Component Rack	Equipment rack with shelves	5,7.5,10,15x20.75x16	Modular, stackable oak equipment racks	\$90/\$95/\$105/\$110
Per Madsen Design	RACKIT System 19 Component Rack Rails	Equipment racks with mounting rails	10,15,30x20.75x16 EIA standard 5, 8, and 16 unit sizes	Modular, stackable oak equipment racks	\$110/\$125/\$185
Per Madsen Design	RACKIT System 19 Disc Cabinet 19	Media storage cabinet glass door	15x20.75x16	Stores LPs, laser discs, books	\$185
Per Madsen Design	RACKIT System 19 Disc Cabinet 19	Media storage cabinet open front	15x20.75x16	Stores LPs, laser discs, books	\$135
Per Madsen Design	RACKIT System 19 DVD/VHS 19 unit	Media storage drawers	15x20.75x16	Modular, stackable oak or birch drawer units hold DVD, and VHS	\$245-\$265
Per Madsen Design	RACKIT System 19 Dolly 19	Dolly for all RACKIT System 19 units	4x20.75x16	4 twin-wheel casters, 300 pounds rolling load	\$55
Per Madsen Design	RACKIT System 19 Dolly 19 PC Tower	Dolly for RACKIT System 19 units	4x30x16	Holds RACKIT 19 units and PC tower	\$110
Per Madsen Design	RACKIT System 19 File 19-25	Storage drawers for hanging files (2 drawers)	25x20.75x16	Stores letter or legal hanging file folders	\$330-\$365
Per Madsen Design	RACKIT System 19 File 19-25	Storage drawers for hanging files (3 drawers)	25x20.75x16	Stores letter or legal hanging folders, cassettes, DATs and CDs	\$360-\$395
Per Madsen Design	RACKIT System 19 Tabletop 19	Tabletop for all System 19 units	20.75x16x0.75	Provides a solid wood surface for System 19 units	\$40
Quik-Lok	A-50	Tripod studio boom stand	Height: 53.5-91.5, Boom 46.5-87	Tripod leg design with solid steel legs, holds mics, locking casters, 7' boom, mic cable clips	\$180
Quik-Lok	BS-300	Height adjustable near field	Shelf: 9 square, height: 31.5-48; base 17.7 each side	All-steel, arc-welded construction, cable management, triangle base with adj. leveling floor spikes	\$180/pair
Quik-Lok	BS-336	36" fixed-height near field studio monitor stand	Shelf: 11 square, height 36; base 17.7	All-steel, arc-welded construction, cable management, triangle base with adj. leveling floor spikes	\$150/pair
Quik-Lok	BS-342	42" fixed-height near field studio monitor stand	Shelf: 11 square, height 42; base 17.7	All-steel, arc-welded construction, cable management, triangle base with adj. leveling floor spikes	\$160
Quik-Lok	Z-250	Triple-shelf computer workstation	33.6x29.8x22.3	Main shelf with pull-out and peripheral shelves; holds computer equip/access	\$320
Quik-Lok	Z-544	Z-500 Series expandable music project station (44" w)	64.6x40.1x27.5	Expandable; holds computer peripherals, spkrs, rack equip, keyboards, mixers, shelves and crossbars	\$280
Quik-Lok	Z-555	Z-500 Series expandable music project station (55" w)	55-75.6x28.75x35.4	Expandable; shelves and crossbars; computer-welded steel frame	\$300
Quik-Lok	Z-750L	Computer workstation	52.8x28.9x22.3	Large left-angled main shelf with pull-out and peripheral shelves, scratch-resistant 3/4" laminate shelves	\$350
Quik-Lok	Z-750R	Computer workstation	28.9x52.8x22.2	Main shelf with pull-out and peripheral shelves	\$350
Quik-Lok	ADMID	Adjustable studio monitor stand	Custom	Adjustable platform heights; variable speaker tilt	\$425
Sound Anchors	Digital Audio Workstation	Workstation for digital-based recording, mixing, post-production	Custom	Adjustable platform heights; built-in cable management, can be configured for multiple monitors	\$450 and up
