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# MODERN **RECORDING** & MUSIC

FEBRUARY 1986  
VOL. 12 NO. 2

*The Technology Magazine*

## STARSHIP

MR. D. PUMEROY  
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**Profiles: John Parr • Producer David Malloy**

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VOL. 12 NO. 2

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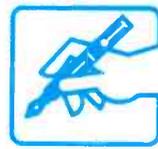
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### **View To A Subscriber**

Let me take this opportunity to say a couple of things. First and foremost, I was a charter subscriber and glad of it. Yours is one of my favorite magazines. Thank you!

Personally, I'd like to see less of your valuable space being used for describing musical instruments unless they are especially unique or innovative. Also I'd like to see less of non-technical musician-personality articles. There are several other publications of which cover those areas, some of which are trying to hone in on, what I'd perceive as, your territory—that is, semi-technical aspects of live and recorded audio.

I'd like to see a good article or series on how to take a magazine construction project, such as you have published, from paper to completion, i.e., through bread boarding and on.

Lastly, I have been trying to contact Meteor Light & Sound in Syosset, NY, but my correspondence is returned as undeliverable. Are they still in business? Do you have an address? Is so, would you please send it to me? I need some information about a Clubman 4 mixer in a Roller Rink sound system I am maintaining. If you could get me their address or let me know who is handling their affairs as soon as possible, I would really appreciate it. Thank you.

Steve Riley

*Well Steve, thank you for the kind words. Our own Jon "Mr. Kit" Gaines is currently working on the type of article you mention—taking a construction project from the pages of MR&M to a completed working piece of equipment. Look for that in an upcoming issue.*

*Unfortunately, we can't help you contact Meteor Light & Sound. To the best of our knowledge, they are out of business. We checked local phone books, and even tried calling information, but no luck.*

### **Loving Every Minute Of It**

I am a brand new subscriber to MR&M (first issue in Dec.) and I already love it. I am especially looking forward to following Brian Battle's Ad Venture. It gave me a lot of great ideas. In fact, I am going to try to sell advertising production as soon as I feel confident enough.

How long has this great column been running? How can I get old columns?

Joan Simons

*"Ad Ventures" premiered in July, 1985, and has run in every issue since then with the exception of Oct, 1985, and Jan, 1986. You can get any of these back issues by sending (check or money order) \$3.25 per issue to the attention of Eloise Beach, Circulation Manager. The address is: Modern Recording & Music, 1120 Old Country Road, Plainview, NY 11803.*

### **Calling All Readers! Calling All Readers!**

If anyone has any information on the Meteor Light & Sound Co. (formerly located in Syosset, NY) or the Clubman mixers that they formerly made, please let us know. We'll be sure to pass the information on.



## SOME OF MAN'S GREATEST TRIUMPHS ARE PERSONAL.

Sure, making music is often a group effort. But there are crucial moments when it all comes down to a one-on-one relationship between you and your music. Moments when only you can give form to a creative inspiration that is uniquely your own. When you've got it, you know it. But the only way to be sure is to hear it.

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# Talk Back

## MIDI Mind Boggler

I am a fairly new reader who is also new to this field. I have recently purchased a used TEAC 3340 4-track recorder, and have

been fooling around with it a little bit. I also have a small Casio keyboard and a Roland Drumatix drum machine. In addition, I play electric guitar and bass.

I hope this question isn't too simple, but I have seen many mentions of MIDI. Unfortunately, I don't have a clear picture of what it is. I would like more details.

Sara Baker  
Sacramento, CA

*Reply from technical editor, Sammy Caine:*

MIDI stands for Musical Instrument Digital Interface, and is just that. It's a method of interconnecting (using special MIDI cables) electronic instruments that have MIDI capability so that they may "communicate" with each other.

Parameters of a MIDI keyboard—pitch, vibrato, pitch bend, etc., can be controlled via MIDI. The controllable parameters vary from one synthesizer to another, but the most important is key-on and key-off. This is the actual motion of the key as you play.

Let's look at a very basic possible set-up.

The following is a very simple example:

Let's say you have four state-of-the-art synthesizers, all with MIDI capabilities.

While recording a song, you decide

you want four different keyboard sounds to be heard at once. Now, you can play four separate keyboard parts on four different tracks, OR you can "MIDI up" your keyboards and play all the parts at once (in most cases). Not only does this save tracks, it also ensures that all the parts will be the correct tempo.

To accomplish this, you must designate one keyboard as the "master." The other keyboards now become "slaves."

By interconnecting the three slaves to the MIDI-Out jack on the master, any key activated on the master will activate the same key on the slaves. The MIDI cable is a unique cable designed specifically for MIDI.

By using different patch sounds on each keyboard, or even detuning one or two, you can get a very layered textured sound. You can actually have four keyboard parts playing at once.

The parameters that can be transmitted via MIDI vary, but there are sixteen different MIDI channels to use.

Of course, this is only a very basic use of MIDI. Other, fairly new uses include interfacing with computers, computerized editing and many, many others.

The best thing to do is to consult some of the many articles that have been written on the subject, such as the series of articles on MIDI in the July, August, and September, 1985, issues of *MR&M*.

In addition, there are two books on MIDI that you might find useful:

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MIDI For Musicians, by Craig Anderton, published by Music Sales Corp. in Chester, NY;

Using MIDI And Related Interfaces, published by Cherry Lane Technologies of Port Chester, NY.

### Department of Eratta

We managed to leave two important manufacturers out of our Directories, Audio-Technica from tape recorders, and LT Sound from Delays and Reverbs.

With apologies to them and you, here they are.

### AUDIO-TECHNICA

#### AT-RMX64

This is a six-input mixer combined with a three-motor cassette deck. It will accommodate any mic or direct input including low-impedance balanced pro mics requiring 48 volts phantom power. A total of 60 dB of avail-

able input attenuation guards against overload. Two aux sends are also included, switchable from pre-eq and fader to post-eq and fader. Two-band parametric eq is available on each fader. With 72 dB of gain, the unit easily direct-drives power amplifiers. The recorder makes 4-track tapes at 3.75 in/sec speed, or 1.875 in/sec compatible two-track tapes. Switchable Dolby B and C are included, as is punch-in/punch-out. Price: \$1495.00.

### LT SOUND

#### Echo Control Center

This unit features a studio quality digital delay system also having Microplate Reverb capability. Delay and reverb can be used together or independently. Both delay and reverb have 18 kHz frequency response. The delay times are from 1 ms to 1 full second with full frequency response. Decay time on Microplate Reverb variable from .6 seconds to 2.4 seconds. Effects include: doubling, chorus, flanging, plate reverb with delay, acoustic chamber, tremolo, and numerous combinations of effects. It has presets which interact with controls for highest flexibility. Price: \$995.

#### Reverb Control Center

Complete mixing and studio quality Microplate Reverb system for use as stand alone device or with mixing board. Two pro quality mic inputs, and with two stereo sources for output for tape recording; 3-band eq optimized for vocal work, and can be used for preparing demos or as a PA mixer for performance. It has 18 kHz frequency response on reverb. Price: \$595.

#### RV-2 Stereo Reverberation Unit

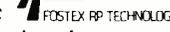
A true stereo reverb unit featuring the Microplate Reverb system with over 18 kHz frequency response. Four simultaneous inputs per channel for three different sounds: plate one, plate two, and acoustic chamber. Decay time control variable .6 seconds to 2.4 seconds. Price: \$895.



First you have to hear the mistake. Flat response is important, but it isn't enough. You also need phase coherence so that some sounds don't mask others.

Then you need to eliminate the room, a common masking factor caused by uncontrolled reflections and reverberations.

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# Taxing Tips

## Last Minute Tax Planning

**W**ith December 31st behind and April 15th fast approaching, most home recording studio owners are resigned to the annual bite of the tax collector. After all, what can be done to reduce the inevitable tax bill at this late date? The answer is plenty!

One excellent illustration of how last minute tax planning can benefit every home studio owner is provided by Section 179 of our basic income tax law, the Internal Revenue Code. Code Section 179 states, quite simply, that every studio owner may choose to immediately deduct up to \$5,000 in new

equipment costs in the year the equipment is placed in service, rather than depreciating it.

Before jumping at this immediate deduction, last minute planning is called for. Would an extra deduction of \$5,000 now be more beneficial than claiming the investment tax credit and first-year depreciation allowance—neither of which is available if the Section 179 expensing election is made?

Since every recording business and its prospects for future earnings are different, there is no cut-and-dried answer to the immediate writeoff ver-

sus depreciation question. In fact, the question is further complicated by the question of whether to claim a full 10 percent investment tax credit or lower tax credit and larger depreciation deductions in later years.

Our tax law states that the basis or book value of investment tax credit property must be reduced by 50 percent of any tax credits claimed. This reduction affects not only the computation of the ACRS (depreciation) deduction but also the computation of gain or loss upon disposition of the asset.

As an alternative, however, instead

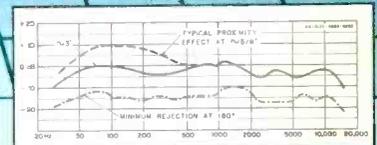
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of reducing the basis by 50 percent of the regular investment tax credit, a home recording studio owner may choose to decrease the regular investment tax credit by two points. Thus, the reduced tax credit is 8 percent for most property and 4 percent for recovery property that has a three-year life.

Going even further into decision land, in the same field we encounter the capital expenditure vs. repair question. According to the rules, any expenditure which adds to the value or useful life of property is not allowed as a business expense deduction. Rather it is treated as permanent investment to be added to the cost basis of the property and charged off through depreciation.

Capital expenditures, on the other hand, include those for new buildings, improvements or betterments of a long-term nature, new equipment, elimination of competition and the cost of acquiring or perfecting title to property. The costs of a new roof, sound or lighting improvements and bricking up windows to strengthen a wall are capital expenditures while repainting the inside or outside of a

building, mending leaks, plastering and conditioning gutters on a building are examples of repairs.

Generally, any professional home recording studio, whether operating as a corporation, an individual, a partnership, trust or estate, may deduct from gross income all of the "ordinary and necessary" expenses of carrying on a trade or business that were paid or incurred during the taxable year. Naturally, no deduction is permitted for any expenditure properly classified as a capital expense.

Whether an expense is ordinary and necessary is based upon a factual examination surrounding each particular expense. The courts have held that an expense can be considered necessary if it was appropriate and helpful to the taxpayer's business or if it was clearly and reasonably related to the business. An expense can be considered ordinary if the response was one which would normally be expected in the situation, even if the situation would seldom arise.

Situations that are arising with ever-increasing frequency involve fines, penalties, kick-backs and illegal payments. With one eye on the Inter-

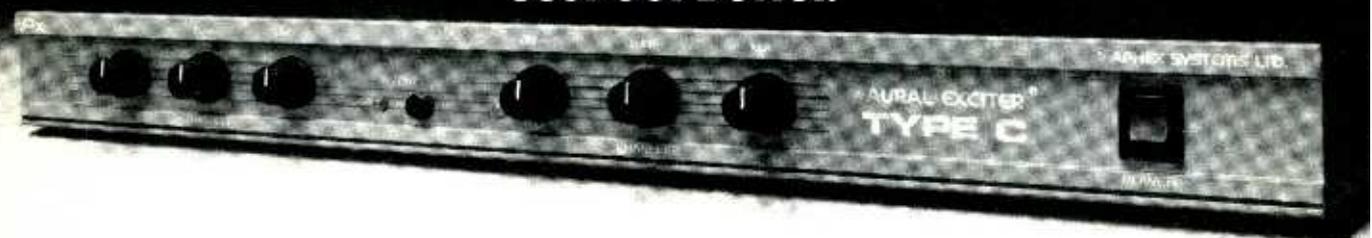
nal Revenue Service's tough rules on this area, now, before April 15th, might be an excellent time to review your own activities and payments—questionably or not.

A fine or penalty paid to a government for the violation of any law is not a deductible business expense under our tax laws. Also, any illegal bribe or kick-back paid either directly or indirectly to a domestic government official or employee is nondeductible. Along the same lines, no deduction is allowed for any payment made directly or indirectly to any person if the payment is a bribe, kickback or other illegal payment under the laws of the United States or under any law of a state—but only if that law is generally enforced.

Legal expenses paid or incurred in connection with a business transaction or primarily for the purpose of preserving existing business reputation or good will are ordinarily deductible. The deductibility tests are substantially the same as those for business expenses and preclude a current tax deduction for a legal expense incurred in the acquisition of good will or another capital asset. An expense resulting

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O	X60H 60W tube combo X-Amp w "HE" 12" spk	\$599	\$299
P	PE300 300W rms Pro Bass Head	\$950	\$469
Q	B215M Dual 15" "High Energy" bass spk system	\$495	\$259
R	LB60K Stereo Koa wood bass guitar	\$919	\$459
S	DC200TI Stereo guitar with Pro Kahler tremolo	\$1199	\$599
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partly from business and partly from nonbusiness activities may be disallowed in full if there is no basis for apportioning the expense between the various purposes.

The present is also a good time to weed out a few expenditures that will be disallowed by the ever-vigilant IRS if used. Political contributions, for instance, are not deductible either as a business expense or as a charitable contribution.

A special rule applies to expenses and interest payments where the payer and the payee are related and the payer is on the accrual method of accounting and the payee is on the cash method. In this situation, no deduction will be allowed for any expense or interest payable to the payee until the payee includes the payment in his or her income. Fortunately, this rule is only for related taxpayers.

Back in the decision-making category, we encounter computer software costs. Computers are obviously capital assets and subject to the Code Section 179 election or the full tax credit, partial depreciation or partial tax credit and full depreciation debate. But software is another story.

Computer software costs (whether held for use in a business, for sale, or for lease), may be deducted currently or amortized over a five-year period (or a shorter period that can be established as appropriate), as long as they are consistently treated one way or another. Purchased software must be depreciated over the useful life of the hardware if the cost of the former is not separately stated. If it is separately stated, the cost may be amortized over a five-year period. In the case of leased software, deductions are allowed for rental payments.

Finally, we come to the ultimate question—did the recording business make a profit? If not, last minute tax planning should include developing a strategy to take advantage of that loss, perhaps by utilizing the net operating loss provisions of our tax law. But, beware of the decisions.

Nearly every studio—or its owner—is allowed to carry back a net operating loss from a trade or business to apply as a deduction against prior income and to deduct from succeeding years' income any unabsorbed loss. Quite simply, the net operating loss is the excess of allowable deductions over

gross income.

Usually a net operating loss is carried back to the earliest of the three prior years; if not entirely used to offset income in that year, it is carried to the second year preceding the loss year and any remaining amount is next carried to the tax year immediately preceding the loss year.

A studio entitled to a carryback period for a net operating loss may choose to forego the entire carryback period. If the choice is made, the loss may be carried forward only. This election might be advantageous where a recording studio had investment credit carryovers that might be wiped out and lost because of the carryback of the net operating loss.

The question of whether income in earlier years was high enough to warrant asking for a net operating loss carryback refund or whether anticipated high taxable income in the future might make it worthwhile to forego the carryback and concentrate on the carryforward of this net operating loss leads into another facet of the last minute tax planning strategy.

Tax planning, even last minute tax planning, offers a number of opportunities for reducing the April 15th tax bill. Why not begin now to review your tax picture for tax reduction possibilities.



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## Gearing Up For The Home Studio

The increased cost efficiency of multitrack recording equipment, as well as the commensurate cost of studio record production has caused what industry analysts call a “growth market” in home studio sales. Both record producers and musicians alike are gearing up their basements and garages (in some cases, apartments and lofts), for recording purposes.

Musicians who decide to set up their own studios at home usually do so for a variety of interrelated reasons. One, of course, is cost effectiveness. By making one substantial outlay for basic necessities (the console, sound proofing, and any acoustic instruments), musicians avoid constantly having to pay commercial studio rates every time they simply want to lay down a few tracks. Another equally important factor, however, is the positive psychological effect of working in a home(y) atmosphere.

To explore further the why and how musicians set up home studios, and in some cases graduate to owner/operator status, *MR&M* spoke with several around New York who have. Four are musicians who've set up studios in houses, basements, apartments, and loft venues. An independent consultant and two pro-audio professionals we contacted are (or were), musicians as well.

In many cases, a home studio may grow beyond its original intent. Steve Vavagiakis, an active club date drummer, is the owner/operator of Inner



Control room of Inner Ear Recording featuring Tangent console and MCI and Otari tape machines.

Ear Recording in Queens, a 16-track studio located in the basement of a two-family house. He became involved in recording by an interest in producing his own material. Through word of mouth, other musicians were attracted to the studio, and Vavagiakis suddenly found himself in the recording business.

A contrast is arranger/multi-instrumentalist Michael Levine, who set up a studio within his Manhattan loft for his own use, although outsiders (such as Boy George and two segments

of the TV show “Tales From the Dark Side”) have used it on occasion. As a member of the group No Guitars, Levine says the band went so far, yet, spent so much money on commercial studio time without achieving the desired results. This prompted him to set up his own studio at home.

Howard Stein and Phil Antonucci of the 8-track, White Cloud Recording on Long Island also came to recording as musicians—Stein as a former drummer and Antonucci as a musician/songwriter. White Cloud started when

Stein and Antonucci merged their respective home studios into *one* at Antonucci's house. White Cloud then moved to Uniondale, where it occupied commercial space for seven and a half years before recently (Sept., 1985) relocating back to the home—this time Stein's, where it occupies the first floor.

While working musicians may set up home studios to experiment and perhaps try their hand at producing, well-known instrumentalist/producer Eumir Deodato set up his state-of-the-art, 24-track Duplex Sound for one

reason—total privacy. What's unusual about Duplex is the location—an apartment in the landmark status American Thread Building in New York City. (Neighbors include both GrammaVision Records and Cyndi Lauper.) Deodato, who's produced four Kool And The Gang albums, recently produced the Roberta Flack track from the dance flick, *White Nights*.

**Modern Recording & Music:** What prompts musicians to open a home studio in the first place?

**Steve Vavagiakis:** Simply to have a place for one's own use. The business

part of my operation just snowballed.

**Michael Levine:** The freedom to experiment and get hands-on technical knowledge, so when you go into a "real" studio, you're not ignorant.

**Eumir Deodato:** Total privacy. I wanted direct access to new digital equipment with no time restrictions, especially on my own projects.

**MR&M:** What about basic start-up equipment?

**SV:** A console, 4-track, and mixdown machine are necessities—everything else tends to vary. Remember, people will be renting the studio because of you and the home environment, not solely because of the equipment as in a professional commercial studio.

**ML:** The first thing I bought was an Emulator II because of the type of music I was working on.

**Howard Stein:** It depends on your goals. If you want to use the equipment as a sketch pad, a home studio can be put together for several hundred dollars. If you're looking to produce finished products that can be taken to record companies, you're obviously talking more money. Check the studio ads and studio news columns in the music trades to see what equipment is current.

**ED:** Even though Duplex is 24-track, I think a decent 8-track can be put together with a board, small 1/2-in. mixdown machine, a cassette deck, and a few keyboards and drum machines.

**MR&M:** Did you initially need to hire any outside help?

**SV:** I have a good background in construction and have worked as a carpenter, so building and soundproofing was no problem. I did hire Alan Fierstein as a consultant for the design of the control room and the tuning of the studio monitors.

**ML:** Barnaby Bristol, who's now an engineer at 39th Street Music, and I wired the studio together. His input made the difference between "nice try" amateurism and a really professional job.

**ED:** I had an outside designer who also drew the construction details.

**MR&M:** What do you think are common areas of ignorance for most musicians?

**SV:** The equipment maintenance and upkeep factor is one. Since most musicians don't come from a technical background, they often have to hire outsiders for this work. The video field seems to be taking most of the good maintenance people, so first-hand knowledge of this area should be a priority.

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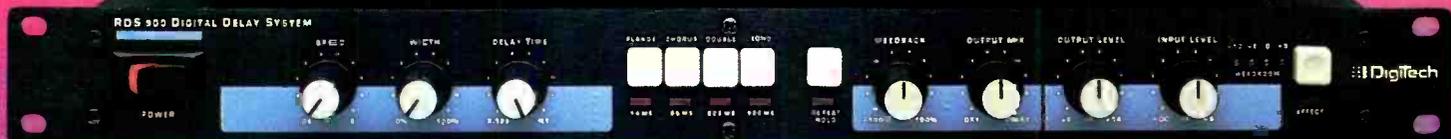
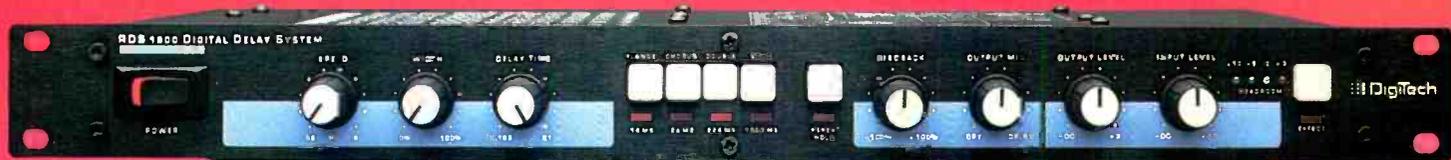
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**ML:** Knowing how to work with a dealer. Doing business with a local one you know and trust saves both time and money. Also, if you buy a lot of package deals in one place, you tend to get treated better and get better service.

**HS:** Most musicians don't know anything about speakers. You must have industry accepted, industry standard speakers that are NOT borrowed from

and knowledge. Also, the sheer amount of paper work you must do before the business even opens is beyond most musicians' wildest nightmares.

Occasionally a musician, no matter how well versed they may be in music, may be a bit hesitant to trust a lot of money to either one store or dealer. In this case they may hire an independent consultant to do the groundwork. Ted Rothstein, a NY-based consultant and



Michael Levine working in his home studio.

your hi-fi. They also seem to lack an overall system concept—what, how much, and how many of each piece you need.

**ED:** Maintenance and upkeep are always underestimated, even if you're the only person that's going to be using the studio.

**MR&M:** What about renting it out and becoming a business?

**SV:** The business of running a business is a full-time job in itself. The minute you open up to clients, you have to consider liability, insurance, getting a certificate of doing business if you use any name other than your own, local laws covering taxes and zoning, etc. Also, and this is sometimes hard to understand, Uncle Sam doesn't consider recording studios a service; they are tangible pieces of property that can be taxed!

**HS:** White Cloud has gone full circle from a home studio, to a commercial one, and back to the home again. If you're only using the studio for yourself, you can obviously work at your own pace and experiment. Once you start accepting clients, they shouldn't have to worry about your competence

co-founder of ROR Audio Research, is one of them. He's been designing studios for the past sixteen years for such diverse clients as the Minskoff Theater Organization, Pink Floyd, Mljoorii Studios in Iceland—and home studios. Rothstein, who started off as a pianist before becoming an electrical engineer, points out that many musicians are unrealistic about money in two areas; *how much* the initial cash outlay will be, and *how much sound* you can actually get for your money. He says, "It's probably best to buy from one dealer who can back up the equipment. Many musicians seem to trade off service for low prices, which isn't smart, considering most of them have little, if any, technical knowledge. If they're looking to save some money they should think about possibly buying used equipment from a reputable commercial studio. Dealers who handle new equipment often have sources for used equipment as well."

