

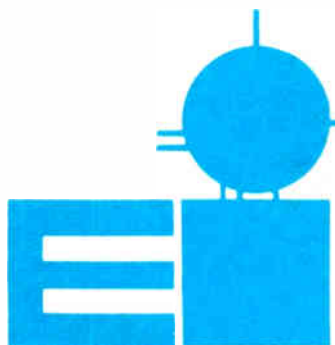
ADDRESS CORRECTION REQUESTED.

FORWARDING AND RETURN POSTAGE GUARANTEED

KHYT (AM) Radio
 Box 26040
 Tucson, AZ 85726

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

50 cents
 per copy



COMMON POINT®

A MONTHLY NEWSLETTER FOR BROADCASTERS

Distributed by Electronic Industries, Inc., 19 E. Irving Ave., Oshkosh, WI. 54901

414-235-8930



THE SKY'S THE LIMIT



DALLAS

April 4-7, 1982
 60th Annual NAB Convention

The 60th Anniversary Meeting of the National Association of Broadcasters is still three months away but for those who work behind the scenes, those who lay the ground work, the momentum is increasing each and every day. The making of a convention of this size, and making it work is an accomplishment, a real accomplishment. Three years ago, the last time the NAB came to Dallas it was a big event but only half of the lower level of the convention floor was needed. This year, the entire 400,000 square feet will be required with 450-500 exhibitors, and with space at a premium. In order to accommodate all those request space, exhibitors who would normally be needing over 300 square feet will be required to cut back 10-12%. Those exhibitors with over 8 years with the convention have been assigned display area on the upper level. Those with less than 8 years, the lower level. In Dallas, there are 15 hotels with some 12,000 rooms available for the convention this year, and as always, the early requests get the best hotels with rooms running \$32.00 per day, and up. Bus service is readily available. Every 15 minutes during rush periods in the morning and afternoon, and every 30 minutes the remainder of the day. This years theme "The Sky's The Limit" is a good discription for the one and only National Association of Broadcasters.

COMMON POINT READINGS

- Page 1 - NAB Preview
 The New Dorrrough 610B
- Page 2 - Editor's Notebook
- Page 3 - WLW -- The Nation's Station
- Page 4 - Talkback
- Page 5 - Letters to Editor
- Page 13 - Common Point Classifieds
- Page 15 - Persons' Post Scripts



THE NEW DAP 610B — READY TO GO!

Dorrrough Electronics has announced the all new discriminate audio processor . . . Model 610B became available on January 2nd. Through digital technology, the 610B is unconditionally stable having no technical alignments. All controls are accessible from the front panel and are provided as "pleasure controls". Processor transfer characters are digital software programmed. This real time processor induces no additional distortion during compression, up to the threshold point of the peak controller.



Discriminate Audio Processor, Model 610

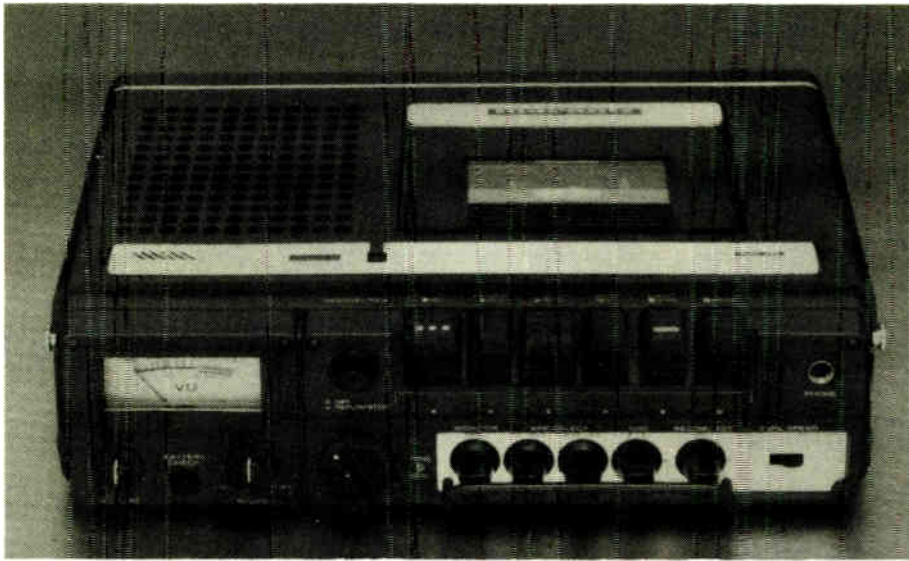
The new peak controller is configured to tend to generate primarily even harmonics during limiting thereby avoiding the harshness and hash typical of limiters. The DAP 610B also features a five position equalizer to enhance the stations quality. A power VMOS 10 watt line amplifier is standard for minimum distortion allowing termination of lossly long lines with a low impedance to flatten them out.

LED real time compression ratio meters and a LED VU meter featuring simultaneous peak level indications enable precise setup.

The net effect of all of these features is unprecedented transparency and uncolored punch for the radio station's signal.

THE PMD 220 PROFESSIONAL THREE-HEAD CASSETTE RECORDER

(formerly Superscope C-207LP)



STILL **\$184⁹⁵**

The Marantz PMD 220 three-head portable recorder is your personal information-processing tool. Combine its compact size and sophistication in features with its two-speed capability and you have the ideal recorder for broadcast journalists and others who demand outstanding sound reproduction and dependable performance of true broadcast quality.

The PMD 220's two-speed function lets you record at 1-7/8 ips, or for twice the recording time on your cassettes use 15/16 ips mode, cutting cassette expenditures in half.

The PMD 220 has separate record and playback heads so you always hear exactly what's going on the tape as you record — there's no guesswork, and you can instantly check recording progress any time. Three-head design also means each head is designed specifically for its function — record, playback/monitoring or erase — without sacrificing any performance for sake of compromise.

That's just for starters . . . check out all the other features that make the PMD 220 the choice of so many people who demand professional quality and performance.

Super-hard permalloy record and playback heads ensure a wide frequency response, low phase distortion and up to ten times longer life than ordinary heads.

Memory Rewind/Replay works in conjunction with the 3-digit tape counter to replay any selection on the tape — automatically. Just reset the counter to "000" at any point on the tape. Later, simply hit rewind. The tape will rewind to "000" and immediately start.

One-touch record allows instant recording with one-button ease, and lets you go directly from play into record mode.

Cue and review helps you find any point of sound on a cassette by enabling you to hear the tape while it's being advanced in fast-forward or in rewind.

Automatic-manual-limiter record level switch provides the option of setting record levels manually or using the built-in automatic record level (ARL) circuitry. The limiter automatically protects against high input signals, so sudden volume increases won't cause distortion or tape saturation.

Distributed by

ELECTRONIC INDUSTRIES INC.