Sound Anchors	Mixer Table	Custom mixing table	Custom	Adjustable platform heights, can be configured for multiple monitors	\$750 and up
Sound Anchors	PROJ	Studio monitor stand	Custom	Spikes at floor, sorbothane pads	\$235
Sound Anchors	PROVID	Adjustable studio video monitor stand	Custom	Adjustable platform heights, spikes at floor, variable tilt platform	\$275 and up
Sound Anchors	STUDADJ	Adjustable studio monitor stand	Custom	Adjustable platform heights, pre-filled and damped, variable speaker tilt	\$335
Sound Anchors	STUDADJR	Adjustable studio monitor stand	Custom	Adjustable platform heights, pre-filled and damped, variable speaker tilt, heavy duty platforms	\$375
Soundsuckers	Sound Isolation Booth	Isolation booth	Custom	Compression door sealing; cam door closure; optional low-profile ventilation (\$355); easy assembly	\$1,499 and up
Standtastic	100KS Single Tier Keyboard Stand Frame	Keyboard stand	48 tall, variable width; folds to 6x48	Fully adjustable	\$149
Standtastic	100TK Tier kits	Accessory for stands and wall mount kits	12-24 depth, 3 angle adjustments	Fully adjustable	\$68/pair
Standtastic	102KS 2 Tier Keyboard Stand 60" Frame	2-tier keyboard stand	60 tall; adjustable width; holds 2 keyboards	Fully adjustable; folds to compact size	\$209
Standtastic	103KS 3 Tier Keyboard Stand 60" Frame	3-tier keyboard stand	60 tall frame, adjustable width	Fully adjustable	\$259
Standtastic	122KS Double Tier Keyboard Stand Frame	For live or studio performance	48 tall, variable width; folds to 6x48	Fully adjustable	\$199
Standtastic	P3 Wood Adjustable Stand	Home or studio	36-54 width adjustment	Adjustable width	\$200

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STUDIO FURNITURE

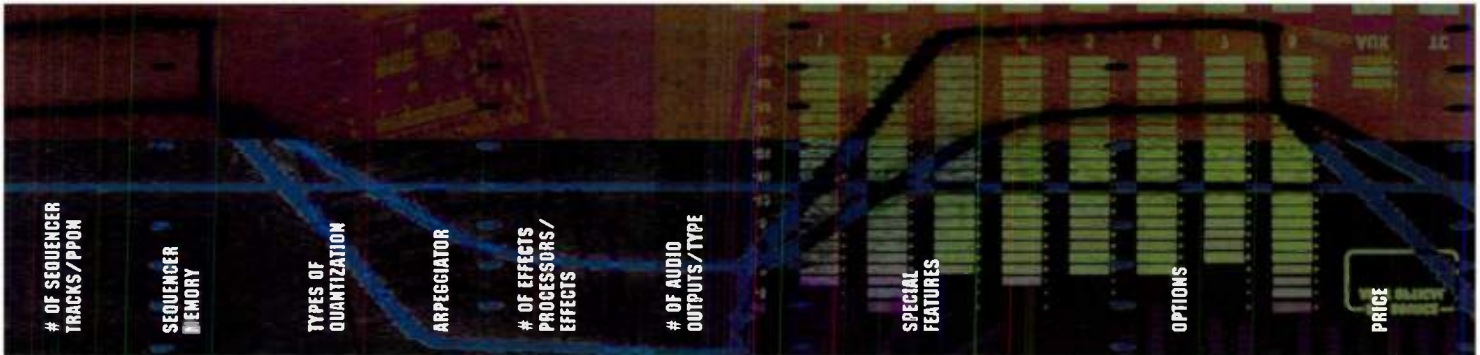
MANUFACTURER	PRODUCT	TYPE	DIMENSIONS (INCHES)	SPECIAL FEATURES	PRICE
Standlastic	UB-1 U Bolts	Wall-mount kit accessory	N/A	Adjusts 100TK's to 90° when used with VF-1s on the wall	\$10
Standlastic	VF-1 Vertical Frames	Wall-mount kit accessory	36 in.	Attaches to wall so 100TKs can be attached for wall mounting keyboards	\$53/pair
Taytrix	Counter tops	Counter tops	Varies	Straight, angle wing, corner units	\$35/sq. ft. and up
Taytrix	Rack Units	12, 14 and 15 rackspace units	29.5-32x16.5-23	Available in square or unique front-angle design, maple or cherry furniture-grade plywood	\$117-\$300
Taytrix	Workstations	Workstation	6' 5" and 5' mini ovals	Adjustable meter bridge shell, 180° swivel speaker wings, rack packages available	\$2,875 and up
Ultimate Support	HS26BP	Studio organizer stand	Height adjustable from 27.5-32 surface: 16x35.5	Large work surface, center tier and side arms support gear, many accessories available	\$250
Ultimate Support	MS36	Studio monitor stand	Height: 36, top plate 9x9, triangle base diameter: 14	Cable management, triangle cast zinc base, available in black and pewter	\$210/pair
Ultimate Support	MS45	Studio monitor stand	Height: 45, top plate 9x9, triangle base diameter: 14	Cable management, triangle cast zinc base, available in black and pewter	\$230/pair
Wenger	Workstation	Computer/synthesizer workstation	48x37x32	Cockpit-like design, steel and wood frame, cord-management system	\$1,143

SYNCHRONIZERS

MANUFACTURER	PRODUCT	SMPT-E	JAM SYNC	FULL FRAME CLIPPING	MTC/MMC	SPECIAL FEATURES	PRICE