Gene Perry, vice president of sales at Audiotekniques in New York and a self-described retired guitarist, says, "Most musicians don't really think through WHY they're setting up the

home studio—which affects the equipment they should or shouldn't buy. What will musicians be using every day? If the studio will be open to the public, he'll have to invest in the type of equipment that will attract outside clients. It's also best to do all your business in one place, because of the system's responsibility aspect. This is a critical factor—by using several advisors, musicians windup buying from several sources, so if something goes wrong everyone blames everybody else. If the reason for going to several different dealers initially is price, any savings will be lost because of all the extra time spent running around."

David Behuniak, sales engineer at Westec Audio (and a former guitarist), says that most musicians tend to start with brand names rather than a budget. He says, "They dream of Neve, SSL, and Studer, when reality is Fostex and Tascam. They also don't tend to consider maintenance and upkeep."

Obviously the size to which home studios can grow is comparable with the finest commercial studios in the world. How far a home recordist wants to take his residential recording facility depends on how he views his individual business—if indeed that's what it is. The fact remains, however, that equipment costs and quality are making home recordings a real alternative for musicians, especially with commercial studios' rates often topping \$200/hr. Combine this with the fact that musicians often find it easier to work creatively in a relaxed setting, and what appears is a development that continues to change the profile of the recording business.

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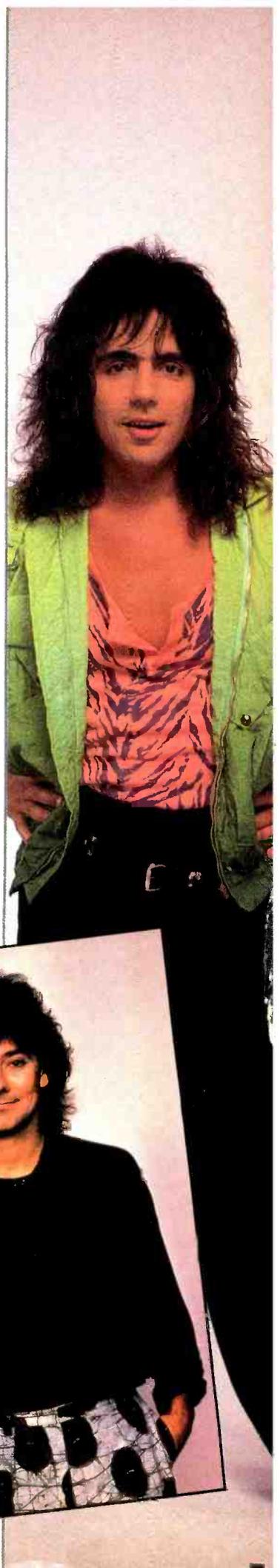
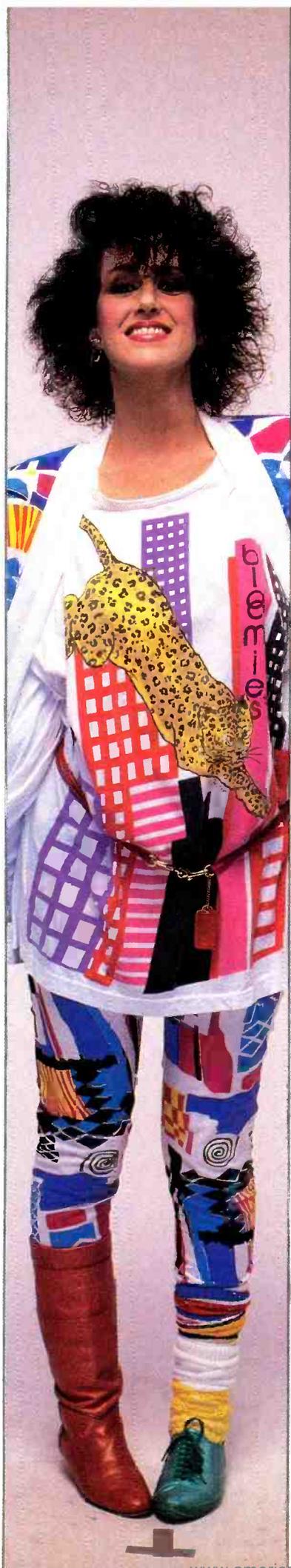
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# STARSHIP:

## Surviving

## the Hoopla!

“**W**hite Rabbit” never made it; neither did “Somebody to Love.” But after only twenty years of trying, after gold and platinum albums too numerous to enumerate, Starship has its first Number One single, “We Built This City.” Because of it they’re in the grips of a late autumn, cross-country tour that has come to a needed rest in Syracuse, New York. The day off is bracketed by five straight performances before it, and five more in succession to follow. Is there a moment here for reflection? After all, there’s nothing like overnight success to rekindle thoughts of the past, of the mid-60s when the then-Jefferson Airplane soared majestically over the volatile rock world.

Something appropriately nostalgic, perhaps, from the group’s one variable constant—or is it constant variable—during all those years, Grace Slick? “I never cling to anything from the past just because it makes me feel good,” Grace says with an easy certainty when asked about the band’s previous successes. “And even if it did—God, get out of it. It’s not going to come back. Like I see sixty-five year old ladies on Hollywood Boulevard

wearing cinch belts, blond hair and spiked heels. They're hanging on to something that doesn't exist and they look ridiculous. So if I were to come on stage with straight hair and a paisley outfit, it'd just be pathetic more than anything else." And pathos, or its benign, distant relative—nostalgia, is something this band has no time for. "We're a new band that has a long past," is the way lead vocalist Mickey Thomas puts it. But doesn't the past inform the present? "I don't think this band has anything to do with Jefferson Airplane except that Grace was in both bands and we still do some of the material." Starship, it seems, has the same attitude about its past as does Grace. "She's very contemporary and I really admire her for that," Mickey goes on. "Everything about her, and her life, is totally modern."

"You might as well be dead if you don't do something about right now," Grace explains while talking about the band's attitude toward its legacy. "You can play old stuff in your set, some of the middle stuff, and then something you're doing right now. It's not fair to an audience not to do some old material, but they don't want to be buried in it either. Also, you're burying yourself if

you don't advance." But a number-one single must have had some impact on her, if not to launch a sentimental journey. "Yeah," she says matter-of-factly, "you get reactions from people. They're more willing to deal with you, and that makes things easier. If your last record sold only 200,000 copies, they're not too interested. Plus, if you're farting around on the low end of the charts, people say, 'What're you doing? You're forty-six. Why are you still doing this?' So, personally, it's easier to get on stage when something's happening than when something is not happening." Bassist Pete Sears, with his properly-British accent, puts it just as directly. "We all really needed this to survive." Survival would seem to be too strong a word for a band with Starship's history of suc-

a turning point for a band with many of them. "I've been here since 1974," Pete offers, thinking back over the band's past. "I've seen all our ups and downs, the strange things and the intrigues. Each phase was different. This is another new direction, in a lot of ways. For example, the last few albums had all inside material. This time we decided to go all out to make a really good, commercial album. In a way it was a conscious effort to keep the band together," Craig agrees. "We've all written in the past and we felt that was part of our being in the band, but we started to listen to outside songs just to cover all the bases. We wanted to make the best album possible. It became an obsession. We listened to hundreds of outside songs. When it was all said and done we

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***This time we decided to go all out to make a really good, commercial album. In a way it was a conscious effort to keep the band together. PS***

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cess, but it was just that history that had become a problem.

While the band has undergone numerous changes and reincarnations over the years, including Grace leaving for a period (1978-1981), its recent problems were its most threatening. Paul Kantner, one of the Airplane's founders, left the group amid acrimony, charges and countercharges, and a law suit that resulted in the name Jefferson Starship being reduced to Starship. "Paul was very destructive," guitarist Craig Chaquico says.

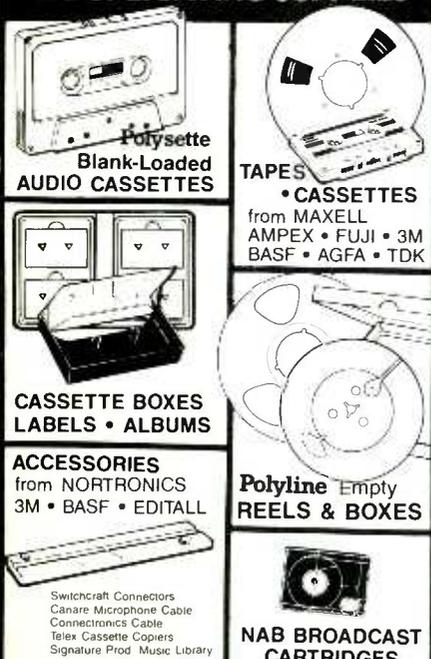
"Now that that's behind us we feel a lot freer." And their problems with Kantner weren't the only ones. "That, and the fact that Chicago tried to steal Mickey before the album (Knee Deep in the Hoopla) was done. We wondered for a while whether we could keep it together, but we knew we had a great album in the making. We were just never sure it would be released, with all the hassles. Now we're on the road, doing what we should have been doing for the past year, playing music instead of fighting law suits."

So it comes back to their music, holding the group together and forging

decided that the best songs were the outside songs. And that would have never happened with Paul."

It sounds like the type of thing that might tear at a band's songwriting ego, but dealing adroitly with change, as it is for Grace, seems to be one of Starship's fortes. "We've always been that way," Craig explains. "When I joined the band with Dragon Fly and we changed from Jefferson Airplane to Jefferson Starship, one of the things that made us viable again in the 70s was that we updated the sound. Then Freedom at Point Zero was a change. Marty (Balin, former lead singer) left, we got Mickey, and that set the band's course from the 70s into the 80s. I think this album is the same kind of turning point; it's going to set the course for this band." The changes in Hoopla go far beyond the use of outside writers. "We really wanted to shake things up," Mickey says. "We didn't want to make the same kind of album again. We didn't want to fall into the routine of each of us bringing in a few songs and then hammering them out. I don't think songwriting is one of the real strong points of this band, anyway.

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like it when the tracks are tight. In a sense it frees me to explore the emotional side of a song without worrying about the groove. But sometimes I do miss it when a song can't sort of breathe and have an ebb and flow to it. I think it's natural for a track to rush

your ears, and make up your own mind. That's the danger: trusting the machines all the time."

"There's a certain charm about the edge of human performance," Craig goes on. "I like hearing fingers on guitar strings, squeaks and pick noises,

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## ***We were kind of going in different directions and I didn't know how to fix it, so I figured it's easier to leave and fix me. GS***

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in spots, especially live. And there is the danger of taking people out of the process too much. That's part of what music has always been about, a spiritual communication between people, and I'd hate to see us lose that. It's getting to the point now where a machine can almost sing, or at least it can take my voice and change it. It makes perfect music but it takes the communication out of it. You can have enough equipment and enough programming so that the guitar player knows his sound's going to be there every night—if he hits the strings the right way, turns the knobs, whatever. But a singer can't be sure of that. You can't change the strings. That's a human quality that's still there."

It's only fair to ask how the guitarist feels about all of this, especially about the supposed sterility of technology as compared to the emotional foundations of rock. "As a songwriter I think it's liberating to be able to program a lot of your ideas out," says Craig. "But there is a danger of sterility. You can lose the emotions, and not allowing the human spirit to come out of the music is the downside of technology for us." "There can be a beautiful aspect of computers playing things so perfectly, but if you lose the emotions, you've lost the heart. We tried very hard not to lose that. I like this new technological stuff unless the soul of the music is lost. I like it as long as musicians learn to use it, as long as they put their souls into it. Once the foundation's built, it's important to get real emotional vocals and real guitar performances into it." "The danger is relying on it (technology) like it's gospel. Like when a Linn-Drum says it's giving sixty beats a minute. Not to pick on that effect or that machine, but you've got to trust

like that. I like hearing the singer breathing. And that's the kind of thing—the human performance—we tried to keep in the album. Like starting with Donny's ideas on the drum and programing his ideas into the machine, then using his sounds for sampling. After that I tried to get my parts as emotional as possible without being sloppy, and at the same time getting them as precise as possible without sounding sterile. That's the fine line I wanted to walk. And then getting good, emotional vocals. In fact, we did one track, "Rock Myself to Sleep," without any sequencing or sampling. And it's a good one to do it on. It's the closest thing to an old-time rocker."

For Mickey, despite some reservations about technology, that fine line, and the union of technology and emotions, is an achievable marriage. "We didn't sacrifice emotions for technology. It doesn't have to be that way at all. Rock still has its emotional roots. It's not as primitive as it once was, but it can still drag out those emotions. But it's better now, and I think emotions may be more sophisticated today. Rock hasn't lost anything; it's gained something." "And more than anything else, it really gets down to the songs. On this album they were all so strong, and that helped Grace and I both out."

Ah, Grace again. How has this leap into technology affected her? After twenty years of seeing rock done in a different way, can she warm up to synthesizers, snuggle up to sampled sounds? By now, you should know the answer. "I love this technology," she says excitedly. "Synthesizers give you an endless possibility of sound. There's no difference between the instruments we've always played and the new stuff.

A piano's a machine. So's a violin. If you get a monkey playing a violin and you get Yehudi Menuhin playing a violin, what are you going to say, that Menuhin's taking all the raw energy out of it? Emotions are dependent upon who's playing the machine. Peter Gabriel's music, which is largely synthesizers, moves me more than, say, Stray Cats, even though Stray Cats use more acoustic-type sounds. "A synthesizer can soar. It can sound like a truck or an ocean, and that extends me as a vocalist because I can try to sound like a truck. You can get sounds like you've never heard although they're still within a structure. The possibilities are expanded for interpreting lyrics, or interpreting a feeling just through sound." "When I started there weren't many rock 'n' roll singers, there were rhythm and blues singers. I've always known that I probably don't have a real marvelous sense of rhythm, but I do have something, and that's the ability to sound like a truck. And that possibility is there for anyone who wants to take advantage of it."

But surely there's something lost, or at the least, something different about recording Hoopla as compared to, say, Surrealistic Pillow, the Airplane's first impact album. She laughs at this a moment, endless comparisons crossing her mind's eye before she narrows them down. "Our producer on that album, Rick Gerard, was a straight guy and he was just floored by us, the drugs, the songs about drugs. He had been doing Perry Como and he walks in and sees us. Actually, he did a good job despite how whacko we were."

The memory seems to delight her. She becomes more animated, recounting that "We used to run our own faders for mixing a record. Jack (Casady) would get on the bass faders, Jourma (Kaukonen, guitar) would get on his. I'd get on mine and we'd mix the record with five or six people on the faders. And of course we were all high; we were all nuts. If you were to tell a producer today that you were going to do that he'd tell you to jump off the Golden Gate Bridge." "It was fun, and at that point it probably worked because things were so much less complex. Things just aren't loose anymore," she adds with almost a sigh of regret. "It used to be we'd get played or we wouldn't get played. Now it's all this stuff about who the single will appeal to. I know this sounds appallingly stupid, but I remember when we put out an LP called Red Octopus. I'm in this hotel room and I hear the guys

yelling out in the hallway about the album being number one in Billboard. The noise was so ridiculous I thought they'd won a football game or something. I really didn't know what Billboard was."

She, of course, found out, but perhaps only after that album became a rarity, climbing to number one on four separate occasions. But that sort of success has never been her principal motivation, either for getting into the business, or for staying with it. "I was doing this because I like having fun, making the music. I am not a dedicated musician necessarily, but I've developed a certain amount of honor, which I know sounds corny. When this stuff with Paul started I said, 'I'm getting out of here.' If it's no fun, I leave. But I've changed. So I didn't leave, and I'm glad I didn't. Things are fun now." She maintains the fun, despite critics who in the past few years complained that Starship's sound had become too commercial, and may howl even louder now that technology has been embraced.

The past inevitably surfaces when you hear Grace talk this way, and it makes you wonder: Was the old Airplane different, more innovative, committed to something more vital? "The old stuff was very commercial," she says without hesitation. "Look at 'White Rabbit.' If you're writing good songs they're going to be commercial. There's something of a contradiction here, I know, because I mentioned Peter Gabriel and he did 'San Yacinto' which was kind of far out, but then he also wrote 'Shock the Monkey.' So you can do both."

There's a bottom line to her thinking about commerciality that bears on the image of Kantner as the forever pure, uncorruptible artist. It's been said of him that given his disposition against commercial success, he left the group just in time. Grace smiles at this, but only for a moment, remembering perhaps too many gut-wrenching conflicts. "If you write eight or nine minute songs about prehistoric gatherings of people in caves, and walking around Damascus, or your beat changes every sixteen or twenty-four bars or something like that, you'll get some people who are interested in that and say, 'Gee, since I don't understand it, it must be very far out.' If you keep writing these songs in a business where no one plays them, somewhere in there is a person who's being self-defeating. It's for fear of trying. And it's too painful to have it go nowhere for Paul."

For Mickey, the connotations of commerciality never fit, especially now, and comparisons with the old Airplane bring forth a quick smile. "Sure they were more inventive. It was great stuff in its way. Everybody was on acid and nobody knew what the other guy was playing." In a more serious mood he adds that, "If critics think you're commercial they like to leap on that right away, like it's some kind of sin to try and sell records. Of course, no one's criticizing Springsteen for selling ten million copies. You can get commercial without selling out. It's as simple as that. And that's the whole point of what we're trying to do."

What they're also trying to do, is, after all these years, discover their personality as a band. "For a long time," explains Mickey, "the band was dominated by Kantner. Now things are

"This last album was the most mature effort I've ever been involved with. There was a lot of ego dropping. People are now working as a unit. It's like a chariot with five horses all pulling in the same direction, but without a driver. It was a decision of the horses themselves, which is unique, particularly for rock 'n' roll star musicians who are capable of being babies, me included." "And it's left us with the chance to extend ourselves even more. Like Mickey. His voice is so incredible. I'd like to see him really get to use his R&B voice. And Craig, if given the chance, can play some very good, very melodic guitar lines. And Pete, too."

Extending themselves seems to be what they all expect. They are, much as Mickey described, like a new band, but one with a past that informs them about the necessity of diversity, and of

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*I was doing this because I like having fun, making the music. I am not a dedicated musician necessarily, but I've developed a certain amount of honor. GS*

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different. We're finding out who we are musically, by being in the studio, by being on tour now."

So, just who are they now, musically? "Craig's from hard rock leaning toward heavy metal," Grace intones to a staccato beat, "Mickey's from R&B, Donny's into that California surfer stuff, Pete's British and all that, and I like songs that are just maniac songs talking about fourteen turds and a pig." She slows down, listening to herself, and smiles. "We're all different and we manage to make a record without killing each other. In fact, we like each other. Other than that, I don't know what we are. And that's all right because I don't like to be tagged. I know what it's like to be tagged with 60s; you never get rid of it." But she does have some definite ideas about the state of the band, past and present: "Things are as good as they've ever been," she says categorically. There have been worse times for the band, and for her. When she left the group in 1978, "We were kind of going in different directions and I didn't know how to fix it, so I figured it's easier to leave and fix me. It took four years."

And now may be the best of times.

change. It's a legacy that also reveals the value of persistence and, oddly, stability, something possibly missed amid the "intrigues," the law suits, and now the sudden focus on polished techno-pop. It's easy to forget that behind all of that lies the character of the individuals, the constancies that have transcended the changes.

Take Grace. Ask her what she'd be doing if she weren't making music, and listen to one of the supposed bitch-queens of rock talk of an enduring fascination, one that suggests something about how she's made it through all these years. "I know this doesn't sound like the person who has the publicity I do, but what I'd like to do is have a doll store, make doll clothes, collect dolls, and just go around to doll shows. I have them all over the house. You have to move them to sit down. It's the Jeckel and Hyde thing: this person who gets up on stage and yells all these obscenities, goes home and collects dolls." Somehow, this fits; the feeling of it rings true. Perhaps that's because Grace says it simply, almost gently, with the hard-won serenity of a survivor.



And we deliberately went for different producers. At first we thought we wanted a producer like Nile Rodgers who has his own sound, but I'm glad we didn't because it gave us a chance to establish our own sound. We had worked with Peter (Wolf) before, and he put the whole team together."

The team consisted of Wolf (not the same-named J. Geils Band member) and Jeremy Smith as producers, and Dennis Lambert as executive producer. The trio had previously produced the Commodores' LP *Night Shift*. On *Hoopla* they worked together in an informal synchrony. "Peter arranged a lot of stuff and played a lot of the keyboards," Mickey explains. "He had worked previously with Jeremy. Jeremy got all the sounds for us, like an engineer, and Dennis was like an overseer. He would come around and say, 'Yeah, that's good.' It turned out great to get that outside perspective once in a while." Those perspectives, coupled with Starship's eagerness to explore new dimensions in their music, made this album as innovative as any album in their long history.

"Our problem in recent years," Craig says, "has been to be consistent, to have an album that hangs together as a whole. We had so much diverse writing. With Paul, his direction was more of a 60s thing, and we wanted to evolve but keep our identity."

He knows that identity well, having been with Starship for eleven years. He started as a session musician for Grace and Kantner on some of their solo work while he was still in high school, and later joined the band just as it was changing over to its former name, Jefferson Starship.

For Mickey, who joined Starship six years ago after singing with Elvin Bishop ("Fooled Around and Fell in Love"), consistency is also a hallmark of the current album. "There were hints of this sound on *Nuclear Furniture* (the group's last album), but now we have a total album that has that sound. We took songs like "No Way Out" and "Layin' it on the Line," took something from them and put it on this album."

The new direction blends Starship's tradition of hard rock with the glossy mantle of technology, a combination that opened the group up to recording methods that they had never tried. "We used a lot of electronics on this album, and different recording strategies," Mickey explains. "For instance, we used to just get the bass and drum tracks, cut all the basic tracks, fix the

guitar, the keyboards, build from there. This time we tried cutting maybe three tracks and building them up until they were almost finished and then going over and starting with three new tracks." "We were bound to go this way because Peter Wolf uses synthesizers all the time," Pete says, in describing how the bass parts were developed. "About half the tracks had regular bass, half had synthesizer bass. We had a whole rack of Yamaha

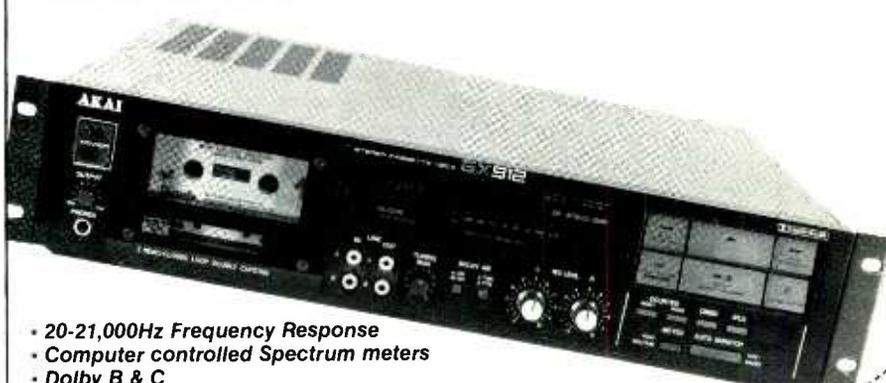
DX-7s. Jeremy brought them all up on the board and mixed them to the best bass sound he could find, and then mixed that down to one or two tracks. So we got this big, big, bass sound." Craig adds, "We used more clocking, drum machines, and sampled sounds, things we've never done before. We'd take Peter's bass parts or Donny's (Baldwin) drum patterns, all his fills, and program that...and then sample those and other sounds...and then clock

***We tried cutting maybe three tracks and building them up until they were almost finished and then going over and starting with three new tracks. MT***

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other keyboards and sequencers off of that. We'd build it like that from the ground up, and then overdub the vocals and the guitar parts." In an era where keyboards have become king-like, the expanded use of synthesizers might be seen as something dangerous for a lead guitarist who cut his teeth on Clapton and Hendrix. "I used to be worried about that," admits Craig, "but I'm happy about the way things have turned out. I guess this album is a little less guitar oriented, but there was nothing really new, no radical new concepts. I don't like it when a guitar gets so affected that it doesn't sound like a guitar anymore, and my role is to introduce hard, straight guitar to the band. I like this album more than our others because the guitar can sound more important when it's featured. I think that's something that's evolved over time for me. Given my roots, I used to just go at it all the time."