19 E. Irving - Oshkosh, WI 54901

Editor's Notebook

It's hard to believe, but there seems to be a lot of interest in our little vote of confidence for the FCC each month. It started in the low 40's and did come up some . . . but never quite to the 50% mark. With many changes in the works for '82...it will be really something for Mr. Fowler and company to top the 50 mark.

THE SBE CRITIQUE continues with members or former members taking the "point" through "Letters to the Editor". If the present directors choose to accept this criticism, then there is a strong possibility some changes will be considered. In the meantime, don't back away. Pay your dues . . . then stand up and be heard.

COMMON POINT WINNER . . . and our very first for 1982 is WFIW Radio, located in Fairfield, Illinois. They'll be receiving a letter informing them they have \$100 to spend at Electronic Industries, and its up to them how, and when.

THINGS TO

COME . . . planning on Dallas and the NAB in April? Be sure to check the airline schedules! There have been big changes in some of those flights we came to take for granted. Motel rooms? Important, too. We all get a little spoiled in Vegas with everything pretty well close in. 'Taint so in Dallas.



Ye Olde Editor

OUR RADIO STORIES . . . have been quite popular with many people coming back in "Talkback" about having worked at that particular station . . .and when. We have one coming, with pictures, of the very unique "Radio Caroline".

USED EQUIPMENT BLUE BOOK?

Still working on it. Talked to Steve Dana about it again in December. Not quite as cool to the idea now... perhaps by NAB time??

LOW END PROBLEMS

. . . on MWS? Talked to Mitch Montgomery at Harris, new PDM Board in MWSB. Also available for price in older models...improved frequency on low end.

Twice again: Shure sets the standard for the industry!



Introducing two new microphone mixers

Ten years ago—with the introduction of the M67 and M68—Shure set the standards of the industry for compact, portable microphone mixers. Shure is now introducing two new mixers with features and improvements that will make them the new industry standards.

NEW

M267

For Professional Broadcasting
Both TV and Radio—in the studio and for remote broadcast applications.

For Professional Recording

For Professional Sound Reinforcement

For more complex public address systems

With all these new features:

- Switchable, fast-attack limiter
- LED peak indicator
- All inputs switchable for mic or line
- Simplex power
- Greater headphone power
- Built-in battery supply
- Lower noise
- Reduced distortion

\$295.00

...and all of the famous M67 original features

NEW

M268

For Public Address and Paging
In hotels, schools, churches, community centers, hospitals, etc.

For the Serious Tape Recording Enthusiast

As an Add-On Mixer for Expanding Current Equipment

With all these new features:

- Lower noise
- Dramatic reduction in distortion
- Mix bus
- Automatic muting circuit
- Simplex power

\$195.00

...and all of the famous M68 original features

Both new models include the same ruggedness and reliability that have made the M67 and M68 the top-selling mixers in the industry.

For complete information on the M267 and M268 send in for a detailed product brochure (ask for AL669)

The Sound of the Professionals™



Distributed by

ELECTRONIC INDUSTRIES INC.

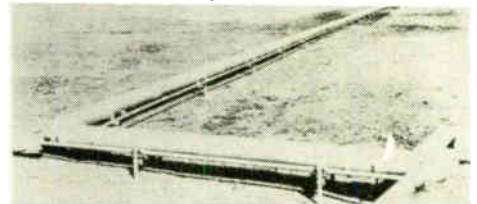
19 E. Irving - Oshkosh, WI 54901

WLW 500 KW the nation's station

The announcement came suddenly for some, long expected by others. The super power years were done. The Federal Communications Commission had ended WLW's full time broadcasting with 500,000 watts. It was spring 1939 and the momentum that would plunge America into World War II was increasing daily. For five long years that mighty voice from America's heartland had been heard throughout the Western Hemisphere and from Hawaii to Europe. There are those of us who grew up taking for granted the mighty voice of the Crosley Radio Corporation, but looking back now, I feel certain WLW provided part of the "Cheering Section" that brought America back from a disaster we call The Great Depression. WLW helped put "Starch" in the backbone of a nation that had been badly bowed.



Mason ground breaking ceremony - Powel Crosley, Jr., at the shovel. Circa 1928.



The RF transmission line to the antenna is 775 feet long and has a surge impedance of 100 ohms. The outer tube has an inside diameter of 9.78 inches, and the inner tube has a diameter of 1-7/8 inches.

Starting off in the Summer of 1921 with a power of just 20 watts. Power was increased to 100 watts in January 1923 and 500 watts later in the year. Operating on 710 KHz, the power was increased to 1000 watts the following year, however, they had to share time with WMH, owned by Precision Instrument.

In 1927 when WLW moved to 700 KHz, time was shared with WMAF in Dartmouth, Mass. and KFBU in Larimie, Wyoming for a short time until one went off the air and the second moved to another frequency.

In the Fall of 1928 WLW went to 50 Kw putting a signal as far east as the Atlantic, and in just five years, construction started to go to 500,000 watts.

One of the first things was a new tower. The half wave 831 foot tower manufactured by BLAW-KNOX,

"diamond" in shape, with the fat middle designed to handle the highest RF current. According to reports, the RCA 500 Kw power amplifier was driven by the Western Electric 50 Kw rig. Because it would be low level modulation, the modulation section included double modulator transformers reported to be 35,700 pounds each including over 700 gallons of oil.

In April 1934, authority for experimental broadcasting at 500 Kw was granted. At the White House, the key President Wilson had used to open the Panama Canal was connected and on May 2nd, President Roosevelt pressed the key at 9:02 p.m. and announced the formal opening of WLW. In Mason, Ohio, the lights dimmed slightly and WLW, operating with 500,000 watts became "the nations station".

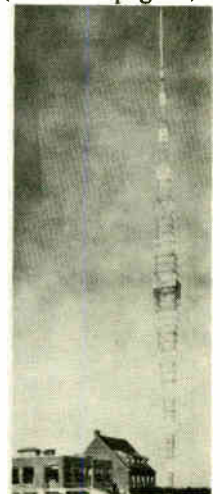
(cont. on page 6)



Placing Base Insulator which would eventually, and to this day, support 110 tons of steel and 340 tons of guy pressure.



Modulation transformers weighing 37,000 pounds each were installed in the basement of the transmitter building. Circa 1934.



**IT COSTS MORE -- BUT IT HAS MORE --
IT'S THE SONY TCM-5000**

THE PORTABLE CASSETTE-CORDER WITH PROFESSIONAL FEATURES, UNSURPASSED PERFORMANCE

The professional quality, dependable TCM-5000 is one of the most exceptional cassette-corders available today. Compact and convenient to operate, this unique unit has a three-head recording/monitor system for high quality recordings. And with the combination headset/microphone unit, you can listen and record at the same time and get professional mixing results. Sony's counter-inertial flywheel system minimizes "wow" and "flutter" when you're in motion—so you can conduct your interviews on the move. And if it takes all night, you're assured of 20 hours of recording time (with alkaline batteries). Plus, it has a four-way power supply capability, continuous tone control and locking pause control system. The portable, professional cassette-corder with unsurpassed performance. The TCM-5000.

