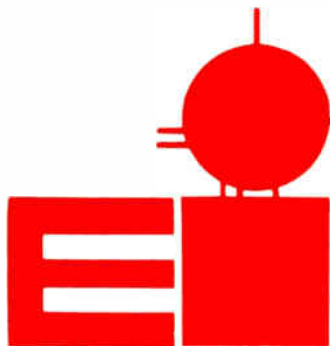


Nov. 1985

KXFW Radio
889 West El Puente Lane
Tucson, AZ 85713

BULK RATE
U. S. POSTAGE PAID
Permit No. 11
Winneconne, WI 54986



COMMON POINT®

A MONTHLY NEWSLETTER FOR BROADCASTERS

50 cents
per copy

Out-Of-State 800-558-0222 Distributed by Electronic Industries Inc., 19 E. Irving, Oshkosh, WI 54901 In-State 800-445-0222

NRBA 1984 Programming Survey Reveals Programming Trends

Among the extensive findings of NRBA's 1984 national Radio Programming Survey, results show that Adult Contemporary is still in the lead as the top radio format for FM and fulltime AM, while Country remained the top AM daytimer format. Other significant trends unveiled in the NRBA survey include a tripling in AM stereo Broadcasting, further growth for older demographics, and jumps in syndication and satellite usage.

The third annual NRBA Survey -- the only one of its kind in the United States -- drew the highest response rate ever, amassing a 46% response rate. Of the 7,600 questionnaires sent to commercial radio stations in the U.S., 3,513 provided usable results; 1,856 were AM and 1,657 were FM stations.

In total, 154,572 separate responses were tabulated to produce more than 1,350 calculations and cross-indexes. Returns were representative of all national regions as well as different market sizes.

The top 10 formats for FM cited in survey results were: Adult Contemporary (A/C), 28%; Country (CTY), 25%; Contemporary Hit Radio (CHR), 20%; Easy Listening (EZ), 10%; Album Oriented Urban Contemporary, 1%; and Oldies (OLD), 1%. The most substantial increases

and decreases in format usage were for CHR - up 3% from 1983, AOR - down 4% from 1983, and EZ - down 3% from 1983.

The top 10 AM fulltime formats are: A/C, 34%; CTY, 30%; News Talk, 6%; OLD, 6%; CHR, Big Band, 4%; REL, 3%; EZ, 2%; Soft Rock, 2% and Ethnic, 1%. For daytimers: CTY, 40%; A/C, 24%; REL, 12%; OLD, 5%; and News Talk, 2%. For fulltimers, A/C made a 6% jump in use from 1983 while News Talk fell 3% from 1983.

Country was the top simulcast format at 42%, followed by A/C at 30% and CHR at 9%. Fourthranked Easy Listening rose 3% in simulcast formats from 1983.

NRBA's survey helped to document radio broadcasters' ongoing commitment to news programming, as the results showed that, despite deregulation, there has been a significant change in the average time for AM and FM newscasts per hour. The same held true for use of commercial time, where both the commercial minutes per hour and spots per hour remained relatively unchanged from 1983 figures.

Another area which remained constant -- with one exception -- was use of syndicated programming. However 8% more FM stations increased their use of syndicated music

programs in 1984 over 1983, while 5% more AM stations programmed music syndication. Equally as revealing was the statement by broadcasters who plan to increase syndication usage -- 17% of FM stations and 21% of AM stations have such plans, up 4% and 5% respectively over 1983.

In keeping with the growing syndication trend, 72% of all FM stations plan to either use a satellite service or own a dish, while only 24% had such plans in 1983. Satellite affiliation is up from 33% of all FM stations in 1983 to 55% in 1984, while AM stations have increased affiliation from 39% in 1983 to 62% in 1984.

On the technical side of programming trends, the growth of AM stereo is clearly revealed in the results of this survey. Thirteen percent of all AM stations responding are now broadcasting in stereo, as compared to only 4% in 1983. Another 11% are planning stereo within the next year.

With regard to network affiliation, the biggest change is seen in the growth of national network affiliation for FM radio -- 79% of those stations were nationally affiliated in 1984, up from 56% in 1983.

Among other results of the survey, it appears that both FM and AM radio stations are targeting older demographics.

New from

marantz[®]

PMD 430

PORTABLE CASSETTE DECK WITH DOLBY B,[™] dbx[™] AND 3 HEADS



FEATURES INCLUDE:

Dolby B Noise Reduction • dbx Noise Reduction •
3 Heads • Pitch Control $\pm 6\%$ • Bias Fine Adjustment •
Auto Shutoff • Memory Rewind • Auto Replay •
3-Position Tape Selector (Metal, CrO₂, Normal) •
3-Position MIC Attenuator (-0, -15, -30dB) • Limiter •
Illuminated Vu Meters • 3-Digit Tape Counter • Impact
Resistant Lexan[™] Case • 4-Way Power Supply:
120 VAC, 4.5 VDC, 3 D Cells, Optional Rechargeable
RB430 Battery Pack • Built-In Speaker • Headphone
Output Jack

UNIT DIMENSIONS:

2H x 8-7/8W x 6-1/2D
(50mmH x 227mmW x 165mmD) 2.4lbs (1.3 Kg)

SHIPPING DIMENSIONS

7-1/2H x 11W x 8-7/8D
(190mmH x 280mmW x 225mmD) 5.5 lbs (2.5 Kg)

RETAIL
VALUE
\$495.00

Introductory
\$395⁰⁰

DISTRIBUTED BY
ELECTRONIC INDUSTRIES INCORPORATED
19 E. IRVING, OSHKOSH, WI 54901

OUT-OF-STATE 800-558-0222

IN-WISC. 800-445-0222

NOVEMBER...Yes we're back. We really never left, just seems as though time slips by quickly when you're having fun. Thanks for your patience and we promise to keep Common Point on your desks at a constant level from here on in. Any new ideas or thoughts would be greatly appreciated.

DATA EXCHANGE...Need ideas? Want to share yours with other broadcasters? Now you can through the Midwest Data Exchange of Two Rivers or MDX-TR. There are no charges to anyone involved. The service is being operated as a hobby. Access to the system at this time is limited to 300 baud either 7 or 8 bit word length with 1 stop bit, and even parity. The system is on line 24 hours a day, 7 days a week. The access number is 414-793-4055. Although MDX-TR is primarily broadcast oriented, it does contain some non-broadcast features that may or may not be phased out depending upon interest. We'll keep our eyes on the system and update its progress.

