

The Computer Concepts Traffic System. You'll wonder how you managed without it.

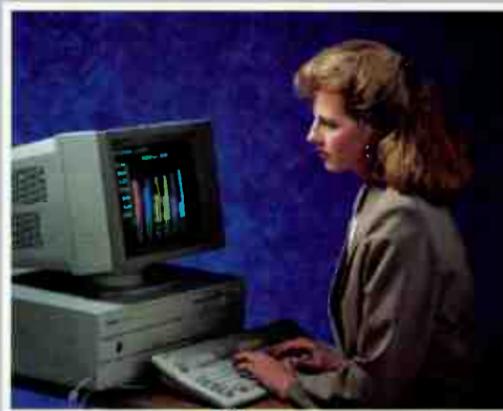
Our Digital Commercial System works great as a stand-alone system. But it really shines when it is integrated with our traffic system.

Then data from all three systems, production, control and traffic, are meshed together.

Our traffic system manages every traffic function from order entry to billing with no paperwork

in between. It creates a log up to 16 weeks in advance. It details what played when, provides hourly avails, and tracks copy and dates to assure audio items are up to date.

Our traffic system is recognized as the best in the industry. To learn more about it, contact your representative for a free booklet on its capabilities. Or call us direct.



DIGITAL COMMERCIAL SYSTEM SPECIFICATIONS DA56-01 Digital Audio Board Specifications

- 16-bit stereo board using Motorola's DSP 56001 digital signal processor along with Crystal Semiconductor's 5326 64 times oversampling, 16-bit sigma delta A to D converter
- User-selectable sample rates: 16 khz (std) 32 khz (std) 44.1 khz (opt) 48 khz (opt)
- User-selectable compression methods to economize on storage requirements.
- Frequency response ± 0.5 db to 15 khz
- Idle noise floor of less than 50 microvolts (-84 dbm)

- Noise floor of less than 170 microvolts (-73 dbm) using digital loop-back of record to play
- Stereo separation in excess of 60db 20hz-15khz
- Total Harmonic Distortion + Noise (THD+N) <0.05% (-66 db) 20-15 khz
- All performance measurements were taken with the DA56-01 adjusted to deliver a peak output of +18 dbm. Measurements were made at 0 dbm reference level (allows 18 db of headroom) using 16 bit uncompressed data sampled at 32 khz. All quoted specs are also achieved at +18 dbm peak with the

- single exception of THD+N at 15 khz which rises to 0.4%
- Output:** •User-configurable to be either active balanced 600 ohms or unbalanced
- Full scale output levels are adjustable up to +22 dbm differential
- Input:** •User-configurable to be either active balanced 600 ohms or unbalanced 10k ohm
- Full scale input levels adjustable up to +22 dbm
- Connections:** •Control and audio connections made via a single DB37 connector



Tape carts are history.



Computer Concepts
CORPORATION

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DIGITAL COMMERCIAL SYSTEM. ■

Suddenly tape carts are obsolete.



The end of carts is at hand.

It's about time. Thirty-year-old tape cart technology, with all its limitations and hassles, has seen much better days.

Now there's a new system that will take the place of tape carts. A system based on digital technology. A system that will transform the way you manage commercials.

It's the Digital Commercial System. Radio will never be the same.

The system.

Imagine, for a moment, what would be the perfect commercial management system.

It would hold hundreds of commercials, jingles, PSAs and promos for instant random access at your fingertips. It would allow precision editing. It would have CD sound quality. It would simplify board work. It would take care of all

paperwork and merge data from traffic, production and control room.

Well, that system is here today. The Digital Commercial System is everything you imagined it would be ... and more.

The inside story.

Our system is built around familiar off-the-shelf hardware that's easy to operate and service. It includes a personal computer, keyboard and a precision trackball control. Better than a mouse, the trackball allows easy positioning of the cursor without running laps around a desktop.

A 766 megabyte hard disk holds up to 340 minutes of audio and can be expanded to hold twelve times that amount.

