April 1982

KCEE (AM) Radio
2100 N. Silverbell
Tucson, AZ 85705

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

COMMON POINT®

A MONTHLY NEWSLETTER FOR BROADCASTERS

50 cents per copy

800-558-0222 Distributed by Electronic Industries Inc., 19 E. Irving, Oshkosh, WI 54901 414-235-8930

ARENDALL BACK AT SBE HELM

Although press time preceeds the actual election, no change is anticipated in the selection of officers for the Society Of Broadcast Engineers with Ron Arendall returning as president, Doyle Thompson as vice president, Brad Dick as secretary and Edwin T. Karl as treasurer. Each officer has impressive credentials.

President:

Ronald L. Arendall
Indianapolis, IN

Mgr. of Engrg, WTHR-TV, Indianapolis, Ind. since 1976. Over 28 years experience in radio/television broadcasting. Cert Sr Broadcast Engr. Previous: Dir of Engineering, WOSU AM/FM/TV; Engrg Manager, Ohio Educational Network; Product Manager, RCA Broadcast Division. Registered PE. Former officer, National Society of Professional Engrs and SBE Ch 25; SBE Board of Directors. Current: SMPTE; SBE President.

Vice President:

Doyle D. Thompson
Atlanta, GA

Director Engrg, The Weather Channel, Atlanta, GA. 33 yrs bcst. engrg. exp. Cert. Sr. Bcst. Engr.

(cont. on page 15)

WOSU - 60 YEARS - THE PROUD VOICE OF OHIO STATE UNIVERSITY

It started in 1870 as Ohio State University under President Edward Orton Sr., with just 50 students located on a small campus not far from the Olentangy River in Columbus, Ohio. Shortly after the turn of the century, after Marconi had successfully conducted his experiments in wireless, the curiosity spread rapidly, and the wonders of wireless had arrived at the school. When the great flood of 1813 sent the Olentangy, Scioto and Alum Rivers over their banks, cutting off Columbus, it was the OSU wireless that maintained contact with the rest of

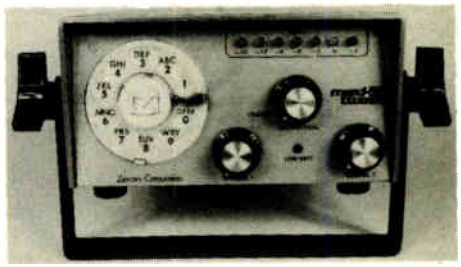
(cont. on page 3)

COMMON POINT READINGS

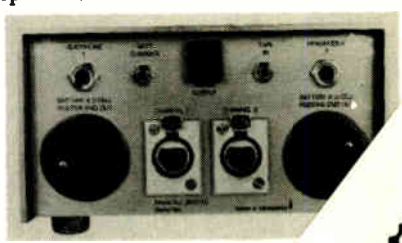
Page 1 - New SBE Board
- The Proud Voice of OSU
Page 2 - Editor's Notebook
Page 3 - Making the Best Better
Page 4 - Letters to Editor
Page 5 - Q Tips by John Shepler
Page 12- Talkback
Page 15- Persons Postscripts

MAXITEL BACK WITH ONE - TWO PUNCH

The Maxitel that hit the marketplace three years ago winning the hearts of most remote broadcasters, then forced to back peddle by competitive manufacturers came storming back this year under new ownership, improved design of the original Maxitel, and a second small model to meet market demands.



The Maxi Two is designed for those small remote requirements like retail store grand openings or promotions, church broadcasts or small sports events.



Priced at just $425.00 Two will operate fror volts or standard D 55 dbm, headroom has built-in AG June delivery.

Common Page 2

Editor's Notebook

The US mail is not exactly famous for its speed, and because Common Point is bulk mail and the last to go..most of you will be seeing this long after the NAB closes in Dallas. Attendance this year due to the economy, fewer air line flights and a number of other reasons will possibly be down from what it might have been, although the total number will be impressive.

Congratulations...and a tip of the hat to Ken Harmon, new president of the South Carolina Broadcasters Association. Ken is V.P. & G.M. of Big Bend Broadcasting with WBSC in Bennettville. He also owns WCNH & WWSD in Quincy, Fla.


Ken Harmon

Major Change Coming?...hard to imagine a station without turntables or tape recorders, but it's coming. The word is digital. High R & D prices put it out of reach now, but give it ten years...maybe five.


Ye Olde Editor

Vendor...According to Webster, he's the guy who we turn to for the nuts and bolts when we need something built, and according to the word we get...he is the bottleneck that slows delivery on those items you order.

The reason?..The economy of course. Vendor stocks are way down.

The Maxitel is back and this time joined by a L'ill Maxi with just two channels. With football just 120 days (or less) down the pike...Now's the time to make plans. Same goes for that Marti, too.

Common Point Winner . . . this month is WRBN Radio in Warner Robins, Georgia. They now have $100 to spend here at E.I. as they choose. Remember, you don't have to buy to win. The winner is chosen at random from acknowledgement cards we receive by month end.

*****

WOSU...
(cont. from page 1)

Ohio.

Two years after the first World War, in March 1920, OSU received their first experimental license with the call letters 8XL. Going from experimental, 8XL became a regular broadcast facility in April 1922 with the call letters of WEAO (willing, energetic and athletic Ohio).