Aardvark	Aardvark II-	No	No	No	N/N	* WC, 2X WC, 256 superclock, AES/EBU, video blackburst lock, low-jitter clock	\$1,795
Aardvark	Sync DA-Word Clock Distribution Amp	No	No	No	N/N	Generates word clock from AES/EBU, 6 word clock outputs, supports Digidesign 256 superclock	\$845
Aardvark	TimeSync II-Universal Time Code Synchronization	Yes	Yes	Yes	Y/Y	Derives ultra-low jitter word clock/superclock & MTC from LTC/VITC in, locks in 4 forms	\$1,295
Brainstorm	SA-1	Yes	No	No	N/N	Displays time code format, position, prints error list	\$949
Brainstorm	SR-1	Yes	Yes	Yes	Y/Y	Recovers, reshapes time code, level control	\$239
Brainstorm	SR-3	Yes	Yes	Yes	N/N	Repairs and generates time code, video reference, or internal	\$699
Brainstorm	SR-15 Distripalyzer	Yes	Yes	Yes	N/N	SMPT-E analyzer, distributor, reshaper, error printer, video reference	\$1,599
Brainstorm	SR-26	Yes	Yes	Yes	Y/Y	Distributes 2 inputs to 6 outputs, refresh, reshape, amplify time code	\$549
Brainstorm	SR-8000	Yes	Yes	Yes	N/Y	Remote control for up to 8 machines, MIDI, 9-pin 100 locators, shuttle, track arming	\$1,999
Digidesign	SYNC I/O	Yes	Yes	Yes	Chases LTC directly	Low-jitter clock design, word clock I/O up to 192 kHz accurate, supports industry-standard pull-up/pull-down rates for film/video, 9-pin dual device control	\$2,095
Digidesign	Universal Slave Driver (USD)	Yes	Yes	Yes	Y/Y	Supports industry-standard pull-up/pull-down rates for film/video, 9-pin connectors, insertable Window-Burn	\$2,095
JL Cooper	Datasync 2	Yes	Yes	Yes	Y/Y	ADAT sync to MIDI time code or MIDI clock	\$300
JL Cooper	PPS-2	Yes	Yes	Yes	Y/N	Allows MIDI clock sequencers like Triton Kurzweil to sync to recorders/tape HD, software, firmware options	\$170
Lucid	GENx6	No	No	No	N/N	Sample clock source that also functions as a 1x6 clock distribution amplifier	\$499
Lucid	GENx6-96	No	No	No	N/N	Sample clock source that also functions as a 1x6 clock distribution amplifier	\$699
Lucid	LTC, VITC, MTC, 24, 25, 29.97, 29.97d, 30, 30d	Yes	Yes	Yes	Y/Y	Converts Sony Panter sync (Smart FSK) to MIDI clock	\$135
MOTU	Digital Timepiece	Yes (LTC, VITC)	Yes	Yes	Y/Y	MTC, Sony 9-pin, video, ADAT, DA-88, S/PDIF sync, 0.1% pull-up/down sample rates (44.1/48 kHz)	\$995
Rosendahl	BIF	Yes	Yes	Yes	Y/Y	Positional LTC and MTC full/MMC locate in jog/shuttle, LTC and MTC gen from bi-phase signals	\$799
Rosendahl	LIF	Yes	Yes	Yes	Y/Y	Generates LTC, MTC from LANC-embedded code, positional LTC and MTC full/MMC locate in jog/shuttle	\$749
Rosendahl	MIF3	Yes (LTC)	Yes	Yes	Y/N	Reclocks LTC for stable output from MTC input, LTC stationary frame output for MTC full frame	\$549
Rosendahl	Nanoclocks	No	No	No	N/N	Master word clock generator/distributor w/12 word/clock outputs, 2 transformer-isolated inputs, 44.1-192 kHz, super clock	\$1,299
Rosendahl	Nanosync V3	Yes (Clock ref.)	No	No	N/N	Low-jitter master clock generator, S/PDIF, AES, (6) word/super clock outputs, (4) video outputs, video sync generator	\$1,599
Rosendahl	WIF2	Yes (LTC, VITC)	Yes	Yes	Y/N	Word clock/superclock out from LTC or video output, film/video pull up/down, MTC out for VITC jog/shuttle	\$799
Steinberg	Steinberg Time Lock Pro	Yes	Yes	Yes	Y/Y	Word clock or Digidesign superclock lockup less than 0.4 seconds	\$999
Swissonic	WD 8	Yes	No	No	N/N	(2) WC in, (8) WC out	\$849

SYNTHESIZER & SAMPLER MODULES

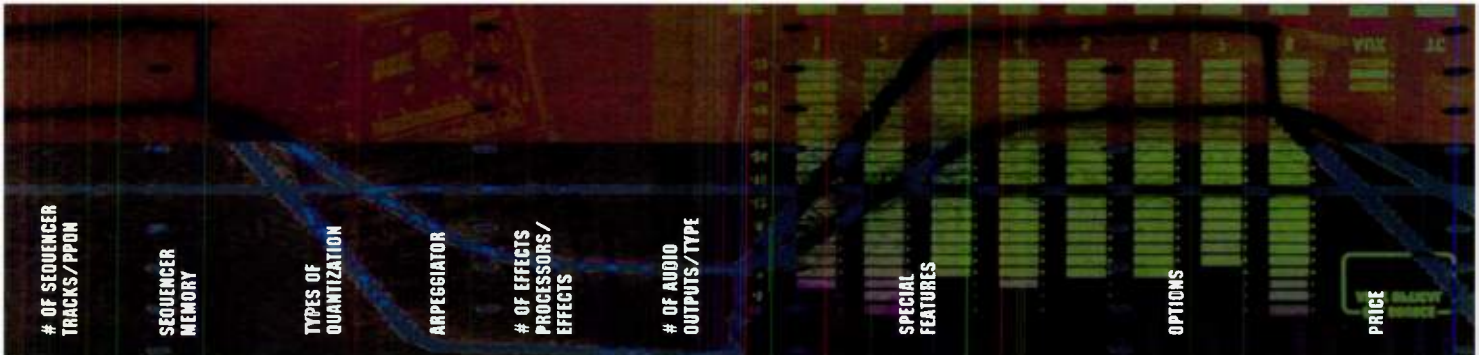