And that evolution was accelerated on this album by his work with the producers. "When we first heard "We Built This City" it was a keyboard demo, and it was a challenge to figure out how to introduce guitar parts to it. I got a lot of input from Peter and Jeremy throughout the album. Otherwise, I would have gone in with my stock attitude. Like on the guitar solo at the end of that track, my original idea was to come in blazing away. Peter suggested that I come in in a new way, from a new direction, and it worked. I was playing less on this album but being, maybe, recognized more. It's a case of less is more." Less guitar, and other changes as well.

The recording process, which took three and a half months, became, well, nuts. "Studios," Craig says, shaking his head. "We wound up using four of them. For the basic tracks the producers wanted to use a studio in LA, The Music Grinder. So we went down there (from their homes in and around San Francisco). About half way through, RCA decided that it wanted "We Built This City" for the first single, so we finished all the overdubs for it and went to another studio called the Sound Castle to mix that down. Then we decided that it was costing more money than we wanted to spend to keep Mickey, Grace, and I in LA to do our stuff. We were there over a month. So we went back to the Record Plant in Sausalito to finish. Then we wound up at Fantasy because we liked their room for some of the stuff, and we were going to do the mixing there, anyway." All of this Craig calls, "Exciting. We

were recording overdubs and mixing at Fantasy. We had one producer doing the mixing and one doing the overdubs, so we had a project that was in the mixing stage, the recording stage, and the basic track stage all at the same time. We were all over the place. In some ways it was the hardest thing we've ever done, with the Kantner stuff, the Chicago thing going on. But maybe it was good. The band came together as a team to do what was best for the album."

Those outside pressures, the imperatives of survival, united them as they hadn't been before. Add the sophistication of technology and the results were a delight. "This album, I think, is the biggest change in any incarnation of this band. Our sound was extremely tight," Mickey says. "Everything was nailed down like some of the younger English bands, the Thompson Twins, Tears For Fears, ABC. But the sound is still ours."

But in getting it tight with technology, in changing with the times, has something been sacrificed along the way? There are questions here for a band with their history, however minimally it now influences them. A simple one to start: Is recording becoming more of a producer's and engineer's medium? "It already is," Pete thinks, "but you have to remember that producers and engineers are artists too. Recording is a very creative process with the engineer. It's not different than it was before. And it's always

board. In fact Peter (Wolf) admitted that, and that's why we used someone else to do the final mix." "It just depends on the producers, how sensitive they are," Pete adds. "We didn't have that problem, but it's not more of a danger now than it ever was. There is a danger, I think, that you can get too mechanical, but you can overcome that, too. To keep the live aspect in there you can get a drummer to play live and trigger those sounds. In fact, that's how I like to do it. Or, you can delay a snare, for example, so that it hits you in the gut like a real drummer does, a guy who can lay back, like Charlie Watts. You can almost recreate that with a doctored click."

A provocative thought, one that may bring us full circle: program machines to recreate human imperfections. And that brings us to another issue: How does all of this technology affect Starship's stage performance? Do they reproduce the studio sound live? "We really don't try," Pete says. "I'm using regular bass on the songs live. But on the next single, "Sara," I'll probably play a new Casio synthesizer live. It has a really good stock bass sound." "We make no attempt to do live what we did in the studio," Mickey agrees. "We don't use the same equipment live. For example, we used a Synclavier a lot in the studio and we don't have one of those on the road. And Donny's drums are all live." Craig puts it another way. "Using technology live is different than in the studio. When you're live,

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## *Not allowing the human spirit to come out of the music is the downside of technology for us.*

### *GC*

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been a collaboration with a producer." "In our case," Mickey offers, "things went extremely well. Peter Wolf is what I call a musical scientist. He has a firm grasp of technology and that made us comfortable in the studio. Also, he's just a great player. He's classically trained, in Vienna, and I think all of that distinguishes him from some of the techno-pop guys."

But what about the dangers of overproduction? "You can end up with too much stuff on the tracks," says Craig. "One of the things we had to do at one point was to take things out of the mix. Again, less is more. Otherwise you dilute everything. You can go over-

you can't go have a sandwich and ask some technician to fix it. You've got to go. It's not so hard for me as a guitar player, but there are those problems, and if possible we don't want to get into them live."

So, live is still live, but what about something else: Does technology sacrifice power for polish? An appropriate question for Mickey with his gospel and R&B background, music seemingly at the other end of the musical spectrum from techno-pop. "My roots are, in fact, diametrically opposed to cold, technological elements, but I've been able on this album to bring out my roots more than on any other album. I

# Patch Bay Primer

A patch bay is a solution to a problem that you might not yet have encountered, especially if your recording operation is young; you've been busily choosing and acquiring the perfect collection of recording, mixing, and processing gear and all the while a fearsome tangle of cables has begun accumulating behind the equipment rack and spilling out from under the console. The mess is the least of the problem. Every time you want to connect one piece of equipment to another or change processing order, you need to crawl behind that rack or under the console, only to find that the equalizer's output is a 1/4-in. phone jack and the compressor's input is an XLR connector. After hunting around for an adapter you're back to work, but your client may be less than impressed. What's worse, when you have to expend that much effort just to try a

new equipment connection, you may decide not to bother next time, missing important opportunities for experimentation and creativity during a session. The Key input of your noise gate and the effects loop of your console's input module might go unused, or you might not get around to hooking up the stereo tie on your compressor. All those features that you paid for in your equipment might be under-utilized if you can't conveniently use them.

Broadcasters and large recording studios solve these problems by making extensive use of patch bays, centralized connection points that tie together all of a facility's equipment. The concept is very simple; imagine reaching around behind your equipment rack and somehow grabbing all of the input and output connectors on every piece you own and pulling them right up to the front of the rack and

pastings them onto a rack panel. Now you'd have access to everything for interconnect. Further, you might reach over and grab all the ins and outs of your 8-track machine, your synthesizer, your cassette dubbing decks, and even all the mic lines in your snake and put them on the panel, too. That is really what a patch bay is all about, and there's no limit to what you can route through it, though money and wiring considerations may lead to some compromise.

## Normals

The only other concept that needs explanation if you're new to patch bays is "normaled-through connections," or "normals." It's really very simple. Having all of our equipment's inputs and outputs together in one location

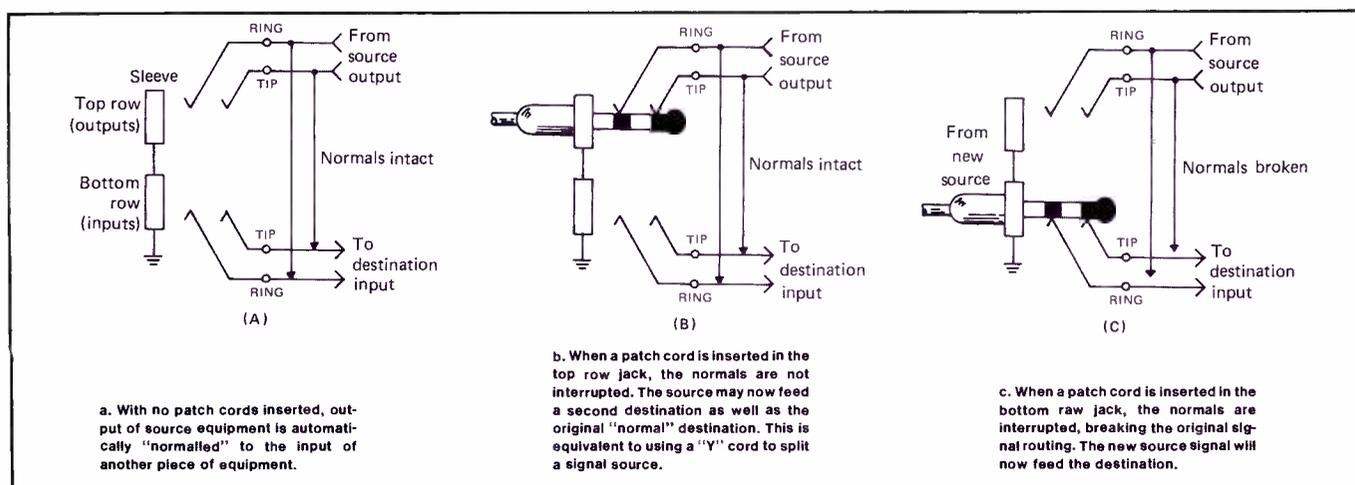
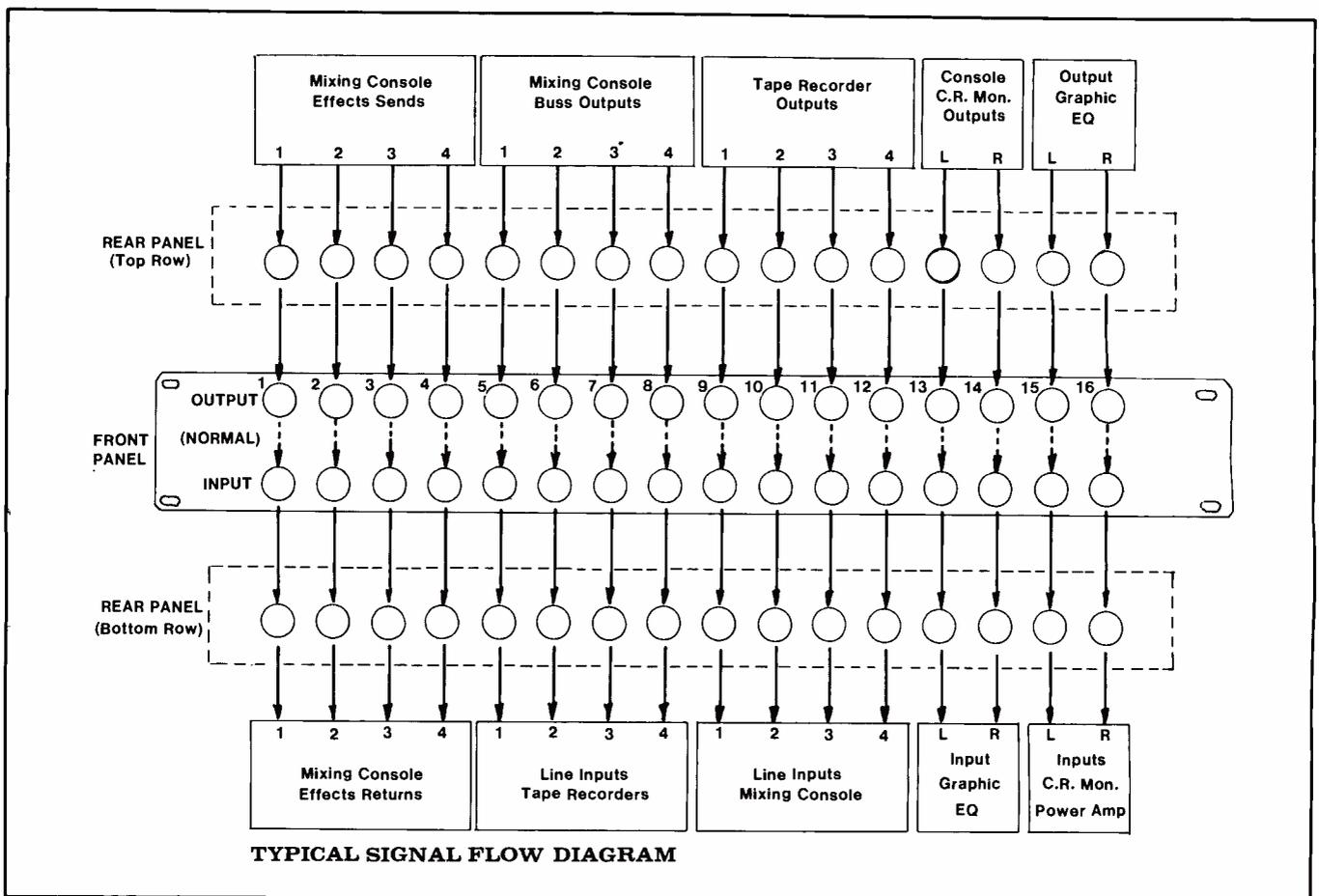


Figure 1. Understanding the function of patch bay normals.



almost automatically suggests the next step. Instead of plugging in several dozen patch cords to complete all of the signal paths that you'd normally use in a session, why not just make all the connections within the bay itself? But rather than permanently hard-wiring everything together, (which would make the system completely inflexible), use the interruptible switching contacts within the 1/4-in. phone jacks to make the connections. In this way, all normal signal paths can be established invisibly within the patch bay, yet they can be broken and rerouted at any time simply by inserting a patch cord.

For example, if the output of channel 7 of your tape recorder normally connects to the line input of input module 7 on your console, you might bring both of these points out to the patch bay. Then, instead of using a patch cord to complete the connection of these two points, you'd wire the patch bay so that the tape machine's output is "normaled" to the input of module 7 on your console. Then, if you ever need to plug something into the line input of input

module 7—say the output of a stereo chorus or some other effect—you can plug right into the patch bay with the patch cord. The normal connection will be temporarily interrupted (the tape machine's output is removed from the circuit), and will automatically be restored when the patch cord is removed. That's all there is to it. Once you've gotten used to this simple concept you can grasp the system flexibility of the huge patch bays often found in larger mixing consoles and studio control rooms.

In actual practice, a whole row of patch points will be designated as **Outputs** and the row below it will be **Inputs**. Since the output of anything usually connects to the input of something else, an entire row will usually be "normaled down" to the row below. The next row down will then be another group of outputs normaled down to another row of inputs, and so on. Large patch bays may literally have thousands of patch points.

Figure 1 illustrates the use and mechanical functioning of normaling jacks.

In addition to organizing your studio and giving you ready access to all parts of your system for quick rerouting, the patch bay provides other benefits. First and most important, it allows complete standardization of connectors. Although your equipment collection may include 1/4-in. jacks, RCA "phono" jacks, XLR-type connectors, or even BNC connectors and barrier strips, you can convert them all to one standard type in the process of wiring them to the patch bay. Most patch bays use all 1/4-in. phone jacks, though RCA type bays are also available from several semi-pro suppliers.

Another benefit of using a patch bay is that it facilitates troubleshooting by letting you quickly localize a problem in a complex signal chain. For example, if you have a string of effects hooked up and suddenly have reason to suspect that the equalizer is distorting, you can bypass it with a patch cord almost instantly. If your hunch turns out to be true, you can then "patch in" a correctly functioning unit just as fast.

During routine alignment and

inspection of your system and for system verification, you can sit down at the patch bay with an oscilloscope or audio analyzer and quickly jump from point to point.

## Types of Patch Bays Available

Patch bays are an old and well established technology first developed by the phone company and later adapted for the broadcast and recording industries. As such, there is a staggering array of styles, sizes, and termination systems available.

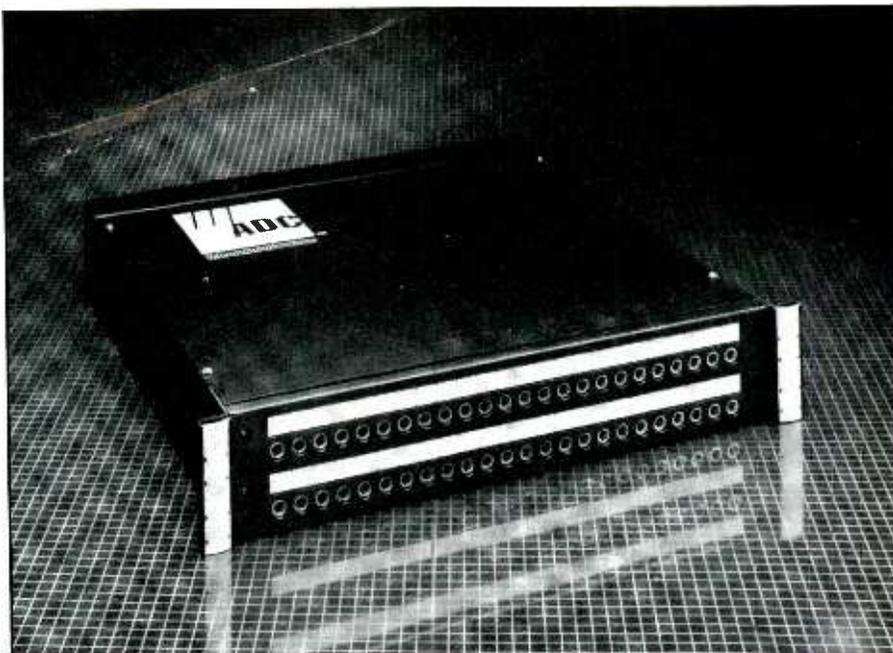
As mentioned, the 1/4-in. phone jack continues to be a standard in many systems, though the need to get more patch points in a smaller rack space led to the development of the smaller (0.173-in.) Tini-Telephone, or "bantam" size jack. These are prevalent in better recording consoles that have built-in patch bays. As more and more semi-pro equipment was introduced using RCA phone jacks as the standard connector, patch bays became available with RCA jacks. In choosing a connector standard for your studio, keep in mind the cost, availability, ruggedness, and repairability of the patch cords you'll be using. If any part of your system is or will be balanced, you'll be limited to non-RCA types.

## Rear Panel Termination Options

Since you will be physically running a wire from each input and output on your equipment to its associated jack on the patch bay, you'll need to have some way of connecting that wire to the patch bay jack. Several systems are popular.

The most direct approach is to solder the wire right onto the jack. This may be inconvenient in very deep equipment racks and there is room for error if you forget which terminal is which. Therefore, the jack terminals are sometimes brought out to an intermediate connection point called a "Christmas tree" which is really just a large terminal block. There, connections may be made via solder or wire-wrap. Another popular system is the insulation displacement or "punch-down" block, a convenient method in which a wire is laid, insulation still on, over a special terminal, and then pressed into place with a special tool. Still, other patch bays bring all connection points out to a multi-pin ribbon connector.

You might wonder why any of these systems were developed when it seems



**ADC ProPatch Mark II 1/4" Patch Bay. This unit features 48 long-frame jacks in a 2 rack-unit package. Approximate cost is \$680.00**

so easy to solder directly to the jack. The sheer number of connections to be completed in a large installation often makes these systems cost-effective.

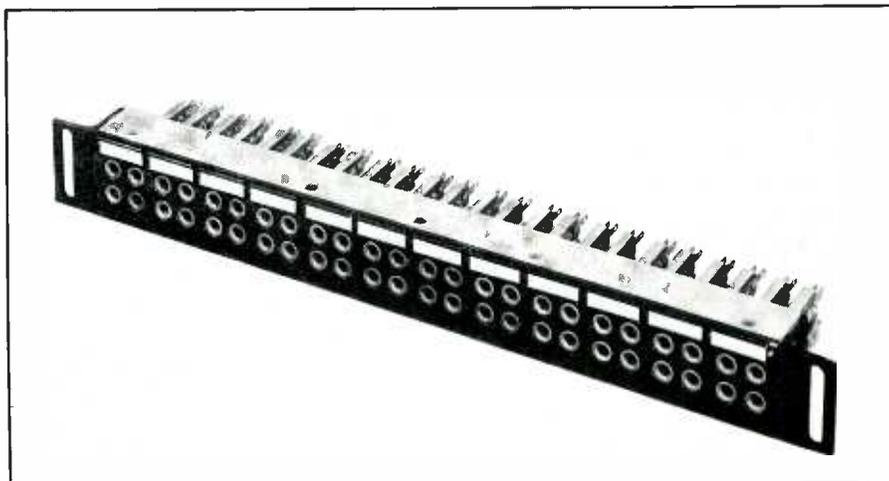
Also worth mentioning is a relatively new style of patch bay connection system in which 1/4-in. connectors are used on both the front panel and back panel of the patch bay. This offers great convenience in that the user simply plugs all equipment into the rear of the bay; no soldering is necessary, and equipment can be substituted or removed as the system evolves. Two potential problems are inherent in this design. First, the user must buy double the number of 1/4-in. connectors as in a "hard-wired" type of system. This can become a significant expense in a large installation. Second, in a portable patch bay, such as in a touring company or a musician's rack,

the connectors may easily unplug themselves in transit unless secured. However, this is not a problem in a permanently mounted rack system. This type of patch bay is available from several manufacturers, including Gaines Audio, Furman, Symetrix, and Tascam. Prices range from \$125 to \$200.

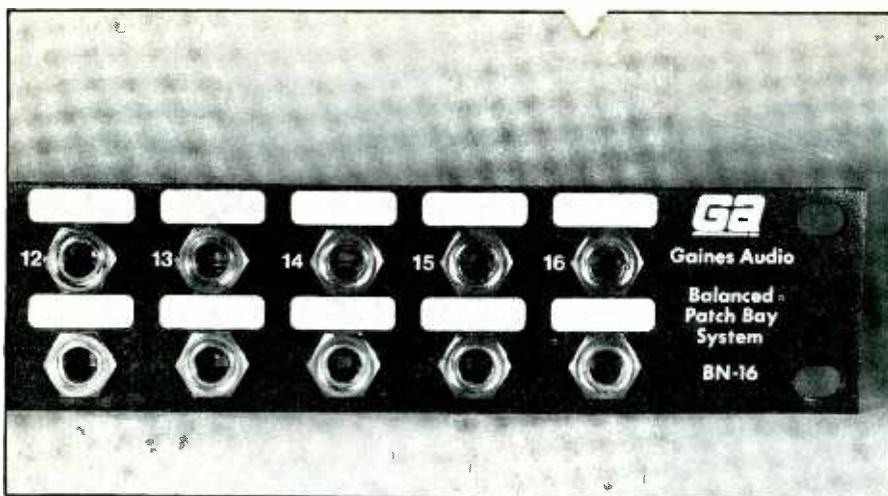
## Planning a Patch Bay for Your Studio

If you think it might be time to incorporate a patch bay into your rack, give yourself plenty of time to plan it out and consider present and future needs. You might want to develop a plan and then implement it a little at a time rather than uprooting your entire operation all at once.

