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March 1982

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COMMON POINT®

A MONTHLY NEWSLETTER FOR BROADCASTERS

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per copy

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IT'S DALLAS . . . AND THE NAB



The 60th Anniversary Convention of Broadcasters starts this coming April 4th in Dallas with "three full days of money saving ideas...innovative programming...and exciting special events...The NAB program for Radio calls for creative seminars on... Managing Cash Flow...The New Tax Law...Budgets...Expenses and Sales Projections...Small Market Special... the 1982 RAB Edition of Sales Sales Sales plus many others.

This year with displays spread over a 200,000 sq. ft. area, up to

500 exhibitors will present the latest in equipment. The NAB, with a tradition of offering the most significant advances on broadcast technology, will continue this year at the Engineering Conference with Paper Presentations reflecting the most timely advance in technology, equipment manufacture and engineering development. For those attending, the registration fee includes a special luncheon for engineers...all general sessions...management workshop and forums.

Those attending can plan to enjoy

discussions of the state of the art including theories and innovations. Authorities in the field will speak sharing their expertise on topics like digital standards, conversion to AM stereo...update on satellites...stereo radio STL problems...and many other subjects.

Be sure to sign up...the NAB, 1982 Engineering Conference for all the best in technology...informative nuts and bolts workshop...exciting general sessions and speakers.

MARTI Model RPT-2 Series

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



FEATURES:

- * Portable operation on internal re-chargeable nickel-cadmium battery
- * Also contains AC power supply for AC operation and/or battery charging
- * Dual frequency operation (One crystal included)
- * Meter indicates battery condition, RF power, and compression
- * Antenna mounted directly on unit
- * Broadcast-quality Compressor/Limiter handles toughest remote pickup conditions
- * Microphone input (push-to-talk) and one Hi-Level input each with individual mixing gain controls
- * 2.5-watt continuous RF output
- * Direct FM modulator.

Booth # 3109

\$695⁰⁰

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Letters to the Editor



Reference Ron Merrill's article in your December issue, I second the idea of regional shows. Many of the engineers from the smaller stations can't get to the big shows, travel costs too damn much these days. If they'll bring them within day trip distance, we'll come. Boston or Hartford or Albany, for this area.

The Federal Communications Commission has deteriorated into an organization for arbitrating between pressure groups, rather than a policymaking body. You would think that after the mess on the Citizens Band, they would know enough to keep an enforced minimum standard, but to turn loose station managers, many of whom will do anything to cut the budget, to hire whom they please for technical help, particularly when the Commission is short on enforcement personnel, is lunacy. Keep up the good work. We really appreciate your newsletter.

Joel S. Look
Claremont N.H.

Dear Sir,

I do appreciate your little Common Point Magazine and was just about to where I was reading it on a regular basis when the guy who calls himself the President comes up with a horribly near-sighted, and generally inaccurate statement. The tragedy is that there are those who, not knowing any better, actually believe these kinds of statements and then our job to re-educate becomes even harder because....."Well, I saw it in one of your industry publications".

Please, don't use this nice little advertiser to tear down what so many engineer's and licensee's have toiled so many hours to repair.

However, I am astounded that someone would call the first phone "The only tangible proof of his years of study and accomplishment". You and every other self respecting engineer has known and complained about for years that a first class license does not mean a darn thing. There is no way at all to tell the "Crash Course" incom-

(cont. on page 5)

Editor's Notebook

INFLATION. The never ending pressure of costs for goods and services is always a pet topic for people, including broadcasters. But where did it come from, where did it start? It negates that long waited for raise in pay. It postpones plans for that new Control Board or completely cancels that new Production Room. This month, "Off the Beaten Path" talks about inflation, one of the headaches of station owners and managers. Our thanks go to Scott Mueller.



Ye Olde Editor

NAB...The big convention in Dallas, less than a month away and more costly every year depending on when you go...how you go...and where you stay.

MARCH WINNER...for **Common Point** was WIGM Radio in Medford, Wisconsin. Again, there's no obligation..nothing to buy. Just return your Acknowledgement Card so we know you've received your issue of Common Point. The \$100.00 is the winners to spend anyway they wish, here at Electronic Industries.