The University was heavily involved in WEAO's first broadcast. In their inauguration broadcast, W. O. Thompson, president of OSU stated, WEAO was the first radio station to serve Columbus and one of the few in the country intended primarily for education. That first broadcast included all national baseball scores, an account of a $10,000 fire in Columbus, recorded music and was received over 100 miles away. WEAO continued with twice daily market and weather reports... University news and other important news.

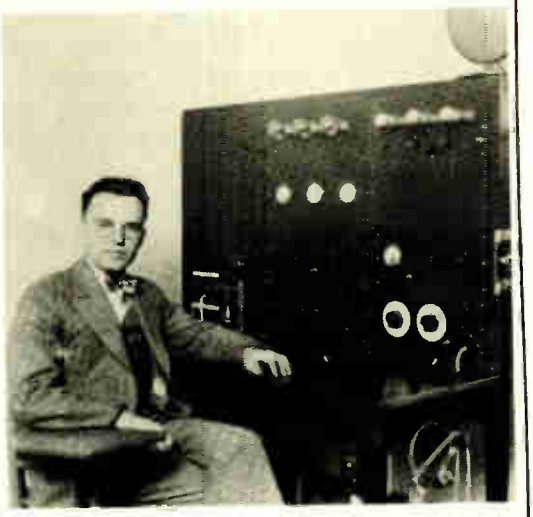
By 1926 the station was recognized nationwide as an important educational station also being mentioned in 1926 and 1927 as one of 25 of constant frequency stations by the U.S. Journal of Standards. Like many stations, WEAO moved around on the dial, first from 1029 Khz to 1060 Khz and finally to 820 Khz with a power of 1000 watts. The call letters were changed to WOSU in the early 1930's.

There were other stations with more powerful transmitters, but none with a more powerful voice than WEAO, gaining international re re-cognition as early as 1926 as an important educational station with a format that remained remarkably consistant up to 1980. One of their more famous programs was the Ohio School of the Air, originated at WEAO and rebroadcast by as many as 10 commercial stations and reaching 300,000 students at its peak.

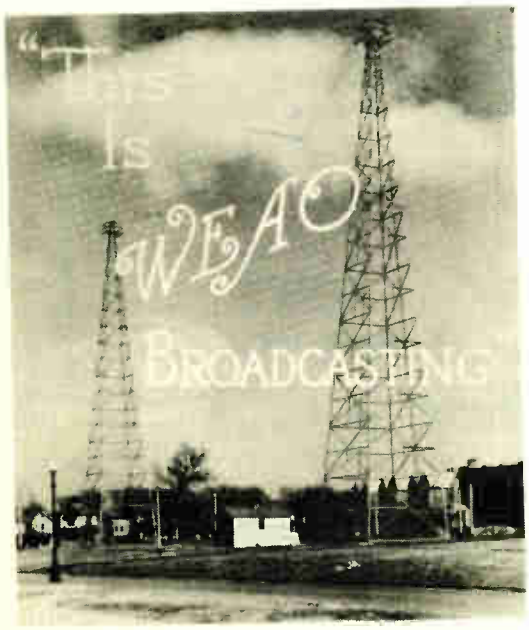
WOSU-FM license was granted in December of 1948, WOSU-AM became a charter member of National Public Radio in 1970.

The stories of broadcasting we hear and share over the years make us all proud to be involved, each in our own small way, and when a station such as WOSU celebrates its 60th year of service, let's all join in a standing round of applause for a job well done.

*****



Robert C. Higgy, first manager of WEAO (WOSU) c. 1926
Dept. of Photography
The Ohio State University



WEAO Transmitter
Columbus, Ohio
C. 1923
Dept. of Photography
The Ohio State University

Making The Best Better

by David Smith Forsman, CE

The following is a modification I made to improve audio quality in our Harris MW-5A transmitter. This modification was made after several years of personal study of the Harris PDM system and after building several model PDM systems.

DAVID SMITH FORSMAN

The circuit I changed was the triangular wave oscillator on the 1A1A1 circuit board. I measured the waveform with a scope and compared it with the waveform of the National Semiconductor LM566CN. The LM566CN has excellent linearity and makes a good source of triangular waves. I built a new oscillator and installed it in our MW-5A transmitter. The installation time was about forty five minutes. Our low, mid and high frequencies are clean, smooth, distinct, full and precise now and the signal has full loudness.

The new circuit is constructed on a 2½ by 3 inch circuit board which can be mounted on the PDM circuit board at the original oscillators position by drilling two sets of matching holes in the two circuit boards and bolting them together with screws and spacers long enough to give about ½ inch of space between them, and leaving the old circuit intact. The +40 volts which feeds Q1 and Q2 of the original circuit is cut off by cutting the circuit board foil which feeds them. This prevents interference and heterodynes from occurring between them. The frequency and amplitude of the original oscillator must be accurately measured before modification so the new oscillator can be adjusted to match it. The original circuit of our transmitter meaasured 78,555cps in frequency and 3 volts peak to peak in amplitude. This is the frequency and amplitude I set the new oscillator circuit to before installation. Frequency of the new

(cont. on page 11)

Letters to the Editor

I, too, may as well jump on the SBE Debate Band Wagon. I am a member of SBE, and have been for many years. And I am proud of my membership in the Society. I have been in electronics for more than 33 years, and I have a little more than 25 years experience as an active broadcast engineer. I have been employed in AM, FM, and TV; I have a BS in Broadcast Production from a recognized University; and I am currently employed as a Broadcast Engineer at a mid-western University. I was certified as a Senior Broadcast Engineer under the "grandfather" clause, and as I see it, being still actively employed as an engineer, I should still qualify as a Senior Broadcast Engineer without the need for collecting a bunch of "Points." I personally do not feel the need for certification, but I can see the need for some method for non-technical people to evaluate applicants for technical positions.