MANUFACTURER	PRODUCT	POLYPHONY/ MULTITIMBRAL PARTS	WAVEFORM MEMORY ROM/RAM	FILTER TYPES/ RESONANCE	SINGLE PROGRAMS ROM/RAM	MULTITIMBRAL PERFORMANCES ROM/RAM	PORTAMENTO	GM/ES/XG COMPATIBLE	BUILT-IN COMPUTER INTERFACE/TYPE	DISK DRIVE TYPE	# AND TYPE OF CONTROLLER INPUTS
Access Music	Virus B	24/16	N/A	24/12 dB LP, BP, HP, BS	512	128	Yes	N/N/N	N	N/A	0
Access Music	Virus C	32/16	N/A	LP, HP, BP, BS/Y	768/256	16	Yes	N/N/N	No	N/A	N/A
Access Music	Virus Rack Classic	16/16	N/A	LP, HP, BP, BS/Y	768/256	16	Yes	N/N/N	No	N/A	N/A
Access Music	Virus Rack XL	32/16	N/A	LP, HP, BP, BS/Y	768/256	16	Yes	N/N/N	No	N/A	N/A
Akai	Z4	64/32	0/272 (exp to 512)	35/Y	0/unlimited	0/unlimited	Yes	N/N/N	Yes/USB	60GB internal IDE	4 knobs
Akai	Z8	64/32	0/272 (exp to 512)	35/Y	0/unlimited	0/unlimited	Yes	N/N/N	Yes/USB	60GB internal IDE	8 knobs
Alesis	DM5 Drum Module	16/1	4 MB	LP/No	0/20	0/0	No	Y/N/N	No	N/A	12 trigger
Alesis	DM Pro	64/16	16/8 MB with flash cards	LP/No	1,536/128	0/64	Yes	Y/N/N	No	N/A	Pedal, 16 trigger 1/4" inputs
Analogue Solutions	Vostok Suitcase	1/1	256/0	LP, HP, BP/Yes	N/A	N/A	Yes	N/N/N	No	N/A	Joystick
Clavia	Nord Electro Rack	146/1	0/6	LP/No	0/6	0/1	No	N/N/N	No	N/A	(2) pedal
Clavia	Nord Micro Modular	4/1	N/A	15 types	99	N/A	Yes	N/N/N	No	N/A	0
Clavia	Nord Modular G2 Engine	16/4	4/4	15/Y	0/500	200	Yes	N/N/N	Yes/USB	N/A	(2) pedal
Clavia	Nord Modular Rack	16/4	N/A	15 types	500	N/A	Yes	N/N/N	No	N/A	(1) switch, (1) exp pedal
Clavia	Nord Rack2x	16/4	N/A	BP, HP, LP/Yes	0/1024	0/300	Yes	N/N/N	No	N/A	(1) pedal switch, (1) exp pedal
Clavia	Nord Rack 3	24/4	N/A	LP, BP, HP, notch, dual/Y	0/1024	0/128	Yes	N/N/N	N/A	N/A	(2) pedal
Dave Smith Instruments	Evolver	1	4 oscillators	Analog LP/Y, digital HP/N	0/384	1	Yes	N/N/N	No	N/A	0
Doepfer	A-100 Modular Synthesizer	Depends on configuration	N/A	10	0	None	With port. module	Optional	No	N/A	Many
Edirol	Studio Canvas SD-20	64/32	N/A	LP	660/23 Drums sets	N/A	Yes	Y/Y/Y	USB, serial	N/A	0
Edirol	Studio Canvas SD-80	128/32	N/A	LP	1,050/30 Drums sets	N/A	Yes	Y/Y/Y	USB	N/A	0
Edirol	Studio Canvas SD-90	128/32	N/A	LP	1,050/30 Drums sets	N/A	Yes	Y/Y/Y	USB	N/A	0
E-mu Systems	E5000 Ultra	64/16 (exp to 32)	0 MB (exp to 64)/ 4 (exp to 128)	21/Yes	1,000/1,000	1	Yes	N/N/N	Yes/SCSI	N/A	0
E-mu Systems	E6400 Ultra	64 (exp to 128)/ 16 (exp to 32)	0 MB (exp to 64)/ 16 (exp to 128)	21/Yes	1,000/1,000	1	Yes	N/N/N	Yes/SCSI	N/A	0
E-mu Systems	Mo'Phatt	64 (exp to 128)/ 16 (exp to 32)	32 MB (exp to 64)/0	12th order/Yes	512/512	64	Yes	N/N/N	No	N/A	0
E-mu Systems	Orbit 3	128/32	64 (exp to 128)/0	Over 50/Yes	1024 factory/ 512 user	64	Yes	N/N/N	No	N/A	N/A
E-mu Systems	Proteus 1000	64/16	32 (exp to 64)	Over 50/Yes	1024 factory/ 512 user	64	Yes	N/N/N	No	N/A	N/A
E-mu Systems	Proteus 2000	128/32	32 MB (exp to 128)	17/Yes	1024/512	64	Yes	N/N/N	No	N/A	0
E-mu Systems	Proteus 2500	128/32	32 (exp to 128)/0	50+/Yes	512 factory/ 512 user	64	Yes	N/N/N	Yes/USB	N/A	(2) footswitch
E-mu Systems	Vintage Pro	128/32	32/0	21/Yes	512/512	64	Yes	N/N/N	No	N/A	0
E-mu Systems	Virtuoso 2000	128/32	64 MB (exp to 128)/0	17/Yes	512/512	64	Yes	N/N/N	No	N/A	0
Fulure Retro	FR-777	1	0	LP, HP/Yes	0	NA	Yes	N/N/N	No	N/A	0
Korg	EA-1	2/2	N/A	LP/Yes	0/448	0/256	Yes	N/N/N	No	N/A	0
Korg	ES-1	10/0	N/A	LP	0/100	N/A	No	N/N/N	No	SmartMedia	0
Korg	MS2000R	4/1	DWGS in ROM	LP, BP, HP	0/128	N/A	Yes	N/N/N	No	N/A	(2) assignable pedal and switches
Korg	Triton Rack	62/16	32 MB in ROM/ up to 128 in RAM	HP, LP	0/640	0/512	Yes	N/N/N	No	3.5" HD/DD	0