HENRY'S HERE...After many months of delay for one reason or another, we finally get to include Henry Ruff's column. Henry now pulls his chair up to the old Pot Belly and joins the "HOT STOVE LEAGUE". You have questions? The Hot Stove League won't always have the answer, but there are real chances they will have most of them.

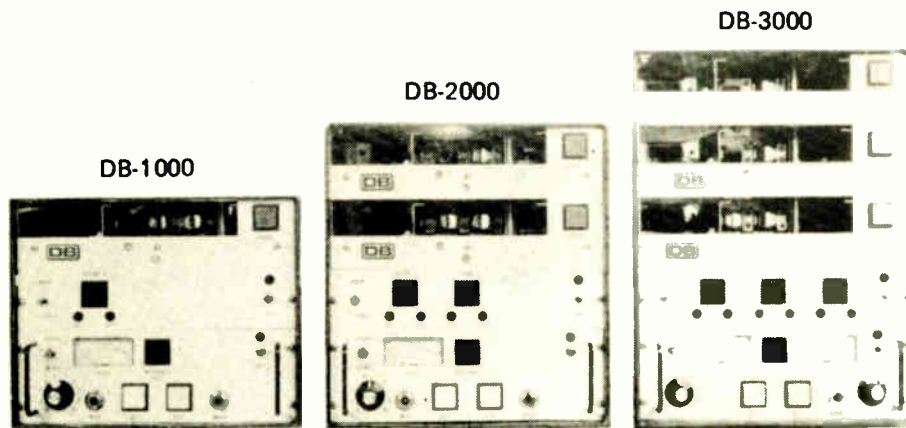
THE SBE...We have had quite a few comments and suggestions over the past few months. Some were in anger, some with tongue in cheek, but most were with a real concern for a good thing. One reader referring to all he had read, included a small clipping. It says...LIES... There's a difference between an ounce of blarney and a pound of "baloney"; Blarney is the **VAR-NISHED TRUTH**, baloney is the **UNVARNISHED LIE!**...I quote former President Lyndon Johnson..."Lets sit down and reason together".

LATE NOTE...Early Bird Registration...2nd Annual WOSU Broadcast Engineering Conference, 7/20-7/22--must be in by 3/31--SAVE--contact John Battison, 614-422-9678.

DB CART MACHINES

BUILT FOR THE STATION ENGINEER

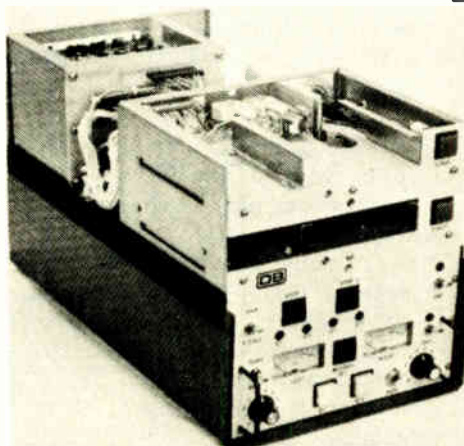
— GO FROM MONO P/B TO STEREO R/PB
ON YOUR OWN BENCH



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.



OFF THE BEATEN PATH . . . AND THEN THERE WAS INFLATION

Inflation is surely Topic A. American voters have consistently named it the No. 1 political and economic issue before the country.

There are probably as many theories as to the causes and cures of inflation as there are economists. It is an enormously complex, confused and confusing matter. All we are really sure of is that it exists and bad as it may be in this country, it is far worse in many others.

The classic economic texts show that, over a period of years, there is a jagged series of rises and falls in prices. The peaks usually coincide with wars, followed by a period of falling prices. But after World War II prices did not go down. We found, and still find ourselves in the worst peacetime inflation in our history. The time-honored pattern of peaks and valleys in prices had been broken. What had happened?

The answer to this question may well have been found in a study made about 25 years ago by two British economists, Hopkins and Phelps-Brown, and augmented later by the American, Warsh.