As I see it, the Commission has slowly but surely abdicated their position of authority, and "threw the baby out with the bath water" when they abolished the First. If the test was really so bad, why not rework it, improve it, or do whatever was necessary to make it do what it was supposed to do. I will admit that there were questions on the First Phone exam that did not reflect day to day engineering practices. But having seen some examples of questions on the certification exam, I feel that the same is true. I still maintain that the Federally issued certificate should bear more credence than a certificate issued by an organization from private enterprise, albeit a professional society.

I hope I see the day when the Commission restores the First with a new, more indicative test. Meantime, for those who feel they need it, certification through SBE is the next best thing. And I agree with Mr. Bridges. If you are unhappy with the way the SBE is being operated, then join it and try to change things by becoming active in Chapter affairs. No organization can

(cont. on page 6)

Q TIPS

by John Q. Shepler
Technical Consultant

OPPORTUNITIES UNLIMITED

The First Phone is dead. Deregulation is high gear. The opportunities in broadcast engineering have never been better!

That's right, doomsayers. The winds of change are creating a new radio industry that promises to be stronger than ever.

Witness the following:

1) Starting this year, network radio programming is reality. The new satellite programming services offer a professional sound for even the smallest stations. They also promise to alleviate hectic control rooms and demanding automation systems. Quality is going to be a lot easier to maintain, too.

2) New transmitters like the Harris MW1 keep cooking with a minimum of fuss. The equipment is getting smaller, cleaner, and a lot more reliable.

3) With fewer regulations on manufacturers, station owners will need to keep a closer eye on their technical operations.

4) More stations are coming on-line every year. There is tremendous pressure on the FCC to create new AM and FM licenses. Super power will give way to smaller, sleeker operations. Cable radio and public radio are just starting to realize their potential.

The demise of the first phone is merely the final blow to traditional broadcast engineering. The economics of modern radio have long since made the local engineering staff a rare commodity. Outside of the major markets the average number of engineers per station is now somewhere between 0 and 1!

Don't misunderstand. The need for high caliber people is greater now than ever before. All that newer, more reliable equipment is also more complicated than the equipment it replaces. This means that it takes fewer but smarter people to keep it running, smarter people that want, and deserve more money for their talents. Few stations can afford to maintain a staff of "super-techs" standing by for the next technical problem.

*****

LETTERS TO EDITOR...
(cont. from page 4)

be changed from without.

Respectfully,
E. Neil Pike
Broadcast Engineer
Fairview Heights, IL.

- - - - -

EDITOR'S NOTE

When the Federal Communications Commission retired the First Class License, what many engineers said would happen has started to happen. A Field Service Engineer with over thirty years experience, wrote to tell us about a station he had beed asked to add to his Service Itinerary.....

The station had recently changed hands, and to quote from his letter.."I went to look and found chaos. The news room was off the air and acting like a hum generator. They had abandoned it. The Production Room was still in use but sounded almost as bad as the News Room. The Control Room was still on the air, but the turntables had both died, so they went to playing music on carts."

"They had a six deck stack in the Control Room and the heads in three of them were so worn they could not be used. The modulation on the transmitter was about 65% on peaks and when I commented on it, (that it was either the Modulation Monitor or the Transmitter), they said it was okay as they didn't need the Monitor anymore anyway... their auxillary generator had not been run since who knows when...it ran on Propane Gas and they didn't even have a tank."

"They didn't like the price I quoted for my services (which is below all other Contract Engineers in the area)...and said "We don't need a 'First Phone' anymore, we can get a local TV man anytime we want."

I think this is a good example of what we can expect...until the FCC gets enough manpower to put some teeth in existing regulations. Of the 15 stations in this area, nine do not have an engineer.

(Name Withheld)

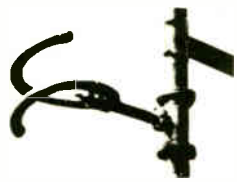
***

ELECTRONIC INDUSTRIES BROADCAST LINE CARD

phelps dodge Communications Company

ANTENNAS & TOWERS

PIROD TOWERS
LBA FOLDED UNIPOLE ANTENNAS
REMOTE BROADCAST PORTA TOWERS
ANIXTER MARK AND SCALA STL & TSL ANTENNAS
PHELPS-DODGE FM ANTENNAS



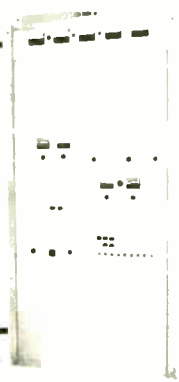
Phelps-Dodge Circularly Polarized FM Antennas

PORTA-TOWER

TRANSMISSION LINE & CABLE

BELDEN
CABLEWAVE

Cablewave Systems



Wilkinson Transmitter

QEI

WILKINSON ELECTRONICS, INC.