Kurzweil	K2600R/K2600RS	48/16	8/64	LP, HP, BP, notch, AP/Yes	231/1,000	100/1,000	Yes	Y/N/N	Yes/SCSI	Floppy	(4) switch pedal, (2) cc pedal, breath controller



# OF SEQUENCER TRACKS/PPON	SEQUENCER MEMORY	TYPES OF QUANTIZATION	ARPEGGIATOR	# OF EFFECTS PROCESSORS/EFFECTS	# OF AUDIO OUTPUTS/TYPE	SPECIAL FEATURES	OPTIONS	PRICE
N/A	N/A	N/A	Yes	1/82	(6) mono, (6) stereo	Stereo filter inputs; 3 LFOs, 2 env. sine, triangle, saw, pulse, plus 64 waveshape	Virus KB (keyboard version)	\$1,795
N/A	N/A	N/A	Yes	1/98	6		Rack mounting kit	\$1,995
N/A	N/A	N/A	Yes	1/68	4			\$1,195
N/A	N/A	N/A	Yes	1/98	6			\$1,795
N/A	N/A	N/A	No	4/52	(2) 1/4" TRS	24-bit/96 kHz support; PC/Mac ctrl/ntwrkng software, write CD-RW, auto program creation, auto normalize	4-buss FX, 8-out analog expander, stereo dig I/O (S/PDIF), 8-ch ADAT dig. I/O	\$1,799
N/A	N/A	N/A	No	4/52	(2) 1/4" TRS	24-bit/96 kHz support, removable front panels, PC/Mac ctrl/ntwrkng software, write CD-RW	IB48P 8-ch. analog output expander, IB4ADT 8-ch ADAT dig. I/O	\$2,299
N/A	N/A	N/A	No	N/A	(4) 1/4"			\$449
16/480	8 MB/50 seq on PCMCIA card	N/A	No	1/5	(6) 1/4" TRS	16 trigger ins; 2 RCA ins		\$899
1/4	8	9ths	No	8	N/A	Full patchable discrete component analog modular synth, pin matrix board patch panel, portable modular in suitcase		\$2,595
N/A	N/A	N/A	No	1/6	(2) 1/4"		Modeled 8-3/sampled elec pianos, USB port to update	\$1,699
N/A	N/A	N/A	Yes	1/30 (+)	(2) 1/4"	Mac and PC editor allows you to build a synth	3,000 (+) presets avail from website	\$749
Step sequencer	N/A	N/A	Yes	4/40	(4) 1/4"	Free editor for computer, create synths from 100+ synth building blocks, 4 audio ins w/XLR, mic preamp		\$1,199
N/A	16 steps	N/A	Yes	4/30 (+)	(4) 1/4"	Mac and PC editor allows you to build a synth	16-voice expander board	\$1,899
N/A	N/A	N/A	Yes	N/A	(4) 1/4"	Analog modeling synth—no waveforms		\$1,199
N/A	N/A	N/A	Yes	N/A	(4) 1/4"	Subtractive synth w/4 operator FM synth		\$2,199
16x4 step	64	Up to 64T	No	2/5	(2) 1/4"	Real analog filters; feedback, delay, stereo signal processing		\$499
N/A	N/A	With quantize module	No	Depends on configuration	Depends on configuration	True analog modular synth system, 70 different modules available		\$50 and up
N/A	N/A	N/A	No	1/2	1/8" line I/O, headphone, S/PDIF (optical)	24-bit, 44.1kHz and 48 kHz Sampling Rates, USB powered		\$375
N/A	N/A	N/A	Yes	3/3	1/4" line I/O, headphone, S/PDIF (coax, optical)	24-bit, 44.1kHz and 48 kHz Sampling Rates		\$850
N/A	N/A	N/A	Yes	3/90	RCA line I/O, headphone; S/PDIF (coax, optical)	Audio Capture: 2-channel, 24-bit A/D/A, 44.1 and 48 kHz Sample Rates; (2) MIDI I/O		\$1,050
48/480	4 MB	1/4–1/64 w/swing	No	2/60	(4) analog, ADAT, AES/EBU	Digital modular synthesis; burns custom flash ROMs	32-channel RFX-32 FX/Mixer card, MIDI, word clock, S/PDIF	\$1,795
48/480	4 MB	1/4–1/64 w/swing	No	2/60	(8 exp to 16) ADAT	Digital modular synthesis	MIDI x 2 exp, digital I/O, ASCII; resampling, ROM brd, ADAT I/O	\$2,295
N/A	N/A	N/A	Yes	2/30+	(2) analog	Control knobs, plays back custom sound ROMs created with E4 Ultra Samplers	Expansion sound ROMs, polyphony/output/MIDI/ROM expansion hardware upgrade	\$695
N/A	N/A	N/A	Yes	2/70	(6) analog + S/PDIF; balanced 1/4"	SuperBEATS	Exp. sounds	\$895
N/A	N/A	N/A	No	2/70	(2) 1/4" TRS	Expandable sound set		\$549
N/A	N/A	N/A	No	2/30+	(6) 1/4", S/PDIF	32 MIDI channels, 4 real-time controls; plays back custom ROMs	Additional 16 MB and 32 MB sound ROMs	\$795