EARTHQUAKE SHAKES UP DAYTIMERS...The recent earthquake in Mexico City has postponed the signing of documents that would allow daytime broadcasters longer evening hours. It looks like the rubble will not be cleared until the spring of 1986.

COMMON POINT READINGS

- Page 3 Memo From Metz
- Page 7 Shepler Says
- Page 10 Crosstalk by Ed Duellman
- Page 15 Persons' Post Scripts



MEMO FROM METZ



by
David L. Metz

CHOOSING AN AUDIO CONSOLE

Audio consoles must be fascinating to design, that's the only reason I can imagine why there are so many of them on the market. I wanted a console that was designed both for production and on the air work. There is a difference, most production consoles do not have provisions for remote starting of turntables, etc.. Air consoles lack effect send buses, EQ and the flexibility that modern studio production requires.

The studio I was building would be used both as a production studio and as a standby on the air studio. The console had to do everything!

At first I was attracted to some of the imported consoles. I was impressed by the great number of channels (lots of knobs) and low price they offered. After looking at a couple of them, my interest cooled. The quality I wanted just wasn't there. They may look good, but I wouldn't want to service one.

I finally settled on the Quantum Audio Labs series 22 console. This is a REAL console, it's designed from the ground up for broadcast service. No corners were cut in its design.

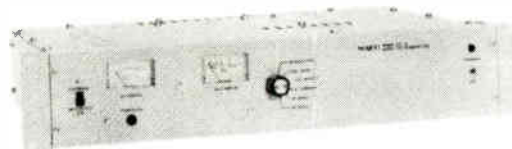
The series 22 is available in up to 28 channels. Because of budget limitations, I had to settle for the eight channel version of the console. Three of the channels are mono microphone or line level inputs, five are stereo line level inputs with EQ, bus assignment, effect send buses, pan pot, and two inputs.

All of the modules plug into a mother board. Even the external connector panels on the rear plug into the

(cont. on page 9)

MARTI

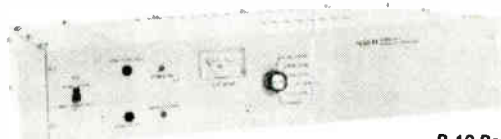
Aural Broadcast STL-10 Studio-Transmitter Links Intercity Relay



STL-10 Transmitter

Applications of the STL-10 include:

- ★ STL for FM stereo broadcast (Dual system).
- ★ STL for AM stereo broadcast (Dual system).
- ★ STL for FM mono or AM broadcast.
- ★ Intercity relay for linking two or more broadcast facilities.
- ★ Multi-relay system for radio network distribution.
- ★ Communications link between satellite earth station and broadcast facilities.



R-10 Receiver

PERFORMANCE - VALUE - RELIABILITY

Marti beats the high-priced competition. Compare the Marti STL-10 system with others — Distortion less than 0.25%. Response ± 0.25 db. Noise — 75 db. Crosstalk — 72 db. 60 db signal to noise ratio with only 14uV signal, dual channel reliability and simplicity. Compare Performance, Price and Reliability. Save hundreds - even thousands of dollars with a Marti STL-10 System.

Mono System \$2990
Stereo System \$6095

Why Pay More For An STL?

All prices quoted are subject to change without notice and do not include antennas or cables unless stated. Specifications are also subject to change. Standard credit policy applies to all orders. Terms are N/30.

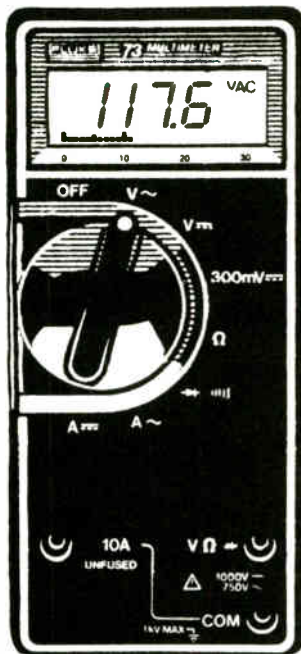
DISTRIBUTED BY
ELECTRONIC INDUSTRIES INCORPORATED
19 E. IRVING, OSHKOSH, WI 54901

OUT-OF-STATE 800-558-0222

IN-STATE 800-445-0222

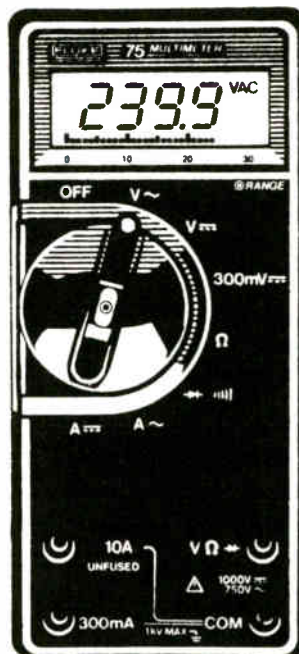
Introducing . . .

THE ANALOG/DIGITAL HANDHELD MULTIMETER



Fluke 73

- Analog bar graph
- 3200 count display
- 0.7% basic dc accuracy
- 10A
- Autoranging only
- Three-year warranty



Fluke 75

- Analog bar graph
- 3200 count display
- 0.5% basic accuracy
- Autoranging with Range Hold
- 10 amp + Autoranged mA ranges
- Continuity and diode test beeper
- Three year warranty



Fluke 77

- Analog bar graph
- 3200 count display
- 0.3% basic accuracy
- Autoranging with Range Hold
- 10 amp + Autoranged mA ranges
- Continuity and diode test beeper
- Touch Hold
- Three-year warranty

Distributed by

ELECTRONIC INDUSTRIES

19 E. IRVING - OSHKOSH, WI 54901

OUT-OF-STATE **800-558-0222**

IN-STATE **800-445-0222**



The Fluke 70 Series

Before designing the new 70 Series, we asked customers like you what they really wanted in the next generation general-purpose multimeter. Thousands of inputs from a wide variety of users—engineers, technicians, service people, hobbyists—were condensed into four basic needs: Ease of use. A more complete display to include signal trend information. Reliability. And affordability.

Here's how the new Fluke 70 Series meets these needs.

The 70 Series is attractive even to people who don't regularly use a DMM. The eight-position rotary dial in combination with the fully annunciated liquid crystal display (LCD) simplifies function selection.