\$449⁹⁵

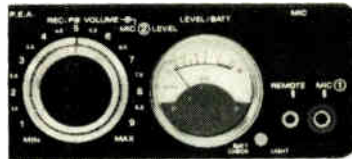


Features

- Three-head recording/monitor system, for professional-quality recordings
- Counter-inertial flywheel system for tape transport stability when unit is in motion
- Automatic or manual recording adjustment, for optimum recording levels
- Fully automatic shut-off to protect cassette and minimize wear
- Pre-end alarm LED and audible signal through earphone
- Variable playback speed control (+40%, -20%)
- Microphone/headset for special mixing included
- Three-digit tape counter
- Locking pause control
- Four-way power supply capability
- Continuous tone control
- Record level/battery meter with battery check
- Compact size for portable convenience
- Source/tape monitoring selector



A. Front panel showing speed control and source/tape selector



B.

Specifications

- System:** 2 track 1 channel monaural
- Frequency response:** 90-9,000 Hz
- Inputs:** External microphone, mixing microphone, line, external DC input, remote
- Output:** Earphone
- Power output:** 700 mW (max.)
- Speaker:** 3½" dynamic
- Battery life:** Approx. 20 hours recording time with "C" x 4 alkaline batteries
- Power requirements:** Battery "C" x 4 (6V) (batteries included) • AC 120V 60 Hz with AC power adaptor AC-61 (optional) • Rechargeable Battery Pack BP-16H (optional) • DC 12V with Car Battery Cord DCC-127A (optional)
- Dimensions:** 2¼" H x 10½" W x 5¾" D
- Weight:** 3 lbs. 3 oz. (with batteries inserted)
- Supplied accessories:** Batteries ("C" x 4), Microphone/headset (CBH-2), connecting cord (RK-69A), shoulder belt, carrying case, blank tape

All specifications are subject to change without notice.

DISTRIBUTED BY

ELECTRONIC INDUSTRIES INC

19 E. IRVING - OSHKOSH, WI 54901

TALKBACK

Massachusetts . . . A quickie question from a recent subscriber . . . do you want these cards back every month??

Ed. Sure do. This tells us the post office is doing its job . . . and . . . you get a shot at being the winner of the month with \$100 to spend at EI as you see fit.

Arkansas . . . Hard to believe the 'cereal box top' restricted permit is what Congress had in mind as the licensed operator maintaining a broadcast plant.

Pennsylvania . . . Being an S.B.E. Chapter Chairman your comments on SBE are depressing . . . but interesting . . . please look to the positive side once in awhile . . . we are trying.

Ed. . . . See Johnny Bridges' letter.

Maine . . . I agree with Patrick Shirley's Letter To The Editor.

Kentucky . . . What cart machine manufacturers have gone out of business? Was interested in SBE, but not now. Expand Common Point with more articles like Persons' P.S.

Ed. . . . Sorry, not going out of business . . . just not making their own anymore.

Indiana . . . Don't need SBE!! Agree with Patrick Shirley (Nov. C.P.). Have MW-5 with muddy sound like Dan Kelly of KVSF!! Solution anybody??

Ed. . . . see Johnny Bridges letter.

Arizona . . . tired of hearing lament about SBE. Get back to practical engineering!

New York . . . re SBE . . . organization only as good as we make it. If you are not an active contributing members . . . then you are part of the problem.

Michigan . . . Used equipment Blue Book is great idea! Still sorry to see "First" gone. Test did not assure technical competence but at least made one realize rules and regs existed.

Montana . . . What is address of SBE National?

Ed. . . . Society of Broadcast Engineers, P.O. Box 50844, Indianapolis, Indiana 46250.

Oregon . . . re: Money Crunch . . . problem is companies are scared into thinking they can't make it. (They take Wall Street too seriously)

Michigan . . . Agree with Idaho Nov. Talkback . . . don't need "First" . . . don't need SBE . . . my exam is everyday operation . . . don't tell me how . . . I can self

(cont. on page 6)

AUDIO-METRICS

Professional Power Amplifier



NOW . . . FROM THE TEAM WHO BROUGHT
THE BEST BROADCAST PHONO PREAMPLIFIER
TO THE INDUSTRY - A POWER AMPLIFIER THAT
IS SECOND TO NONE!

NOW **350⁰⁰**

Audio Metrics' engineers publish specs which can be verified in the laboratory. Specs which approach theoretical limits. Here's the most popular level of amplification for the average control or production room at a price that will please.

- * Active balanced bridging inputs.
- * Assymetrical clipping indicators.
- * State-of-the-art discrete double differential SEPP topology.
- * High speed balanced emitter driver and output devices.
- * Multiple output transistors with 480 watts of dissipation per channel.

Power Output: 50 watts min./channel, 8 ohms, 20-20 kHz -65 watts min./channel, 4 ohms, 20-20 kHz - 130 watts mono, 8 ohms, 20-20 kHz.

THD 20-20 kHz: 50 watts, 8 ohms .01% -65 watts, 4 ohms .015% - 130 watts mono, 8 ohms .015%

SMPTE IM: .25 watts to rated output .006%

Frequency Response: ± 1 dB 20-20 kHz, ± 3 dB .5 Hz - 100 kHz

Hum and Noise: 100 dB below 50 watts

Gain: 28 dB

Input Impedance: 20 Kohms balanced

Input Common Mode Rejection: 60 dB

Load Rating: 3 ohms or greater, resistive or reactive

Slew Rate: 50 V/micro sec.

Power Bandwidth: 5 Hz - 40 kHz

Dynamic Headroom: 2 dB

Distributed by

ELECTRONIC INDUSTRIES

19 E. IRVING - OSHKOSH, WI 54901

Letters
to the
Editor



I am afraid that Mr. Ron Arendall does not have an intuitive grasp of what is going on in many of the SBE Chapters at large, even with his present position taken into account. COMMON POINT reports to the effect that many of the SBE Chapters were leaning towards television related technologies, and in doing so inadvertently perhaps exclude the presence of radio engineering members--is a true fact!

I am a Senior Member of SBE and head of the Electronics department at Temple Junior College. I am also an active member in a newly organized SBE chapter in central Texas in which each and every month we have a program that is usually 100% television oriented. Since I am Engineering Advisor for the two Temple radio stations, I very often feel like a minority in an all-white church when the programs start. The social fellowship doesn't change that feeling much either! (Perhaps I should have found a different example to site above, but it makes my point.)

The only thing that keeps me coming back I suppose is my broad background which includes television! But I can easily see why I'm the only radio person in the group of about 30 attending. I think we're dealing with a human nature thing here however, since the vast majority of members in this chapter are from TV stations. The thing they have most in common is "television". This same type of thing is happening in other chapters as well, and while it may not be totally fair to radio members, it is happening.

I enjoy reading COMMON POINT. Keep up the good work!