First, narrow your connector choice by deciding if you want a balanced or



**Switchcraft 1/4" Patch Bay. Forty-eight long-frame jacks in a single rack-space frame. Note legend strips above top row of jacks.**



**Gaines Audio BN-16 Balanced Patch Bay.** This unit has 32 1/4" jacks in a single rack space. Cost is \$85.

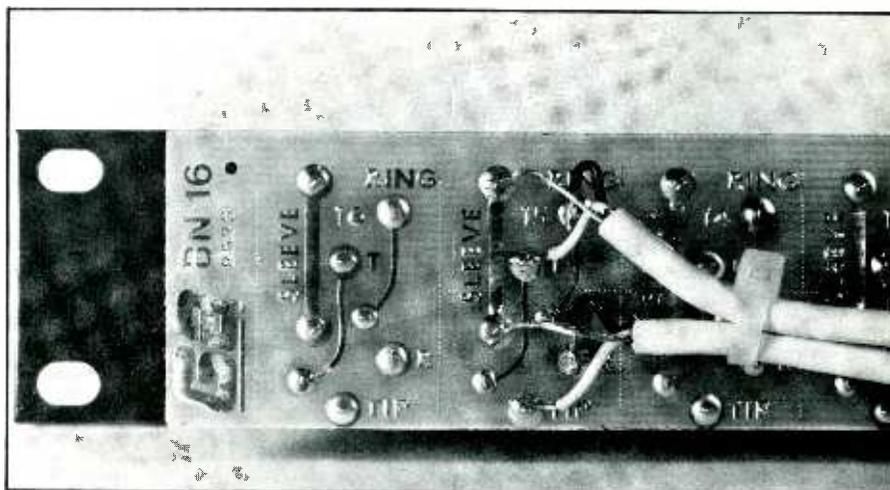
unbalanced bay. RCAs are out if you want it balanced. Perhaps some of your equipment is balanced and some is not. Remember that you can always run unbalanced lines through a balanced patch bay, but the reverse is not true. It may be worth your while to initially buy a balanced patch bay even if most of your equipment is still unbalanced.

Go through your studio and take an input/output inventory. Write down and count up every single connector you can find. If your console has sends and returns on the same 1/4-in. jack, be sure to count that as two patch points. Make a list and group things by category; i.e., console connections, tape recorder connections, processing and effects units, musical instruments, tape dubbing facilities, studio sends, control room monitor chain, etc. Your list could include mic lines, although this is usually not economically feasible for small studios. Do not run speaker-level signals such as headphone feeds or control room speaker lines through a patch bay; a 1/4-in. jack is not suitable for high power signals and you also want to avoid the crosstalk that could result from mixing line level and speaker level signals in the same patch bay.

You'll probably be amazed to see the number of possible patch points on your list, and the next step will naturally be to trim the list down by deciding what your priorities are. You'll probably want the inputs and outputs of all your effects available, as well as the send and return loop of each input module on your console. During mixdown it's very useful to have the outputs of your tape machine on the patch bay, as well as reverb and auxiliary sends. Next in importance might be the main output busses of the mixer and

inputs to the tape machines. If you have room, you might include the ins and outs of all the tape machines you make copies on, the input to the control room monitor amp, stereo tie points, footswitches, and instruments.

While you're planning, try to leave



**Rear panel view of Gaines Audio BN-16.** Equipment is soldered directly to printed circuit board, which also completes "normal" connections from top row to bottom row.

space for two or three multiple connection points, or "mults." A mult is nothing more than three or four jacks all wired permanently in parallel. It functions exactly like a "Y" connector, allowing you to conveniently route one source to several destinations. Mults are very useful in mixdown and allow you to experiment with multiple effects that would be difficult to accomplish any other way.

Once you have a list of desired patch points, draw a flow chart similar to the one shown in Figure 2. This is the point at which you'll plan out your normals for maximum flexibility and convenience. Since you already have a working recording studio, you basically know what normal connects to what.

Drawing the flow chart helps you to visualize how the patch bay fits into the existing system.

## Wiring the System

Once your system is mapped out, you can proceed to wire it in, one connection at a time. Use good quality, low capacitance shielded wire for all interconnections, such as Belden 8451 or any foil shielded cable. Multi-pair "snake" cable is useful for running groups of connections across the room, as in wiring a multitrack tape machine. Take care that you do not run high impedance signals through very long cables as they may suffer a loss in high frequency response. This would be true whether you have a patch bay in line or not. Try to keep line level cable bunches away from speaker lines and 120 VAC lines.

## Labelling

Last and easiest, you'll want to label the patch bay clearly so you can find

your way around. Most bays include legend strips or an area for writing directly on the patch bay panel.

## Conclusion

The need for a coherent patching system often is not apparent until after you've purchased a lot of other recording equipment, and so a lot of small studios delay installing them until necessity demands it. Once installed, you'll wonder how you ever got along without it. The variety of systems now available should make it possible for any studio to incorporate a patch bay system. By careful planning and assessment of future needs, you'll be able to take full advantage of your facilities.

sammy caine

## JOHN PARR:

### Man In Perpetual Motion



Photo credit: Cheryl Lynne

**W**hen someone refers to an artist as an “overnight sensation,” it’s usually because they suddenly seemed to come out of nowhere and become popular.

In the case of John Parr, his “overnight” success is three-fold. John went from being relatively unheard of to having a Top 40 hit, “Naughty, Naughty,” (complete with album and video), a number one hit with “St. Elmo’s Fire,” and credit for writing an “instant classic”—“Under A Raging Moon”—for Roger Daltrey. In addition to all this, John is getting involved with other artists to collaborate and produce. Of special interest is his production work on the new Marilyn Martin album (who recently recorded the hit “Separate Lives” with Phil Collins) and his writing collaborations with Meat Loaf.

Before his meteoric burst into the limelight, John had been a musician “all his life” and finally decided to quit the road in 1980. At that time he was planning to build a small recording studio for a friend. “He paid for me to go to an APRS (Association of Professional Recording Studios)

course in Britain for a few weeks. It was only a brush-over, but I got a lot of technical knowledge like acoustic design," John explains.

Although the extent of John's studio prowess is not enormous, "I know what sound I want but I don't know how to go about getting it, and I usually push the engineer to the edges of insanity until we do get it," he says, laughing.

"For three years before recording the album, I was locked away in a small studio getting my act together as a writer and producer," he adds. The studio had a Soundcraft Series II and a Sculley 1-in., 8-track tape machine with very little outboard gear. Still, the experience was enough for John.

Ultimately when he became unsatisfied with the progress of his debut album at Miami's Criteria Recording Studios, John wanted to take the album back to England to produce it himself. He interjects, "I felt qualified. Atlantic (Records) thought I was qualified but they didn't want me second guessing the market." When discussing the Criteria tracks, John is hesitant to bad mouth the first-class Miami studio. "The album we layed down there didn't sound right and some of the material was a bit too diverse," he laments.

As a result of the constant movement from one studio to another, a lot of different engineers were featured on the record. In addition, some of the tracks were self-produced, while others were produced by Peter Solley. John explains, "He produced a few basic tracks and then I took the stuff and reworked it to what it became. But out of politics and everything, I had to put his name on the record."

The album's production is very elaborate, well orchestrated and well arranged—almost like a Roy Thomas Baker (Queen, Led Zeppelin, Joe Lynn Turner) production. In fact, "Roy desperately wanted to produce this record." He continues, "I am generally very unhappy with the basic sound of the 24-track. It sounds too squeezed, not the right eqs and stuff."

John reveals that the record was a very hard record to rework because of the different studios used. All the work was done on a very old Neve console. "There were a lot of samples used for the drums because some of the drum sounds were very bad," he says. There was also extensive use of AMS units, especially on the drums. "One of the rooms we recorded in had a terrible sound, so the whole drum sound had to be totally recreated. We got good drum

sounds in Marcus Studios in London. The walls were actually metal, so the drums sounded great."

Most of the drums were recorded with drummer Graham G.B. Broad, "one of the best session drummers in the world." They were recorded with just the kick, snare and high hat—to get good separation—and then the toms and cymbals were overdubbed. There were also some electronic Simon's sounds added to round out the sound.

The rest of the drums were played by Simon Phillips, "He's got an enormous kit and it was just mic'ed in the traditional way. We had about fifteen mics everywhere."



John also put AMS units to unusual uses. "A lot of times I had the engineers do things that they considered to be breaking the rules. They thought I was going to blow the units up and that they would overload and stuff. Some of the weird sounds were created by feeding back the AMS onto itself, *twice*. It made a really wild sound," John emphasizes.

Some of the other sounds were derived from the use of a Fairlight CMI. But even that caused some headaches: "I brought in Trevor Horn's Fairlight programmer and he had come more for a holiday than to work. He didn't even bring a sample disk." All the sounds were made specifically for the project—there were no prere-

corded sounds used.

In England, some of the basic tracks were engineered by Ian Morais at Farmyard Studios. Still, John wasn't extremely happy: "Ian was there because his father owns the studio, and although he is a reasonable engineer, he wasn't what I was looking for."

The fruit of all this labor was the Atlantic Records release simply entitled, John Parr. Off it came the hit singles "Naughty, Naughty" and "Love Grammar," which brought John's music into households everywhere with heavy radio and video airplay. But, more importantly, it brought John's writing and performing abilities to the attention of super-producer

David Foster, who was in the process of putting together the soundtrack for the movie, *St. Elmo's Fire*. (For more on Foster see the July, 1985 *MR&M*.) David asked John to write the title track, and after John sat down with the screenplay writer, he came up with "Man In Motion." ("St. Elmo's Fire.") Although John never saw the movie as he was writing the song, it seems to fit right in with the action. As far as John's involvement in the production, "I was involved with the production of "Man In Motion" by making a few small suggestions, but basically David sailed the ship."

The soundtrack was released at a very opportune time—there were ten other soundtracks on the charts at the

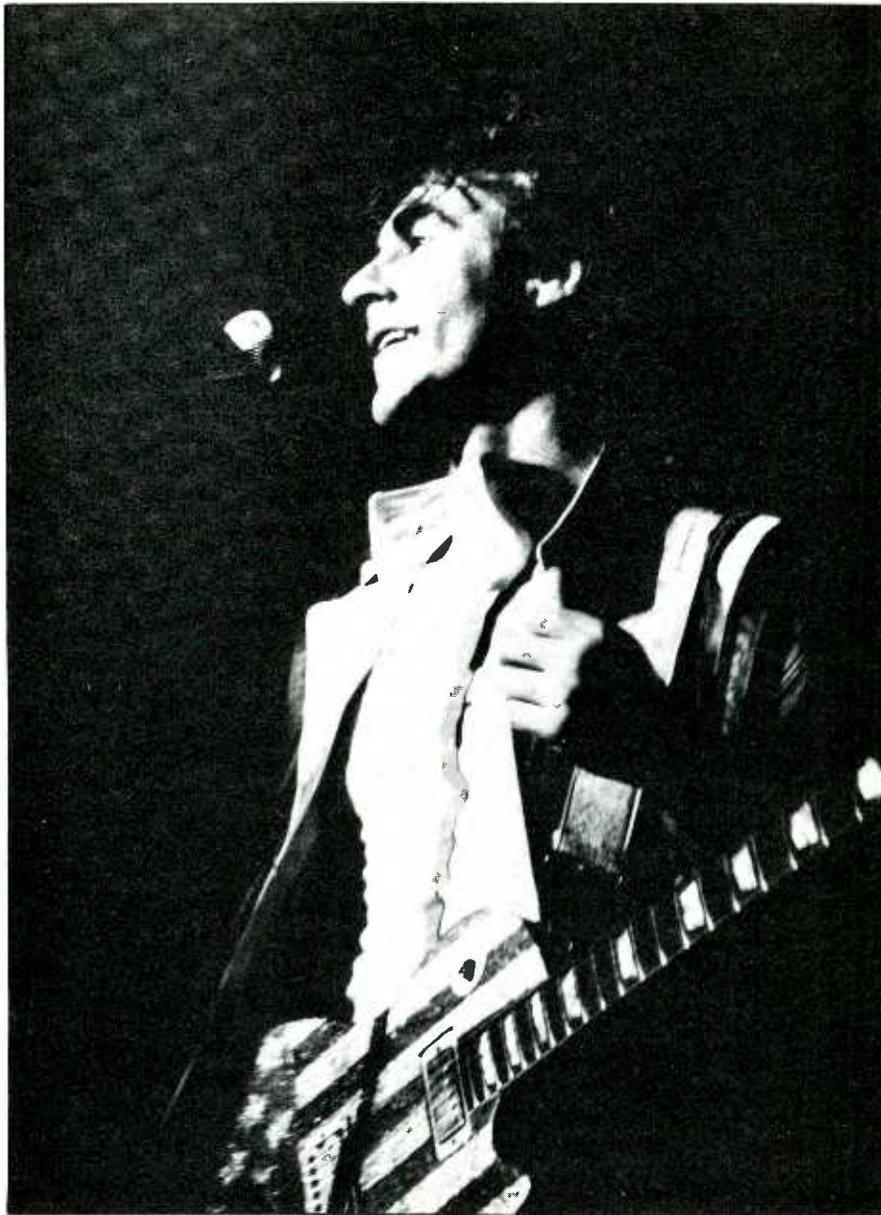


Photo by Cheryl Lynn

On the road, John has opened for such acts as Tina Turner and Heart. As far as equipment goes, "We have a tremendous amount of stat-of-the-art equipment out front...dbx compressor/limiters, a Yamaha REV-1, AMS digital delays and reverbs, a Roland programmable reverb, and quite an extensive rack."

To reproduce the textured, layered sound of the album, two extensive keyboard set-ups are used. One employs a Yamaha DX-7, a Roland 816 rack, and a Prophet. The set-up also has a Roland sequencer. The other

set-up employs a Memory Moog, a DX-7, and a remote.

"I just play my Les Paul into my Marshall 50," John says. While there may be nothing unusual about John's set-up, the paint job on his guitar is not what one would expect from a typical English rocker. But no one said John was typical. "I've used my 'Stars and Stripes' guitar for the past ten years. I gave up on the British music scene in 1975 because I was so pissed off at the state it was in. I always looked to America, so I thought I would have my guitar painted that way, and it stayed."

time of *St. Elmo's Fire's* release. It climbed into the Top 20 on the *Billboard* charts and the single went to number one.

As if all this isn't enough, John recently hooked up with former Who singer Roger Daltrey.

John's connection with Roger came as a result of Roger working with John's long-time friend and collaborator, Meat Loaf. John explains, "Roger sang a duet with Meat Loaf on Meat Loaf's album, *Bad Attitude*, and Roger heard some songs I had written for Meat Loaf. He liked them and said, 'I want this guy to write for me.'"

When John met Roger, he was asked to write a song that was retrospective. John adds, "He was looking for a song to look back over his career." The result was "Under A Raging Moon," which is "really about a night at a Who concert, 'under a raging moon' and also about the 'raging moon' himself, Keith Moon," John says. Roger was obviously very happy with it—it was the second single from his new album of the same name. "I was able to submit this song that had an insight that I don't think he imagined was around," John remarks.

Not only did John write the song, he also sang background harmonies with Roger, of which he says, "It's an honor and a thrill."

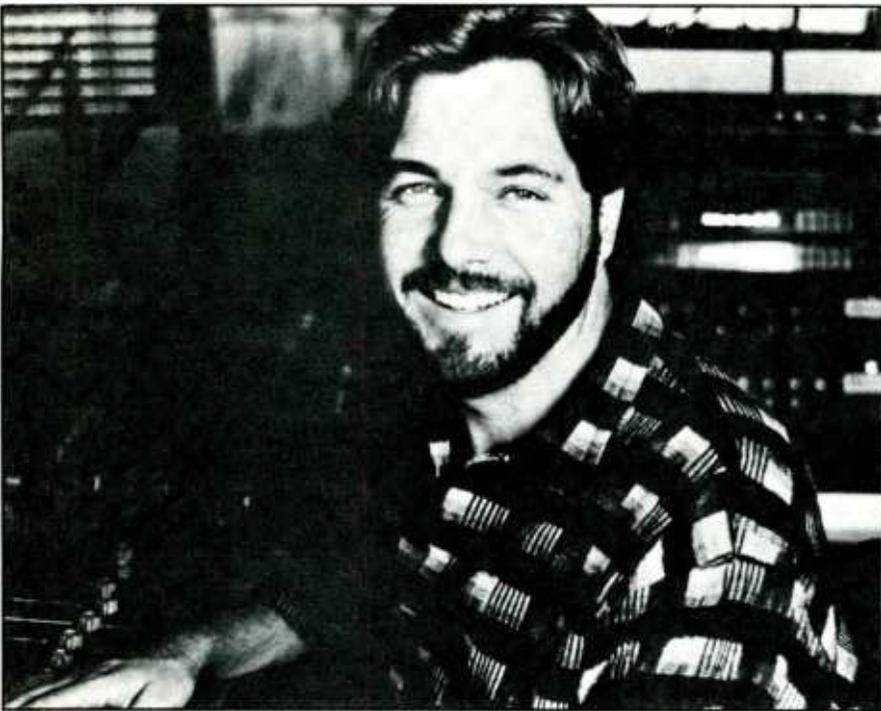
The song also incorporates something unique—seven different drummers playing consecutively at one point on the song. "The idea for all the drummers came from Alan Shacklock, Roger's manager. I thought it was a wonderful idea. All those drummers played as a tribute to Keith, and there were a lot of heavyweights," he says.

Upon listening, there seems to be a somewhat cohesive feel to the different drummers' approach to their parts. Even all the sounds are similar, although "most of the drums were recorded in the drummer's home studios, with a few exceptions," John admits.

The drummers involved were Martin Chambers from the Pretenders, Roger Taylor from Queen, Cozy Powell from Emerson, Lake and Powell, Stewart Copeland from the Police, Zak Starkey (Ringo Starr's son), Carl Palmer, (formerly of Emerson, Lake and Palmer), and Mark Brzezicki from Big Country.

"I am very proud to have been involved with the project. I'm sure Keith's smiling up there. And Roger's vocal on that song was the best I ever heard..."





## Producer DAVID MALLOY: Owner of A Country Chart

**A**t thirty-three, David Malloy is not as well known as a record producer/writer as he should be. From his first forty seven singles, thirty topped the country charts and five went Top Ten pop. He also co-wrote twenty two of them.

Of course, it didn't hurt that he did many of these with Eddie Rabbitt, who seemed to own the country charts for many years. After his success with Rabbitt, Malloy and writing partner Even Stevens, built Emerald Sound Studios in Nashville, TN. But Malloy is not a typical studio owner/producer. He is apt to produce a record in some other city away from his studio if he feels it would benefit the project. Actually, Malloy only built Emerald in order to feel comfortable in his native town—Nashville.

Some might call Malloy eccentric, but in actuality, he is attempting to extract himself from the stylistic country music rut into which the music industry has fallen. He wants to delve into pop productions. These efforts can be seen on Roseanne Cash's latest album *Rhythm and Romance* which is his most progressive album to date.

Malloy possesses six of BMI's prestigious "Million-Airs Performance Certificates" representing one million or more American aired performances on radio and/or television for writing or co-writing Eddie Rabbitt's "Someone Could Lose a Heart Tonight," "Suspicions," "Drivin' My Life Away," and "Step By Step" plus Kenny Rogers' "Love Will Turn You Around."

Malloy has been part of the industry for a long time. His father Jim Malloy

was the top engineer at RCA Studios in the late 50s and recorded almost all of the Henry Mancini sides, and some for Elvis Presley, Waylon Jennings, Willie Nelson and Charlie Pride. The family's move from Los Angeles to Nashville, precipitated David's interest in country music.

David Malloy actually began as a janitor/"gofer." At age fourteen, he started to write songs, and through Jim Malloy, he soon saw some several

become recorded, initially by Sammi Smith ("And Then You Walk In"). At age eighteen, he started as a janitor in Bill Grass' studio, worked his way up to engineer and then producer. He was a backup engineer for two-to-three years and started producing records after being an engineer for four years. Yet today, Malloy considers himself solely a writer/producer.

He worked at Jack Clement Studios and then Lab Studios before becoming

a staff engineer at CBS Records for a year. He moved up to the A&R department for three months before taking a similar position at Elektra Records. Malloy was instrumental in having Elektra ink Eddie Rabbitt, but the label brass passed on his suggestion of the Oak Ridge Boys. At Elektra, he also produced Badfinger and Bruce Roberts.

But with the success he had with Eddie Rabbitt, it didn't take long for Malloy to go independent and work with him exclusively for a few years. "What makes a monster song?" he asks. "The simplest common denominator is a message that gets to anybody in any walk of life. Does it go beyond your intellect and touch you personally? It's an attitude. I feel responsible for the music I put out and how it affects people."

"To me, a producer shouldn't be the guy who creates a record by inserting a vocalist," he continues. "It's an artist's album, not a producer's. The producer's job is to take those things that are positive and appealing to the public and bring them to the forefront. I don't like being more of an artist than the artist...and that's happened. It's easy to make the production and the music itself better sounding than what the artist is doing. You don't want to do that. It makes the artist look bad, and unfortunately, that's very common."

**Modern Recording & Music:** You are a producer, writer, engineer, publisher, and owner of a recording studio. What are your priorities?

**David Malloy:** To be a writer/producer.

**MR&M:** You are construed as a Nashville producer and writer, yet you are beginning to become a bit disillusioned with Nashville. Why?

**DM:** Most of the people cutting music in Nashville now are very frustrated and are concerned about losing radio station airplay. If the music gets smaller, then there's a generation gap—the difference of opinions between the generations. The younger guys want to be more progressive with the music but feel they're being held back. The older guys are not sure about that and are afraid.

**MR&M:** What do you mean by progressive?

**DM:** Not afraid to use electric guitars and synthesizers and having a louder sound and using tricks in the mix besides just a traditional Nashville mix. All country records today sound the same. If you listen to fifteen country records, they all sound basi-

cally the same. I've tried keeping my records from sounding like that. I try to treat each record differently, fresher.

To me, the new country artist is the guy who grew up with the Beatles in one ear and George Jones in the other. What the artist delivers isn't really either but somewhere in between...a gray area.

**MR&M:** But couldn't you lose the artist's country base by making him too progressive?

**DM:** You can't take someone who has a base of two or three hundred thousand albums and just kiss it off. My theory is to expand an audience, not to turn one off to obtain another one. The idea is to keep what you've got and get some more. That's what makes big records.

**MR&M:** What about engineering?

**DM:** No. I don't feel I can do both and do 100% of my job. Engineering and producing are two different jobs. Some people can do both, but I find it hard to split my concentration.

**MR&M:** How do you differentiate between both functions?

**DM:** An engineer is responsible for sounds, like the drum sound, and that takes all my attention. The artist and musicians might be in the corner working on an arrangement I disagree with so I might have to stop engineering the sounds and run off to them. I felt I was watering myself down. I wanted to be the producer the whole time and not split my attention. When I'm tracking a song as an engineer, I'm working tape levels and sounds and not paying the needed attention to the arrangements and performers.

The engineer is responsible for capturing the sound with his interpretation; the producer is the ultimate end of the product. He finds or writes the songs, hires the musicians and engineers, and follows the record through the entire process until it's delivered to the record company.

**MR&M:** Is it advantageous for a producer to also be a songwriter?

**DM:** Yes. I co-wrote twenty-two of the thirty songs that I produced—all reached number one on the country charts. Hit songs are hard to find. If a producer has the ability to write a hit song, he can create a song to follow the direction of the artist versus going out and finding and matching a song to the direction. I've written some great songs and hope to continue writing them, I don't feel I can write all ten songs on an album and have them all great. Every song on an album has to

try to be a great song so I'm very open about looking for other people's material.

**MR&M:** When you write a song, do you write it with a particular artist in mind?

**DM:** Yes. Usually, but this past year, I've been treating myself as a songwriter and just writing for the sake of writing as a release and enjoyment. Usually, I have a project going so it's like in an assignment situation. In case of "Real Love," the duet with Kenny Rogers and Dolly Parton, which I co-wrote, I felt it was a song that worked for both of them and the audience they had—mainstream, middle-of-the-road, not too hard country yet not too hard rock. I wanted a song with a positive message.

**MR&M:** Did they have any input in what they wanted?

**DM:** No. They liked the song. I have a 24-track demo studio in Nashville where we write. I did an entire demo of the song before they heard it. I used musicians and male and female lead vocalists. We blocked out the entire song.