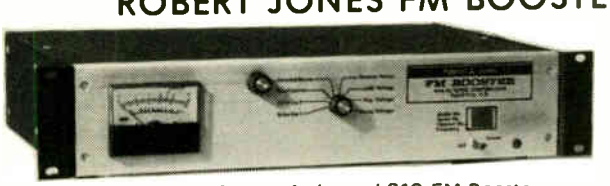
TRANSMITTERS & RECEIVERS

BROADCAST ELECTRONICS FM TRANSMITTERS
CSI AM & FM TRANSMITTERS
MARTI REMOTE BROADCAST TRANSMITTERS & RECEIVERS
MARTI STUDIO TRANSMITTER LINKS
MOSELEY REMOTE BROADCAST TRANSMITTERS & RECEIVERS
MOSELEY STUDIO TRANSMITTER LINKS
QEI EXCITERS AND TRANSMITTERS
WILKINSON AM & FM TRANSMITTERS
ROBERT JONES FM BOOSTERS & REPEATERS BY TEPCO

Marti Transmitter RPT-2

Marti Transmitter RPT-15

TEPCO



Robert A. Jones J-318 FM Booster

WILKINSON ELECTRONICS, INC.

orban

FM EXCITERS & STEREO GENERATORS

BROADCAST ELECTRONICS
ORBAN
OPTIMODS
WILKINSON

BE

BE
Stereo Generator FS-30

Optimod - AM

MARTI

ELECTRONIC INDUSTRIES

Micro-Trak Sport IV Console

AUDIO CONSOLES

AUTOGRAM
BROADCAST ELECTRONICS
LPB
MICROTRAK
RUSSCO
SHURE

BE 4M50 Console

Russco 505S console

TURNTABLES

BROADCAST ELECTRONICS (QRK)
RUSSCO
TECHNICS

Russco Mark V

RUSSCO

QRK Turntable

Russco T112

RUSSCO

Orban 418A Stereo Compressor/Limiter

BE

BE 8S250

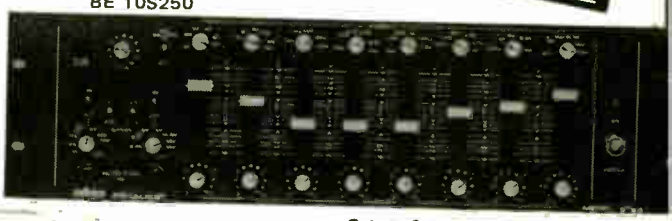
BE 10S250

AUDIO PROCESSORS

BROADCAST ELECTRONICS
DORROUGH
INOVONICS
MARTI
ORBAN

SHURE

Dorrough DAP-610



Orban 672A Equalizer

Belar AMM-3

Potomac AM-19D(210)

MONITORS

BELAR AM & FM MONITORS
DELTA ELECTRONICS
GORMAN-REDLICH EBS MONITORS
POTOMAC INSTRUMENTS PHASE MONITORS & METERS
QEI AM & FM MONITORS

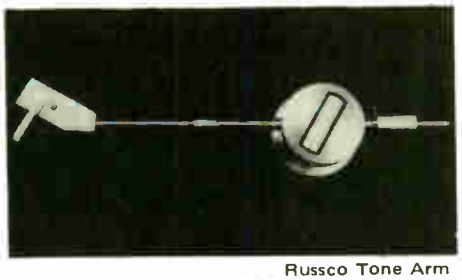
Delta Electronics DAM-1

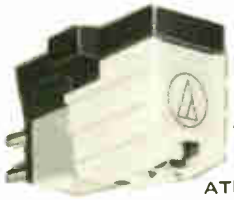
BROADCAST LINE CARD

TONE ARMS

AUDIO-TECHNICA
BROADCAST ELECTRONICS (QRK)
MICROTRAK
RUSSCO


Russco Studio Pro


Russco Tone Arm


Audio-Technica ATP-2


ATP-1

SHURE

TURNTABLE CARTRIDGES

AUDIO-TECHNICA
SHURE
STANTON

audio-technica

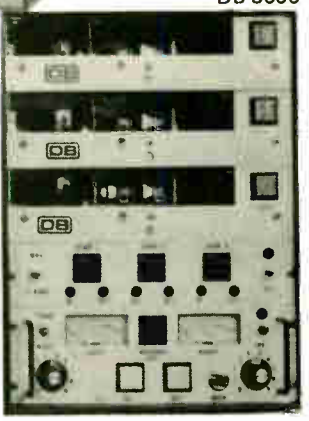

Shure Hi-Track

TAPE CARTRIDGE MACHINES

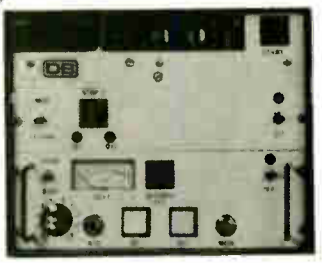
AUDI-CORD
BROADCAST ELECTRONICS
DB ELECTRONICS
TELEX