Charles R. Schlieper
Temple, Texas

THE SBE . . . A QUESTION ON CERTIFICATION PROCEDURES

In reading a November Letter to the Editor, I was reminded that I must be another somewhat disgruntled member of SBE. I joined SBE under the grandfather's clause and received my beautifully engraved certificate as a Senior Broadcast (cont. on page 11)

TALKBACK

(Cont. from page 4)

teach. Give us radio engineers some credit.

Texas . . . Great notes on BC-1GT . . . Peter Dahl's replacement transformers are great for this one. His operation in El Paso would make a great article.

Vermont . . . pleasant surprise to be Common Point winner. Will order shortly. Enjoy newsletter. Especially the tips on keeping BC-1T alive.

Ohio . . . FCC not in contact with real world! They don't know how bad some stations and operators are!

Kansas . . . Pat Shirley made a lot of sense in "Letters to the Editor" in Nov. issue.

Idaho . . . Pat Shirley's "disgruntled" letter to editor crystalized many thought and feelings on subject of First Phone, SBE and technical support at a radio station. It seems that the station who doesn't hire qualified technical support is slitting his/her own throat regarding signal quality competitively . . .

Texas . . . Am with Idaho in Talkback . . . my First was only license to learn . . . and have learned a lot . . . but two of my mentors don't have Firsts . . . and couldn't get jobs in the biz because of that . . . and they were better than those who got 'em in their places.

Oregon . . . Let's give support to the efforts of Oregon's Senator Packwood and others in their efforts to establish de-regulation guidelines.

Kansas . . . Just read FCC considering cutting back on Mod Monitor requirements. Have they abandoned all manner of reason? . . . compliance in many areas of the country will become joke.

Massachusetts . . . What's the difference between FCC First and SBE exam? . . . same thing . . . it's an exam. Can we take FCC to court to get our licenses back?? Sounds like SBE wants to make a lot of money.

Ohio . . . interested in Ron Arendall's statements. I advocate SBE certification (if for no other reason!) for adding self confidence in passing a stiff test. (2) Do not agree with denial of pro rated dues. (3) Members get far less for \$20.00 per annum now than we did for \$10.00. Where does money go?

Minnesota . . . have been in broadcasting for almost 5 years . . . met a lot of engineers but only one who was in SBE . . . and

WLW . . . The Nation's Station

(cont. from page 3)

Based on the experience of most present day engineers, it's hard to visualize having a transmitter capable of pushing 72 amperes across a tower. WLW Radio had done it through special authority from the FCC. It wasn't easy to reach and it was made very difficult to stay there. Within the year, power had to be reduced to 50 Kw at night until two towers could be erected to go directional, to protect a Canadian station on 690 Khz. An American station, WOR on 710 Khz at 500 watts also filed complaints. It was also a battle to keep this a WLW special authority. By the spring of 1938, some 15 other stations had applied to go to 500 Kw, with a reported battle every six months before the FCC. Those stations applying included:

- KDKA Radio Pittsburgh
- KNX Radio Los Angeles
- KSL Radio Salt Lake
- WBZ Radio Boston
- WGY Radio Schenectady
- WHAS Radio Louisville
- WHO Radio Des Moines
- WJR Radio Detroit
- WOAI Radio San Antonio
- WOR Radio New York
- WSB Radio Atlanta
- WSM Radio Nashville

At WLW, the engineering problems were a constant challenge with a reported 63 engineers on staff and up to 17 needed at one time. An engineer was always needed to ride gain. This was before the days of the Audio Processors and AGC.

The Complete Story . . . this issue of COMMON POINT just touches briefly a small part of the complete WLW story. For a complete story, one I would recommend for every broadcaster . . . one written by Dick Perry . . . "Not Just A Sound - The Story of WLW" published by Prentice-Hall.

Ed. Note: Our many thanks to Marian Shumate at WLW for Dick Perry's book, to Broadcast Engineering for permission to use their pictures, and to Dave Burns at Allied for making them available to us.

have been working a long time to fix mess he created.

Virginia . . . for those of us on Canadian clears . . . how about an update on NRBA Treaty Conference? . . .

THE CROSLY RADIO CORPORATION											
WLW - WSAI - WBXAL											
TRANSMITTER RECORD											
Operator	Date										
J. J. W.S.	May 2, 1934										
TIME	6:00	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30
LINE VOLTAGE	2380	2330	2194	196	145	144	140	130	130	220	220
FILAMENT VOLTAGE	232	231	202	212	20	20	20	20	20	20	20
P. A. GRID BIAS	1800	1700	1500	1300	1200	1200	1200	1200	1200	1200	1200
P. A. GRID BIAS	670	630	500	300	300	300	300	300	300	300	300
ANTENNA CURRENT	77	71	95	115	120	120	120	120	120	120	120
H. V. RECTIFIER	117	117	117	117	117	117	117	117	117	117	117
P. A. PLATE CURRENT	64	65	81	81	81	81	81	81	81	81	81
D. C. GRID CURRENT	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
P. A. BIAS CURRENT	18	18	18	18	18	18	18	18	18	18	18
H. V. RECTIFIER	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
CRYSTAL IN SERVICE	2	2	2	2	2	2	2	2	2	2	2
I CRYSTAL TEMP	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6
II CRYSTAL TEMP	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6
P. A. PLATE VOLTAGE	4.7	4.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
P. A. PLATE CURRENT	200	200	200	200	200	200	200	200	200	200	200
LINE CURRENT	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
CRYSTAL IN SERVICE	2	2	2	2	2	2	2	2	2	2	2
I CRYSTAL TEMP	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8
II CRYSTAL TEMP	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8
P. A. PLATE VOLTAGE	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2
P. A. PLATE CURRENT	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
LINE CURRENT	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
CRYSTAL IN SERVICE	2	2	2	2	2	2	2	2	2	2	2

An Era Begins — Transmitter log for May 2, 1934, shows 500 KW testing from 5:15 to 6:30 p.m., official superpower operation starting at 9:02 p.m. by remote control from the White House. Antenna current (circle) jumps from 19½ to 72 amperes. (Note: WSAI was co-owned by Crosley Broadcasting, as was short-wave WBXAL. Latter simulcast with WLW, later programmed Spanish-language fare beamed to South America.)



Dramatic shot of master control at Crosley Square.

LETTER TO EDITOR

(cont. from page 5)

Engineer for over twenty years service from the Society of Broadcast Engineers of Washington, D.C.

Not having a close SBE chapter, I did not join in a local chapter; in fact, I had no invitations to join a local chapter. To my knowledge I received no additional information about SBE. About the middle of 1981 I began receiving information notifying me of the need to be re-certified each five years. In order to be re-certified it was necessary for me to have accumulated at least twenty-five professional credits over the last five years by attending SBE meetings, conferences, etc.