They argued, in essence, that the classic studies of prices did not measure the "high cost of living" but rather the "cost of high living." In other words, with the wealth of new products and services in the world today, people are not spending their money on the same things they bought in past years. The only true measure of prices and standard of living had to be based on a fundamental and common "market basket" over a long period of years.

So they chose a basic market basket of food, cloth and fuel since man's principal needs are food, clothing and shelter. And they chose to trace the purchasing power of a British carpenter and a laborer. The augmented study covered a period of over one thousand years. The results were not only interesting and informative, and of great value, but they completely refuted the old theory of peaks and valleys in prices.

(cont. on page 15)

- 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 Hall 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: Recorder 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

BOOTH
NO. 2024



D-B ELECTRONICS, INC.

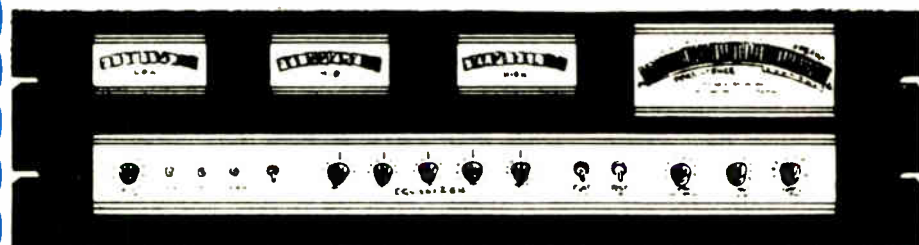
Gaithersburg, Maryland 20760

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THE FAMED DAP GOES DIGITAL



Discriminate Audio Processor, Model 610

\$3200⁰⁰

The Dorrough Audio Processor DAP-610 operates on the same discriminate triband principle as the classic 310.

The DAP-610 departs from conventional gain reduction techniques which utilize a servo loop to control attenuation of the audio signal. Instead the DAP-610 utilizes a frequency discriminate digital control signal, operating in real time, to control the action of analog attenuators, which are located within the discriminate path of the input audio signal. This concept eliminates the delay in attenuator action on the leading edge of the input waveform. Attack and release time are not a function of the program in the digital control circuit and are fixed, as are the discriminate frequency bands of this device.

"Pleasure" controls, located on the front panel, provide for adjustment of Input Level, Individual Compressor Threshold, Equalization, Limiting, and Output Level. Metering by LED display is provided for each of the three compressor signals. The output signal

is monitored by a 40 segment version of the Dorrough Audio Meter, with the provision for comparison with another audio signal through the use of an external input.

DORROUGH AUDIO METER

This device simultaneously displays, in LED form, the peak amplitude and average persistence of the complex audio waveform.

Effective gain-riding for equal loudness and available headroom, can be accomplished by monitoring the action of the persistence scale, while observing the amplitude of the peak excursions on a single arched scale. As a result this unique metering concept becomes a useful tool in distinguishing processed from un-processed program material for loudness content. Primarily designed for TV, this meter lends itself to any broadcast service.

Both of these products will be on display at the NAB show in the Dorrough Electronic's Booth #2112.

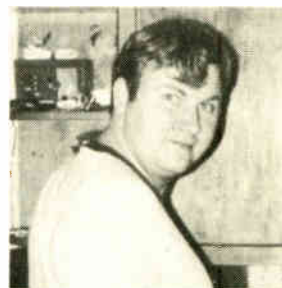
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*Henry
Says . . .*



by
Henry
Rue

Ever notice how audio ranks at the FCC? Once you do the CP proof you never need do an audio proof for a TV station again. On the other hand the FM station must do a stereo proof at turn on and a mono proof every year thereafter and the poor AM station must run an audio proof every year and partial RF proof every three years! Now how about deregulating that??