Fluke's exclusive CMOS (Complimentary Metal Oxide Semiconductor) chip design provides the artificial intelligence needed for ease-of-operation. This software includes fast autoranging to save you the trouble of range selection. The unique software "Touch-Hold" feature (Fluke 77 only) when activated, senses a stable reading and locks it on the display. You can then concentrate on the test points, and check the reading later. Our CMOS chip also initiates an automatic self-test each time you turn the meter on, alerting you to any malfunction. Finally, the intelligent 70 Series even senses when the meter has been left on and unused for an hour, powering it down into a sleep mode to save its battery.

The 70 Series' LCD displays more information than any other 3½-digit multimeter.

Its 3200 counts offer the resolution of more expensive 4½-digit DMMs for readings above the usual 1999-count limit of other 3½-digit meters.

The LCD also includes a unique fast-response analog bar graph to show trending information for rapidly

*“A breakthrough in high-performance,
low-cost instrumentation.
Simply put, the most DMM
you can get for the money.”*

changing signals. A proprietary "multiple slope conversion" technique permits bar graph updates at 25 times/second. This speed allows our bar graph to simulate the ballistics of a physical analog needle movement.

The Fluke 70 Series is backed by an unprecedented 3-year warranty. That says a great deal about the remarkable reliability levels we have been able to achieve—and our commitment to your long-term satisfaction with the product.

For safety, the 70 Series offers superior overload protection, from voltages to 1000V dc or 750V ac, resistance to 500V, and transients to 6 KV. All mA current inputs are protected by a 2A/250V fuse in-line with a heavy duty 3A/600V fuse.

Many of the features that make our 70 Series reliable also make them highly affordable. Low parts count, automated assembly, integrating a variety of functions on a pair of chips—all have helped make the Fluke 70 Series one of the most outstanding test and measurement values available today.

Fluke 73 Simplicity and Value

Our lowest priced model, the Fluke 73, offers simplicity to the industrial user and hobbyist alike. Without sacrificing quality, rugged-

ness or dependability.

Operation is so simple, you merely select your function and proceed to test.

The Fluke 73 features our unique analog bar graph with 0.7% basic dc accuracy, better than three times the accuracy of the finest analog-only meters. Instant autoranging. Plus superior overload protection.

Fluke 75 Full-Feature Analog/Digital Meter

The Fluke 75 offers every Fluke 73 feature plus a beeper for high-speed continuity and diode testing, as well as autoranging with Range

Hold override. To activate Range Hold, simply press the button in the center of the rotary switch, locking in the range you're using. This simplifies analog bar graph trending, peaking and nulling tests. Manual range changes are also possible at the push of a button.

In addition to the 10A range, an autoranged mA current function allows you to measure smaller currents with higher resolution.

Fluke 77 The Deluxe Model, with "Touch-Hold"

In addition to the features of the Fluke 75, this top-of-the-line model offers 0.3% basic dc accuracy plus Fluke's exclusive "Touch-Hold" (patent pending) capability.

Activate "Touch-Hold" and you can concentrate on placing the test leads instead of watching the display. The meter will beep when it senses a stable reading, locking it in the display for you to read at your convenience. Touching the probes to new test points or pushing the button in the dial updates the reading.

The Fluke 77 is equipped with a multi-purpose protective holster that incorporates a belt clip, tilt bail and test lead storage capability.

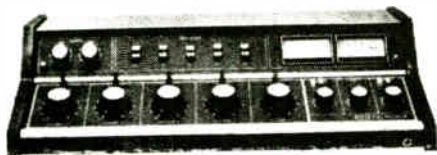


***Special 15% Discount Console Sale
Until January 15, 1986 From Electronic Industries**

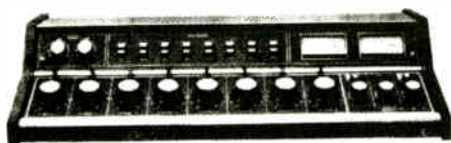
150 Series . . . Rotary Sealed Potentiometers, 5, 8 & 10-Mixers

Two inputs per mixer . . . FET bus selection . . . Modular electronics . . .
Headphone and cue amplifiers . . . Cue switching . . . Hi/Lo input selection

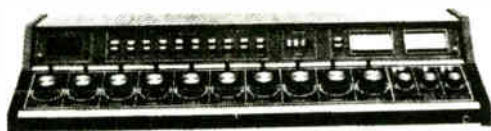
STEREO MODELS



Model 5S150, 5-MIXER STEREO



Model 8S150, 8-MIXER STEREO



Model 10S150, 10-MIXER STEREO

15% Discounted Price
UNTIL Aug. 31, 1984

NOW \$2422
◆ reg. \$2850

NOW \$1950
reg. \$2295 ◆

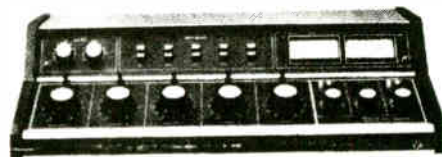
NOW \$3017
◆ reg. \$3550

NOW \$2375
reg. \$2795 ◆

NOW \$4377
◆ reg. \$5150

NOW \$3565
reg. \$4195 ◆

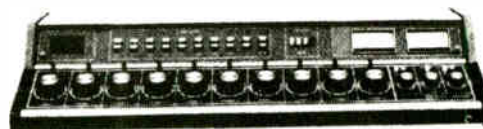
MONO MODELS



Model 5M150, 5-MIXER MONO



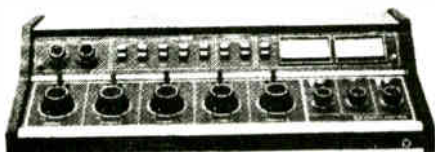
Model 8M150, 8-MIXER MONO



Model 10M150, 10-MIXER MONO

**250 Series . . . Rotary Step Attenuators, Dual-Channel,
5, 8 & 10-Mixers**

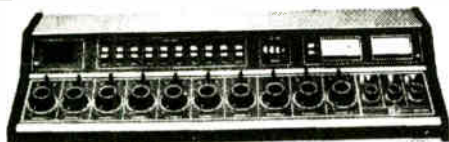
Telephone type channel keys... Two inputs per mixer... Cue switching on each mixer



Model 5S250, 5-MIXER, DUAL-CHANNEL STEREO



Model 8S250, 8-MIXER, DUAL-CHANNEL STEREO



Model 10S250, 10-MIXER, DUAL-CHANNEL STEREO

NOW \$3017
◆ reg. \$3550

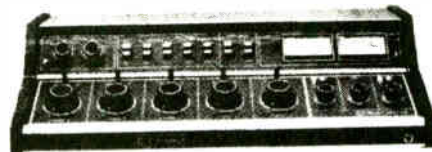
NOW \$2290
reg. \$2695 ◆

NOW \$3952
◆ reg. \$4650

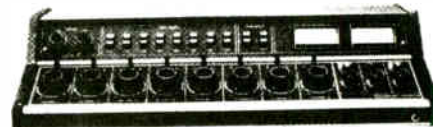
NOW \$3055
reg. \$3595 ◆

NOW \$4925
◆ reg. \$5795

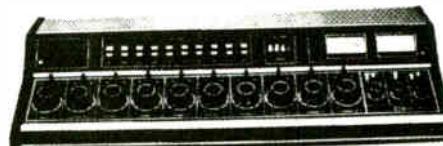
NOW \$3952
reg. \$4650 ◆



Model 5M250, 5-MIXER, DUAL-CHANNEL MONO



Model 8M250, 8-MIXER, DUAL-CHANNEL MONO



Model 10M250, 10-MIXER, DUAL-CHANNEL MONO

CALL TODAY . . .