**MR&M:** Did they make any changes from the demo?

**DM:** No.

**MR&M:** Do many of the artists you write for make changes?

**DM:** Not really. Occasionally they might change a word because the phrasing isn't just right or doesn't roll easily off the tongue as smoothly as an alternative would. On "Love Will Turn You Around," where Kenny was a co-writer, two of the other writers were in Los Angeles working with Kenny and one of us was back in Nashville. He wanted to change a verse and we got on the phone and conversed.

**MR&M:** I understand that you thought "Suspicious," the Eddie Rabbitt hit, was actually an R&B song.

**DM:** Yes. At the time we wrote it, we were working at the Wally Heider Studios in Los Angeles. That song was written in about the time it takes the song to be played three times. It went real quick. The first reference became the record, recorded with drums and a Rhodes piano. Eddie did the vocal without hearing the finished record. It was a good song to pitch to R&B artists. We were trying to think of which R&B singer we could pitch it to. You know, we did do many types of music with Eddie, and they kept calling it country.

**MR&M:** If you felt the song was R&B, why did you give it to Rabbitt?

**DM:** We wrote it together so I didn't really give it to him. It was his creation also. We liked it so much, we recorded it. We didn't care about direction, we loved the song. We didn't worry who was going to sing it.

**MR&M:** Do you feel that you are typecast as a country writer and producer?

**DM:** Yes, a little bit. I would like to break out of it.

**MR&M:** How do you accomplish that?

**DM:** By working with pop artists. But even working with Eddie, Dolly, and Kenny, who all have country sales, I don't want to blow that base off.

There are no boundaries in music. When I write or produce, I don't worry who's going to play it. It's either a hit or not a hit. I don't think the public worries what kind of music it is. They'll let you know right quick if they like it or not.

If an artist is signed to a Nashville division of a record company, I can't dismiss that and go in other directions. So no matter how pop I might want to take them, I can't take the chance in losing their audience. I want to work with straight pop artists where I don't have to worry about getting country airplay. The new Roseanne Cash album, which I produced, is her most progressive album to date.

**MR&M:** You have lived in Los Angeles and yet you built a studio in Nashville. Yet you record outside of Nashville too. Why?

**DM:** I lived in Los Angeles for a while. While I was working with Eddie Rabbitt, I flew back to Nashville to write and a lot of it we cut in Caribou in Colorado. I record outside of Nashville because I want a different kind of energy. When I go to Los Angeles and other places outside of Nashville, there's more excitement and more openmindedness. Even when you bring musicians from out of town to Nashville to play, they automatically think it's a country place, and I feel they get a bit inhibited at times.

**MR&M:** Right now you're remixing Dolly Parton's "Think About Love" at the Record Plant in New York.

**DM:** I'm eliminating about one and a half seconds and adding her vocal to one spot because it will make for a better record.

**MR&M:** Does Dolly know about it?

**DM:** Yes. She has entrusted the entire project to me.

**MR&M:** Does an artist have to know about it?

**DM:** It depends upon the artist.

**MR&M:** You want to eliminate a minute amount of time on the record. Can the normal music listener tell there is something amiss?

**DM:** I think so. When there is dead time on a song, they're apt to change the dial. There's one and a half seconds of dead time, and for a single, you can't have a second of dead time.

**MR&M:** You recorded Parton in Los Angeles.

**DM:** Yes. I recorded Dolly in Rumbo Studios in Los Angeles. I wanted to record in Los Angeles because Dolly is living there and most of the musicians I wanted to use are out there. I didn't want to bring musicians from Los Angeles to Nashville and have them feel contrived. I didn't want them to second guess what they do because it was Nashville. I wanted them to do what they do normally. I recorded in Los Angeles because there is less of a country stigma there.

**MR&M:** You own your own studio in Nashville. Why do you choose to record elsewhere? Doesn't that defeat the purpose of building a studio?

**DM:** I couldn't find a studio in Nashville that I felt was as comfortable as the studios I was in in Los Angeles. I built a room that was an equivalent to me, which I would use when I work in Nashville. But I never built the studio with the intention of doing all my work solely out of that studio.

**MR&M:** You actually have two studios in Nashville, yet you recorded the song in Los Angeles, and you're remixing it in New York. Why did you use three studios for this one song?

**DM:** Because I wanted a totally automated console, and the console they had at Rumbo wasn't what I wanted at the time. At Rumbo, they had a Neve while Sunset has their own custom console.

**MR&M:** Now it's nine months after you finished the album, and you're at the Record Plant.

**DM:** I'm working with David Thoner, an engineer/producer, who has worked with the J. Geils Band and John Waite. I had to do an edit and a new mix, and I wanted to work with him. He also mixed Roseanne Cash's single, and he did a great job mixing it so I wanted him to do Dolly's single.

**MR&M:** You don't do your own mixing?

**DM:** I'm in there, and I make changes if I hear something I want, but I don't actually make the mixes.

**MR&M:** Do you generally use dif-

ferent engineers and studios on the same project?

**DM:** It depends. This is a little unusual. I generally use only one engineer, but I'm trying this to see what happens. I'm looking for something fresh. I'm always experimenting, always moving around, always trying to do different things.

Sometimes I like to change the consoles in addition to engineers. I like to record on one console, mix on another because each brand has its own personality as far as sound. Neve consoles are warm and punchy sounding. Some of the newer consoles are more pointed sounding. If you get a broad banded as far as the equalizers and sounds like a Neve, you might want to get something more pointed like a Neve than a console which is more broad banded the whole time. I cut the album on a Neve at Rumbo and mixed on a custom console at Sunset with API equalizers, which are punchier and more pointed than the Neve as far as the EQ selection, more punchy at 3000 cycles.

**MR&M:** When did you build your own Emerald Sound Studios?

**DM:** Three years ago. I also have another studio, which I call the Garage, which is an old house on 16th Avenue (Emerald is also on 16th Avenue), where the writers develop their songs. Even Stevens, Eddie Rabbitt, and I work there along with the other writers signed to our publishing company. My dad runs the publishing company. I try not to think of myself as a publisher on a day-to-day basis. And I don't want to have to deal with the day-to-day business of Emerald either.

**MR&M:** What kind of equipment do you have in the Garage?

**DM:** An old 25-year-old, 24-track board and an MCI tape machine. This was built way before Emerald in order to let us expand our song ideas. The Garage is for the sake of writing.

**MR&M:** Do you rent the Garage out to other songwriters?

**DM:** Occasionally for someone who wants to write, but it's not in operation for being in the studio business. It has two rooms—one is about 25-feet by 35-feet and has a 25-foot ceiling. There's also a small overdub room.

**MR&M:** It sounds like a low overhead studio which saves you a lot of money from renting out other studios to do pre-production work.

**DM:** Exactly. It does two things: It's great for writing an album instead of a song and it's great for pre-production since it saves time in the recording

studio. If I write a song on the guitar, the initial performance generally has an enthusiasm and vigor. But after an hour of playing it, I don't play it the same way. It might become real soft or slowed down, which affects the writing. If I record it as a reference, I can retain the initial response or excitement I had when I came up with it, which I like to be able to do. If I can cut a resemblance of a record with it and drums, I'm hearing more of a record. I then can tighten up the lyrics to how the record might appear instead of the song itself.

**MR&M:** What kind of equipment do you have in the Nashville studio?

**DM:** An old three-band Neve console and a Studer 800 tape machine. I like the warmth and width of the equalizers in the Neve. I like the bottom end and range of the Studer. And I especially like the combination of them. I wanted to get from the microphone to the console and tape machine very simply.

What is unique about Emerald is the isolation rooms. The studio is actually five rooms connected together—one main room built like a bandshell roughly 35-feet long with a seven foot ceiling sloping upwards to ten feet and then up to a 22-foot ceiling where I can put the drums so that the sound can shoot out of there. The room has a nice open side. I also have four connecting rooms. That was the engineer coming out of me in order to have the separation but not making the musicians feel that they had to look at video cameras to see each other in order to play. They can leave their amps in the small rooms, close the door, and sit around the drummer while the engineer can have the separation over all the sounds.

**MR&M:** How unique is it?

**DM:** Other studios are similar but not as comfortable. Other studios are after thoughts as rooms, like converted closets. Emerald was laid out with these rooms in mind. Jack Edwards, who designed Bill Schnee's studio, Evergreen and Sand Castle, was the architect.

**MR&M:** How much money did it cost you to build Emerald?

**DM:** I have roughly \$1 million invested in my studio.

**MR&M:** In the three years that you have had the studio, how much updating of equipment have you made?

**DM:** Not much. We've reached the point though that we have to get a bigger console. I'm checking out what's available, but I will go with what I like

rather than what seems to be the trend. I find with engineers that only a few people know what they're doing while the rest go along with the trend. If I stay locked up and out of sight, I miss out on a lot of new things. So I try to stay open and get out there.

**MR&M:** Why haven't you updated in three years?

**DM:** Because it's going to cost me \$250,000. The studio is always booked. Phil Ramone was in recently working with Eddie Rabbitt. Brenda Lee, the Bellamy Brothers, Louise Mandrell, Hank Williams, Jr., Loretta Lynn, Conway Twitty, Merle Haggard, Roseann Cash, Crystal Gayle, Englebert Humperdink, Emmy Lou Harris and others have recorded at Emerald.

Most studios are owned by millionaires who want the novelty of being in the recording business. Studios will not make a person rich and put them on the beach. They're necessary evil. They're very expensive to have, and record companies always explain that they're too expensive to book. It's always a catch-22 with them. Nashville is the last place new equipment is going to—New York and Los Angeles are more avant-garde. I would like to see Nashville more in the forefront.

**MR&M:** Is your console outdated?

**DM:** The console is not outdated nor worn out. It's too small. It can't handle two machines synched up in an automated mix situation. It's great for tracking.

**MR&M:** Do you ever have a hard time booking your own studio?

**DM:** Sometimes. Sometimes I want to go to another city. Sometimes it's frustrating being a studio owner and a producer. I never choose my studio over another situation because it's better for me financially to record at Emerald. I go where I think it will be best for the record. It's not that the studio can't handle any type of recording but because I might want to be in another city than Nashville. I don't use other studios in Nashville because there's nothing else that knocks me out.

**MR&M:** What do you look for when you check out other studios? Do you check it out as a producer or as a studio owner looking for new ideas for Emerald?

**DM:** I always think of myself as a producer so the first time I check out a studio is for the work I'm going to be doing. It's not so much for improvements I'm going to be doing in my studio. If I see new gear, of course, I

think about getting it for Emerald, but I never think of myself as being a studio owner.

**MR&M:** When you're in the studio, what kind of microphones do you prefer?

**DM:** There's no one microphone, per se. It depends upon the artist and what I'm going to record. Eddie Rabbitt primarily used a Neumann U-87, Dolly Parton used a Schoeps, and Roseanne Cash used a Neumann U-47. I put up a few microphones on stands so that we can swing them in and out of the way and move them around while trying them all. Every variable to the tape machine changes the sound—the limiter, the microphone or whatever. Each variable has its own characteristic sound. It's mixing and matching to get the right combination, and it may depend upon whether it's a ballad or a real screaming, hard song.

**MR&M:** What are the artists like in the studio?

**DM:** The first two years, I probably booked eighty percent of the time at Emerald. I did most of Roseanne Cash's album there, some in Los Angeles. I did Dolly Parton in Los Angeles. She was there for the tracking. Most of the vocals were live. She has great intonation and is a great vocalist. She's in tune from the first second at the microphone. She wasn't there for some of the overdubs and mixing. I brought in the whole rhythm section. I wanted Dolly's album to be like someone taking a picture of something rather than it being done in little pieces at a time.

Eddie Rabbitt was always in the studio for everything except the mixing because coincidentally, he always had to go on the road during the mixing period. Roseanne was there for the whole album. Kenny Rogers comes and goes. He's there for the tracking. He does his vocals and then splits for a tennis lesson. He may come back or may not come back at all. Then I would run a cassette up to his house. I enjoy having the freedom of being alone when I work on a project.

I did a Badfinger album for Elektra. It was my first experience working with a band. Whatever the musician plays is the only concern on his mind. I found that hard because each member was only concerned with his part.

**MR&M:** What does the future hold for you?

**DM:** I want to produce pop music and expand.

**MR&M:** Any rock?

**DM:** More pop than rock!

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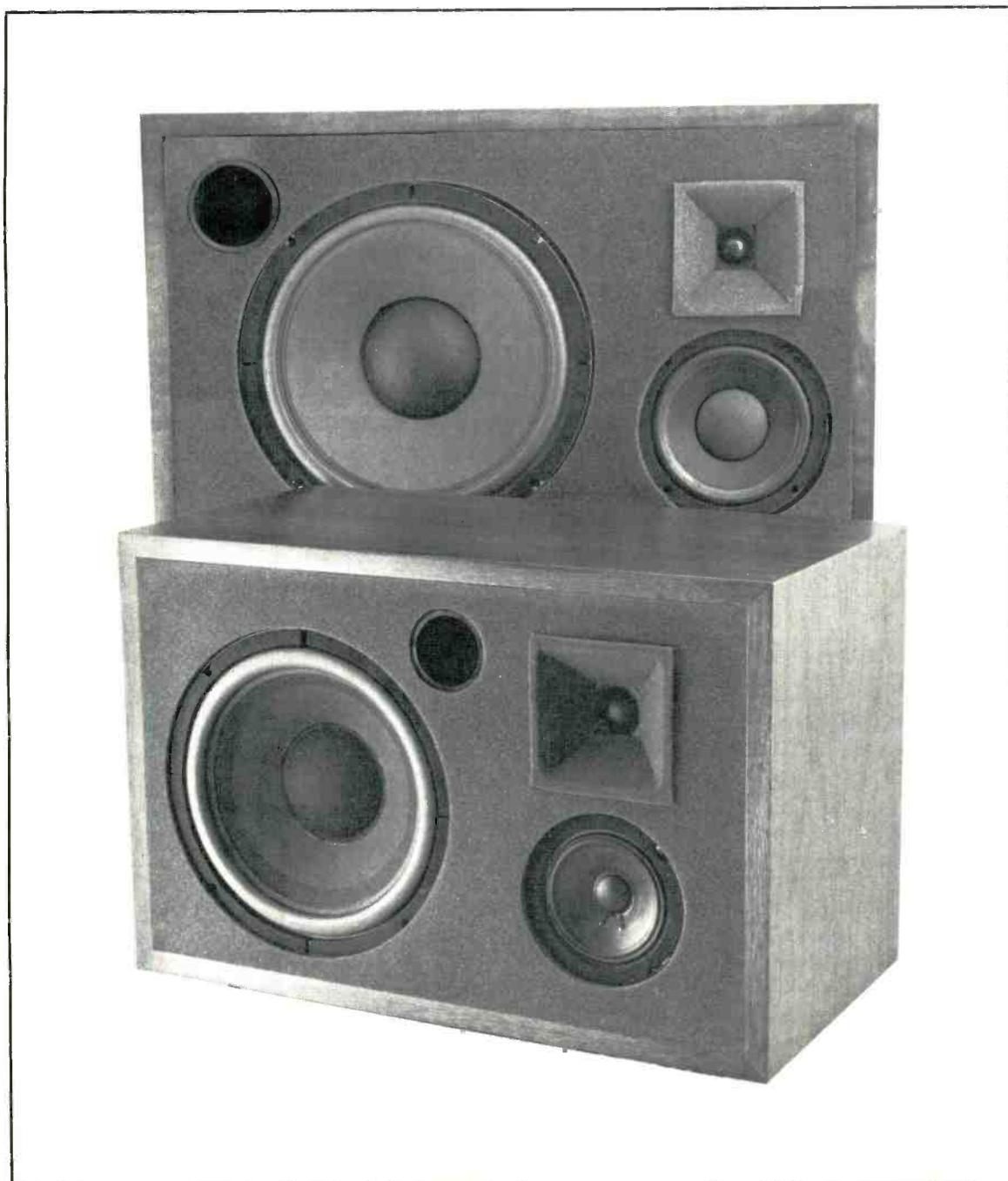


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This has an oiled walnut finish and a dark blue fabric grill screen. Specifications: 14.75 x 9.5 x 7.25. Bass driver is 6.5-in. cone, high driver is a 1-in. dome radiator. Impedance is 8 ohms and crossover is at 2.5 kHz. Frequency response is 70 Hz-18 kHz, +/-3 dB. Weight is 35 lbs. Price: \$189.00.

#### **4312**

This has a textured gray or oiled walnut finish with a black fabric grill screen. Specifications: 23.5 x 14.25 x 11.75. Bass driver is 12-in. cone; mid driver is 5-in. cone; mid driver is 1.4-in. direct radiator. Impedance is 8 ohms and crossover is at 15 kHz and 6 kHz. Frequency response is 45 Hz-15 kHz, +/-3 dB. Weight is 45 lbs. Price: \$432.00.

#### **4411**

This has an oiled walnut finish and a dark blue fabric grill screen. Specifications: 23.25 x 14.5 x 13. Bass driver is 12-in. cone; mid driver is 5-in. cone; high driver is 1-in. dome radiator. Impedance is 8 ohms and crossover is at 1 kHz and 4 kHz, +/-3 dB. Weight is 52 lbs. Price: \$570.00.

### **MEYER SOUND LABORATORIES**

#### **833**

This monitor includes a matched pair of S833 loudspeakers and the C833 Control Electronics Unit, which contains Meyer's exclusive SpeakerSense driver protection circuitry. Specifications: 32 x 20 x 14.75. Black high pressure laminate finish with brown cloth grill screen. Bass driver is 15-in. cone; mid driver is 1.4-in. throat horn. Crossover is at 700 Hz and frequency response is 35 Hz-18 kHz, +/-3 dB. Weight is 115 lbs. Price: \$5,300.00 per system.

### **TOA ELECTRONICS**

#### **22-ME**

This is a 120 watt RMS monitor with grey paint finish and black cloth grill screen. Specifications: 6.5 x 6.5 x 6. Mid driver is 5-in. cone and impedance is 8 ohms. Frequency response is 100 Hz-17 kHz. Weight is 5 lbs. Price: \$119.50.

#### **22-ME/AV**

This is the same as the 22-ME but with shielded components for video use. Price: \$139.50.

#### **265-ME**

This monitor has symmetrically arranged components to enhance stereo imaging; grey paint finish with black cloth grill screen. Specifications: 14 x 8 x 9.5. Bass driver is 6.3-in. cone; high driver is 1.2-in. dome tweeter and impedance is 8 ohms. Crossover is at 3 kHz; frequency response is 60 Hz-20 kHz. Weight is 11.5 lbs. Price: \$299.50.

#### **265-ME/AV**

This is the same as the 265-ME but with shielded components for video use. Price: \$339.50.

#### **280-ME**

This monitor has grey paint finish with a black cloth grill screen. Specifications: 15.5 x 9.5 x 9.5. Bass driver is 8-in. cone; mid driver is 1.2-in. dome tweeter; high driver is .79-in. dome tweeter; impedance is 8 ohms. Crossover is at 1.5 kHz and 14 kHz and frequency response is 60 Hz-20 kHz. Weight is 15.5 lbs. Price: \$399.50.

#### **280-ME/AV**

This is the same as the 280-ME but with shielded components for video use. Price: \$449.50.

#### **312-ME**

This monitor handles 135 RMS and has a grey vinyl finish with black cloth grill screen. Specifications: 23 x 13 x 12. Bass driver is 11-in. cone; mid driver is 4.7-in. cone; high driver is 1.2-in. dome tweeter. Impedance is 8 ohms and crossover is at 1.5 kHz and 14 kHz. Frequency response is 50 Hz-20 kHz. Weight is 35.5 lbs. Price: \$699.50.

#### **312-ME/AV**

This is the same as the 312-ME but with shielded components for video use. Price: \$749.50.

### **UREI**

#### **811B**

This monitor has a flat black finish with a black cloth grill screen. Specifications: 20.75 x 26.5 x 19. Mid driver is 15-in. cone; high driver is 1.75-in. titanium horn. Impedance is 8 ohms and frequency response is 80 Hz-17.5 kHz, +/-3 dB. Weight is 107 lbs. Price: \$1,556.00.

**813B**

This monitor has a flat black paint finish with a black cloth grill screen. Specifications: 36 x 31 x 23. Bass driver is a 15-in. cone; mid driver is a 15-in. cone; high driver is a 1.75-in. horn. Impedance is 8 ohms and frequency response is 40 Hz-17.5 kHz, +/-3 dB. Weight is 195 lbs. Price: \$2,096.00.

**815B**

This monitor has a flat black paint finish with a black cloth grill screen. Specifications: 32 x 43.5 x 21. Bass driver is two 15-in. cones; mid driver is a 15-in. cone; high driver is a 1.75-in. horn. Impedance is 8 ohms and frequency response is 40 Hz-17.5 kHz, +/-3 dB. Weight is 235 lbs. Price: \$2,196.00.

**809**

This monitor has a flat black paint finish with a black cloth grill screen. Specifications: 23 x 16.5 x 13.5. Mid driver is a 12-in. cone; high driver is a 1.75-in. horn. Impedance is 8 ohms and frequency response is 50 Hz-17.5 kHz, +/-3 dB. Weight is 60 lbs. Price: \$699.00.

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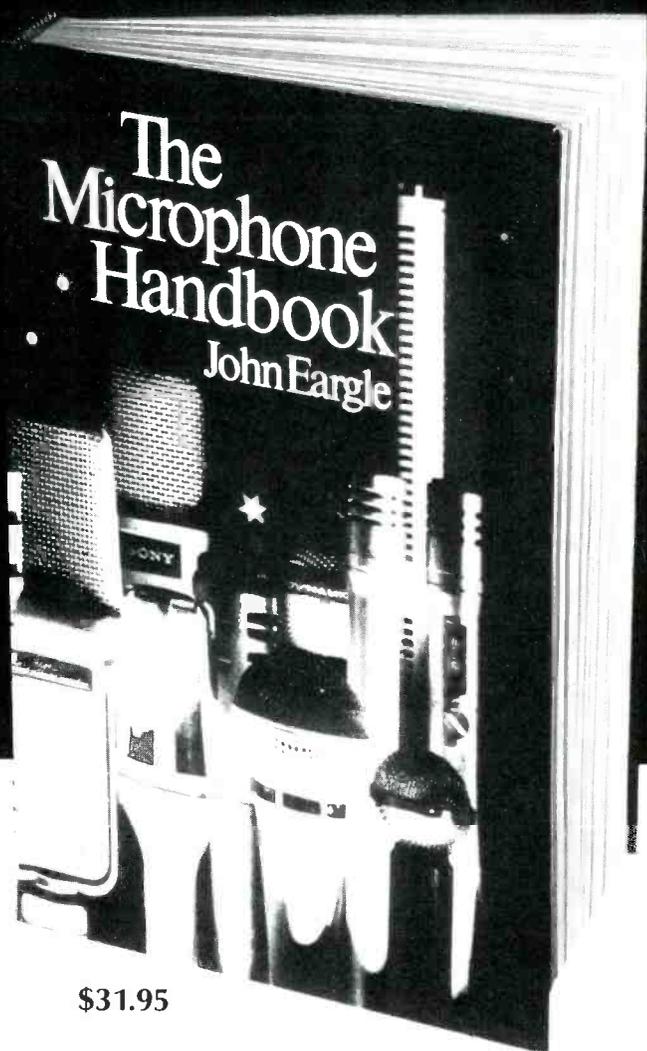
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## **AMP**

### **BH-420**

This is a 400 watt (into 4 ohms) bass head with 0.08% THD. Front panel includes high and low gain input jacks, gain and master volume controls, compressor/limiter, 4-band semi-parametric equalizer, tone balance, and crossover frequency control. The dimensions are 17 (w) x 4 (h) x 9.5-in (d), and the weight is 25 lbs. Price: \$799.00.