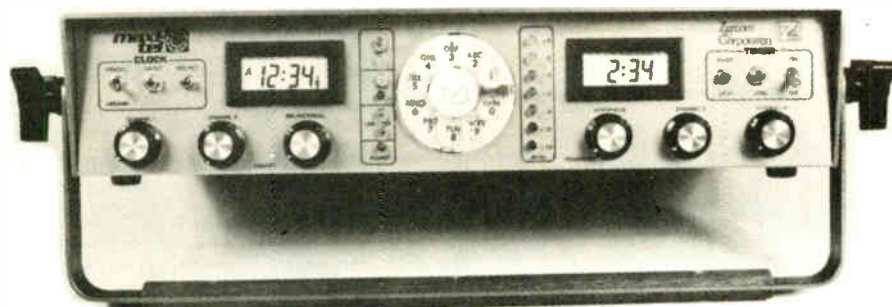
The FCC wants more clout. Not content with slamming 20 G's onto a station in Utah which "carelessly" built its transmitter in the wrong location, with too high a tower and over power, it wants authority to hit you with a 100 G fine. That would wipe out most small stations in one sweep. Imagine a daytime 250 watter grossing \$125,000 a year getting a \$100,000 fine? Instant dark city. That's it folks, lower taxes, cut the budget, now up the fines to replace the funds in the treasury! Kind of like a wind fall tax on oil companies. You pay for it with higher pump prices every time you fill up.

Deregulation is the elimination of the program log? How does any station operate without a log? If you need a network affidavit, or sponsor "as ran" certification, where do you get the proof for it if you don't have a log? How does the nock know what to run for spots, etc. if he doesn't have a log? Why not have simply said, "you goody goody two shoes creeps that want to cause trouble for stations by examining their logs to see if they meet public service criteria will simply have to LISTEN to the station rather than be allowed to read their logs?"

NEXT MONTH--Working on ITC, or 3M, or whatever, Cart Decks.

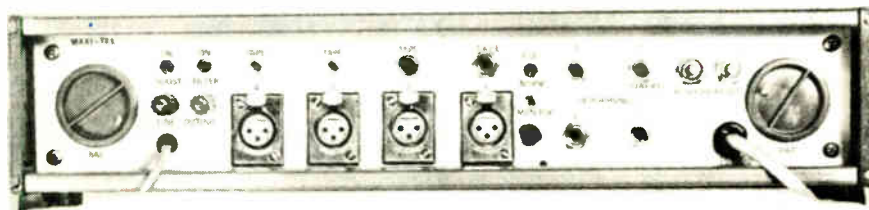
MEET THE COMPETITION -- HEAD ON!
GET READY FOR SPORTS
WITH THE PROFESSIONAL . . .

**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.

\$795⁰⁰



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tel**  **by zercom**
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LETTERS TO EDITOR
 (cont. from page 2)

petents from the real engineers. Any engineer or manager who used the fact a person had a first class license as the determining factor of his qualifications was either not a very good engineer or not a very good manager.

Then there was the comment that station owners were told they would no longer have to worry about the credentials or certification to prove the engineer knew his job. You know and I know not one thing has changed. The radio station licensee has precisely the same obligation he always has had and the engineer he hires risks no more than he ever did.

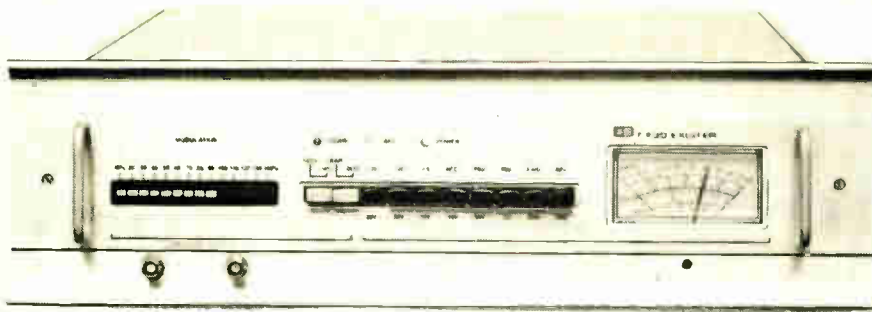
All the work that has gone into getting those outlandish rules abolished could have been hurt if such comments came from a publication with a wider circulation or if they had come back when we all were working for you to reduce government regulation in the business. I know what you say may be hot stuff with certain people only interested in hiding their lack of skill with a piece of paper....but most engineers and most management knows that the real proof of the qualified engineer is in the combination of information we gather anytime we are hiring an employee. His knowledge in the interview, his training and the courses he took, recommendations, his previous work experience and the type of work he has done-where applicable. There is, of course, more but we darn sure don't use his first class license to determine his ability to do a job for any thing else than F.C.C. compliance.