ELECTRONIC INDUSTRIES INC.

OSHKOSH, WISCONSIN

OUT OF STATE

800-558-0222

Common Point / Nov. 1985

Page 6

IN-STATE

800-445-0222

Shepler Says. .



by John Q. Shepler.
Technical Consultant

PRO TO SEMI-PRO

A lot of really nice audio equipment was never intended to be used in a radio station. You probably have your own collection of cassette decks, mixers, amps, and tuners that work well together but don't like to interface to standard broadcast equipment. You can see why there's a problem by looking at table: A.

I'm taking the liberty of calling "home" stereo equipment semi-pro. You can see that there is a big disparity in levels and impedance characteristics between the professional/broadcast gear and the semi-pro/consumer equipment. Even connectors are different. Pro gear is typically terminated on terminal strips or XL connectors. Other audio equipment uses phono or phone jacks.

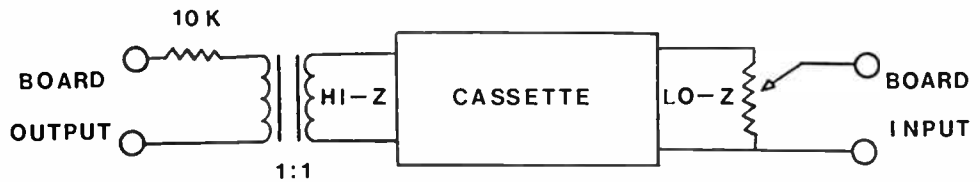
Fortunately, it's not too tough to match one standard to another. Consider the example of a portable cassette recorder shown in figure 1. The input is balanced with a 1:1 ratio transformer. A 10k bridging resistor is included so that the board output won't even know that the cassette recorder is connected. A 10k/10k transformer works nicely. If you are using an inexpensive recorder for interviews or news actualities, then a cheap audio inter-stage transformer is certainly good enough. The speaker output is a very low impedance and can probably drive the console input directly. The pot is handy for setting levels but really isn't needed. Balancing is provided by the transformer in the board.

If you would like to use a tape deck, equalizer, or other equipment with the standard high output impedance, try the circuit shown in figure 2.

TABLE A

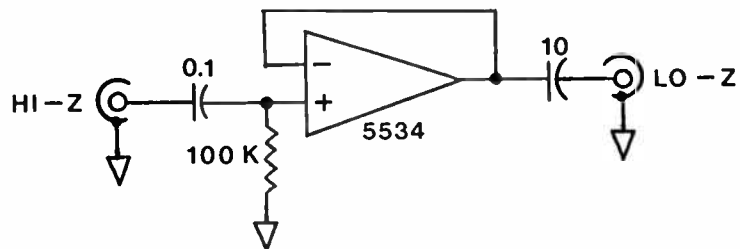
CHARACTERISTIC	TYPICAL BROADCAST	TYPICAL SEMI-PRO
Termination	balanced	Un-balanced
Input Impedance	600 ohms	100k ohms
Output Impedance	600 ohms	10k ohms
Input sensitivity	0 dBm	8 ohms
Output level	+ 8 dBm	0.01 volts
		0.1 volts

FIG. 1



CASSETTE INTERFACE

FIG. 2



ELECTRONIC IMPEDANCE TRANSFORMER

(cont. on page 12)

OTARI

Model 5050 B-II 1/4" Two Channel Recorder



- Transformerless balanced inputs and outputs with XL type connectors.
- Line output switch selectable for +4 dBm or -10 dBV level.
- Mic input has switch selectable 20 dB pad and mute.
- Mic/Line mixing on each channel.
- Headphone monitor output.
- Lighted VU meters with L.E.D. peak indication.
- 3 speeds switch selectable in 15/7.5 ips or 7.5/3.75 ips speed pairs.
- Record reference level switch selectable (185, 250, 320 nWb/m).
- Equalization switch selectable (NAB, IEC).
- Reel Size switch selectable (5"-7", 10.5") EIA or NAB.
- Low frequency reproduce eq. adjustable.
- Fourth head switch selectable for 1/4 track stereo playback.
- Plug-in head assembly with hinged cover for easy access.
- Front panel record setup adjustments.
- Integral splicing block.
- Built-in test oscillator (1 kHz, 10 kHz).
- Microprocessor-controlled HRS/MINS/SECS real-time counter with L.E.D. display.
- Dump Edit and Cue (lifter defeat) modes.
- D.C. capstan motor, servo controlled.
- Variable speed control ($\pm 7\%$) usable in record and play.
- Memory stop switch selectable to stop tape when rewinding past 0:00:00.

The 5050 B-II Recorders are covered by a one year parts and six months labor limited warranty. Heads, pinch-roller, fuses and lamps have a 90 day parts warranty.

SOLD & SERVICED BY

ELECTRONIC INDUSTRIES INC.

800-558-0222

OUT OF STATE

19 E. IRVING - OSHKOSH, WI 54901

IN STATE **800-445-0222**

Common Point/Nov. 1985
Page 8

mother board. It sure makes service easy. With the extender card you can survive ALL of the electronics in a comfortable position. If there's anything I hate, it's a console that opens up like the hood of a car. It's no fun standing on your head to work on something.

Line level inputs are transformerless differential amplifiers. Actually, all of the amplifiers in the console are differential. Each op-amp has a 10 to 22 pF silver mica capacitor connected from the negative input to the output. The result is the first console I had in this plant that is completely free of RFI!

The theory behind this is quite simple. The differential design cancels the common mode RF signal that might be present at the input. The silver mica capacitor makes the gain of the op-amp zero at RF frequencies without effecting the AF performance.