16/384	>300,000	32d triplet swing	Yes	2/70	(6) 1/4" TRS, S/PDIF	Real-time controls		\$995
N/A	N/A	N/A	Yes	2/30+	(6) 1/4" S/PDIF	Expandable soundset, 12 peak filters, real-time controls	Expansion ROMs	\$795
N/A	N/A	N/A	No	2/30+	(6) analog, S/PDIF	4 real-time control knobs; plays back custom sound ROMs	Expansion sound ROMs	\$1,395
256	256 patterns/16 songs	16th note, 3/4, 4/4	No	1/2 (overdrive)	1/4"	Pure analog synthesis, external audio input, MIDI to CV converter		\$777
2/0	64 steps	12T, 16, swing 16, 32	No	2/2	(2) 1/4" headphone	Audio in for gating audio with patterns; realtime control		\$399
10/0	Up to 64 steps per part	16, 16 swing, 32, triplets	No	2/12	(2) 1/4"	Resample; time motion sequencer, Smartmedia storage		\$599
3 part motion sequencer	16 steps	N/A	Yes	2/7	(2) 1/4", RCA	16-band vocoder, 3-part motion sequencer		\$850
N/A	NA	N/A	Dual Polyphonic	8/102 inserts, 89 master, 3-band stereo EQ	(6) 1/4" outs, headphone jack	Sampler up to 96 MB, user expandable upgrades	SCSI, physical modeling, sound expansion, MLAN	\$2,500
32/768	60,000–180,000 notes	Groove, reference, swing, shift	Yes	5/480	(10) 1/4" TRS, AES/EBU + S/PDIF XLR, KDS	Reads samples from Akai, Roland Ensoniq, AiFF, Wave, Flash ROM upgradeable OS Ram-Tracks	128 MB sample RAM, ROM for various instruments	\$3,490/\$4,000

SYNTHESIZER & SAMPLER MODULES

MANUFACTURER	PRODUCT	POLYPHONY/ MULTITIMBRAL PARTS	WAVEFORM MEMORY ROM/RAM	FILTER TYPES/ RESONANCE	SINGLE PROGRAMS ROM/RAM	MULTITIMBRAL PERFORMANCES ROM/RAM	PORTAMENTO	GM/GS/XG COMPATIBLE	BUILT-IN COMPUTER INTERFACE/TYPE	DISK DRIVE TYPE	# AND TYPE OF CONTROLLER INPUTS
Kurzweil	Micro Ensemble	32/16	6/0	LP, HP, BP, notch	256/0	N/A	Yes	N/N/N	No	N/A	0
Kurzweil	PC2R	64/16	16/0	LP, HP, BP, notch	400/128	64/128	Yes	Y/N/N	No	N/A	4 knobs
MAM	ADX 1 Analog Drum	5/5	N/A	LP/Yes	0/0	N/A	No	N/N/N	No	N/A	N/A
MAM	MB33 II Analog Bass	1/1	N/A	VCF 18 dB LP/Yes	1	0/0	No	N/N/N	No	N/A	VCF
MAM	MIDI Arpeggiator	N/A	N/A	N/A	16/50	N/A	No	N/N/N	No	N/A	N/A
Melasonix	TM Modules	Config-dependent	N/A	BP/Y	0	N/A	No	N/N/N	Optional/MIDI	N/A	Config-dependent
Quasimidi	Polymorph	16/4	N/A	24 dB LP, +12 dB HP	0/128	0/64	Yes	N/N/N	No	N/A	0
Quasimidi	QM-309 Rave-O-Lution	17/5	N/A	24 dB/12 dB LP	0/384	N/A	Yes	N/N/N	No	N/A	(1) footswitch
Red Sound Systems	Dark Star XP2	8/5	no samples	LP, HP, BP, notch/Yes	0/200	5/5	Yes	N/N/N	No	N/A	2
Red Sound Systems	elevAra	16/8	no samples	LP, HP, BP, notch/Yes	0/200	8/8	Yes	N/N/N	No	N/A	2
Roland	S4-32	32/4	N/A	LP, BP, HP, Peak/Yes	128/128	0/64	Yes	N/N/N	No	N/A	(1) foot switch
Roland	SP-505 Groove Sampling Workstation	8 voice/4 part multitimbral	4 MB/expandable	LP/Yes to 128 MB	250/256	100	No	N/N/N	No	Smart Media	(1) pedal
Roland	SP-808 Exemix-studio	4/0	250 MB RAM cached from disk	HP, LP, BP	0/1,024	N/A	No	N/N/N	No	ZIP 250 MB (2x)	(6) assign knobs, D-Beam
Roland	VK-8M	Full/3	Tonewheel mod x3	N/A	0/36	0/36	No	N/N/N	No	N/A	(1) pedal
Roland	VP-9800	6/6	8 MB (exp to 136)	LP/Yes	0/1,024	1 RAM	Yes	N/N/N	No	ZIP 250 MB	0
Roland	XV-2020	64/16	64/0	(3) LP, BP, HP/Y	785/132	64/64	Yes	Y/Y/Y	Yes/USB	N/A	N/A
Roland	XV-5050 Synthesizer Module	64/16	64/0	(3) LP, BP, HP, Peak	1,280/128	Yes	Yes	Y/N/N	Yes/USB	N/A	N/A
Roland	XV-5080	128/32	64 MB ROM (exp to 512)	LP, BP, HP, peaking/Yes	1,152/128	64/64	Yes	Y/N/N	No	128 MB SmartMedia, SCSI	0
Studio Electronics	ATC-1	Monophonic	N/A	Moog 24 dB	0/512	0	Yes	N/N/N	No	N/A	CV/gate I/O