My first letter to them pointed out the fact that in as much as I had not received additional information which evidently I would have received through a local chapter, I did not know of their certification requirements. I was in favor of a certification program but I was not interested in going somewhere and taking a test. Since I am secretary of WOCH, Inc. as well as engineer for the last twenty-four years, certification would probably never mean anything to me job-wise. But since I have this big beautiful certificate, I did have a desire for re-certification.

Through four letters over the next two months I tried everything from an exception-to-the-rule to being put on a years probation so that I might prove that I could accumulate their needed points in one year. My last letter from them stated, and I quote, "The Committee's decision is that they can not grant you re-certification. They feel that there was enough publicity given on the necessity of acquiring professional points in order to keep your certification." They did not say whether I should send back their beautiful certificate.

It does not appear to me that SBE has the engineer or the broadcaster at heart nearly as much as they have of getting the dues or administering programs. By the way with my first communication I did include the \$45.00 they requested for one year's membership dues in SBE and re-certification which evidently will be of no benefit.

When I hire any additional engineering services, I will certainly have to look at someone who can get the job done rather than whether or not they are certified by SBE. As any reputation requires, it will take a lot of years of much

(cont. on page 12)

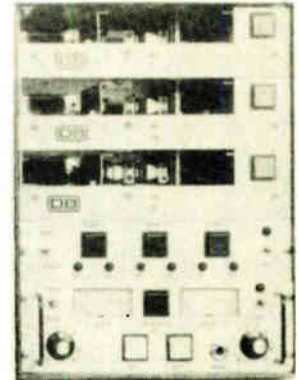
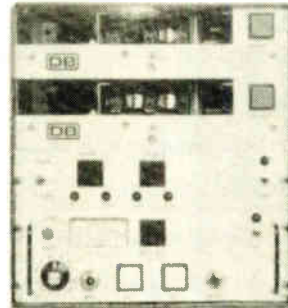
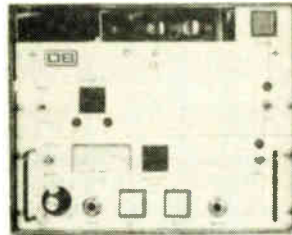
DB

THE MOST VERSATILE CARTRIDGE MACHINE

DB-3000

DB-2000

DB-1000

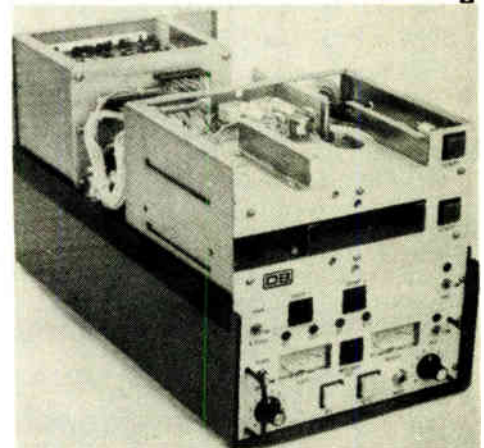


LIMITED 3 YEAR WARRANTY

SPLIT CASE

All new DB one, two and three deck cart machines come with split cases for easy access, top or bottom, for inspection and routine maintenance.

- ALL DB-1000, DB-2000 and DB-3000 mono playback units are pre-wired for stereo and to accept Recorder Modules
- ALL DB-2000 and DB-3000 Record/Playback units can simultaneously record and playback
- ALL DB-2000 and DB-3000 Record/Playback units dub deck to deck
- ALL decks are 100% removable and interchangeable
- ALL decks have individual electronics
- ALL decks have front pressure roller azimuth adjustment
- ALL decks use individual low voltage solenoid
- ALL IC's and transistors are common types easily procured at local electronic suppliers
- ALL models use the same DC servo Half effect motors that are not affected by line frequency variations
- ALL options are easily installed in the field after leaving the factory
- ALL machines equipped with cue lights for visual cue monitoring for each deck while in playback mode
- STANDARD: Recorder Modules wired for plug-in Q1 and Q11 Tone Generator PC board
- STANDARD: Cue tones can be applied while recording or during playback -- also simultaneously Q1 and Q11 operation
- STANDARD: Cue tone and Bias check -- metering on front panel
- STANDARD: Provision for external cue audio input and output for text logging
- STANDARD: Reorder Modules have 1KHz disable jumper plug
- STANDARD: Line voltage change internal w/jumper -- 120/240V
- STANDARD: 7 1/2 ips to 3-3/4 ips switchable on power supply PC board with potentiometer to adjust individual speed
- STANDARD: Manual Fast Forward on front panel
- STANDARD: Headphone monitor output on Recorder Module front panel
- STANDARD: Microphone input on mono Record models, front panel



DB

D-B ELECTRONICS, INC.

Gaithersburg, Maryland 20760

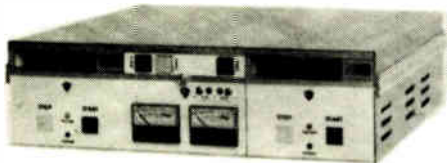
Sold & Serviced by

ELECTRONIC INDUSTRIES INC.

19 E. Irving, Oshkosh, WI 54901

THE AUDI-CORD PRODUCTION MASTER

**MOST USEFUL STUDIO PRODUCTION
MACHINE EVER PRODUCED.**



**THREE SELECTABLE
RECORDING MODES —
STANDARD DUAL
REPLAY MODES:**

\$1979⁰⁰

(MONO-SINGLE TONE)

Regular Single Deck Recordings —

Made on the right hand deck. Left deck may be playing as needed.

Dual Recordings —

Simply load the cartridge and push the buttons. How many times have you needed two copies? This is now possible with the Audi-Cord Twin Transport Record-Play.

Copies (Dubs) —

Place cartridge to be copies in left deck and select dub mode, make a perfect copy in the right deck — all switching is automatic.

Sound Over Sound —

Cut first sound in normal manner, place in left deck, mix in second recording by dubbing left to right.

Composites —

Easily performed in dub mode using 1kHz inhibit facility provided.

Stereo to Mono Mix Dubs —

Special models on request with 1 deck of each.

Distributed by

ELECTRONIC INDUSTRIES
414-235-8930

LETTER TO EDITOR

(cont. from page 11)

more discreet handling than SBE is now giving for them to ever build up a reputation on which one could depend.

Jim Ochs, Sec'y & C.E.
WOCH, Inc.

THE SBE DEBATE — A SOONER SUMMARY

I've been reading the pros and cons of S.B.E. in COMMON POINT and I just can't leave it alone. It seems to me that the way to change any organization's operating policies is to join the organization and make yourself heard. The officers of each chapter and the national organization are elected by the vote of the engineer-members. Obviously, you can't please everyone all of the time, but you can try by democratic process to please the majority. This the S.B.E. does. To sit on the outside and howl is to make a loud noise to no purpose. As a comparison, how much weight was given to your comments on dropping the license (or any other Commission proceeding)? You DID comment, didn't you?