Audi-Cord Production Master

DB-3000



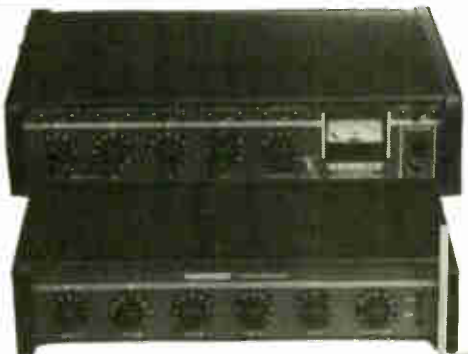

BE 2100


DB-1000

MICROPHONES & HEADPHONES

AKG
AUDIO-TECHNICA
ELECTROVOICE
SENNHEISSOR
SHURE BROS.
TURNER-TELEX
VEGA


Shure SM58


Shure M267 & M268 Microphone Mixers


AT 831


Telex WLM-100

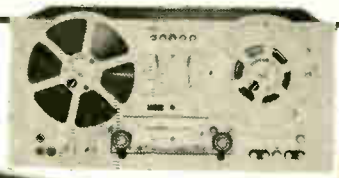

AT 815

SHURE

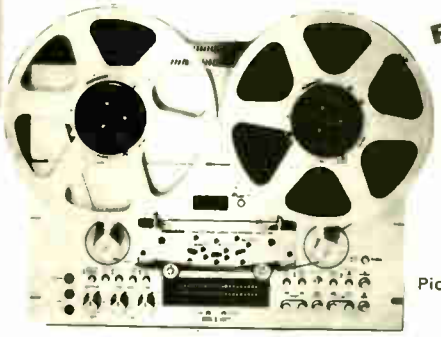

Vega Orator II

ELECTRONIC INDUSTRIES BROADCAST LINE CARD

Pioneer RT-701



Sony TCM-5000



Pioneer RT-901

REVOX

TAPE RECORDERS

JVC
MARANTZ
PIONEER
REVOX
SONY
TECHNIC
TELEX

SONY

MISCELLANEOUS

AUDIO TRANSFORMERS
TURNTABLE PREAMPS
ALIGNMENT AND TEST CARTRIDGES & TAPE
JACK PANELS & PATCH CORDS
NORTRONIC TAPE HEADS
CLOCKS & TIMERS
TEST EQUIPMENT
RELAYS
CONTROL ROOM FURNITURE
AUTOMATION SYSTEMS