### **BH-220**

This is a 240-watt (into 4 ohms) bass head with 0.08% THD. Front panel includes high and low gain input jacks, volume control, flat/enhance switch, bass and treble controls, 3-band equalizer, tone balance and power switch. The dimensions are 17 (w) x 4 (h) x 9.5-in. (d), and the weight is 16 lbs. Price: \$599.00.

### **XB-15**

This is a bass speaker system using 7.7 cu. ft. bass reflex design and an enclosure resonance frequency of 33 Hz. The power rating is 250 watts(8 ohm impedance), and the frequency response is 40 Hz-5 kHz. The speaker is 15-in. with a 2.5-in. voice coil. The dimensions are 27(h) x 22.5 (w) x 17.2-in. (d), and the weight is 81 lbs. Price: \$699.00.

## **CARVIN**

### **TUBE HEADS FOR GUITAR**

All tube-heads are available in two power versions, the X-100 provides 100 watts of continuous power, while the X-60B features 60 watts continuous power into 4, 8, or 16 ohm loads. Channel switching, 5-band graphic eq, active tone controls, Concert Hall Reverberation, 3-way RMS switch (25, 50 or 100 watt settings), XLR recording output, and all-tube design are features. Price: X100B \$499.00;X60B-\$449.00.

### **AMP-SPEAKER COMBO (FULL SIZE)**

The XV-112-E is a 100 watt combo amp with 100 watts continuous power into 4, 8, or 16 ohm loads, channel switching, 5-band graphic eq, active tone controls, concert hall reverberation, 3-way RMS switch, XLR recording output, and much more. Price: XV112-E (with EVM12L speaker)- \$599.00; XV212-C (w/2 G12M70 speaker) \$599 (Celestion speakers).

### **AMP-SPEAKER COMBO (COMPACT VERSION)**

X-60 compact all-tube amp features channel switching, active tone controls, concert hall reverberation, 3-way impedance matching, and a headphone/aux. output jack and a size of 18 x 10.5 x 18. Price: X60H with Hi-Energy 12-in. speaker \$299.00; X60-C with G12M70 Celestion 12-in. \$329; X60-E with EVM12L 12-in. \$389.00.

### **BASS GUITAR AMPS**

The Pro-Bass amplifier head is available in 150 or 300 watt versions with Dual channels, parametric eq, 6-band graphic eq, Compressor, electronic crossover, effects loop, channel switching, balanced recording XLR output, and much more. Price: PB-150 (150w) \$399.00; PB-300 (300w) \$469.00.

## **CRATE**

### **B-60**

This amp is 60 watts at 4 ohms and 90 watts at 2 ohms. Speaker is 15-in. 4 ohm in a ported, closed back cabinet, with high and low inputs. Five bands of eq plus bright and contour switches. Internal limiter with threshold control, balanced line out and effects loop. Price: \$399.00.

### **B-150**

This amp is 150 watts RMS at 4 ohms and 220 watts at 2 ohms. It has two 15-in. speakers in separate closed back, side ported enclosure. Six bands of eq plus bright and contour switches. Internal limiter with variable attack and threshold. Built-in crossover with variable frequency and level controls. Balanced line out with level control. Price: \$599.00.

### **G-60-GT**

This amp is 60 watts at 4 ohms and 90 watts at 2 ohms and comes standard with a 4 ohm G-12M-70 12-in. Celestion speaker. Discrete channel switching by means of footswitch or panel switch. LED channel indicators. Low, Mid Hi and Gain control on channel A. Gain, Level and shape controls on channel B. Master reverb and bright switch. Price: \$300.00.

### **G-250 GT**

This amp is 150 watts at 4 ohms and 220 watts at 2 ohms. It has twin G-12m-70 Celestion speakers, and discrete channel switching with LED channel status indicators, Hi and Lo input jacks, gain and level controls on each channel plus separate channel tone controls, solid state preamp and power amp, and master presence and reverb controls. Price: \$670.00.

## **G1500**

This amp is 150 watts at 4 ohms and 220 at 2 ohms. Two separate 4-12 slant and straight closed back cabinets with 4 12-in. Celestion speakers in each. Solid state circuitry in head. Discrete channels with footswitch and panel switch channel operation. Each channel has LED status light, gain and level controls and full eq capability. Price: \$1650.00.

## **KBA-150 (KEYBOARD AMP)**

This amp is 150 watts at 4 ohms 15-in. speaker in ported closed back cabinet with high frequency horn. It has three discrete input channels each with 2 bands of eq, level and reverb control, master 4-band eq, effects loop and line out. Price: \$600.00.

## **DEAN MARKLEY**

### **K-20**

This is a self-contained studio amp with tube-type switchable overdrive, 9 watt power output (6 volts into 4 ohms at 1 kHz) and 3-way equalization. Controls include drive switch, volume and master volume, treble, mid and bass controls, and LED power indicator. Dimensions are 12.75 (h) x 12.25 (w) x 7.5-in. (d), and the weight is 13.5 lbs. Price: \$99.00.

### **80DR**

This is a tube driven rack mounted guitar amp with two independent switchable channels, with separate controls for pre-amp gain, master, bass, midrange, treble, presence and reverb on each. It features active tone controls for up to 15 dB of boost or cut and 90 watt (at 4/ohm) power output. The dimensions are 3.5 (h) x 19 (w) x 9.75-in. (d), and the weight is 13 lbs. Price: \$895.00.

### **CD-60**

This is a self-contained tube amp with a 60 watt RMS power output and controls for volume, drive, gain, presence, bright switch, midboost and voicing switch, master volume, reverb and ground switch. It also features a footswitchable effect loop with send and receive level controls. The dimensions are 19 (h) x 20 (w) x 11-in. (d), and the weight is 56 lbs. Price: \$650.00.

### **400 SB**

This is a solid-state bass amp rated at 400 watts RMS. Controls include volume, treble, midrange, mid Hz, bass, master volume, limiter and ground. It also features an effect loop and preamp out/power amp in. The dimensions are 5 (h) x 19 (w) x 9.75-in. (d) and the weight is 22 lbs. Price: \$649.00.

### **DM 130 C**

This amp features a MOSFET power section, footswitchable built-in chorus and overdrive, 4-band eq, presence control, master volume, and reverb. It also has two speaker outputs, a convenience AC outlet and 105 watt RMS output power. Dimensions are 19.5 (h) x 20 (w) x 11.5-in. (d) and the weight is 37 lbs. Price: \$695.00.

### **RM-100 MT/PRE AMP DR**

The RM100 MT is a tube-type power amplifier with one balanced XLR and one 1/4-in. phone jack for inputs and outputs. The DR features active tone controls (15 dB cut/boost) and 120 watt maximum power. The dimensions are: RM-100-MT-5.25 (h) x 19 (w) x 8.5-in. (d); Pre amp DR-3.5 (h) x 19 (w) x 9.75-in. (d). The combined weight is 26 lbs. Price: RM-100-MT-\$599. Pre amp DR-3.5-\$495.00.

## **FENDER**

### **SIDEKICK 25 REVERB**

This guitar amp has a 10-in. speaker driven by 25 watts with 2 inputs. Controls include volume, gain and master, active tone controls, presence, reverb control and headphone jack. There is also an on/off footswitch for the reverb included. The dimensions are 14.75 (h) x 15.5 (w) x 8.25-in. (d) and the weight is 21 lbs. Price: \$199.00.

### **SIDEKICK 35 REVERB**

This is a 12-in. speaker, 35 watt version of the Sidekick 25, above. The dimensions are 15.75 (h) x 16.5 (w) x 9-in. (d) and the weight is 25 lbs. Price: \$229.00.

### **SIDEKICK 65 REVERB**

This guitar amp has a 12-in. speaker driven by 65 watts with 2 independent input channels. Channel A features volume, treble and bass controls, channel B features volume, gain and master, treble, middle and bass controls. Both channels have presence controls and footswitchable reverb. The dimensions are 16.25 (h) x 18.5 (w) x 10.75-in. (d), and the weight is 35 lbs. Price: \$329.00.

### **STAGE LEAD II 2-12**

This guitar amp has two 12-in. speakers driven by 100 watts with 2 independent input channels. Channel A features volume, treble, mid and bass controls, and channel B features volume, gain, master, treble, mid 1 (350 Hz), mid 2 (800 Hz), and bass controls. Both channels have presence controls and footswitchable reverb. The dimensions are 19.5 (h) x 26 (w) x 10.25-in. (d) and the weight is 54 lbs. Price: \$469.00.

### **SIDEKICK 35 BASS**

This bass amp has a 12-in. speaker driven by 35 watts with 2 inputs. Controls include input gain (with peak indicator), treble, mid and bass controls with frequency selector for mid, master volume with "compensation", and limiter (with indicator). The dimensions are 18.5 (h) x 20.25 (w) x 10-in. (d) and the weight is 38 lbs. Price: \$229.00.

### **SIDEKICK 65 BASS**

This is a 15-in. speaker, 65 watt version of the Sidekick 35, above. The dimensions are 21.75 (h) x 26 (w) x 13-in. (d), and the weight is 60 lbs. Price: \$319.00.

## **GIBSON**

### **CR100 E-V**

This amp has a 300 watt RMS output (into 8 ohms) and eight 12-in. Electro-Voice speakers. It has an effects loop, graphic equalizer, distortion and reverb with 2 switchable inputs. It has a tube preamp and a solid-state power amp. The weight is 245 lbs. Price: \$750.00.

### **G 25 R**

This amp has a 25 watt RMS output (into 4 ohms) and a 10-in. speaker. It has distortion and reverb controls with two switchable inputs and it is all solid-state. The weight is 27 lbs. Price: \$269.00.

### **B-40 BASS**

This amp has a 40 watt RMS output and a 12-in. speaker. It is all solid-state. The weight is 35 lbs. Price: \$249.00.

### **G-120 R-10**

This amp has a 120 watt RMS output and four 10-in. speakers. It is all solid-state with distortion and reverb controls and two switchable inputs. The weight is 75 lbs. Price: \$750.00.

### **G 60 R-12**

This amp has a 60 watt RMS output and a 12-in. speaker. It is all solid-state with distortion and reverb controls and 2 switchable inputs. The weight is 45 lbs. Price: \$525.00.

### **B-70 BASS**

This amp has a 70 watt RMS output and a 15-in. speaker. It has an effects loop and compression/limiter. It is all solid-state, and has 2 switchable inputs. The weight is 50 lbs. Price: \$395.00.

## **HOLMES (ON SIGHT MUSIC)**

**All models are solid-state, high impedance, 8 ohms, with black tolex covered wood cabinets and hi/lo gain inputs.**

### **TECH 75R**

This is a 75 watt RMS, 12-in. speaker (Celestion) guitar amp with channel switching, dual variable parameter overdrive circuit, pre/post gain controls, master, 3-band eq, effects loop, external speaker output and reverb. The weight is 35 lbs. Price: \$399.95.

### **TECH 135R**

This is a 135 watt RMS, with two 12-in. speakers (Celestion option) guitar amp with channel switching, dual variable parameter overdrive circuit, pre/post gain control, master, 5-band eq, Brite switch, effects loop, external speaker output, and reverb. The weight is 65 lbs. Price: \$559.95.

### **TECH 150R**

This is a 150 watt, RMS 12-in. speaker (Celestion) guitar amp with two independent channels, dual variable parameter overdrive circuit and pre/post gain, 3-band eq each channel, master, effects loop, external speaker output and reverb. The weight is 50 lbs. Price: \$699.95.

### **TECH 40B**

This is a 50 watt RMS, 12-in. speaker bass/keyboard amp with dual band parametric eq, treble and bass eq, input gain, master, line out and headphone out. The weight is 48 lbs. Price: \$299.00.

### **TECH 75BK**

This is a 75 watt RMS, 15-in. speaker bass/keyboard amp with dual band parametric eq, treble and bass eq, input gain, master, effects loop and external speaker output. The weight is 53 lbs. Price: \$399.95.

### **TECH 150B**

This is a 150 watt, 15-in. speaker bass/keyboard amp with dual band parametric eq, treble and bass eq, input gain, master, effects loop and external speaker output. The weight is 70 lbs. Price: \$599.95.

## **LECTROSONICS**

### **MOUSE**

This is a portable battery operated guitar amp with an 8-in. speaker and 5.5 watt RMS into 2 ohms output. The S/N ratio is 80 dB (at 100 MV input) and the battery is a rechargeable, self contained 12 volt, 4 amp/hour type. (charger included). The dimensions are 9.5 (h) x 12 (w) x 10-in. (d), and the weight is 13 lbs. Price: \$251.95.

### **MAXI-MOUSE**

This is a 9 watt version of the Mouse, above. Distortion level is less than 1%, and the frequency response is 50 Hz-20 kHz, +/- 1 dB. Price: \$339.95.

### **MOOSE II**

This is the same as the Maxi Mouse, above, but for bass. The dimensions are 22.5 (h) x 13 (w) x 12.5-in. (d), and the weight is 38 lbs. Price: \$499.95.

## **MESA/BOOGIE**

### **MESA BASS 400**

This amplifier is a rackmountable, all tube unit. It includes a 6-band graphic equalizer, switchable tone controls, inputs for active and standard basses, balanced line out, effects loop with blend control and 200 watt output (into 4 or 8 ohms). The weight is 42 lbs.

### **MESA/BOOGIE STUDIO .22**

This amp has an output of 22 watts (at 4 or 8 ohms), and a 12-inch Shadow speaker. It includes reverb, effects loop, and footswitchability. Optional 5-band graphic equalizer available. The weight is 40 lbs. Price: \$499.00.

### **MESA/BOOGIE MARK III**

This amp is can be footswitched between clean rhythm, "crunch rhythm", and lead. Stock features also include 5 tonal boost switches, suspended chassis mount, direct out, effects loop and many available options.

## **PEAVEY**

### **BACKSTAGE PLUS**

This is a single input, single channel, 35 watts RMS into 8 ohms, guitar amplifier. Gain block includes pre gain, saturation (TM), post gain controls, 3-band equalizer (includes bright and thick switching,) switchable reverb, preamp out/power amp in jacks for effects patching capability, and one heavy-duty 10-in. speaker. Weight 24 lbs. Price: \$169.50.

### **SPECIAL 130**

This guitar amplifier has high and low gain inputs, dual channel with Automix (TM) switching, 130 watts RMS into 4 ohms, lead channel features pre gain, saturation (TM), and post gain controls, 4-band equalizer including selectable midrange center frequency, bright and thick switching and switchable reverb. One 12-in. Peavey Scorpion Plus speaker is included. Weight 50 lbs. Price: \$399.50.

### **COMBO 300**

This bass amplifier has high and low gain inputs, single channel, 210 watts RMS into 4 ohms, 300 watts RMS into 2 ohms, pre and post gain controls, pre-eq patch jacks, 8-band active eq at one-octave centers, continually variable crossover (50-500 Hz), DDT (TM) compression, and one 15-in. Peavey Black Widow speaker. Weight 88 lbs. Price: \$599.50.

### **STEREO CHORUS 400**

This guitar amplifier has high or low gain inputs, dual channel with Automix (TM) switching, mono or stereo operation, and 130 watts RMS per channel. Each channel features pre and post gain (channel 1 includes saturation (TM)), 4-band eq including selectable midrange center frequency, bright and thick switching, effects patching capability, full stereo chorus and vibrato. Weight 61 lbs. Price: \$649.50.

### **KB-300**

This keyboard amplifier has 3 channels and 130 watts RMS into 4 ohms. Each channel features one input, level control with gain boost switch, 3-band active eq, reverb control, master level and reverb controls, pre and post eq patching capability, DDT (TM) compression, and one 15-in. Peavey Scorpion Plus speaker, one Peavey CDH (TM) horn. Weight 94 lbs. Price: \$499.50.

### **ED-100**

This electronic drum amplifier has two channels that are 65 watts RMS into 8 ohms. Each channel features one input, level control, monitor level, pre-eq patch jacks. 4-band active master eq, post-eq patch capability, 2-channel monitor outputs, headphone jack, DDT (TM) compression, one 15-in. Peavey Scorpion speaker, one Peavey CH-3 horn and one Peavey 22A compression driver. Weight 78 lbs. Price: \$349.50.

## **POLYTONE**

### **MINI-S12L**

This is 110 watt RMS (into 2 ohms) output guitar/keyboard amp with a 12-in. speaker. It has 3-position Brite/Dark switch, switchable dual channels, distortion/sustain, modulator speed and intensity, and master volume/reverb controls; effects loop and mono/stereo preamp switch. The dimensions are 1(h) x 20.5 (w) x 12 (d)-in. and the weight is 32 lbs. Price: \$625.00.

### **MINI-S15L**

This is a 15-in. speaker version of the S12L, above. The dimensions are 19 (h) x 22.5 (w) x 12 (d)-in. and the weight is 35 lbs. Price: \$675.00.

### **STUDIO 212**

This keyboard has two separate power amps for a total of 200 watts RMS. (100 watts into 3 ohms for 12-in. speaker for lows; 100 watts into 3 ohms for other 12-in. speaker for highs). It has the same features as the S12L, above. The dimensions are 18.5 (h) x 27.5 (w) x 12 (d) and the weight is 55 lbs. Price: \$775.00.

### **FUSION L**

This tube amp has switchable output, 100 watts and 60 watts RMS into 4 ohms and a heavy duty 12-in. speaker. It has effects loop, Brite/Dark Switch, 5-band eq and dual footswitch. The dimensions are 17 (h) x 20.5 (w) x 10 (d)-in. and the weight is 50 lbs. Price: \$795.00.

## **ROLAND**

### **BN-100/60 BASS AMPLIFIERS**

The BN-100 (100W RMS) and BN-60 (60W RMS) bass amplifiers feature active eq (high/high-mid/low-mid/low) centered at 10 kHz, 1 kHz, 500 Hz and 60 Hz, chorus (rate and depth), line outputs, XLR balanced out (BN-100) eq bypass switch and 15-in. speaker. BN-100 measures 24.3 x 31.5 x 14.8 inches and weighs 107.6 lbs. Price: \$850.00. The BN-60 measures 22.3 x 26.9 x 12.5 inches and weighs 59.4 lbs. Price: \$650.00.

### **CK-40/60/100 KEYBOARD AMPLIFIERS**

The Roland CK-40, CK-60 and CK-100 (40W, 60W, and 100W) are amplifiers designed for keyboard and synthesizer applications. Each features 3-band eq, passive crossover, pull attenuator, RCA-type record outputs (CH1/CH2), dual channel inputs, effect send/return jacks and headphone jacks. CK-60 measures 12.2 x 14.5 x 8.1 inches and weighs 24.2 lbs., 10-in. speakers, price: \$350.00. CK-60 measures 14.6 x 18.3 x 11.8 inches and weighs 36.3 lbs. 12-in. speakers, price: \$460.00. CK-100 measures 18.2 x 28.7 x 15.4 inches and weighs 68.2 lbs. 15-in. speakers Price: \$750.00.

### **JC-120/77/50 GUITAR AMPLIFIERS**

The Roland Jazz chorus amps (120W, 80W and 50W) feature chorus (rate and depth), vibrato (JC-50), stereo power amp (JC-120/JC-77) and very high fidelity pre-amp sections to produce ultra clean sounds. JC-120 measures 29.5 x 21.3 x 10.6-in., and the weight is 61.6lbs., with two 12-in. speakers. Price: \$775.00. The JC-77 measures 22.2 x 16.5 x 9.8-in., and the weight is 41.8lbs., with two 10-in. speakers. Price: \$625.00. The JC-50 measures 21.6 x 19.9 x 9.41-in., and weighs 39.6lbs., with one 12-in. speaker. Price: \$495.00.

### **SPIRIT 40A/25A/10A GUITAR AMPLIFIER SERIES**

The Roland Spirit Amps (40W, 25W and 10W) feature variable pre amp and post gain controls, 3-Band passive eq, reverb (40A/25A), headphone jacks, line outputs, footswitching capabilities, and normal/overdrive channels. Spirit 40A measures 17.4 x 18.2 x 8.07-in., and the weight is 24.2 lbs. with one 12-in. speaker. Price: \$295.00. Spirit 25A measures 14.9 x 15.7 x 8.07-in., and the weight is 17.6 lbs. with one 10-in. speaker. Price: \$199.95. Spirit 10A measures 12.0 x 12.8 x 6.1-in., and the weight is 10.1 lbs. with one 8-in. speaker. Price: \$99.95.

### **SCL-100/60/40 GUITAR AMPLIFIER SERIES**

Roland Super Cube Lead series (100W, 60W, 40W) feature normal/overdrive channels, 3-Band passive eq, reverb, line-out/headphone jacks, effect send/return jacks and remote footswitch capability. SCL-100 measures 16.9 x 18.7 x 11.4-in. and the weight is 48.4 lbs. with one 15-in. speaker. Price: \$660.00. SCL-60 measures 14.6 x 16.1 x 10.2-in., and the weight is 30.8 lbs. with one 12-in. speaker. Price: \$475.00. SCL-40 measures 12.8 x 13.8 x 8.7-in. and the weight is 23.1 lbs., with one 10-in. speaker. Price: \$360.00.

### **SCB-100/60/40 BASS AMPLIFIER SERIES**

Roland Super Cube Bass Series (100W, 60W, 40W) feature high and low gain inputs, 3-band active eq, shiftable mid eq, pre-out/main in jacks, headphone jacks, and XLR output (SCB 100/60). SCB-100 measures 18.2 x 20 x 14.1-in., and weighs 52.8 lbs., with one 15-in. speaker. Price: \$660.00. SCB-60 measures 14.9 x 17.1 x 13.3-in., and weighs 35.2 lbs. with one 12-in. speaker. Price: \$480.00. SCB-40 measures 13.1 x 14.8 x 11.7-in., and weighs 26.4 lbs. with one 10-in. speaker. Price: \$360.00.

## **ROSS**

### **G-1240**

This is a 50 watt RMS output guitar amp with a 12-in. heavy duty speaker. It has 3-band equalizer, pre and post gain, reverb and effects in and out. Price: \$299.95. (Also available in 100 watt version, G-1280, \$399.95).

### **FAME MODEL 15**

This is a 15 watt RMS output guitar amp with a 8-in. speaker. It has 3-band equalizer and headphone jack. Also available with reverb. Price: \$129.95; \$149.95 with reverb (Reverb 15).

### **REVERB 15**

This is a 25 watt RMS output guitar amp with a 10-in. heavy duty speaker, 3-band equalizer, headphone jack, master volume control and reverb with footswitch jack. Price: \$199.95 (also available in 35 watt, 12-in. speaker version, \$249.95).

### **B-1550**

This is a 50 watt RMS output bass amp with a 15-in. heavy duty speaker. It has a 3-band equalizer, pre and post gain, 7-band master graphic equalizer and effects in and out. Price: \$399.95 (Also available in a 100 watt version, B-5100, \$499.95).

### **G-100**

This is a 100 watt guitar amp with high and low gain inputs, 3-band equalizer, pre and post gain controls, reverb and two 5-in. speakers with 130 watt power handling capability. Price: \$399.95.