Nothing has changed....how many first class license holders do you know who have been penalized for failure to do their job? Now compare that to the number of radio stations who have been fined for the engineers failure to do their job, or because management and the engineer did not give a hoot.

The licensee still has the responsibility, just as they should, to find people with the training or experience, or both, who can do the job right. If it is not done right they should stand accountable. Nothing has changed except to finally have rid ourselves of a rule that kept many fully qualified engineers from legally doing some of our work and also to cover incompetent engineers with an undeserved viel of compe-

(cont. on page 11)

The FM Performance Champion Broadcast Electronics' FX-30 Exciter.



From coast to coast in more than 150 stations Broadcast Electronics' new FM Exciter - the FX 30 - delivers superior performance that rivals the best hi-fidelity tuners available.

For the Purist, Purest Sound.

The FX-30 has the lowest distortion with THD and IMD less than 0.08%. And, it's the first exciter to specify Transient Intermodulation Distortion (TIM) at less than 0.1%.

Loud, yet Quiet.

The FX-30 is loud and sparkling clean with your programming, yet it's the quietest exciter of all, with a typical S/N ratio of 78 dB.

Set It and Forget It.

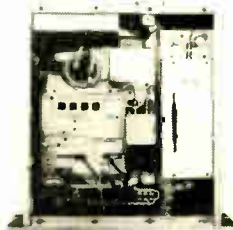
Automatic control circuits eliminate adjustments after initial setup. Exciter output is automatically stabilized and fully protected. Set it and forget it.

Delivery Is Prompt.

As RF power output is adjustable up to 30 watts, the FX-30 will improve the performance of any transmitter. It will fit directly in place of your present exciter. Delivery is prompt.

Broadband and Synthesized.

Advanced dual speed phase locked loop puts more than 2000 channels at your fingertips.



Styling Elegance.

Elegant in styling as well as in performance, the new look in FM is the elegant look of the FX-30.

**Booth
No. 3104**



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ELECTRONICS INC.**

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TALKBACK

California...Especially appreciate attitude toward engineers reflected constantly in Common Point.

Michigan...Re QOM For Engineering...Ferris State College, Big Rapids, MI.

Virginia...Keep up tech info. How many of us besides radio have "Ham"? K3VMS

Montana...Persons must be ham or carry mouse in his pocket. Only excuse for using "we" and "our" in column.

Louisiana...Enjoy your point of view...if and when AM stereo becomes reality...what will audience reaction be?

(Ed. . . . Slow)

Idaho...Been reading about satellite program service...OK for low staff operation...If you don't care for individuality...local listener trends...it will get you on the air...how can one or two formats serve whole nation?...Taint pie in the sky!

Ohio...Let's hear a lot more on SBE. It certainly does not do much for its members...No directory for example. It needs shake up!

Alabama...Enjoy articles and tips, product info is very useful...like to see more Tech Data on AM Stereo.. Think public will benefit...as well as radio when resolved.

Illinois...First...no more First phones...Then...no more mod monitors. Next the FCC will eliminate xmitters.

Washington...What is world coming to? This is small market... 3 AM's 3 FM's. We are only station with "Chief" on staff. The others get by but often sound like it. Getting by that is.

New Mexico...License or no makes no difference. Part of responsibility in management. You pay for what you get...other half is engineer himself. RE 12/81 Persons P.S.... Highly compressed air 35 psi too much...Especially on older equipment.

New York...About mod monitors... Have had enough trouble with type approved monitors...what happens when there is nothing you can trust?

Massachusetts...RE Regional Convention...Yes! Maybe small market station could send their CE/CO.