The power supply is a separate rack mounted module. The new version is quite "bullet proof". It has anti-thump turn on circuitry, lots of heat sinks and diagnostic LEDs. The cue and headphone amps are located in the power supply and have plenty of power. Believe me, the headphone amp will blow the ears off the hardest hearing DJ on your staff!

I added one little modification to the console. I installed a switch so the audition VU meters can be used to check the level of the audio source selected by the control room monitor amplifier input selector buttons. The console comes from the factory either one way or the other, and the switch lets me have both. It's a very handy feature for setting the levels of the distribution amps that feed the monitor audio to the console.

This remarkable console was designed by Mr. John Hall. John is one of the old timers of the audio trade. Every time I've spoken to him on the phone it was an education. I had some problems with the console as it came right out of the box. They are minor, but John went back to the lab, redesigned the circuit involved, and made the modifications I wanted. The service I got from Quantum was remarkable.

REAL TIME WEATHER RADAR WILL MAKE YOU THE WEATHER CENTER FOR YOUR AREA



SI-TEX RADAR LETS EVEN SMALL MARKET STATIONS PROVIDE BIG, FAST, ACCURATE ANSWERS. GOVERNMENT STORAGE RADAR AND WEATHER WIRE SERVICE JUST TOO SLOW WHEN YOU NEED THEM MOST. SI-TEX WILL GIVE YOU THE ACTUAL REAL TIME PICTURE TO ALLOW YOU TO IDENTIFY THE PROBLEM AREAS FOR YOUR AUDIENCE, FAST . . . AVAILABLE WITH UP TO 5 YR. PAY PLAN. CALL FOR DETAILS

FEATURES:

- Variable gain controls adjusts receiver sensitivity for maximum discrimination and clarity.
- Push-button range selectors -- 1/2 mile to 64 miles with LED range indicators. Range calibration rings automatically adjust to selected range.
- Main function selector for: radar off, radar standby, radar on with antenna rotating and anti-clutter rain (FTC) on to reduce rain return.
- Variable intensity control adjusts brightness of picture.
- Warns when severe weather approaches.
- Electronic bearing marker (EBM) LED readout showing direction of storm center in relation to station.
- General coverage area displayed in blue.
- Distant and local light rain show on display in green color.
- As storm area intensifies, color changes from blue to yellow.
- Major storm cells on SI-TEX radar indicated in red.

\$7,995.00*

*Subject to change

PUT A SI-TEX WEATHER RADAR
TO WORK FOR YOU...

SI-TEX

REAL TIME WEATHER RADAR

DISTRIBUTED BY

ELECTRONIC INDUSTRIES INC.
19 E. IRVING - OSHKOSH, WI 54901

OUT OF STATE
800-558-0222

IN WISC.
800-445-0222

Crosstalk...



by ED
DUELLMAN

Home Brew Satellite

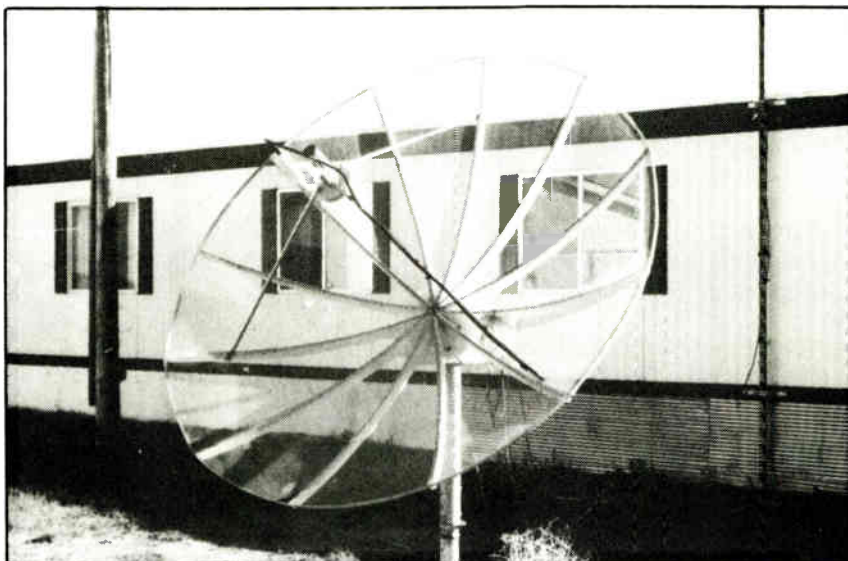
Dear Ed:

Re: Home Brew Satellite Dish--
Just a quick note to let you know it works! and boy does it work.

I started to build my "Duellman Dish" in mid-winter, here in Wyoming. Since our weather during that time did not favor outside work, I constructed the frame indoors at our AM transmitter site. I got it outside by leaving one screen petal and one section of the outside frame off, and then worked the 8' dish thru our 6'8" high door frame. The construction was pretty much as described in your article, and the computer print out of X and Y Points worked fine. Instead of the single pole LNA mount, I went to a tripod. Wyoming is a rather windy state, and the tripod is rock steady. The construction of the dish also lends itself perfectly to our weather, since the wind goes thru the mesh. Here at the KUUY transmitter site, we also have a commercial 12' dish that requires extra guy wires to hold it steady. The "Duellman Dish" stays steady all by itself.

The biggest and most pleasant surprise came when I fired the receiver up. The picture is "tape quality", better in fact, than the bigger commercial dish, which seems to pick up part of the transmissions from a telephone company microwave site two miles due west of us. The mount was put together in a hurry, using parts from a transmission line ice shield. I plan on redoing it down the road for easier changing of satellites. The en-

(cont. on page 14)



TALKBACK

OHIO... N.A.B. Was not as good this year as last. Manufacturers were not as helpful in the booths. As you said in C.P. a lot of empty space. Radio does take a back seat at the N.A.B.

MONTANA...With C-QUAM exhibiting so many problems, can we afford to allow it to become the industry standard NO! KAHN*HAZ-ELTINE system is in use on some impressive stations and technically looks like the better system, without the problems. Write your congressmen and Senators, to press the FCC in changing it's position and mandating the KH system for A.Ms survival.

IDAHO...We definately agree with NRBA feelings about the FCC fee proposal. Government Bureaucrats are far too much inclined to keep building on laws which are promulgated by decree.

MINNESOTA...NAB radio engineering sessions are a complete waste of time. I don't have any answers now, but something has to be done to improve the information flow between engineers.

WISCONSIN...Ban Beer and Wine ads? More nonsense from people who are purists. Let's have better education of the use of alcohol and that should start at home besides in school.