## **SEYMOUR DUNCAN**

### **CONVERTIBLE 100 WATT HEAD**

This is a tube-type head with 4 and 8 ohm outputs, 100 watt output (at 8 ohms) and effects loop. Features include two independent channels, separate volume, overdrive, treble, mid, bass and reverb controls for each channel, built-in fan, 2 AC convenience jacks, panel mounted channel selector and footswitch. The weight is 42 lbs. Price: \$1,190.00.

### **CONVERTIBLE 100 WATT COMBO**

This is virtually the same as the head, above, but it uses a Celestion G12k-85 speaker. The weight is 57 lbs. Price: \$1,260.00.

### **BASS 400**

This is a solid-state bass amp with a 400 watt (at 4 ohms) power output and effects loop (with level control). It features a distortion level of less than 0.05%, 7-band active eq, high and low contour boost switches and DC output protection circuit. (Rack mountable). The weight is 25 lbs. Price: \$830.00.

### **BASS 300 x 2**

This is a solid-state bass amp with an output of 600 watts (8 ohms) in the bridged mode; 300 x 2 mono channels (4 ohms) in the dual mono mode; and 300 watts high end, 300 watts bottom end (4 ohms) in the biamp mode. Most of the features are the same as the 400, above. The weight is 30 lbs. Price: \$1,150.00.

## **SUNDOWN TECHNOLOGY**

### **REBEL AMPS HEAD**

The all-tube SDR100H Rebel 100 and SDR50H Rebel 50, are 100-watt and 50-watt lead heads, respectively. They feature an all-new preamp, designed specifically for leads and sustain, gain and tone controls and a gain-boost that is activated at the front panel, or by remote footswitch. The output section features the exclusive Sundown "Governor" for precise control of output stage overdrive, the patent-applied-for "RMS" control for actual output power control, and presence control.

## **YAMAHA**

### **G100III SERIES**

This series has three models with two 10-in. speakers, one 12-in. speaker, or two 12-in. speakers-100 watts (4 or 8 ohms), two foot switchable channels, each with 3-band equalization and mid-boost, master parametric eq, presence and reverb, effects loop send and controls level. Weight from 54-65 lbs. Price: G100-112III-\$520.00. G100-210III-\$560.00. G100-212III-\$600.00.

### **G100SIII SERIES**

This series has one 12-in. or two 12-in. speakers. All of the features of G100III series with cast frame high performance speakers, balanced XLR line level output with level control and effects loop bypass. Weight 57.5 lbs. (G100-112SIII); 70 lbs. (G100-212SIII). Also available in head only (40 lbs.). Price: G100III head-\$550.00. G100-112SIII-\$620.00. G100-212SIII-\$720.00.

## **B100 SERIES**

These are 100 watt RMS bass amplifiers with one 12-in. or one 15-in. speaker. Dual parametric equalizers and versatile electronic crossover system, balanced XLR and 1/4-in. line level outputs with level control, high pass and low pass outputs. Weight, 82 lbs. Also available in head only (42 lbs.). Price: B100III head-\$450.00. B100-112III-\$600.00. B100-115III-\$640.00.

## **G20-110III**

This amp is 20 watts RMS into a 10-in. speaker. It has two channels with parametric equalizer, presence and reverb, and preamp out/power amp in connectors that may be used as effects loop. The weight is 29 lbs.

## **G50-112III**

Same as G20-110III, with 50 watts RMS and one 12-in. speaker. The weight 41 lbs. Price: \$430.00.

## **YORKVILLE SOUND**

### **BLOC 20G**

This is a compact solid-state guitar amp with overdrive, reverb, bass, mid, and treble eq controls, boost footswitch jack, and headphone jack. Power is 20 watts RMS with a 10-in. speaker. The dimensions are 14 x 12.5 x 9.5-in. and the weight is 20 lbs. Price: \$245.00.

### **BLOC 100G**

This is a solid-state guitar amp with two switchable channels (footswitchable), eq bypass capability, bass, mid and treble eq controls, reverb, send and return effects loop jacks and headphone jack. It has a 100 watt RMS power output with a 12-in. speaker. The dimensions are 16 x 15 x 11-in. with a weight of 30 lbs. Price: \$390.00.

### **BLOC 50G**

This is a 10-in. speaker, 50 watt version of the 100G, above. The dimensions are 16 x 12 x 10-in., and the weight is 25 lbs. Price: \$325.00.

### **BLOC 80B**

This is a solid-state bass amp with dual inputs (hi and low), volume control, bass, mid and treble eq controls, headphone jack, send and return effects loop jacks and line out jack. It has a 15-in. speaker with 80 watts RMS output. The dimensions are 16.5 x 17.5 x 12-in. and the weight is 35 lbs. Price: \$325.00.

### **BLOC 40B**

This is a 10-in. speaker, 50 watt RMS version of the 80B, above. The dimensions are 12 x 14 x 11-in. and the weight is 20 lbs. Price: \$245.00.

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Chatsworth, CA 91311

**Gibson**  
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Nashville, TN 37205

**RolandCorp. US**  
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Los Angeles, CA 90040

**Carvin Mfg.**  
1155 Industrial Ave.  
Escondido, CA 92025

**Lectrosonics, Inc.**  
2100 Atrisco Dr. N.W.  
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**Ross**  
1316 E. Lancaster  
Ft. Worth, TX 76102

**Crate**  
1400 Ferguson Ave.  
St. Louis, MO 63133

**Mesa/Boogie, Ltd.**  
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**Seymour Duncan**  
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**Dean Markley, Inc.**  
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**Sundown Technology**  
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Campbell, CA 95008

**Polytone Musical Instruments**  
6865 Vineland Ave.  
No. Hollywood, CA 91605

**Yorkville Sound**  
56 Harvester Ave.  
Batavia, NY 14020



# THE WATERBOYS:

## Same Time Next Year

Many a recording perfectionist has come to a cripplingly crucial point in their career where their artistry, must simply forge into the black—in a commercial sense. In most cases, this is achieved through well-intentioned, but often hollowing concessions. However, for a rare handful, verve through substance and style allows the artist to bend and not break to fulfill this demand. Scotland's Waterboys seemed destined for the latter.

This Is The Sea, their third Island/Ensign album is starting to receive the same kind of attention in the US, that the Waterboys have enjoyed in the UK since their early '83 indie-singles releases. Their anthemic, at times U2-esque, celtic rock has undergone refinement, but has come out stronger from it.

The perfectionist at the heart of the Waterboys is twenty-seven-year-old Mike Scott. A year ago, the guitarist, pianist, singer/songwriter, and producer was intent on his basic, but commercially wayward methods of recording and marketing his band. For example, he balked at the making of a video, rendering it mediocre at best, and often scoffed at them in interviews. This year, the young man is still as fiery, but perhaps a little wiser.

"My opinion on TV was altered by Live-Aid, which was a good demonstration of the positive power of television and mass-media. It made me realize that TV is a part of today, so I might as well use it to do my work." Scott and Co. finally made an effective video for their latest single, "The Whole Of The Moon," but Scott still "prefers that people see their own 'videos' when listening to our music."

Prior to "This Is The Sea," the Waterboys were less of a band, and more of a vehicle for Scott's many talents. The albums followed suit, as



both of their previous releases, *The Waterboys* and *A Pagan Place* (released in March and September 1984), were culled from randomly recorded

efforts. Many of these one-man demos from Scott were recorded two and three years prior to its release.

For the latest LP, it was more of an

ensemble approach and definite album aim. The Waterboys, who are currently comprised of: Scott, Anthony Thistlethwaite—sax, Karl Wallinger—keyboards, Roddy Lorimer—trumpet, Marco Sin—bass, Chris Whitton—drums, and Steve Wickham—violin, holed up with veteran Van Morrison producer Mick Glossop in various UK studios for a solid five months (March to July '85) to record "This Is The Sea." Scott found this approach much more satisfying, and even a little easier.

"I had so much responsibility on A Pagan Place, that it just killed me. I didn't want that responsibility on this record—I needed more freedom to think about the music. Mick Glossop is a superb technician, so I know that when I'm working with him, the sound quality is never gonna drop below a certain high level. This leaves me free to work on the content, structure, and arrangement of the songs, plus the overall character of the music without worrying if it's gonna holdup technically." Scott concluded, "I think this is definitely our best sounding album. I intend to work with him (Glossop) again."

While the Waterboys' music can be totally disciplined one moment, and then menacingly wreckless the next, a ruminative thread runs through it all. Unusual references, such as to the mythical Scottish village of Brigadoon, are frequent. Scott's formative years reflect this compelling mixture.

Raised in Ayr, Scotland, Scott enrolled in the University of Edinburgh to study English and Philosophy. He soon abandoned his studies, however to adhere to the first London Callings of Punk. In '77 he founded *Jungleland*, a punk fanzine. By '79 Scott began playing in a succession of London-based bands such as DNV, and Another Pretty Face. Even then, Scott's artistic domination was not quite suited for a band, per se, which led Scott to form his band, the Waterboys.

In '82, a first Waterboys' LP was attempted in NYC with musician/archivist Lenny Kaye producing. The sessions didn't go as planned, so Scott started producing himself. This method was used until the latest LP.

But, while the '82 stint in NYC didn't provide Scott with a first Waterboys' LP, it did implant a lasting musical impression. "On my first trip to NYC, I picked up a record by Steve Reich called "Tehillia." He does a lot of records that are kind of systems music, but this one had a lot of Hebraic

## **THIS IS THE SEA—BASIC TRACKS**

**By Mike Scott as told to Alvin Eng** "Don't Bang The Drum" started with a drum machine and then me building up the instruments one by one in a 'wall-of-noise' kind of thing. "The Whole Of The Moon" again, started with a drum machine and was then built up with piano, trumpets, bass, and synthesizer. "Spirit" was vocals, piano, bass, and synthesizer all live in the studio. "The Pan Within" started with a drum machine, then I played three pianos, two acoustic and one electric guitar. Karl then put down bass and additional drums, and we added Steve's violin much later. But, all were done one after the other and all of the tracks were first takes. "Medicine Bow" and "Be My Enemy," which were more rock 'n' roll tracks, were done with piano, bass, drums, and guitar live in the studio with the whole band. On "Medicine Bow" there are two feedback guitars running through

the whole song. That's my '59 Gibson 335 turned up full with the amp turned up full, and a graphic equalizer with every frequency turned up full, and me standing in front of the amp with plugs in my ears just making a terrific noise. "Old England" is a live backing track of piano, bass, sax, and snare drum. The snare drum was played by Pete Thomas from the Attractions. "Trumpets" was piano, sax, and celeste live. For "This Is The Sea," Karl and I worked for a long, long time to get an acoustic guitar and piano backing track that had the right feel, and then we overdubbed from there. There are five acoustic guitars on there. On the LP, Scott played an '84 Yamaha Acoustic 12-string, '59 Gibson 335 and his favorite guitar, his '79 Gibson Les Paul. Augmenting the guitars on many of the tracks on all three Waterboys' albums is a Danelectro manufactured Vincent Bell Bellzouki, the Greek equivalent of a mandolin. His main amps are a Roland JC-120 and Vox AC-30.

chanting, and it was unlike anything I'd ever heard. After I heard it, I stripped down my own music and started writing songs that used only two chords. Then the variation and dynamics of the song has more to do with the interplay of instruments within the two-chord structure. I started going for hypnotic, trance-like music, although I still write songs with choruses as well."

Like his sparing use of chords, Scott prefers to build up a larger-than-life sound through reverb and reinforcement. Songs such as "This Is The Sea" and "A Pagan Place" feature massive sounding acoustic guitars overdubbed up to five times. This massing of guitars, acoustic and electric, is a staple of the Waterboys' sound, and an area that Scott takes much pleasure and great care in.

"I'm very limited in some areas, like fast-fingering, but I've got a good sense of rhythm and I can reproduce identically what I do from take to retake. I interplay the rhythms of the acoustics by laying down one acoustic guitar, and asking the engineer to send it to one side of the headphones. Then I play a new acoustic part in the other side and play 'em off of each other. With electric guitars I sit in the control room with the volume incredibly loud

and have the two electric guitars on either side—playing 'em off each other like two musicians. It's a very pleasurable experience."

Above all, Scott considers himself a songwriter, and like two of his biggest influences, Bob Dylan and Van Morrison, he believes in a creative muse. "I like the songs that come without any effort best. They're the purest ones with the least interference from me. The others were sort of blood from a stone."

Being a bandleader, Scott recently learned, can also be difficult. While admitting to often losing the balance between commerce and art, he now has a better handle on this as well. As in other instances, Scott had to surrender a little control, because prior to this year, guess who the Waterboys' manager was? In the future, the harried and hurried young perfectionist will be, well, a little less harried and hurried.

"We seem to be moving forward, not spectacularly, but solidly. And that's good 'cause it gives us time to adapt to a changing situation. But then again," Scott added, "this time last year was much easier. And I'm sure this time next year will be much tougher, but a lot of that's to do with me. I'm a real worrier."

# Snare Drum Recording—Part 3

Now let's see—where did we end up last time? Oh yeah, we *had* something. That something should be a SPLAT kind of drum machine(y) sound. Not too much, if any, discernible pitch like a tom-tom, but rather a punch with a crisp snare(y) top end. This is where my “get rid of the mid” comes into play. Not upper mid, but lower and middle mid—from about 500 Hz to about 2 kHz.

My reasoning for this goes back to some studies made by the team of Fletcher and Munson, back in the 30s, I think. They were scientists who stated, basically, that your ear is most sensitive to the mid frequencies. As nature would so neatly have it, these are also the most easily recorded and reproduced frequencies, as well as the most commonly occurring, an example being the human voice. (It's almost as if nature had taken stock in Ma Bell well in advance!)

Anyway, at normal volumes, you hear mostly mids, as Fletcher and Munson discovered. However, they did not stop there. They also discovered that the LOUDER that you make something, (for example, music), the more top and bottom end your ear can hear. (“But Ma, it's GOT to be loud; honest! Don't take it from me, ask the scientists!”)

Anyway, your hearing sort of “flattens out” in its frequency response as the volume increases; therefore, why not take out the normally nature-boosted mids, and have the response flatter at ALL VOLUMES. Meaning, since your ear boosts the mids 10 dB more than the bass and treble frequencies, if the mids are cut 10 dB at X volume, won't the frequency response at that volume be flatter? Of course, you may counter that when you raise the volume, there will be MORE tops and bottom; YEAH, but SO WHAT? Isn't that sort of what you want, at least for most types of music? Well, it's what I want, anyway, as well as most records you hear that were made in the

latter part of the twentieth century.

Besides, your ear is not totally linear, therefore all things are not perfectly equal in the battle for the volume of the frequencies. In other words, don't worry; you'll still hear the mids when you turn it up. At worst, the recording will sound “transparent” and “airy” instead of “murky” and “ploddy.”

And if that still ain't enough, next time you go into a club where the music is LOUD; loud enough to hurt at certain points, take note of what it is that hurts. My guess is it won't be a bass or bass drum; probably not a high hat or cymbal crash, if you are more than a few feet from the speaker spewing out the sound. More than likely, it will be the bad eq by a deejay or mix engineer of a mid frequency—voice, guitar, synth, or similar sound source.

Now weren't we talking about snare drums?

Oh yeah, again.

Now the reason I suggest taking this out of the snare is that you will eliminate the “cardboard oatmeal box” sound of the drum. If you have a parametric, or sweep frequency-type equalizer, this is the perfect application for it, because you can really “fine tune” the eq for the particular resonance of the drum, and eliminate the mid that “boxes” up the snare. While you're at it, boosting the high end anywhere from 8 kHz to 15 kHz (with the median being about 10 kHz or 12 kHz), will give you the nice snare snap, which, again, can be refined to your drum and your taste. And a boost of about 100 Hz, give or take some Hzs, will give the nice bottom punch without mud, murk, or mid.

Just a word or two, before I forget, about the pros and cons of boosting frequencies versus cutting them.

Cut them.

Whenever possible. Even though in this example I give two boosts to one cut, in general it is usually better to cut on an equalizer, especially on a lower

cost, smaller format system. Why? First off, remember our boys Fletcher and Munson? Well, in answer to all you guys (and hopefully gals) who read this column and say, “Oh no, that's not it!! The way I get my ‘classic LinnDrum snare’ sound is a boost at 3 to 5 kHz!!”

All that is well and good, but if you cut 1 kHz, don't you automatically boost the upper mids anyway, sort of because the lower mids are noticeable by their absence? Therefore the upper mids are gonna “stick out.” And if you then boost the highs and lows at around where I suggest, what you'll have is highs, lows, upper mids, and no cardboard boxes.

Another good reason is if you:

- a. Have no noise reduction because you can't afford it.
- b. Have no noise reduction because: “Hey man, I do EVERYTHING at 30 in./sec.; I NEVER use noise reduction; I think it's evil and it pollutes my sound. Besides, I can hear it working, and it doubles the frequency response errors in my poorly aligned machine.”
- c. Have an inexpensive, but good, system that uses a small track format that may not maintain the world's best signal to noise ratio.

Then boosting, the upper mids and highs will bring out the ol' analog tape hiss or system noise much more than rolling off some bottom or mids to achieve, basically, the same effect.

An inexpensive system will also have a greater chance of overloading, especially if the signal is hot, and the eq gains are boosted (again, usually in the mids).

Better to cut the frequencies that will get you what you want and raise the fader level a little to make up for the gain loss (since we all run our faders at a nice conservative level to preserve as much headroom as possible throughout the system), than to

blow those poor little chips out of their (hopefully built-in) sockets.

Say you do all this and the snare sounds swell; what next?

Limiters and gates, anyone?

Limiters or compressors and gates for snare drums are very popular on American Bandstand and MTV the week that I write this. By the time you read it, they may not be, but read it anyhow because you can never tell what will happen next week.

First, gates.

To get that nice clean snare with NO leakage from any other drum or cymbal, a gate is real nice. I know, I know, your mic placement is so good you don't get any leakage. But I, on a rare occasion, may get just a tad so I'll tell you how I eliminate it, just in case you may slip up someday when you've been doing sessions for forty-eight hours straight, have still got that perfect placement for the snare mic, and then the drummer got so excited when he saw the mirror that his knee whacked it out of line and he never told you about it.

The perfect setting for a gate is the one that just triggers when the drummer hits the snare at any volume, but doesn't EVER trigger when he hits any other drum or cymbal, no matter what the volume. This is, of course, impossible to achieve, but on the rare occasions that I have come close, I felt as if I owned the world, or at least the mic. Seriously, (...have I been, yet?) a gate is a commitment. If you use it to print with, it probably won't do you any good, (by mistracking and triggering when it is not supposed to, or not triggering when it is).

What are you to do?

Well, believe it or not, this is one where humans can make a difference. If you do choose the correct mic placement, you can keep the leakage down to a minimum. Also, if you explain the workings of a noise gate to the drummer, he can help you by restricting his dynamic range to that of one which will always trigger the gate when it is supposed to be triggered. He can also let you know if he is going to "cross-stick," which will unfailingly produce a level that will not open that gate.

### **WARNING, AGAIN!**

If the gate is set wrong, or the drummer hits the drum too softly, the beat in question will not get through the gate and will be lost forever, unquestionably on the one take that is perfect in all other respects. If the snare has its own track, you may be

able to punch it in sort of close to where it is supposed to be in a couple of hours, not counting the leakage on the rest of the tracks from the original time he hit it too softly.

If you have to premix the drums to, say two tracks, you might as well send the band home and sell your equipment, because they will bad-mouth you to every other band in the universe for making one mistake that you did not do, but are still responsible for because, "The Buck Stops Here." (Did you ever notice how the "artist" can do one note 600 times, and mess it up every time, while your punches are perfect. The one time you mess up the punch, he will claim to have gotten it right, but you blew it. You can always laugh it off and say, "Yeah, 600 to 1," but he or she will be pissed off at you anyway; how dare you not be perfect?! Well, here's a little secret; they didn't get it right anyway. They're just saying it to get themselves off the hook. If they EVER get it right, chances are, you'll have done the punch correctly, as usual).

If you set the gate saying, "Hey, I ain't taking any chances; I'm going to set that thing so it opens even if he sneezes," You'll have the problem of the gate triggering on every loud tom fill or cymbal crash.

On a separate snare track, you can fix it if some genius would only write an article on how to backwards hand erase, [See MR&M, Sept. 1985 for Bob's column on the subject.] but even if you do, after fourteen hours of it, you'll probably mess up at least once and you're back to having a missing snare beat. If it happens on a drum submix, you'll have a real "bumpy" and "blare(y)" drum sound as the gate opens on the toms and cymbals respectively, and then it's back to packing up the equipment.

But chances are, with care, patience, and time, you'll get a snare that opens the gate just right, just when you want.

Of course, you COULD try a little shortcut, like taking a contact mic or pickup and attaching it to the snare drum. Then you might run the output of the pickup to the "key" input of your gate, (assuming it has one). Then, it's possible you could put the gate in the "key" mode. This, of course, would let only a sound triggered by the snare through the gate. If you set the threshold, attack, release and attenuation correctly, then I guess that only a direct snare hit would open the gate that is gating the mic that is mic'ing

the snare. Then, maybe only the snare would trigger the snare mic, and it would also not be fooled by any toms or cymbals, since they are not a part of the snare drum. If so, then the release could be set so it releases at a constant rate, and the gate will allow the full envelope of the snare, but not the next strike of the high hat or ride cymbal, assuming the "artists" keep the timing relatively consistent. Then, maybe, the snare would key the snare, and leave little chance for error.

But this is up to you.

So this is where to use a limiter or compressor, if you do at all.

A limiter (I'm just going to call it that, since I'll assume we are using a ratio of 10 to 1, or greater), will keep all the snare hits from the mic relatively consistent, as well as any other sound the snare mic "hears." If so, it will try to make any leakage as loud as the snare, since it can't tell the difference between the snare and any other sound coming in. This makes the snare "kick" pretty good. But it will also give the gate a harder time by increasing the leakage from the mic.

If you have a separate snare track you have a choice of dealing with the limiter after the gated snare is printed. This is my favorite way, because it only affects the pure snare sound. However, the limiter might add some noise, so I'll usually gate it once again. That way there is no hiss from the limiter added to the track between snare hits or in its quiescent state (look it up).

If you're limited (pun) to a drum submix or only one gate, you'll have to try the limiter pre- and post-gate and decide where it does the most good and works the best. Before the gate; you'll eliminate the hiss but add the gate problem. After the gate: you won't fool the gate with a pumped-up signal from the limiter, but you'll have hiss, and will goose up anything that passes throughout the gate.

Experiment, try and decide.

By the way, I DO know about frequency selective gates and limiters, and frequency selective keying, but I'll get to that next time when I get into gating reverb before no one does it anymore. Besides, this article is already too long. Hope you all had a Merry and a Happy since I forgot to say it last time.

P.S.: Cassette Of This Series Update: They ARE in the works; I will make them up, and they will be available through MR&M. Prices and availability, as well as contents, to be announced soon...

# NONA HENDRYX



Photo by Brian Ais

## A Universal Language

“I had no desire to be a singer,” says Nona Hendryx in her smoky throat. “I wanted to be a teacher.” But growing up in the ghettos of Trenton, New Jersey, Hendryx was asked to join a singing group by her neighbor Sarah Dash one day. She agreed. “It was no big deal,” she recalls, reflecting her earthy attitude. “Everybody could sing!” Nine months later, the fledgling group hooked up with a Philadelphia singer named Patti Labelle, and the new act, Labelle, made records, toured the world, and became hugely successful, while Nona enjoyed herself to the max. “I was having fun,” she shares. “The *music* part of it must always stay *not* business.”