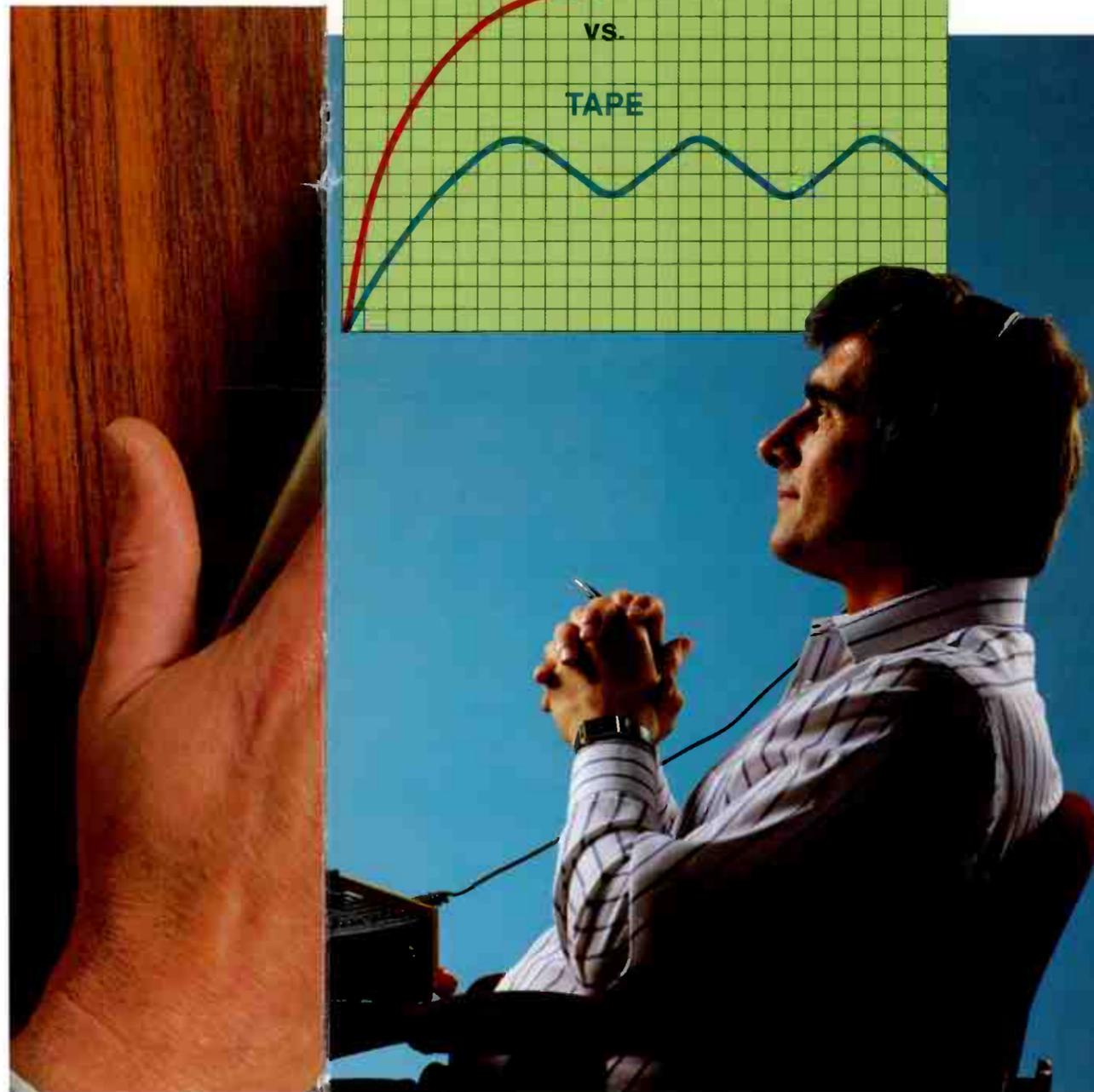
All hardware is stock except for one important item: a unique stereo audio board (patent pending) that allows recording and playing of three stereo sources at the same time.

This hardware is driven by breakthrough software that has been created and fine-tuned by people who know radio inside out.

Simply the best.

The Digital Commercial System is a joy to use. Anyone can learn to run it in minutes. Help screens provide information every step of the way.

Most operations only require moving the trackball to target an item and clicking a button to start the action.



At your service.

When you buy a Digital Commercial System, you're also buying fast, attentive service.

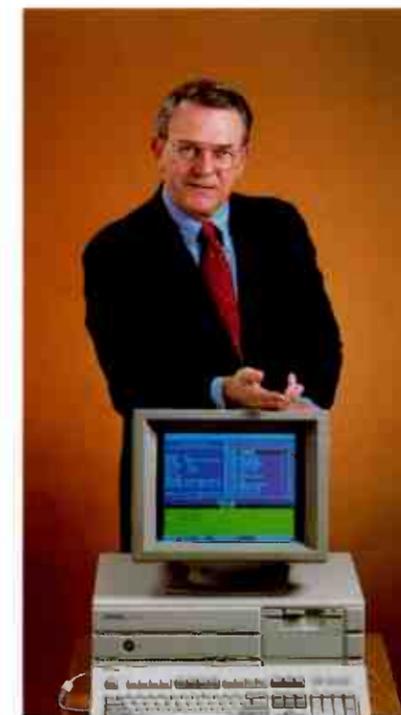
We'll help you set up your system, train your employees, and provide any after-sale service you may need. We even have a hot-line number for quick response to your problems.