Arkansas...Don't always agree with you 100%...but keep on swinging!

Kansas...Best place for Associate Degree? Try Hutchinson Community College...excellent tech program.

THE ULTIMATE TAPE CARTRIDGE

NEW MasterCart II™ - The Next Generation



Over 20 years of cartridge experience brings you the new Fidelipac MasterCart II - the ultimate tape cartridge.

Superior performance in any tape machine.

Extremely low friction tape path for minimum wow and flutter and longest tape life.

New front corner post for precise tape alignment and excellent stereo phase stability.

Factory loaded with Fidelipac's exclusive HOT TAPE®, for up to 8dB more output than standard tapes.

All parts field replaceable without special tools.

SPECIFICATIONS:

TYPE	Meets or exceeds all existing NAB Type AA specifications
STEREO PHASE REPEATABILITY	50° normal (30° typical) relative to left and right audio signal at 12.5kHz
FREQUENCY RANGE	20 to 20,000Hz or greater (cart machine dependent) at 7½ ips (19.05 cm/s)
TYPE OF TAPE	Fidelipac TAS-500 Series HOT TAPE
WOW AND FLUTTER	Less than 0.2% (weighted)
SPLICE	Visible tape splice. Sensing foil available at additional cost.
MAX. OPERATING TEMPERATURE	150° (66 C)
BASE COLOR	Metallic bronze.
DIMENSIONS	4 x 5.175 x 0.875 inches (101 x 133 x 22 mm).
SHIPPING WEIGHT	(100 carts) Empty: 22.6lb (10.27kg) 10.5 min. 30.7lb (14kg) 100-cart bulk empty container: 20.5lb (9.3kg)
SHIPPING VOLUME	100-cart container: 1.46ft. ³ (0.041 m ³) 100-cart bulk empty container: 1.22ft. ³ (0.034 m ³)

**BOOTH
No. 3132**



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LETTERS TO EDITOR

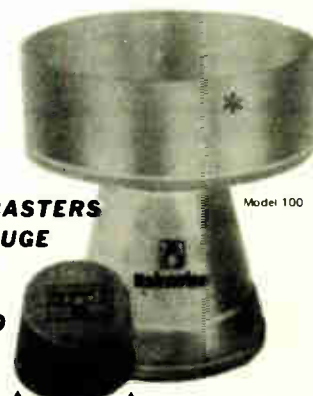
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tence. Darnedest thing, it comes down again to a persons ability to do a job, which is just what we licensee's and engineer's who fought so hard to get rid of those rules were trying to accomplish. It's very simple, this was not an anti-licensee or anti-engineer move, it was a hard earned change that puts skill back where a piece of paper once stood. The station that did not comply with rules and ran a sloppily engineered operation will continue to do it and the ones that want to do a good job will have the freedom to get any skillful engineer who has any simple F.C.C. certification. Once you have lived in a small town for a while you'll understand how damaging your man's commentary can be.

Sincerely Yours,
William R. Buchanan

Ed.....you don't shoot a horse when it throws a shoe.....only when it breaks a leg. The First Ticket was limping. The new General License will have the whole industry limping. It will take the Society of Broadcast Engineers, our Universities and Trade Schools working as an entity to bring credibility to the Broadcast Engineering License and protection to our broadcast station owners.

**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!



Q TIPS

by John Q. Shepler
Technical Consultant

GETTING STARTED ON THAT NEW JOB

Good grief, where do I start? If you have just walked into a new job, you're probably fighting that feeling of being overwhelmed by a million little problems that all need to be solved now. OK, what do you do first?

Unless there is a critical technical problem, the most important thing you can do is get organized. Most books on making better use of your time emphasize listing your projects in order of priority.

This is a great idea but not the first step. Your first move should be to get everyone involved in the decision making process. The reason for this is simple, though maybe not obvious. When you set priorities by yourself, you naturally limit your perspective to only those things you personally consider important. Chances are, you'll be forgetting some of the needs of the rest of the staff.