Studio Electronics	ATCX-QFS	Monophonic	N/A	4 classic/Y	0/512	N/A	Yes	N/N/N	No	N/A	External audio, ring mod
Studio Electronics	Omega 2	2/2	N/A	12 dB LP, BP, HP, BR, Moog 24 dB/Y	256/256	0/128	Yes	N/N/N	No	N/A	(1) env following audio in per voice
Studio Electronics	Omega 8	8/8	N/A	12 dB LP, BP, HP, BR, Moog 24 dB/Y	256/256	0/128	Yes	N/N/N	No	N/A	External audio
Studio Electronics	SE-1	Monophonic	N/A	12 dB LP, BP, Moog 24 dB	0/198	0	Yes	N/N/N	No	N/A	0
Studio Electronics	SE-1X	Monophonic	N/A	SEM 12 dB, Moog 24 dB/Y	396/396	N/A	Yes	N/N/N	No	N/A	External audio
Studiologic/Fatar	Blue Chip OX-7 Virtual Tonewheel Drawbar Module	24/3	N/A	N/A	99/99	N/A	No	N/N/N	No	N/A	0
Studiologic/Fatar	Blue Chip Baby B Virtual Tonewheel Drawbar Module	24/3	N/A	N/A	99/99	N/A	No	N/N/N	No	N/A	0
Synthesis Technology	MOTM Analog Modular Synthesizer	1-4	N/A	LP, HP, BP/Yes	N/A	N/A	Yes	N/N/N	No	N/A	(2) CV, pedal
Vermona	Perfourmer	4	N/A	LP/Y	N/A	N/A	Yes	N/N/N	No	N/A	N/A
Vermona	Mars	1/1	N/A	LP/Y	128	0	Yes	N/N/N	No	N/A	(1) pedal
Voce	Electric Piano	32/3	N/A	BP/Yes	32/0	3/0	No	N/N/N	No	N/A	0
Voce	Micro B II	32/3	N/A	HP, LP/Yes	36/0	3/0	No	N/N/N	No	N/A	0
Voce	V5	Full/3	N/A	N/A	0/7	0/3	No	N/N/N	No	N/A	0
Ward Synthesizer	Ward Modular System	1/1	N/A	Multi-type resonant	N/A	N/A	Patchable	N/N/N	No	N/A	0
Yamaha	A4000	64/16	0/4 (exp to 128)	16/Yes	0/128	0/128	Yes	N/N/N	Yes/SCSI	Floppy	(5) assign knobs
Yamaha	A5000	128/32	0/4 (exp to 128)	16/Yes	0/128	0/128	Yes	N/N/N	Yes/SCSI	Floppy	(5) assign knobs
Yamaha	CS6R	64/19	28.8	12/Yes	N/A	N/A	Yes	Optional	Yes/serial, Mac/PC	SmartMedia	Breath controller
Yamaha	Motif Rack	128	85/0	(21) LP, HP, BP, N/Y	640/256	N/A	Yes	Y/N/N	Yes/USB	N/A	N/A
Yamaha	OY700	N/A	N/A	N/A	N/A	N/A	No	N/N/N	No	N/A	0



# OF SEQUENCER TRACKS/PPON	SEQUENCER MEMORY	TYPES OF QUANTIZATION	ARPEGGIATOR	# OF EFFECTS PROCESSORS/EFFECTS	# OF AUDIO OUTPUTS/TYPE	SPECIAL FEATURES	OPTIONS	PRICE
N/A	N/A	N/A	No	1/8	(2) 1/4" stereo, headphone	Contains same basic factory presets as acclaimed PC2 series		\$449
N/A	N/A	N/A	Yes	2/172	(2) 1/4" TRS, AES/EBU, S/PDIF RCA, headphones	Triple strike stereo grand piano, KB-3 tone wheel modeled organ mode, Flash ROM upgradeable OS	Polyphony/orchestral/GM/vintage keyboard expansion cards	\$1,415
N/A	N/A	N/A	No	N/A	1/4"			\$519
N/A	N/A	N/A	No	N/A	1/4"		Distortion	\$319
N/A	N/A	N/A	Yes	N/A	N/A	Split, up, down, random, chord, MIDI channel 1-16		\$159
N/A	N/A	N/A	No	Config-dependent	Config-dependent	All-vacuum-tube synthesizer mods, 100% analog, 5 different mods avail.		\$399 and up
4	N/A	N/A	No	16	4	Analog-style sequencer, AES synthesis, 2 audio inputs		\$1,199
5/24	20,000 events	N/A	No	3/17	(4) RCA	Full synth features on drum sounds, 2 audio inputs	Sound expansions for drums and synth sounds	\$899
N/A	N/A	N/A	Yes	N/A	(4) 1/4"	Joystick controller, virtual analog	Vocoder EPROM	\$399
N/A	N/A	N/A	Yes	1/4	(6) 1/4"	Joystick control, analog modeling synth	Vocoder EPROM	\$699
N/A	N/A	ARP: 16th triplet	Yes	2/45	(2) 1/4"	Sub Osc, ring mod, osc sync, chord memory		\$595
4	15,000 events	8 4 w/swing	No	1/26	(2) RCA	S/PDIF input, chop function, pitch	BPM adjust	\$395
8	N/A	Grid	No	1/149	(4) RCA	D-beam, COSM effects (incl. guitar amps, microphone modeling)	SP-808-OP1; SP-808-OP2 expansion boards	\$1,695
N/A	N/A	N/A	No	3/6	(2) 1/4"	D-beam; (2) 1/4" audio inputs, active expression	BKT-8 mounting bracket	\$995