As to Certification, it's voluntary. I hire as I please, so should you. I might note, however, that I've taken the test. I found it to be representative of day-to-day engineering requirements and knowledge. While I don't really care whether you took it or not, if you don't have the knowledge it asks, you aren't competent to work on my plants, and I'm not going to let you try.

I think that, if you look at the qualifications of the S.B.E. officers and Board members, you'll find that they are competent engineers. I've learned a lot from them, you can too. Try asking. Likewise, you can

get the answers to a lot of questions at the Chapter meetings. And, you can share your solutions with other engineers. If you're in one of those areas where no one speaks to anyone else for fear that the other guy might steal your ideas for his station, you have my sympathy. I'll give you my ideas, there's nothing secret about them. They work. And, I'll happily try yours to see which ones might save me some time or effort. On the other hand, if you stick your head in the sand, all you'll get is gritty ears. You choose.

Tell the guy with the MW-5 that he is seeing the results of the Quincy Tin Work's design team. The LF Tilt control on the Optimod ought to minimize the problem. He can cure it with the Brand C box, which represents a somewhat better design, as much as for any other reason because it takes advantage of newer components and circuitry. 'Tis my opinion that, should you manage to set it on fire, it will contain the flames somewhat better than the MW-5. I might be wrong, I haven't heard anybody getting the Brand C lit yet.

If the above isn't enough to get some letters of hate and discontent started, let's jump on COMMON POINT. It's a good sheet, and it's nice to have a print forum. It's also a sales tool for Electronic Industries. No reason why it shouldn't be, but don't let's lose sight of that fact.

Guys, I left the company logo and S.B.E. chapter off this because it represents only my foolish opinions. When the Company and/or local chapter form an opinion, I'll add them. Meantimes, take a number, stand in line, and be mad at me alone.

Johnny Bridges
Tulsa, Oklahoma

MARTI Model RPT-2 Series

RPT-2
Transmitter

**Hand-Carried 2.5-Watt
Continuous-Duty Broadcast Quality
Remote Pickup Transmitter**

\$695⁰⁰



COMMON POINT CLASSIFIEDS

DURACELL BATTERIES

- 12-MN1300B2 (24 batt) D size \$11.80
- 12-MN1400B2 (24 batt) C size \$16.80
- 12-MN1500B2 (24 batt) AA size \$13.08
- 12-MN1604B (12 batt) 9 Volt \$16.56
- 12-MN1604B2 (24 batt) 9 Volt-2 pak . \$31.62

FOR SALE: 5 ARS-1000 Otari. Gone satellite. Call 800-558-0222.

FOR SALE: 672A Orban with balanced output, 1 yr. old. TFT 732 on 1490 kHz. Urie BL40, new power supply. Call Don, WABJ, Adrian, Michigan.

FIGHT INFLATION! Your engineering and parts and our circuit boards result in economical circuits from line amp to phono pre-amp. Build single circuit or entire mixer. Boards also fit in columnic series module cans. Write for listing and prices. Barrett Electronics, Box 488, Habre, MT 59501. 1281-0182-0282

NEW . . . the Answer Man. Ideal for automatic answering, ball scores, weather, etc. Built-in counter to log calls. Up to 20 dB gain. FCC type approved. AA9987-70295-PCE \$390.00. Call Vern Schmidt, 800-558-0222.

FOR SALE: MacIntosh MR78 tuner, used only 4 hours. Contact WDST, Woodstock, New York.

WILKINSON SELF-TESTING NON-ENCAPSULATED DIRECT REPLACEMENT SILICON RECTIFIER STACKS



- Directly replace mercury vapor tubes
- Go/No-Go Indicator on each diode
- Repairable—diodes easily replaced—no encapsulation
- Reduces heat, power cost, hash, AC hum
- Eliminates filament transformers
- High voltage warning lights
- Operates from -65°C to +70°C in free air
- Eliminates preheating and warm-up time

COMPUTEMP 2

FOR THAT NEWS DEPT. OR QUICK "LIVE ASSIST"



COMPUTEMP \$89.95
100' PROBE EXTENSION \$9.95

PREVIOUS HIGH/PREVIOUS LOW TEMPERATURE MEMORY

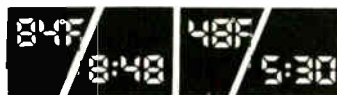
At your fingertips, Computemp 2 will display the days extreme temperatures, and you'll know the exact time each took place. The electronic memory records the information automatically.

HELP PROTECT LIVESTOCK TEMPERATURE ALARM

As the temperature reaches a pre-determined setting, one you choose anywhere within the -40° F to +130° F range, the Computemp 2 alerts you. The many uses for this function are limited only by your imagination. May be switched in or out.



Indoor Temperature Outdoor Temperature



Day's high & time of occurrence Day's low & time of occurrence

TIME ALARM

The unit even has a handy time alarm which will alert you daily as needed. Computemp 2 continuously displays information at a glance with a bright LED readout easily visible.

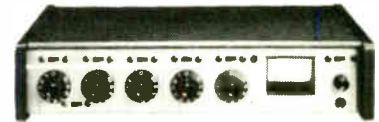


SSAC
B-KON-FLASH Tower Flasher

FS155-30T

\$39.95

ANOTHER SHURE THING...



- Now Lo/Hi Level On All Channels
- Easy Stacking With Mix Bus If More Than Four Mics Required
- Battery Supply For Sessions In The Park



THE SHURE M267

Reg. \$395.00 - NOW **\$295.00**

FOR SALE: Marti STL - Mono - approx. 6 years old - factory rebuilt 2 years ago, asking \$1700.00. Call Don at 517-265-1500.

FOR SALE: AEL 2202A FM Exciter, AEL 2213 stereo generator, \$1500.00; 4 ITC 750 PB decks - mint condition, \$1000 each; 2 Marti CLA 40 Limiters, \$300 each; 2 Electro-Voice RE51 mics, 1/2 price; 1 Orban 245 stereo synthesizer, \$370. Call Mark Persons, 218/829-1326.

GOOD AS NEW -- TWO -- that's right! -- two IGM Stereo Insta-Carts, one year old, \$9,500.00 each. First come/first served. Contact Chuck Tiff, Meyers Broadcasting, 701-223-0900.

WANTED TO BUY: 5 - 20 foot sections Wincharger type 150 tower, measuring 18-3/4" on face. Check out back and call collect, even if you have only couple sections. 208-743-2502.

FOR SALE - DEMO - Orange County CLX FM, just \$995.00. Call 800-558-0222.

FOR SALE -- OVERSTOCK -- NEW -- FULL WARRANTIES --

- [2] ORK turntables;
- [2] S320 tonearms with cartridges;
- [2] Shure M64 pre-amps;
- [1] dual turntable cabinet;
- [1] BE4S50 console;
- [3] Switchcraft Series 2400 jack panels, 48 jacks.

Call 414-481-5400, ext. 24, between 8 a.m. and 3 p.m., ask for Gary.