NEBRASKA...RE: Beer and Wine ads? Moe nonsense from people who are purists. Let's have better education of the use of alcohol and that should start at home besides in school.

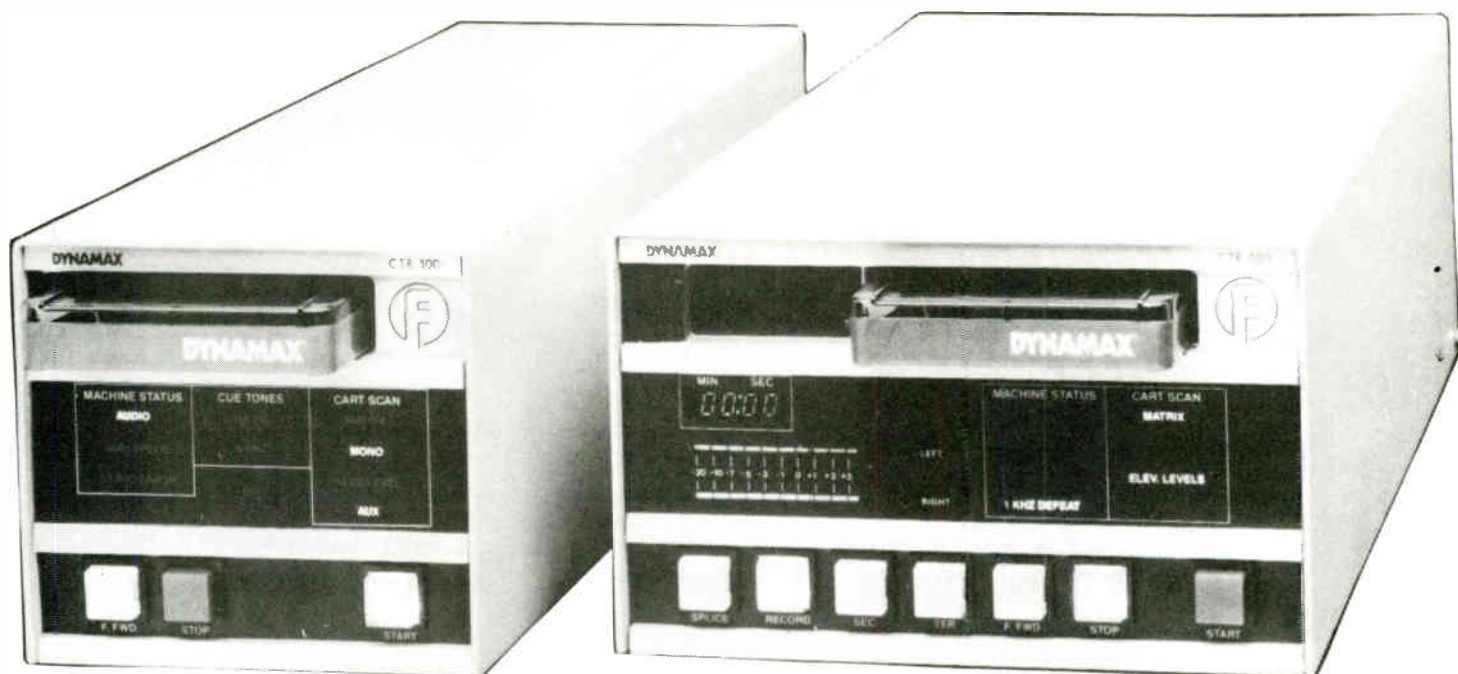
O.K. but they should not be glamourized, by the in crowd type ads. Call it like it is, a DRUG.

OREGON...Riggins is 'RIGHT ON', also the Arkansas Talkback commentf its in here. However, being short of tar and feathers, how are we going to make licenses see the light! The gloom and doom sayers of a few years back are dead on. Whe the FCC dropped the ball, the quality of the licenses went with it.

For thirty years, we've been waiting for a machine like this.

Introducing . . .

The DYNAMAX CTR100 Series from Fidelipac



Dynamax CTR100 Series Tape Cartridge Machines

MODEL NO.	DESCRIPTION	UNIT PRICE
CTR111	A Size Mono Play	\$1900
CTR 112	A Size Stereo Play	2060
CTR 123	B Size Mono Record/Play	3135
CTR 124	B Size Stereo Record/Play	3465

CALL TODAY . . .

ELECTRONIC INDUSTRIES INCORPORATED

OUT-OF-STATE
800-558-0222

IN WISCONSIN
800-445-0222

Common Point/Nov. 1985
Page 11

SHEPLER SAYS...
(cont. from page 7)

It is nothing more than an op-amp configured to be a voltage follower with a gain of 1. You can think of it as a perfect impedance transformer. The input matches the high impedance of the semi-pro equipment and the output drives the lower impedance of the control board. A transformer would work as well, but would cause you to lose voltage in order to step down the impedance.

The key rule is that low impedance outputs can drive low or high impedance inputs...but high impedances can only drive other high impedances.

**THE VERY BEST
FROM**



FIDELIPAC®

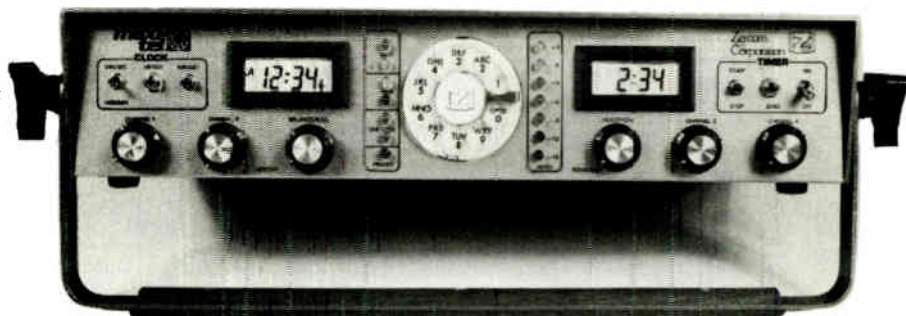


**MODEL 400
MAGNETIC TAPE ERASER**

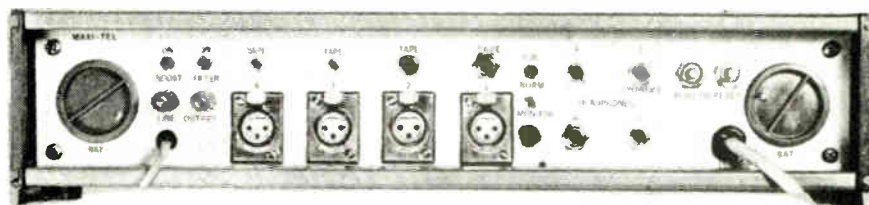
75⁰⁰

NOW IS THE TIME TO TRADE UP TO

**maxi-
tel.**  **by
zercom**



- Up to four microphones to allow you to accommodate every situation.
- Up to four tape inputs, both miniature and standard jacks to fit any tape system that you may want to use in the field.
- A monitor input so you can monitor off air along with your program output.
- Built in telephone complete with a dial that works with your standard headphone and microphones.
- Record output so you can tape any event for future use or feed a PA system.
- A Hi/low boost function to compensate for those long phone lines.
- A super sharp notch filter to prevent spurious crowd noises from disconnecting you when you are on a long distance line.
- A cue circuit for both tape and microphone.