N/A	N/A	N/A	No	3/40	(6) 1/4"	Variphase processing	DR-10/ DR-20	\$3,295
N/A	N/A	N/A	No	3/40	(2) 1/4", (2) RCA	(2) SRX slots, incl. XV-Editor for PC/Mac	SRX-series expansion board	\$695
N/A	N/A	N/A	No	5/90		(4) 1/4", (2) S/PDIF, (2) SRX Slotz Editor software; (2) 24-bit S/PDIF outs	SRX expansion	\$995
N/A	N/A	N/A	No	5/96	(4) 1/4"	Word clock, R-BUS, supports Akai, Roland, AIFF, WAV libraries	SmartMedia; SCSI CD-R, SCSI HD or removable media	\$2,495
N/A	N/A	N/A	No	N/A	(1) 1/4"	2 LFOs; 3 envelopes; ext in, plug in filters, 2 VCOs per voice	Additional filter cartridges: SEM,303,2600	\$1,099
N/A	N/A	N/A	No	N/A	1/4"	Quad filter system-mini, SEM, 303, 2600; 2 VCOs; 2 LFOs; 3 envelopes; AFM, ring mod, distortion	Available w/mini filter only (\$1,195)	\$1,595
N/A	N/A	N/A	Yes	N/A	(2) 1/4" TRS, (3) 1/4"	2 VCOs, 3 LFOs, 3 multi stage env., sub OSC, OSC sync; AFM, noise generator per stereo voice	2 additional filter slots per voice currently available: 303, 2600	\$2,295
N/A	N/A	N/A	Yes	N/A	(8) 1/4" TRS, (3) 1/4"	2 VCOs, sub OSC, 3 LFOs, 3 multi stage envelopes, OSC sync; AFM, noise generator per stereo voice	2 additional filter slots per voice currently available: 303, 2600	\$5,295
N/A	N/A	N/A	No	N/A	(1) 1/4"	3 LFOs, 4 envelopes; ring mod,osc sync; 3 VCOs per voice	External input	\$1,699
N/A	N/A	N/A	No	N/A	1/4"	3 VCOs; 3 LFOs, 4 envelopes; ring mod, OSC sync, noise generator	Upgrade SE-1 to SE1x (\$379)	\$1,799
N/A	N/A	N/A	No	1/6	(2) 1/4"	Drawbars, rotorsound simulator	VP-26 pedal \$39, PS-10 footswitch \$18	\$1,595
N/A	N/A	N/A	No	1/6	(2) 1/4"	Drawbars, rotorsound simulator	VP-26 pedal \$39.95, PS-10 footswitch \$18	\$895
N/A	N/A	N/A	No	2/4	Multiple 1/4"	5U tall, fits standard studio racks, 18 different module types (VCO, VCF, etc.)		\$89-\$499
N/A	N/A	N/A	No	N/A	(6) 1/4"	Real analog synth, individual outs, stereo outs, FM synthesis, external inputs		\$995
N/A	N/A	N/A	No	N/A	(1) 1/4"		Mars DAF1 rack controller for multi-mode filter	\$595
N/A	N/A	N/A	No	1/4	(2) 1/4"	Digital model based with analog effects		\$579
N/A	N/A	N/A	No	1/4	(2) 1/4"	Half-rack organ simulator	Spin II rotary speaker simulator	\$579
N/A	N/A	N/A	No	1/4	(1) 1/4"	Drawbar organ synthesizer	Spin II rotary speaker simulator	\$975
N/A	N/A	N/A	No	N/A	N/A	Complete modular system	Built-to-order, several modules available.	\$2,999 and up
16/480	100,000+ notes	N/A	No	3/96	(4) 1/4"	Loop divide; loop remix, CD burning capable (data and Red Book audio)	Output expander; internal HDD, zip drive	\$1,595
16/480	100,000+ notes	N/A	No	6/96	(4) 1/4"	Loop divide; loop remix, CD burning	Output expander, internal HDD, zip drive option	\$2,295
16/480	N/A	N/A	Yes	2/130	(4) 1/4"	Phrase clip sampling 4 MB, stereo A/D input, scenes	PLG series expansion boards x 2, 6 types available	\$1,495
N/A	N/A	N/A	Yes	10/123	(4) 1/4" optical/coax	Modular synthesis plug-in system	2 PLG series expansions	\$1,295
48/480	N/A	input, percentage, groove templates, user definable	No	1/3	N/A	XG tone generator with 480 normal voices, 11 drum kits, 3.5" FDD		\$1,495

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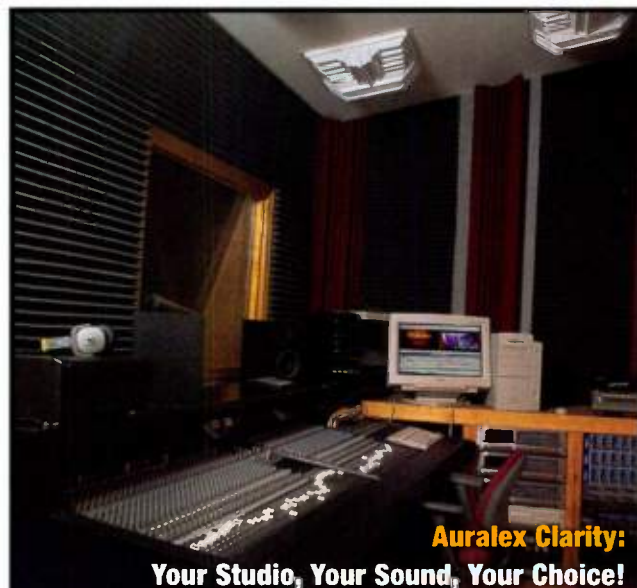
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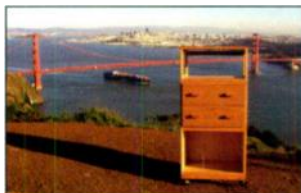


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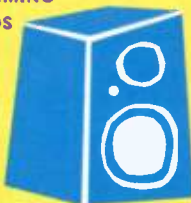
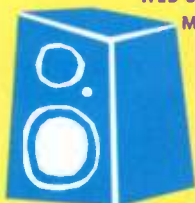
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