1281-0182

COMMON POINT CLASSIFIEDS

A.V.E. BROADCAST CARTRIDGE REBUILDING SERVICE

- COMPLETELY CLEANED
- ONLY APPROVED TAPE
- 72-HOUR TURN-AROUND SERVICE IF REQUIRED

40 SEC.....	\$1.45
70 SEC.....	\$1.50
100 SEC.....	\$1.60
2½ MIN.....	\$1.70
3½ MIN.....	\$1.80
4½ MIN.....	\$2.00
5½ MIN.....	\$2.10
7½ MIN.....	\$2.20
10½ MIN.....	\$2.40

*prices shown for Audiopak A2 and Fidelipac 300 Series cartridges

*for specified lengths use next higher price shown

*add \$.10 to above prices for Aristocarts - Audiopak AA3 and Fidelipac 350's and 380's

*all carts reloaded with new double lube tape per mfg. specifications

*cartridges reloaded with Fidelipac Hot Tape - add 15% to above prices

*all carts pretested under actual broadcast conditions

*like new cart 90-day warrantee with approved replacement of pad

SHIP TO
A.V.E. ELECTRONICS
520 W. 14th Street
Oshkosh, Wi 54901

VALUABLE COUPON

Save \$50.00

Now you can own a Sony TCM5000 Cassette Recorder for under \$400. while supply lasts. Send this coupon with your order. Subscribers pay balance under regular terms.

Go Top of The Line -
Go With
A Sony TCM 5000

DB-TEL TELEPHONE ANSWERING INTERFACE

Automatic telephone answering for D8 one, two and three deck cart machines with a built-in call counter.



\$245.00

DB-10 MONO/STEREO TURNTABLE PREAMP

High quality turntable preamplifier featuring up to date integrated circuitry, with conservative design and employing readily available IC's mounted on plug-in sockets.



\$265.00

audio-technica

INNOVATION □ PRECISION □ INTEGRITY

ATP-1 REGULAR PRICE . . . \$17.00

\$12.95

Upgrade to similarly priced Stanton 500AL & Shure M44-7

ATP-2 REGULAR PRICE . . . \$28.00

\$19.95

Upgrade to similarly priced Shure S35C or Stanton 600 Series

ATP-3 REGULAR PRICE . . . \$52.00

\$31.95

Upgrade to similarly priced Stanton 681 Series

Distributed by

ELECTRONIC INDUSTRIES

PROFESSIONAL SERVICES FOR BROADCASTERS

*MR. CLIFF GROTH,
Field Service Engineer
Broadcast Electronic Services
Box 94 - Eastern Avenue
Ft. Atkinson, WI 53538
414/261-9289 - Home
414/563-7236 - Office
414/563-6351 - WFAW

*MR. RICHARD KENNEDY,
Field Service Engineer
Kentronics Communications
Box 161
Bloomfield Hills, MI 48013
313/335-2010

WLS COMMUNICATIONS
William (Bill) Spitzer
Box 460
Rapid City, SD 57709
605/343-6510 - Office
605/343-6986 - Home

*ELECTRONIC ENG. SERV.
James C. Droege
Route 3, Box 138
Beatrice, Nebraska 68310

*MR. ROBERT SCHAEFFER,
Field Service Engineer
Schaeffer Electronics
203 Wilson Ave.
West Bend, Wis. 53095
414/338-3111

*MR. JOE BELLIS,
Field Service Engineer
RMF Associates
329 Wheeler
Scott City, MO 63780
314/264-2972

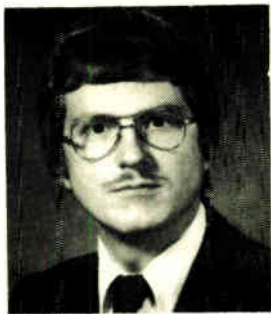
*MR. MARK PERSONS,
Field Service Engineer
M. W. Persons & Assoc.
Rt. 8, Box 406
Brainerd, MN 56401
218/829-1326

*TRANSCOM ASSOC.
3322 W. 6th St. Rd.
Greeley, CO 80631
David Sawyer
Claud Van Horn
303/356-1310
303/353-9383

*MR. RICHARD TYNER,
Field Service Engineer
Broadcast Service
3965 Arrowwood Lane N.
Minneapolis, MN 55441
612/559-2280

*MAYNARD & ASSOC.,
Telecommunications Engineering
Box 202
East Lansing, MI 48823
517/339-3498

*member of Society of Broadcast Engineers



PERSONS' POST SCRIPTS

by Mark
Persons

Editor's Note: This article is written from a speech Mr. Persons gave before the 1981 Broadcasters' Clinic in Madison, Wisconsin.

I am sold on Live Assist. By live assist, we mean the use of reel to reel tape as a medium for storing and playing music in a radio studio. Producers of reel to reel music formats have come a long way since the day when almost all FM was background music. Today formats are available to satisfy any taste from Bock to rock with a dozen kinds of country in between. I've been sold on live assist since 1976 when we built our first such system. I hail from Brainerd, Minnesota where there are two AM's and two FM's. In a town of twelve thousand, that's competition!! All four use reel to reel tape as a music source. One is automated. Two use full live assist. The last uses live assist and some disc.

The advantages of using live assist as opposed to records are as follows:

1. Management has tight control over the music format.
2. No more flying turntables, cue burn, record scratches, turntable rumble, or music started at the wrong speed.
3. The announcer does not play his favorite song at the same time each day even if it never made it to the top one hundred.
4. Distributors of music formats usually send updated "Current" reels with new music weekly.
5. No music director is needed at the station along with expensive long distance phone bills to get the music your competition already has.
6. Tape music formats are put together by top programming professionals. Audience ratings of their customer stations prove it.

All this great reel to reel music programming isn't free however. Plan on spending \$400 to \$1,000 per month for the service.

Assume your station has decided to live assist. What hardware is required for the job? The average format calls for four tape decks.

You'll need two racks to put them in 25Hz cue detectors and a device with logic to control them. Plan on spending about \$8,500 for the hardware.

Let's take a closer look at the controller. We built a number of such units that have proven to be an ideal interface between man and machine. Pictured here is the Programmer 3. It's a third generation box with the logic well thought out.



There is a stereo audio level control for each of the four decks. Audio is summed and sent either to a regular input on the studio console or to the program mix bus of the console. Opto-isolators are inserted in the audio path of each deck to turn off the audio when that deck is not running. This avoids summing hum and hiss from each deck raising the noise floor of your audio system. Each level control has a cue detent position that sends audio to the cue bus of the studio console for cueing tapes. There are "Play" lights to indicate which deck is running and "Cue" lights that come on as 25Hz cue tones are detected at the end of each song on the tapes. A minutes and seconds count-up digital timer has been included. For operator convenience, a "Next Play" memory is built in to remember which tape deck is to be started next. These buttons are located across the bottom front of the Programmer. The "Common Next Play" button is in the center and slightly closer to the operator. It is used to start the selected next play deck.