ES301 100 Minute Timer

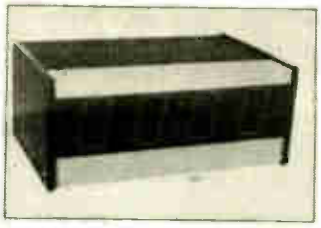
Micro Trak

ES 70 Series Console Timers

Kustom Kraft Studio Furniture
Model KK230

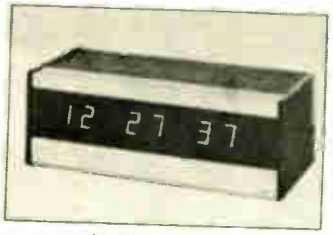
ESE

ES 90 Series
2-Inch Display Timers



Allied Broadcast Equipment

Studio Timer



ES 80 Series Timers

Kustom Kraft
Cartridge Racks

ES302 100 Minute Timer

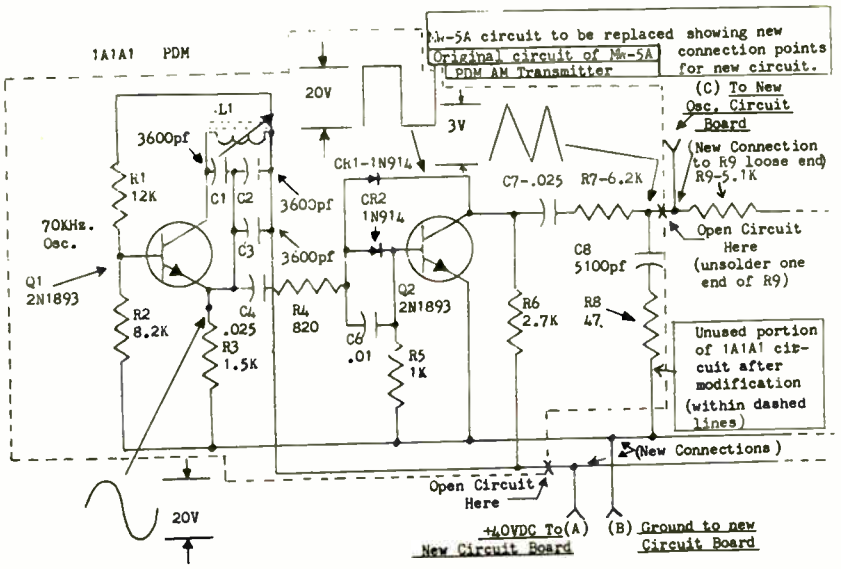
ELECTRONIC INDUSTRIES

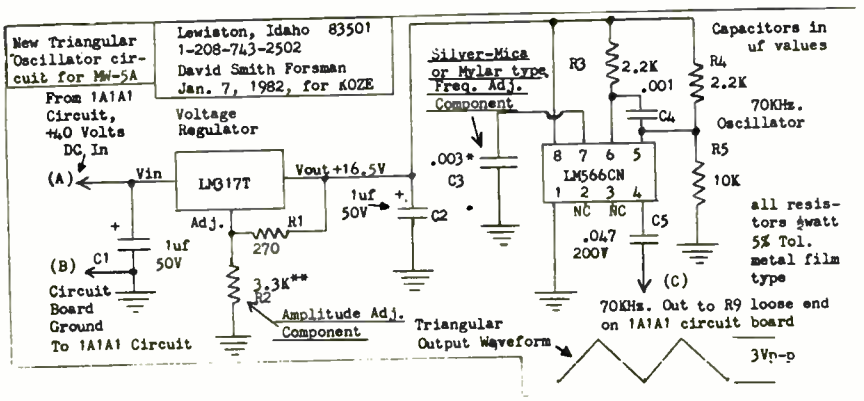
19 E. IRVING AVE. – OSHKOSH, WIS. 54901

Call Us Toll Free!
1-800-558-0222
YOUR ORDER/INFO LINE

MAKING THE BEST BETTER...

(cont. from page 3)





oscillator is set by hand selecting a capacitor for C3 which gives the desired frequency. The value of C3 will be somewhere near .003 microfarad. The output amplitude of the oscillator varies with input voltage to the LM566CN. Adjusting amplitude is therefore done by changing the value of R2 on the voltage regulator which varies its voltage output going to the LM566CN which changes its peak to peak output level. Component values for the rest of the circuit are exact values and should not be varied. R9 on the original oscillator board is unsoldered at the C8 end and the output (C) of the new oscillator is connected to R9 at this same unsoldered end. The +40 volt power source for the new board can be picked up almost anywhere on the original board but the ground point should be taken near the ground end of R8 of the original board. Once the new oscillator is built and its frequency and amplitude have been set to correspond with the original circuit, it should be tested further on the bench with a scope and counter to sure it is stable and linear. If the frequency and amplitude of the new oscillator circuit matches that of the original circuit then installation of the new oscillator should have no change on previous power and modulation settings.

EDITOR'S NOTE . . . our thanks and a $50.00 check to David Forsman for a story we know engineers, especially those with MW5's will be interested. Although there are many times when engineering changes don't have the official blessing of the manufacturer, other engineers will want to compare notes. Again, thanks to David and KOZE for making the story available.

TALKBACK

TEXAS...Enjoy article and agree with expanded SBE certification program.

MINNESOTA...SBE just wants the money. They are definitely not the way.

MISSISSIPPI...Re License Abolishment...Any engineer worth his salt should have no trouble in remaining gainfully employed...

KANSAS...Re question on certification being placed in hands of accredited trade schools...This is a way.

MISSOURI...Re Certification..Present system is firm/fair/effective and simple. Why change it at all...

IDAHO...Read comments about SBE with mixed emotions. Many pros and cons. So far have not seen anything that makes me want to join...an engineer in this business lives only on his reputation.

ILLINOIS...Really getting sick of hearing about 1st Phone and SBE. Bury 1st Phone issue and let it R.I.P.

GEORGIA...Thanks for the paper. As a member of SBE I feel four class certification will hurt the society more then help..Such as happened to ARRL and FCC have license levels.

NORTH DAKOTA...Too bad more Xmitter manufacturers don't put out modifications for older equipment rather then junking anything old.

WYOMING...Liked Persons live-assist speech..Would like to have been on hand at the time. SBE?? FCC??

Ed....Univ. of Wisconsin 27th Bdcst Clinic.

NORTH CAROLINA...The "Hot Stove League" sounds like some good people. As for SBE classification...I agree.

TEXAS...Talking about SBE..Who needs it if you're degreed or certified by a school and you still don't know how to turn on a transmitter.

IOWA...Couple of pats on the back...rebuilt carts by you (A.V.E.) in constant use and holding up well...Thanks for the 800 number.

MONTANA...How about a new logo for your news letter?? Start a contest!

Ed...We are directional..toward radio. That's why we have to make a "Common Point".

*****

COMMON POINT CLASSIFIEDS

COMPUTEMP 2

FOR THAT NEWS DEPT. OR QUICK "LIVE ASSIST"

COMPUTEMP	$89.95
100' PROBE EXTENSION	$9.95

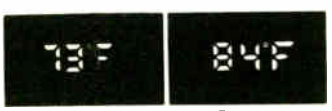
PREVICUS HIGH/PREVIOUS LOW TEMPERATURE MEMORY

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.

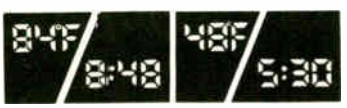
HELP PROTECT LIVESTOCK

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 occurance | Day's low & time of occurance

TIME ALARM

The unit even has a handy time alarm which will alert you daily as needed.

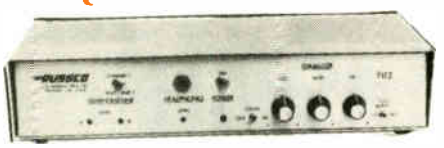
Computemp 2 continuously displays information at a glance with a bright LED readout easily visible.