After Labelle broke up in the late seventies, Hendryx, an enchantress with milky smooth skin, played the New York punk scene, globetrotted, and recorded with the likes of Peter Gabriel, the Talking Heads, Material and Oliver Lake, while trying to discover herself on a series of Epic stiffs. “I went through a period of transition, of experimentation,” she remembers, “when I learned to develop my own music. Coming from Labelle,

having written for the group, I was very cued into Patti's voice. Outside Labelle, I had to find my own voice, not only as a singer, but as a writer and a person." Read on.

**Modern Recording & Music:** Labelle, a girl group, seemingly had no desire for the past. To you, what was Labelle?

**Nona Hendryx:** Labelle was the female group that broke the mold set by all the female groups that came before it. As far as the sound was concerned, I thought it was different from groups like the Motown groups—the Supremes, Martha Reeves and the Vandellas. We were much more aggressive and we moved beyond oohs, aahs, and light harmonies. How we presented ourselves, how we dressed and actually performed on stage, was different, too. Our shows were almost like theater; the three of us had three distinct personalities and we performed them. We weren't a lead singer and two background singers.

**MR&M:** How did you resolve those three personalities to result in the one entity known as Labelle?

**NH:** It was very natural. There was no need to say what Labelle was; Labelle *was* those three different personalities. And that was the difference between us and other girl groups. Labelle was constantly changing!

**MR&M:** Was Labelle's rock slant a result of your input?

**NH:** I would say so. Because I wrote most of the band's material, I influenced what the band had to say musically, whereas, Patti's input was her voice and her performance. She is a great performer, and she has a unique voice.

**MR&M:** Your last three albums—*The Heat*, *The Art of Defense*, and *Nona*—were produced/co-produced by very high-tech producers—Bill Laswell/Material, Bernard Edwards, Arthur Baker, and Jason Corsaro. For your albums, do you consciously choose studio masters?

**NH:** I generally approach producers depending on what type of people they are. And I know what kind of people they are by the variety of artists they've worked with. I try to find producers who have worked with funk, R&B, rock, pop, and avant-garde music—producers who are slightly outside of the mainstream, because I think they would be a lot more capable of working with me, and interpreting what it is I want to communicate.

**MR&M:** For a producer to be good,

must he or she be cued into many different styles?

**NH:** Well, for some people, no. If a group is doing straight rock, they need a producer who does straight rock; if they're doing straight R&B, they need someone who does just that. Bobby Womack, for example, does very aggressive R&B music. I don't think he'll be able to work with someone who does heavy metal! The "producer" might be interested in doing R&B, but that's not what he's done.

**MR&M:** But, say Mick Jagger is working with Nile Rodgers, and Mick wants to do a country and western tune.

**NH:** Then what he does is bring in musicians who naturally play country music. That's how I work with musicians. If I want a rock guitar, I bring in a rock 'n' roll player. Because my music is a mixture of a whole lot of music, I need to work with producers who could hear, feel, and appreciate all kinds of music.

**MR&M:** Let's talk about individual producers now. How did each of them work with you? Let's start with Bill Laswell.

**NH:** I think they all pretty much work with me the same way. The only difference was on the second Material-produced LP (*Art of Defense*). We did a lot of the creating of the songs in the studio. Instead of going in with a rhythm section, and putting down the basic tracks, we would start with just a drum pattern, and I would sing. Or maybe the basic would be just me singing with a guitarist, just getting the very skeleton of the song down. I wanted the album to be very sparse, so it was good to work that way. The songs were there—I'd already done demos—but I allowed them to change in the studio.

**MR&M:** Do you leave the basic tracks intact to get a more live-band-playing feel—as opposed to a tinkered-with, overdubbed sound?

**NH:** It depends on the song. Certain songs can have an electronic feel—because that's what the song is calling for. If it's a song that says: "I'm a guitar song!", then it must sound like you have guitars on there, and not a guitar fussed with to sound like a drum. It depends on the song.

**MR&M:** What do you consider the bedrock of a track?

**NH:** Bass and drum.

**MR&M:** All the time? In certain cases, wouldn't a guitar or a keyboard riff be considered integral to the bottom?

**NH:** There are some songs where, if you don't use a certain type of guitar, it takes away from its tonality. And there are certain songs where an acoustic piano is the key; so you start off with an acoustic piano.

**MR&M:** And you would emphasize the key element in the mix?

**NH:** Yes, definitely. (Though) bass and drum are the backbone of a song no matter what the focus. No matter what else is there, the feel comes from the bass and drum.

**MR&M:** Are you very picky in the studio?

**NH:** (Laughs) I don't think I am; maybe other people think I am. But, yes, when I go to the studio I go to create, you know, and I have nothing else on my mind but that. I forget about time; I forget about family; I forget about people's needs, desires, and wants. They're secondary to my making music. I'm picky in that I want it to feel right.

**MR&M:** Part of *The Heat* and your two later albums were produced/co-produced by you. How'd you get into production?

**NH:** It comes from writing. If you write musically—and not just from your ear—you hear what your song should sound like. And I hear the song; I hear the record in my head, so when it comes time to make the demo or the actual record in the studio I'm trying to get that sound. And because I'm curious and inquisitive, I started finding out about the actual process of recording—the board and how to use it.

**MR&M:** Do you touch the board or do you simply use your knowledge to supervise an engineer?

**NH:** Well, I have a studio at home where I do my own recording....

**MR&M:** The hot-shot engineer at home, huh?

**NH:** (Laughs) I don't know how much of a hot-shot I am, but I'm learning! Because I found myself sitting in a studio—especially with Labelle—looking at this board and hearing music coming back, and knowing I heard it one way when I was writing it, and it wasn't sounding like that. This person was doing what he thought was right, trying to please me, but I couldn't communicate with him in his language, and tell him what I wanted. I would say "yes" to something I was not happy with. So I said, "Stupid, go and learn!" It used to be like telling a musician or a singer, "It's not blue enough, or pink enough." So ambiguous.

**MR&M:** What do you have in your home studio?

**NH:** I have an 8-track, and a lot of outboard equipment—a lot of reverbs, delays, noise gates, eqs, Dolby and dbx, various keyboards, guitars, a drum machine...just what I need.

**MR&M:** Do you play all of the instruments you mentioned on your demos?

**NH:** Yes, on some of them. On other things—when I can't get what I wanted—I get musicians to come in and do it. They're people I work with, people that do sessions—and I pay them!

**MR&M:** So you have pretty slick sounding demos?

**NH:** I try to make them good—if I'm gonna work with someone, or send someone a song. But I do it for my own uses more so—when I'm looking for a producer, I want him to hear what it is I'd like to get across. Then he can enhance it or expand on it. Also, I'm trying to create an identifiable sound for myself.

**MR&M:** Which is...?

**NH:** I don't know yet; it's coming; it's not exactly there yet. I haven't hit on that one thing. It has to do with affecting a natural sound that is identifiable with me.

**MR&M:** With all the hip, new sampling keyboards, one literally can bring the world into the studio. For you, what are the possibilities of this?

**NH:** Well, you have more control over a natural instrument...that's the only difference for me. For many people who cannot play a horn, they can sample it and play it. Moreover, you can alter it in ways you couldn't have by playing it into a microphone onto tape—because it's analog and not digital.

**MR&M:** But wouldn't trapping, say, sounds from the Brooklyn Bridge affect that "natural sound"?

**NH:** You could bring atmosphere that people wouldn't expect to find on a record. You could, for example, go to a racetrack and get a car going by. You could have cars going back and forth, whatever you want. Like when synthesizers first came out, people would say, "That's electronic music; that's weird." Now it's commonplace. The same thing will happen with environmental sounds.

**MR&M:** Are you fascinated by this?

**NH:** Oh, everyone has to be fascinated.

**MR&M:** Do you see music as being a

healing thing, in addition to a listening and dancing thing?

**NH:** I think art is a healing process for humanity. That's why we have it. Not just music, but all kinds of art. People can look at a painting, for instance, and be released. And music is universal. I've traveled to many countries—countries where they don't even speak English. But people were dancing to my music or having some sort of cathartic emotion because of something that was being performed. It's a release; that's what music was for me in the beginning. It had nothing to do with show business or making money. It had to do with a spiritual experience...not a religious experience.

**MR&M:** What's the difference?

**NH:** Religion is a dogma—rules and regulations. ("This is how you're supposed to live.") Spiritualism has to do with the energy of life, and your relationship with yourself, nature, and the universe. It's the spirit. *Religion* is the word.

**MR&M:** What are your views on the PMRC's lyric battle?

**NH:** I think censorship is uncomfortable. Artists, though, have a responsibility—to themselves and people they create for—to censor themselves. One could be outrageous, but there must be a degree of dignity about the way it's done. There is an age of consent, and if an artist is going to do something extreme; he or she could find some place to do it. Children do—to a degree—need to be protected (from pornographic lyrics). They're too young to discern for themselves what is coming in—and how much of it should be used. So artists need to edit themselves. McCarthy-type actions aren't necessary.

**MR&M:** I think that—because of the furor—radio programmers will read things into songs that aren't really there.

**NH:** There are always going to be people who'll use things to stroke their egos—to say that person's bad, and I'm obviously good because I'm pointing a finger at them.

**MR&M:** How did you become involved in the all-star "Sun City" project?

**NH:** The same way I got into show business, Arthur Baker ("Sun City's" co-producer, along with Little Steven) called me up and explained, "We're doing this record for South Africa." It's something I've been looking for for years, so there was no other answer but yes.

**NH:** Were you ever approached to perform in Sun City?

**MR&M:** No. They wouldn't have asked me, because my views on its policies are known. I also feel the same way about what's going on in Australia; they get very little publicity regarding their treatment of the Aborigines. There are certain things I wouldn't do—even in America. My beliefs are human beliefs; they have nothing to do with politics.

**MR&M:** How do you translate your gizmo-ized studio sound to the stage?

**NH:** I try not to repeat what was on the record.

**MR&M:** But wouldn't doing that disappoint an audience?

**NH:** I've never had that problem. Live, to me, is totally different from the studio. Studio is something that must be able to stand up to many listenings, and have people discover things by listening to it many times, whereas live is immediate—it's *happening*, it's *happening*, and it's *happening*. People aren't going to be listening to the chorus I did two minutes ago; they're listening to the chorus I'm doing now. The difference is I'm there, and I'm communicating with the people there. There's no time to remember how the keyboards sounded, or that the guitar had some phase on it!

**MR&M:** Which environment demands more of you creatively?

**NH:** I'm always learning, and there's always more that I could do in the studio. The songs that I write start at one point, and, on the record, end up at another point. And if I went back into the studio now they'd be totally different still. Live, on the other hand, what I do at this instant is what's done.

**MR&M:** What mics make it happen for you?

**NH:** I once used the AKG-414, but my voice changed because I got a nodule removed. When I used it after the operation, my voice went right through the mic. The sound quality went from a slightly airy to a very pointed sound. I'm now using the Shure SM-58.

**MR&M:** On "The Heat-Part I," your voice sounds thinner than on the album's other tracks. Was it your singing, or the way you mixed?

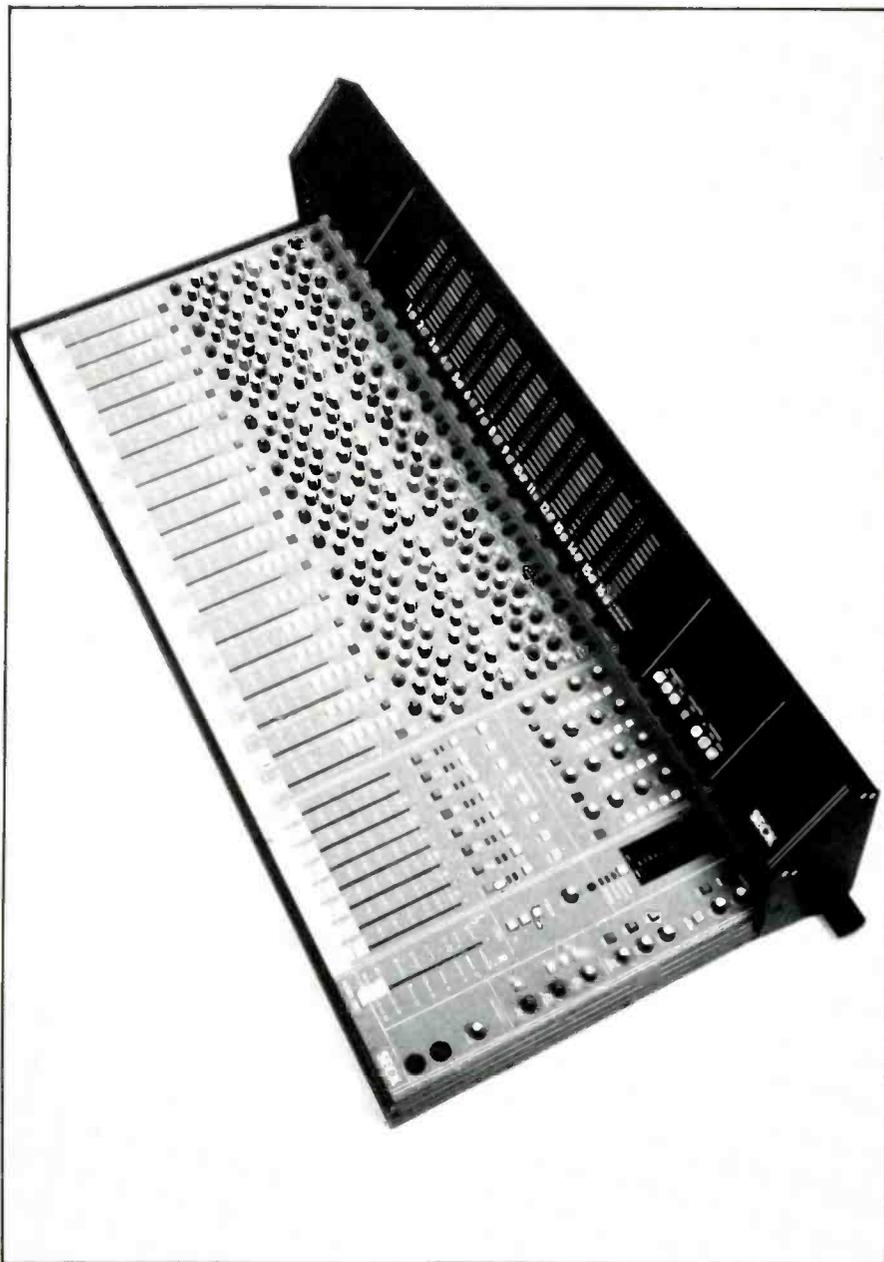
**NH:** It was the end mixing. My voice had very slight delay on it, and I, also, put it through a Lexicon to bring out the highs and sharpen it. So the vocals there are a lot more strident than the other vocals; the other vocals are a little softer. It fit the tracks.

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## CONNECTRONICS

The Connectronics Corporation's new SECK 1882 Portable Mixing Console has 18 inputs which can be switched between a mic or line or tape input. All these inputs are balanced, and the microphone input has 48 volt phantom power which is switchable at the power supply. The input amplifiers provide extended range from  $-55$  dBm to  $+10$  dBm with a full 20 dB margin of headroom above this. Full in-line monitoring facilities, which provide an easy stereo monitor mix for multitrack recording and enables the extra facilities to be switched into the signal channel, provide three extra effects busses during mixdown. In addition to the three effects busses available in the monitor section, there are three further effects busses in each input channel, together with a three-band EQ which includes a sweepable midrange section. To ensure accuracy, there is a stereo 'in place' solo facility on all inputs and auxiliary returns. Solo is also available on the sub-groups and auxiliary sends. Full throw 100 mm Alps faders are used throughout the SECK 1882, allowing easy control of your signal at all points. The eight sub-groups are switchable to 16-track outputs, giving full compatibility with 16-track tape machines without continuous patching. Insert points are provided on all sub-groups and input channels, allowing dedicated signal processing or feeds at each of these points. The four auxiliary returns all have their own EQ section and are assignable to any sub-group, or the left and right Master Output. The Input Channels are assignable in the same way. Metering is via LED bargraph channels and allows switching between Channels Monitors, left and right Master Output or a two-track tape machine during mixdown. A built-in 'talk back' microphone is included, allowing access to the fold back busses or tape. A 30 Hz slate tone can also be directed to the sub-group outputs. Headphone monitoring is provided via two headphone outputs driven by their own built-in amplifier. The SECK 1882 is constructed in a metal case and is only



2-in. deep, and the unit weighs under 40 pounds. A carrying handle is provided. The power supply is external, assuring low noise and eliminating interference from that area. All the circuit boards are double sided, plated through fiberglass type and are virtually indestructible. No wires are used inside and all components mount direct to the circuit boards, resulting in reliability higher than that of boards using conventional construc-

tion. The SECK 1882 has a retail price of \$3,995.00. Available as an option is the SECK meter bridge. This provides sixteen full size LED bargraph meters behind an attractive, black, plexiglass panel, which is mounted on a bridge over the top of the 1882. The meter bridge forms an interface between a multitrack tape machine and the 1882, and is supplied to operate at  $-10$  dB or  $+4$  dB. Each meter can be individually switched to meter the tape input or the

group output from the SECK 1882. Also included in the Meter Bridge is a low distortion oscillator with nine frequencies to provide a constant tone signal for set up purposes. The SECK Meter Bridge is supplied complete with its own power supply and with a full compliment of patch cords for connecting it to the 1882. The SECK Meter Bridge has a retail price of \$985.00.

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### MOOG SONG PRODUCER

The Moog Corporation Song Producer is a real time/step mode hardware/software MIDI drum/sync color video computer music system. The Song Producer interface links Commodore Models C-64, SX-64 or C-128 to MIDI devices. A disk drive and television/monitor is required for practical use. The system is not a "software only" system and does not use the SID chip within the Commodore. The metal enclosed interface has MIDI-In, Thru, and four MIDI-Outs; eight drum trigger (gate) phone jacks for triggering non-MIDI devices such as lights, analog drum modules, etc.; Clock In/Out and Clock Disable In/Out; and two Footswitch In jacks. Bundled software is diskette based for easy updating, and includes: MIDI Command, which turns any MIDI keyboard into a master that independently controls MIDI program numbers, eight split/layer points, and transpositions of four slave MIDI instruments without regard to MIDI channel assignment. Multiple sets of 100 pages of split/layer/transpose configurations may be chained, stored, and retrieved for easy footswitch control of a keyboard stack during performance. Each page may contain 32 MIDI program numbers. Songstepper is a sophisticated multi-voice, multi-timbral composition program with realtime/stepmode linear entry. It provides scoring for up to 24 MIDI/non-MIDI drum sounds and eight individual voices of music. Songstepper is oriented toward the composer, arranger and producer who may or may not have keyboard skills. Stepmode entry is enhanced with MIDI pitch entry and pitch and rhythm buffers that remember the latest pitch/time value entered. Song-

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An intelligent MIDI card for the IBM PC and compatibles is now available from Octave-Plateau Electronics Inc. The OP-4001 retains all the important features of the industry standard while providing the enhancements of improved sync capability, un-pitched audio metronome output, and no need for an interface card and cable. The OP-4001 handles all timing and buffering of MIDI information making it possible for the host PC to support fully professional sequencer software. The OP-4001 plugs into any available slot in an IBM PC or compatible, with all connections made directly to the

rear of the computer. The OP-4001 will receive or transmit standard 5V clock pulses allowing master and slave synchronization to most drum machines. A unique feature of the OP-4001 is its ability to convert an incoming FSK (Frequency Shift Keying), signal to standard 5V clock, or conversely, convert incoming 5V clock to FSK out, while maintaining sync to the input. These sync and conversion modes are set by two switches and allow four possible modes. The audio metronome output provides a more natural un-pitched click with an accent on the downbeat, and may be routed through any mixing console. The OP-4001 is available at a retail price of \$295.

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stepper displays your keyboard performance/entry on screen in musical notation, provides printouts, and allows 16 levels of performance auto-correct to be tried and removed after your performance. The music voices may be assigned individually, doubled, etc., across the four MIDI outs with 12 channels total. Sync to tape capability makes it possible to use a single MIDI instrument to create multi-timbral music on tape. Complex timing, poly-rhythms and mixed meter may be produced using 32 internal segment clocks with overall tempo control as well. Songstepper allows entry, display, editing, in one memory, and storing of entire songs on diskette. Sync

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# & MUSIC...



**EVELYN "CHAMPAGNE" KING: A Long Time Coming. (A Change Is Gonna Come)** [Produced by T. Life, Hawk, Bobby Watson with Rene and Angela, Allen George and Fred McFarlane; various engineers and studios.] RCA AFL 1-7015.

Performance: **Confined**

Recording: **Sonically Accurate**

Evelyn's eighth album has serious overtones of rigid techno pop. Most selections feature a computerized or mechanical type of groove. Synthesizers prevail.

The LPs title cut "A Change Is Gonna Come" is redundant and borders on monotonous. This is a result of an absence of production subtleties or instrumentation which would 'spice up' the all-too-familiar blues/rock pattern. Yet, Evelyn does display some soulful conviction on this Sam Cooke tune at times.

"Spellbound" features some interesting layering of vocal overdubs to present a dreamy sort of texture. The lead vocal is recorded dry, save for a bit of short delay. The track was produced by Bobby Watson with Rene and Angela.

"If You Find The Time" quickens the pace and includes a tenor sax accompaniment recorded with just the right amount of delay to convey an alley setting. Sam Peake's sax offsets the rigidly mechanical structure of the tune, and instills in it a human element.

An overpowering, thick bass synthesizer and raspy, compressed power chords are characteristic of "Slow Down." The various delays on the lead and background vocal tracks overlap and tend to get cluttered in the mix. Adding to this confusion are spotty guitar licks in the background. A recurring beat box voice follows the thick bass synthesizer.

Side two opens with "If I Let Myself Go," a very melodic ballad



which sounds like it could be a theme for a film soundtrack. The song features very well recorded dynamics and begins with an acoustic piano and bass guitar. The bass is recorded neatly, free of effects, which contrasts with the heavily synthesized bass lines inherent on the LP. String and flute synthesizers add color and depth to the ballad as do the shades of tympanis. King's vocals are recorded superbly exhibiting warmth and intimacy.

"Your Personal Touch" is an uptempo dance number featuring sharp and brilliant percussion throughout. The vocalist seems at ease with the track and soft keyboard fills add presence to it. However, nothing exciting is added to justify the length of the cut (five minutes and forty-eight seconds.)

"I'm Scared" and "High Horse" are both very mechanical, almost computerized selections. Nothing outstanding happens production-wise in "I'm Scared" to really make the listener take notice. At some points the drum machine sounds distorted.

"High Horse" has overpowering drum fills which, rather than emphasize, are out of context and distract the listener. King sounds restricted in her vocal interpretations on these tracks.

"Chemistry Of Love" is a catchy funk track exhibiting very encompassing spatial panning. Proportion is the key word in this T. Life produced track. Effects such as the delay-repeat on the vocal overdubs do not overwhelm the singer, but are used discretely. There is also a recurring synthesizer line reminiscent of 1982's "Love Come Down."

The funky "Chemistry Of Love" and the melodic "If I Let Myself Go" are the LPs highlights. Both cuts were produced by T. Life and recognizably reunite the singer with her former producer. Since the two have previously collaborated, these two selections are befitting of King. The mechanical techno pop groove doesn't suit Evelyn as does a pop/R&B or funk direction. In fact, it inhibits her.

peter g. marzulli

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