An operational sequence might go like this: A song is being played on deck number two. It's the second one from the left on the Programmer 3 and it's associated "Play" light is on. The announcer

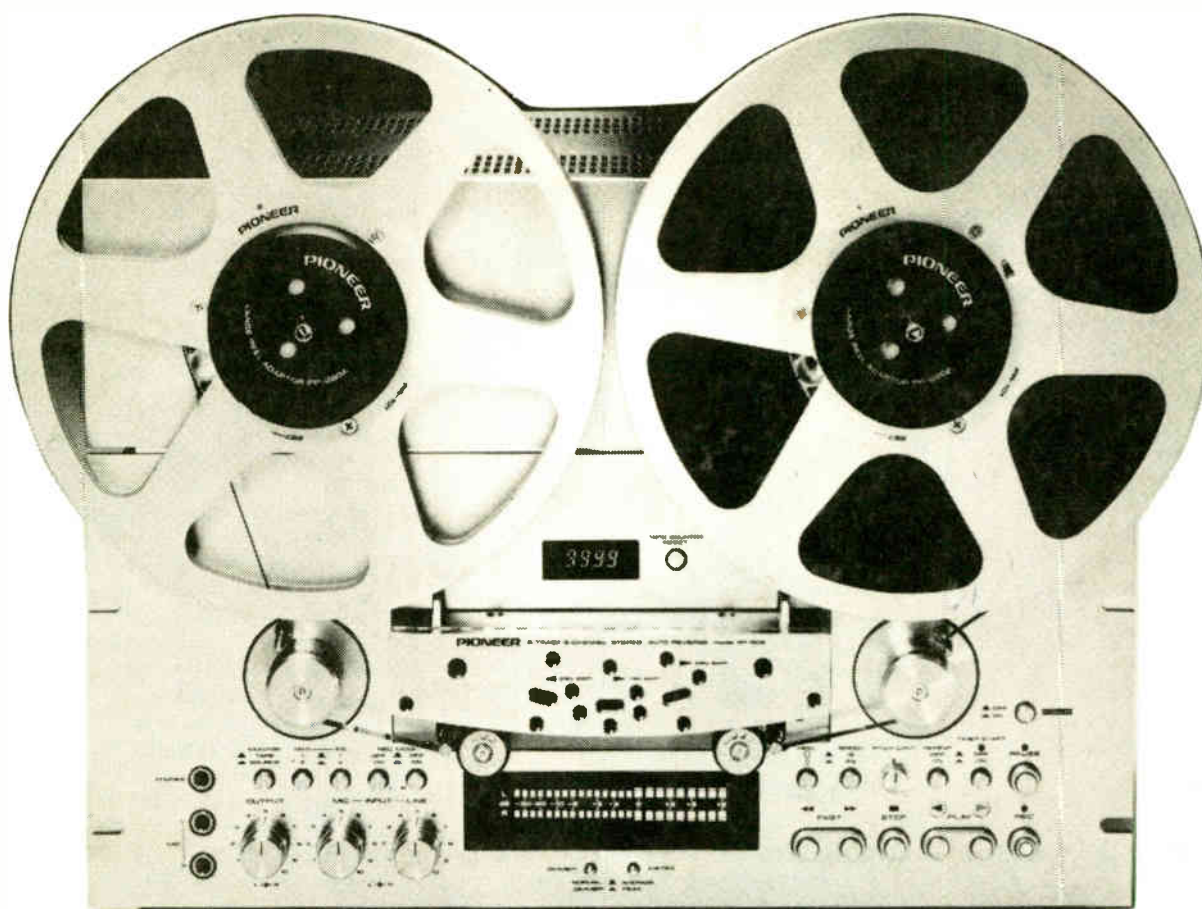
checks his music sheet and sees that deck number four should be played next. He touches the far right (number 4) next play button. It lights as does the center "Common Next Play Start" button. The Programmer is now armed and ready. When the song on deck number two is in its last few seconds of playing, a 25Hz burst lights the #2 cue light. The announcer, seeing this, can open his microphone and start talking with confidence that the timing is right and that it is indeed ending right now. This is especially helpful when the announcer is playing new music or really old music with an ending that he is unfamiliar with. Getting back to what we were saying, the announcer reads his commercials, the weather, time, temp, and then is ready for more music. He touches the "Common Next Play Start" button and deck number four starts. The digital timer resets to zero and starts counting up. The announcer's music sheet says he has eighteen second to ad lib over the instrumental intro of this song. He does and then stops talking when the timer says 0:18 precisely when the vocal portion of the music starts. The listener hears clean and tight programming. The timer continues to count up telling how much of the song has been played. The announcer checks his music list and touches the next play button for the upcoming music deck. The Programmer 3 remembers and stands ready. If the announcer is busy on the phone or with other matters he can flip a small toggle switch to "Auto". When a 25Hz cue tone is received from the deck that is playing, it automatically starts the next deck in a perfect sequence identical to that of automation. Remember though, the Programmer 3 is an assist to the live announcer--not a replacement for him.

Initial announcer reaction to live assist is usually poor. Air personalities will say "I'm being replaced by a machine . . . How can I be creative if I can't play my own music?" However, after two days of using it they reverse their position and say "It gives me more time to be creative and it's the best thing that ever happened to this station."

We don't know of one station that has gone back to playing discs after using live assist.

Our thanks to Bill Spitzer, Les Childers and Rey Lark for their input which helped make Programmer 3 what it is today.

THE COMPANY WORKHORSE . . .



THE PIONEER RT-909

- CLOSED LOOP DUAL CAPSTAN TAPE TRANSPORT (3¾ & 7½ IPS)
- FREQUENCY RESPONSE 20 - 30 KHZ AT 7½ IPS
- DISTORTION NO MORE THAN 1%
- FLUORESCENT DISPLAY LEVEL METER WITH PEAK/AVERAGE SWITCH (-30 DB TO -8 DB)
- INDEPENDENT LEFT/RIGHT RECORDING MODE SWITCH
- OUTPUT LEVEL CONTROL
- PITCH CONTROL ($\pm 6\%$) IN PLAYBACK MODE
- "LITE-TOUCH" ELECTRONIC TRANSPORT SWITCHES
- TAPE HEADS—NORMALLY 4 TRACK—EASILY CONVERTIBLE TO 2 TRACK WITH TOUGH NORTRONIC HEADS
- CONVERTED TO 1/2 TRACK RECORD/PLAYBACK SINGLE DIRECTION FOR PRODUCTION ROOM — INCLUDING LONG LASTING NORTRONIC HEADS AND BALANCED OUTPUTS . . . **\$1295.00**
- FOR 1-7/8 AND 3-3/4 IPS ADD \$65.00
- CONVERTED TO 1/2 TRACK PLAYBACK ONLY FOR AUTOMATION SYSTEM . . . **\$875.00**

SOLD AND SERVICED BY

ELECTRONIC INDUSTRIES INCORPORATED

800-558-0222

414-235-8930