CASH WITH ORDER – SAVE 10%

at

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

THE RUSSCO T112 TELEPHONE TO STUDIO EQUALIZER/COUPLER



The RUSSCO T112 is the accessory you need to get maximum fidelity performance from your T411 Remote Mixer or your present remote facility. It's a Studio Equalizer/Coupler designed to act as an interface device between a standard dial telephone line and your studio console or as an in-line equalizer-amplifier between your broadcast loop and your studio console. It really improves the voice quality of your talk show or the on-air sound of your remote broadcasts, with its 3 band equalizer pepping up the poor frequency response that's usually associated with class C broadcast loops and phone lines. The T112 is proof it doesn't cost much to bring quality sound to your broadcast. Check these RUSSCO-RELIABLE features:

** 2 separately adjustable 600 Ohm balanced outputs feed the console and a recording line simultaneously * Separate 2 Watt headphone amp with jack provides local monitoring without loading the line * You can correct line frequency response by switching in a 3 band equalizer * 60 Hz notch filter reduces the hum in the phone line * Cabinet with rack mount optional*

DISTRIBUTED BY

ELECTRONIC INDUSTRIES INC

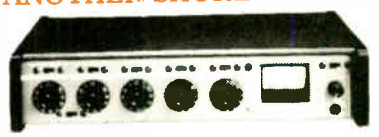
FOR SALE – DEMO – Orange County CLX FM, just $995.00. Call 800-558-0222.

FOR SALE: NEW...(1) BE 8S250 console with spare modules, $4526.00; (1) Orban 245E stereo synthesizer, $380.00; (1) Neptune 1020 10-band stereo graphic equalizer, $375.00. Contact Mark Persons 218-829-1326.

FOR SALE: DB 2000 R/PB mono, demo unit, full warranty, save $500.00. 800-558-0222.

FOR SALE: BE 4S250 console – 4 mixer – 12 input, $1450.00; 3 Switchcraft double-row jack panels, series 2400, TJ339, $80.00 each or 3 for $225.00. All items brand new – full warranty. Call 414-481-5400, ext. 24 before 3 p.m. Monday-Friday, ask for Gary.

ANOTHER SHURE THING...

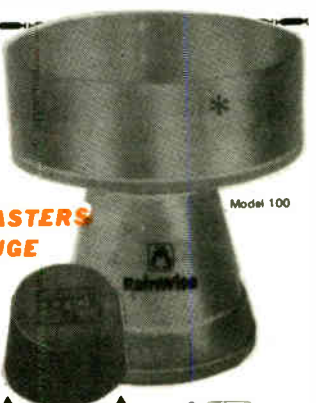


- Now Lo/Hi Level On All Channels
- Easy Stacking With Mix Bus If More Than Four Mics Required
- Battery Supply For Sessions In The Park

THE SHURE M267

Reg. $395.00 – NOW **$295.00**

SENCORE DVM 38 . . . Digital Voltmeter -- $195.00. Push button, Hi and Lo ohm, 15 Meg input, Auto ranging, 3½ digits, Manual and carton, excellent condition. Call Jim Grignon at 414-426-2201 for more information.



THE BROADCASTERS RAIN GAUGE YOU NEVER HAVE TO EMPTY

BY RainWise

Reg. $69.95
INTRO SPECIAL –
$59.95

A Completely Automatic Electronic Rain Gauge

Now you can have immediate answers to a most asked question. A must for every station -- the Broadcaster's Rain Gauge by Rainwise.

CALL 800-558-0222...your order/info line!

FOR SALE: Phelps-Dodge ECFM4 circularly polarized for bay antenna, 91.3 FM, excellent condition, $700.00. Call George Bishop (517)834-2271, ext. 40.

COMMON POINT CLASSIFIEDS

ENERGIZER® BATTERIES FROM EVEREADY®

E95 BP2 **$1.44** each

SIZE D
E 95

E93 BP2
$1.44 each

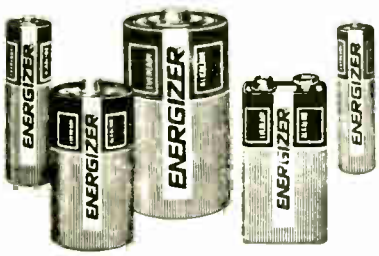
SIZE C
E 93

E91 BP2 **$1.11** each

SIZE AA
E 91

522 BP
$1.44 each

9 VOLT
522



THE ENERGY SOURCE OF THE 80'S

ENERGIZED FOR LIFE... LONG LIFE

CALL ELECTRONIC INDUSTRIES
1-800-558-0222

CLIP AND SAVE!!

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

CLIP AND SAVE!!

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

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. 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

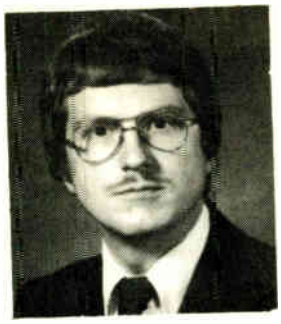
*TRANSCOM ASSOC.
3322 W. 6th St. Rd.
Greeley, CO 80631
David Sawyer
Claud Van Horn
303/356-1310
303/353-9383

*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

JOIN THE LIST OF FIELD SERVICE ENGINEERS. YOUR KNOWLEDGE IS NEEDED NOW.