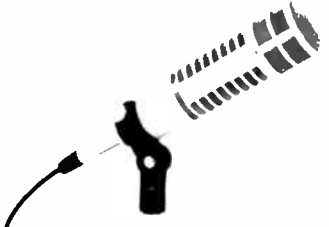










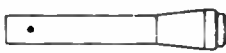
**maxi-
tel.**  **by zercom
CORPORATION**

Distributed by

ELECTRONIC INDUSTRIES INC.

19 E. Irving - Oshkosh, WI 54901

**ELECTRONIC INDUSTRIES IS
YOUR HEADQUARTERS FOR
ELECTRO-VOICE PROFESSIONAL MICROPHONES**

 <p>RE18 Shock-mounted Variable-D® Cardioid</p> <p align="right">\$199.00</p>	<p>RE20 Variable-D® Cardioid</p> <p align="right">\$349.00</p> 
 <p>RE30 Omnidirectional Line/Mike Level Condenser</p> <p align="right">\$276.00</p>	<p>RE34 Cardioid Line/Mike Level Condenser</p> <p align="right">\$276.00</p> 
 <p>RE50 Omnidirectional Noiseless, Hand-held</p> <p align="right">\$108.00</p>	<p>RE55 Omnidirectional</p> <p align="right">\$179.00</p> 
 <p>RE85 Noiseless Lavalier</p> <p align="right">\$109.00</p>	<p>635A Omnidirectional</p> <p align="right">\$69.88</p> 
PROFESSIONAL CONDENSER MICROPHONE SYSTEMS	
 <p>CO15P Omnidirectional System</p> <p align="right">\$204.00</p>	<p>CS15P Single-D Cardioid System</p> <p align="right">\$190.00</p> 
<p>C090 Tie Clasp Omnidirectional Lavalier \$114.00</p> <p>C090E Tie Clasp Omnidirectional mike capsule and cable \$69.00</p> <p>C090P Tie Clasp Omnidirectional Lavalier \$126.00</p> <p>C094 High-output Tie Clasp Omnidirectional Lavalier \$165.00</p> 	<p>PROFESSIONAL CONDENSER MICROPHONE COMPONENTS</p> <p>CO15E Omnidirectional mike capsule w/315A windscreen \$83.00</p> <p>CS15E Single-D cardioid mike capsule w/315A windscreen \$65.00</p> <p>PE15A Electronic preamp for use with CO15E and CS15E mike capsules \$128.00</p>  

ELECTRONIC INDUSTRIES INC.

IN WIS. **800-445-0222**

OUT OF STATE **800-558-0222**

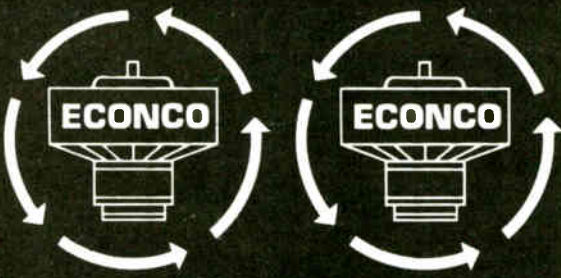
CROSSTALK...
(cont. from page 10)

closed off air pictures were from the disney channel on Galaxy 1.

HINDSIGHT: If I were to build another one, I would make the dish 7½ feet in diameter instead of 8 feet. The eight footer took three (3) 8 foot pieces of 1/8 x 3/4 aluminum, plus another couple to feet. I used 2' wide 1/8" hardware cloth, and the 8 footer has small mesh gaps near the outside edges. Three 8' pieces of aluminum will go all the way around a 7½ footer, saving the necessity of digging up another short piece. Total cost of the dish sans polarotor is about \$75.00. The LNA is a 100° Locom from Anderson Scientific, and the receiver is a commercial Ross. My own home built receiver didn't want to cooperate at picture time. I found six mistakes I made during construction, but at this writing I haven't found the seventh. I can watch the transponders signal increase, but there seems to be a knot somewhere after the IF amp that won't let the picture thru. By the way, in case anyone wants to make a 7½ foot dish instead of an 8 foot, be sure to run a plot for the smaller one. There is a difference in the parabolic curve. Keep the ideas coming, especially on that receiver we talked about.

73
Wally Boller
GM/CE @ KUUY/KKAZ
Cheyenne, Wyoming

ECONCO



REBUILT POWER TUBES



OVER 150 TUBE TYPES REBUILT!!

ECONCO REBUILT IS BETTER THAN NEW.

CALL

ELECTRONIC INDUSTRIES

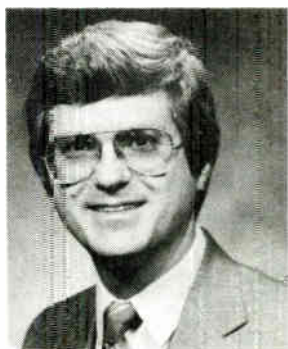
19 EAST IRVING - OSHKOSH, WI 54901

IN WISCONSIN

800-445-0222

OUT-OF-STATE

800-558-0222



PERSONS' POST SCRIPTS

by Mark Persons

CLASS IV AM NIGHT OPERATION

What kind of night coverage have Class IV (local AM) stations reported since they were authorized increased night power? Well, December 15, 1984 was the magic date. Most Class IV's had been running 1000 watts day and 250 watts night. Most are now running 1000 watts day and night. Some are running something less than 1000 watts during the day and are authorized to run four times their previous night power at night. These are stations that increased tower height during the past ten years or so and were required to reduce power to prevent prohibited coverage overlap with other stations.