It's what you'd expect from a company that has served the broadcast industry well for over 16 years.

A historic product.

Control. Versatility. Precision. Efficiency. Savings. Sound quality. Savings. That's the Digital Commercial System.

It's a system that will make radio history. To learn more about it, contact your representative today. Or call us direct at 800-255-6350.



Sound reasons to put tape technology behind you.



What kind of sound do you get from a computer hard disk? Terrific. It's exactly like the sound of another digital medium, the compact disc.

Since the sound is recorded digitally, the audio weaknesses of analog tape - - hiss, distortion, wow and flutter - - are simply not there.

You'll hear crisp, noise-free recordings with all the presence and excitement of CD recordings. Every time you play them. Digital recordings never wear out. They'll sound just as good 30 years from now as they do today.

Your advertisers will love it. And they won't be calling you up for make-goods because their spot sounded bad.

Sound savings too.

The Digital Commercial System isn't cheap. However, it is priced at or below the cost and maintenance of

today's quality tape cart equipment.

The benefits it gives you are well worth the money, but it also pays big dividends in savings.

It eliminates the hundreds of tape cartridges and miles of tape you would have to buy. It eliminates expensive tape machines and carousels. It ends the cost of cleaning and maintaining tape heads (freeing your engineer for more productive work).

Its precision makes sure every commercial played is billed so you get all the money that's coming to you. It also prevents billing advertisers for something that didn't run - - a good way to lose business.

When it is used in a satellite interface, there's also tremendous savings in overhead.

As you can see, the Digital Commercial System is a very sound investment.

Click on the future.

The Digital Commercial System is here to stay. It'll work with any analog or digital system you have today or have planned for tomorrow.

Since we are continually enhancing its capabilities, your system will always be state-of-the-art. In fact, some things are already in the works - - enhanced editing capability that can "cut" and "splice" audio elements and a revolutionary "compression/expansion" feature for stretching or shrinking a commercial to fit without changing pitch.



Future changes will be primarily simple software upgrades, saving you the expense of replacing hardware items.

"Click" and a commercial is placed in a queue ready to play. "Click" and a promo is placed immediately on the air. "Click" and a jingle is inserted between songs. "Click" and the computer is ready to record. It's a system light years away from a dumb tape machine.

Walk away from satellite station overhead.

If your station is a satellite affiliate, the Digital Commercial System is a dream come true.

A satellite format saves you big money, since you don't have to pay for an air staff. But you still have to pay someone to load commercials several times a day.

Not with our system. It can play an entire day's or even a weekend's worth of commercials, jingles, promos, PSAs and liners automatically. It pulls them, places them in a queue for each break, waits for the signal from the satellite company, and plays them. All by itself.

It's even smart enough to see when commercials aren't going to cover a break period, and inserts a jingle or PSA to fill the time perfectly.

And since it handles three stereo sources, it can overlap two commercials for a smooth, non-mechanical sound, and still record any incoming information from the satellite company at the same time.

The result? 100% walk-away time! Think what that can mean to your profitability.



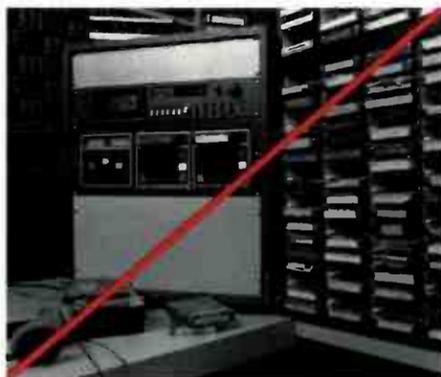
DIGITAL COMMERCIAL SYSTEM. ■

We've made commercial control problems a thing of the past.

Tape carts are a pain.

They're hard to control. They have to be stored and retrieved. And stacked up for each break.

They're a hassle for DJs to handle during interviews, playing music or using the phone.



They're hard to queue consistently and sometimes are forgotten to be re-queued, leading to stepped-on commercials or dead air. Which makes your broadcast sound amateurish.

They deliver muddy sound caused by differences in tape machines.

And they break.

All these tape problems are erased with this Digital Commercial System.