*member of Society of Broadcast Engineers



PERSONS' POST SCRIPTS

by Mark Persons

THE SANDBOX

Purists and those who like to imitate purists have found a way to reduce or completely prevent unwanted vibrations from reaching broadcast turntables. We are speaking of the ones that travel along a studio operating table and onto a turntable where the phone cartridge faithfully passes these vibrations onto listeners in the form of clunks or booms. These horrendous noises started out innocently enough as the drop of a pencil or putting a phone back on its hook. The studio operator doesn't hear them in all the confusion of the day, but after the umpteen dB of compression and limiting, the gosh awful noises are heard to thump out loud and clear from thousands of radios. It will sometimes evoke a comment like "What was that!" from listeners, or make them think the announcer belched or worse "on the air". After putting up with this condition til you "can't stands no more", it's time for action.

The alternatives are:

A. Put foam rubber along the bottom perimeter of the turntable and set it back on the operating table. This helps, but doesn't solve the problem.

B. Put springs under each corner of the turntable base and the operators now have a fit trying to grab and handle the turntable, which now has the agility of jello.

C. Build a much stronger operating table with two 3/4 or even 1" pieces of plywood contact cemented together and heavily braced from underneath. This works fairly well. OR

D. You can build "sandboxes" for the turntables. That's right, you can build a sturdy box and half fill it with dry sand. This box will stand on the floor independant of the studio table. Any amount of finger tapping and coffee cup clunking on the operating table will have to be transmitted through the table, down it's legs, across the floor, and then attempt to get several hundred pounds of sand vibrating before any audible sound is heard on the air. Assuming a fairly sturdy floor, the dB loss is almost beyond our ability to measure. Sandboxes have proved to be extremely successful in classical music formats and are becoming increasingly important in all phases of the broadcast industry where improved bass response in transmitters and home stereo systems have made even disco broadcasting possible.

To make a sandbox you start with 3/4" plywood cut to make a box with the outside dimensions larger than the turntable base. The box should have a bottom and top and should be the same height as the studio operating table. Cut a rectangular hole in the operating table large enough to accomodate the sandbox plus a little clearance so that the tabletop and the sandbox do not touch under any circumstances. The space between the two will vary depending on how much tabletop movement you anticipate and how good a carpenter you are. If you fill the box only half way, there will be room inside for the phone preamp. One thing to remember before you fill the box with sand is that there will be tremendous outward pressure on the box sides, especially as the sand settles. Use many wood screws to hold the sides together.

Your work will be well rewarded with thump-free studio turntables. Tone arms won't jump off the records at the drop of a hat.

*****

SBE Officers...

(cont. from page 1)

Previous: CE, WTKR, Norfolk, VA; Dir. of Engrg. Landmark Comm. Bcst. Div.; supvr. reconstruction, WFMY TV. Grad., Central Technical Institute Former engrg. advsr. bd. member, NCAB; former chmn., NAB Engrg. Conf. Comm. Current; IEEE, SMPTE, NAB Egrg Adv. Comm., SBE Ch. 54, SBE VP.

Secretary:

Brad Dick
Lawrence, KS

Dir. of engrg, KANU/KFKU, Lawrence, Kan., since 1973, 12 yrs. exp. Cert Sr Bcst Engr. Previous: CE, KMUW; Operations Engineer, KARD-TV and KAKE-TV. Author, lecturer, conslt. BEA, De Vry Electronics Institute; BA, Wichita State University; post grad work at Kansas University in electrical engrg and computer science. Membership Comm Chairman and former Charman, SBE Ch 3. Current: AES, SBE.

Treasurer:

Edwin T. Karl
Manchester, MO

Engineer in charge of KMOX -TV, St. Louis, MO. Over 21 yrs bcstg exp. Cert Sr Bcst Engr. Previous: Mgr, Radio Sales, Harris; VP, Engrg and Ops, Suburban Broadcasting; VP Engrg, Beck-Ross Communications; VP, Engrg, Friendly Frost Broadcast Division. Amateur radio operator. Past SBE Board of Directors; Certification Committee. Current: SMPTE; AES; SBE Ch 55; SBE Treasurer.

Six men are to be selected for the Board of Directors with 10 available for those positions. Included are Leonard Ballar, Director of Engineering for Swanson Broadcasting, Tulsa, Raymond Dick, Engineering manager at WHIO-TV in Dayton, Elmer Chancellor VP/Director of Engineering for Gilmore Broadcasting, Evansville, Hugh Cleland, Chief Engineer for WCNY TV/FM Liverpool, NY, Robert Klein Director of engineering Kentucky Educational Television at Lexington, Roger Johnson Chief Engineer at KOY, Phoenix, Zaven Masoomian, Chief Engineer at WQXR AM/FM, New York City, Jack McKain, Director of Engineering at KCMO TV AM/FM, Kansas City, Glenn Romsos, Engineering Manager at WKBS-TV, Philadelphia, and Richard Rudman, Engineering Manager, WFWB (Group W), Los Angeles.

THE PMD 220 PROFESSIONAL THREE-HEAD CASSETTE RECORDER

(formerly Superscope C-207LP)

BY marantz

$189.95

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

Call Us Toll Free!
1-800-558-0222
YOUR ORDER/INFO LINE

MasterCard VISA