To the uninformed, the 4:1 night power increase looks like tremendously enhanced night coverage. Some Class IV operators thought their night coverage would be the same as their day coverage. Not so. One of the main limiting factors in night coverage is co-channel interference. This is skywave interference from distant stations on the same frequency. A station would have increased night coverage if it ran 1000 watts night while all other stations on the frequency ran 250 watts. I suspect this may have been true in some actual cases. However, when all Class IV stations increased night power at the same time, coverage was not affected that much. The apparent increased local coverage was reduced back to the pre-power increase area because of increased skywave interference from the other stations that also increased power.

Well then, what is the reason for increasing night power? The answer is that stations do have increased night coverage when skywave interference is at a minimum. Also, increased

power helps overcome noise such as fluorescent light buzz and lightning cracks. Most Class IV operators I spoke with have reported a small overall increase in night coverage since December 15th. One added side benefit is that Class IV stations no longer run the risk of an FCC citation when an announcer forgets to decrease transmitter power at sunset.

Some stations have reported REDUCED coverage. Engineering consultant Doug McDonnell of Madison, Wisconsin said he feels the reduced coverage occurs beyond the normal service contour of a station. The station may have had coverage in an outlying area beyond the calculated interference free contour. Now, with increased night skywave interference, the previous coverage has disappeared.

Class III regional AM stations on adjacent channels to Class IV's are suffering more now though. The 4:1 Class IV power increase is causing more "monkey chatter" sideband interference to be heard by their listeners. Likewise, Class IV stations receive less sideband interference from Class III stations. So, as you see, the radio spectrum wars go on and on. To top it off, I recently heard about the disappointment and anger of the owner of a Class III station. His station runs 1000 watts day and 250 watts night into a single tower as Class IV's do. He wanted to know why his station didn't get a night power increase when all the Class IV's did. Try to explain that to a non-technical person!

Transmitters at Class IV stations are using tubes a little faster with the night power increase. Reliability is a mixed bag though. A transmitter that is turned on and left on continuously has less chance of failing than one

that is turned off briefly to switch power levels twice a day. A lot of failures occur during power change. However, it's nice to have the ability to run a transmitter at quarter power. This has kept many a station on the air when a component failure prevented full power operation, but allowed quarter power operation.



Model 65-395

BLANK-IT

The multi-format magnetic tape eraser

the multi format magnetic tape eraser

- NAB cartridges
- Video cassettes—VHS or Beta
- ¼" to 1" reel-to-reel audio tape
- 8, 16 or 35mm magnetic film
- 8 track cartridges
- Audio cassettes
- Computer tape
- Dictation Cassettes

\$49.95

CALL

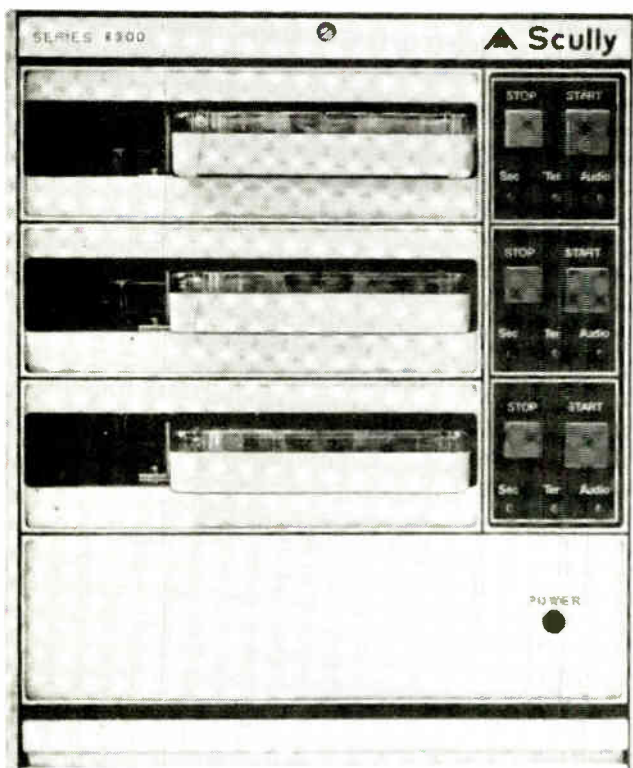
ELECTRONIC INDUSTRIES

OUT-OF-STATE **800-558-0222**

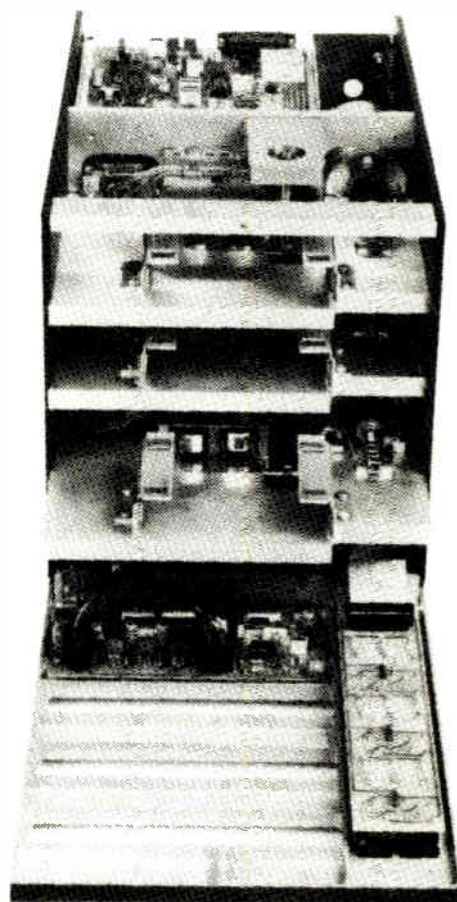
IN-STATE **800-445-0222**

The Scully Series 8300 Reproducer

... A New Standard of Excellence



The new Scully Series 8300 three deck tape cartridge reproducer provides a new standard of excellence in a convenient modular configuration. All presently marketed three deck machines were evaluated, which resulted in a new packaging concept with all decks removable, a new servo motor without bearing adjustments, a new head bridge assembly, and graphics that won't wear off.



Standard features include a two bearing crystal-controlled D.C. brushless servo motor, 150 Hz secondary cue tone, audio mixer, audio switcher, and a reload indicator.

Modular construction allows field conversion from Mono to Stereo, as well fast and easy maintenance.

Sold & Serviced by

ELECTRONIC INDUSTRIES INCORPORATED

19 E. Irving, Oshkosh, WI 54901

OUT OF STATE **800-558-0222**

IN WISCONSIN **800-445-0222**