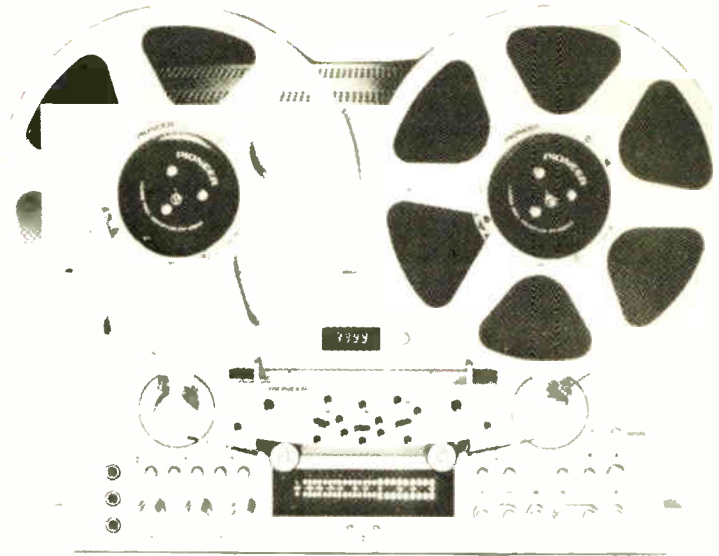
While you may prefer to test the spare tubes, the program director may be pacing his office having a fit because two studio cart machines have given up the ghost. Meanwhile, the station manager is nursing a headache caused by three lost remotes. Why? Because the RPU transmitter has a shorted output stage. The net result is bad feelings toward you...bad feelings you can easily avoid.

The trick is to get everyone involved from the very beginning. If the PD doesn't come to you, then you go to him. Better yet, set up a meeting with programming, management, and even sales if they are interested. Let everyone get their gripes on the table and then come up with a battle plan that is agreeable to everyone.

Many of your own pet projects will no doubt get delayed. That's OK. After you've taken care of the other guys they will be more than happy to let you tinker in the shop.

Cooperation and organization are simply grease in the gears of life. Take the initiative to win over your co-workers and you'll find that your technical problems will be a lot less hectic.

THE COMPANY WORKHORSE . . .



THE PIONEER RT-909

- CLOSED LOOP DUAL CAPSTAN TAPE TRANSPORT (3¼ & 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 (±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

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COMMON POINT CLASSIFIEDS

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

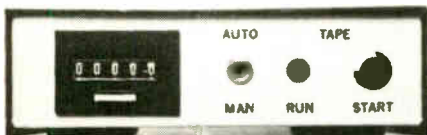


- Directly replace mercury vapor tubes
- Go/No-Go Indicator on each diode
- Repairable—diodes easily replaced—no encapsulation
- Reduces heat, power cost, hash, AC hum
- Eliminates filament transformers
- High voltage warning lights
- Operates from -65° C to +70° C in free air
- Eliminates preheating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

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.

DB-TEL TELEPHONE ANSWERING INTERFACE

Automatic telephone answering for DB 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

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.

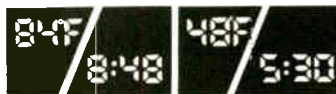
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Temperature

Outdoor
Temperature



Day's high & time
of occurrence

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of occurrence

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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.
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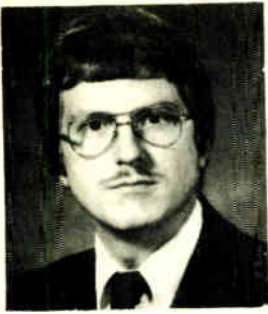
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PERSONS' POST SCRIPTS