Our digital system gives you total control over commercial messages. Both in the control room and the production room.

Control room .

With this system, all the commercials and other audio elements the DJ needs are listed right on the screen. Just by clicking a button, he can have instant access to any of them at any time he desires.

Two sources can even be played simultaneously. That gives the DJ cross-fade capability for smooth, seamless, professional-sounding air-play.

What's more, queues are always right on the button. And the sound is perfect.

No paperwork.

Most people don't get into radio to become file clerks.

Our Digital Commercial System handles all the paperwork. There's no log to maintain. When a commercial is played, the time is automatically inserted next to that listing to serve as a checkmark for the operator and provide precise billing information for the traffic system.

With it, you won't have to worry about commercials getting played or getting billed.

It all adds up to a better sounding show, and higher efficiency and precision in the control room.

But don't tell your DJs that. It might spoil their fun.

| Time | KXXX-AM | Len | Type | Cust # | Prod | Actual |
|------|----------------------|------|------|--------|------|--------|
| 0829 | T433 DORITOS | :60 | CM | 50287 | 0-22 | |
| 0830 | T169 STROH'S BEER | :60 | CM | 31833 | 0-08 | |
| 0831 | KXXX SPORTS | 2:00 | | | | |
| 0832 | | | | | | |
| 0833 | | | | | | |
| 0834 | | | | | | |
| 0835 | | | | | | |
| 0836 | | | | | | |
| 0837 | | | | | | |
| 0838 | | | | | | |
| 0839 | | | | | | |
| 0840 | T014 SEARS KENMORE | | | | | |
| 0841 | T086 CAINS COFFEE | | | | | |
| 0842 | PATTERN CHANGE 6:45A | | | | | |

| File | Catalog of FILLER Carts | Length |
|------|-------------------------|--------|
| J213 | KXXX Jingle 13 | :08 |
| J214 | KXXX Jingle 14 | :08 |
| J220 | KXXX Jingle 20 | :06 |
| J223 | KXXX Jingle 23 | :15 |
| J224 | KXXX Jingle 24 | :15 |
| J225 | KXXX Jingle 25 | :02 |
| J237 | KXXX Jingle 37 | :03 |
| J239 | WTNS Jingle 39 | :08 |

| Time | Description | Len | Type | Cust # | Prod | Actual |
|------|--------------------|-----|------|--------|------|--------|
| 0829 | T433 DORITOS | :60 | CM | 50287 | 0-22 | |
| | J208 KXXX Jingle B | :07 | | | | |
| 0830 | T169 STROH'S BEER | :60 | CM | 31833 | 0-08 | |

The control room screen.

A. **Log.** Shows a listing of recordings and information from traffic -- the time a recording is scheduled to play, description, length of recording in seconds, type (commercial, PSA, etc.), customer number and product code (to avoid running competitive products back to back). The last column shows the exact time the recording played.

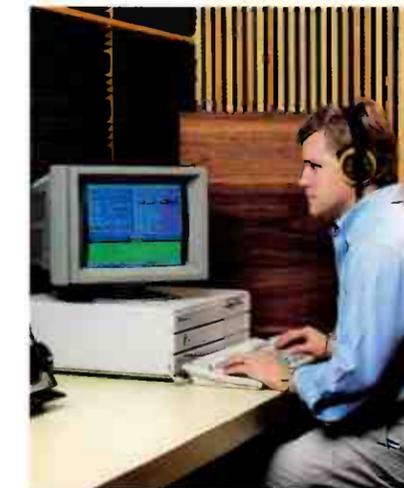
B. **Filler window.** Special pop-up window holds PSAs, jingles and promos for quick access.

C. **Play line.** Shows what's playing on the air.

When activated by a trackball button, this line automatically plays the first selection of the queue. A selection can also be "hot-keyed" to the play line at any time.

D. **Queue window.** By clicking on a listing with a trackball button, recordings can be "pulled" and placed in this queue to await playing. Other buttons take the listing directly to air, place it at the top of queue, or move it back into the list. Selections automatically play one after the other.

Production room .



Our system gives the production person unprecedented control. Commercials can be recorded and edited with incredible precision.

Recording is a breeze. The computer develops perfect queues every time -- it won't start recording until the exact moment it senses the sound. Recording can be in stereo or mono, and there's never a phasing problem.

The operator has complete freedom to place end-of-message and other signals on the recording and adjust queues. And three-stereo-channel capability opens the door for adding special effects to commercials.

It also works hand-in-hand with a traffic system interface, automatically providing positive ID and saving valuable time.

The result? A better product. Higher efficiency. And happier clients.