by Mark
Persons

We recently supervised the construction of a new 100Kw FM transmitter site. It has a 600 foot unpainted tower with strobe lighting and a 20Kw transmitter. All of the usual TV interference complaints were handled by installing traps and filters for the station's operating frequency at each affected receiving antenna. However, residents within several miles of the tower continued to have AM, FM, and TV interference problems, but only when the wind blew. It appeared as one or two line high white streaks in television screens and as "cracking" in radios. It was logical to assume that these impulses of noise were coming from a defective insulator on a nearby powerline. An arc across an insulator could cause such a problem. The power company was called in and they found an intermittent ground on one pole, but the problem persisted. Further checking narrowed it down to the transmitter site itself. We checked for faulty power connections to the transmitter, but found none. A climber was sent to the top looking for loose hardware or wires swinging in the wind. He found nothing. Finally, I inspected the guy line anchors and found the problem. The pre-formed guy line grips had a plastic coating which prevented them from making a good electrical connection between the guy lines and guy anchors. There was also a lot of other hardware like turnbuckles and pins between the guy lines and anchors. Each added to increase the unreliability of the electrical connections. Wind, blowing by the guy lines, generated high static charges on the lines. The charges arced across the hardware joints at the guy anchors only after reaching hundreds or thousands of volts. The worst arcing took place on the longest guy lines which had 200 foot fiberglass rods at the top end near the FM antenna. Arcing was so bad that three of seven strands of quarter inch steel safety wire were burned off in just two months. The safety wire had been run thru the turnbuckles to prevent vandalism. It provided a handy conductor for

static charges to arc to. Think of it this way, we had at least three arc transmitters with 750 foot long antennas. We firmly clamped a quarter inch steel wire to each guy line and guy anchor ground to eliminate the problem.

On another subject, every station should have an "Electronics Discrepancy Sheet" with room to write a COMPLETE description of problems encountered, what was done as a temporary measure, name of person reporting the problem and the date. "Cart deck bad" does not tell the story. It should say something like "Cart recorder in production studio--the record meter read normally, the cart ran thru the machine, but nothing was recorded on it. Moved a cart recorder in from the news room temporarily. Joe Doe 3/14/81." Remember, no electronic technician can troubleshoot a symptom he doesn't understand.

INFLATION

(cont. from page 3)

The study showed that in the past one thousand years there have been four inflationary surges, each lasting for decades, followed by a long period of steady prices at a new and higher plateau. Never have prices gone down to former levels. These four surges have coincided with sweeping and radical changes in the world's economy. We are in the fourth one right now.

The first surge came following the Dark Ages, when in the Thirteenth Century the western world entered the era of feudalism and commerce. This brought with it widespread economic changes: cities began to grow up, new crafts developed, there were new systems of distribution and exchange.

Next, in the Sixteenth Century came the era of what historians call mercantilism. Strong nations emerged, international trade and capitalism developed, colonialism appeared, governments grew in size and importance. Again, widespread economic change.

The third surge came in the Eighteenth Century with the Industrial

Revolution. Factories developed, mechanization and mass production developed, there was more division of labor. A far more complex economy was, for a time, accompanied by severe inflation.

And so we come to the fourth surge, going on right now. We are well into another era of radical economic change. Today we see multinational corporations, huge government and the welfare state, international banking supplying credit on an unprecedented scale, and probably above all a revolutionary upsurge in services and "information." There was a time when well over half the people in this country were engaged in agriculture. Now 5% of the population supplies our food. We see forecasts that by the end of this century our blue collar production workers will be down to 7% of the population due to the automation of production. Those who lose their jobs in production will be absorbed into the service industries. There is no doubt that we are in a period of tremendous upheaval and rapid change.

What causes inflation during these periods of change, and then what brings us to a new and higher plateau where prices stabilize?

The theory is that during the years when radical economic change is taking place and we are shifting gears into the new system, the economy is operating inefficiently. Changes are resisted, resulting in friction and quarreling. There is much shifting of labor in the new industries and services. Great infusions of new capital are necessary and not always invested efficiently. Demands of consumers are in a state of flux. Government is in a turmoil of change. Bottlenecks develop. These inefficiencies are costly and result in inflation.

Finally, after some years, the new system comes into adjustment, efficiency returns and prices smooth out on the new and higher plateau. With the adjustment of people's income to prices, purchasing power stabilizes.

So, depending on your age, you can figure out what this theory may mean to you in your own affairs.

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THREE-HEAD CASSETTE RECORDER**

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STILL **\$189⁹⁵**

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.

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