APRIL 1994

Parkersburg Amateur Radio Klub

Di-Dah-Dit

The Official Newsleter of the Parkersburg Amateur Radio Klub
P. O. Box 2112 Parkersburg, WV 26101

COMPUTER EMI

Here are a few suggestions on tracking down computer Electromagnetic Interference from the pages of QST 10/93 To reduce the EMI you must firs determine the exact source. (Not always so easy)

Try disconnecting cables to your printer and other external devices (including your monitor and keyboard) one at a me. (To be completely safe you should turn off the computer before plugging or unplugging anything, most people don't, but you never know when fate may strike.) Listen to the interference signal as you do so. If it suddenly disappears or becomes substantially weaker when you disconnect a particular cable, try adding some ferrite chokes (sold by Radio Shack, Amidon or MFJ) to the cable at the point where it connects to the computer. You may need to add several to fully suppress the signal. Also, make sure that the cable is adequately shielded. If the cable isn't shielded at all, (ribbon cable) replace it.

If you remove every cable and still have interference, the computers AC power cord may be radiating the signal. Try wrapping the cord through a toroidal ferrite core.

Minutes: March 1994 meeting

the 50/50 was won by George Bonnett! --He also gave Tim some Ice Cream and then took it back.

Rory Hughes called the meeting to order at 7:10 pm. The Minutes were read, changed and approved.

There was then discussion about Field Day and about the purchase of finger stock for the .97 cavities.

Old Business- Rory read over the applicants of the clubs classes.

New Business- Earl mentioned the need for an ATV xmtr for use during the Schoolboy Regatta.

Rory read a letter from the WV Amateur Radio Council dealing with the nominations for the 1994 Outstanding Amateur of the Year.

John McGuffy asked if any would be interested in getting a bus for Dayton and said that he would look into it.

Bob Lyons made a motion that we adjourn and Larry Dale. seconded. Meeting was adjourned at 8:05. N8NMA

New Klub Officers for 1993-94

Parkersburg Amateur Radio Klub

President - Rory Hughes KB8MDN

1st. VP- Roy Maull N8YYS

2nd. VP- John McGuffey N8NBL

3rd. VP- Earl Hulce KB8HRG

Sec.- Tom Jones N8NMA

Tres.- Jane McGuffey N8MOW

NL Eds- Jerry KA8NJW

Russ N8FID

Buy Sell Trade

For the Commodore 64 I Have the following programs for sale:

1. AEA Doctor DX...Morse code contest trainer cartridge.
2. Morse University.....Very FB code trainer cartridge.
3. Electronice PAC.....15 Ham programs including: Antenna Design, Computing formulas, AC Circuits, DC Circuits, Beam heading and many more useful programs, on disk.

If interested call 304-863-9569....Tim KB8JWF. 73's

BUG OR KEY?

Bugs, straight keys and electronic keyers all have advantages and disadvantages. It's usually a matter of personal preference. For example, you can easily send clean, readable CW with an electronic keyer, if you use it properly. Although keyers will maintain the correct length of dits and dahs, you're still responsible for controlling the spaces that control characters and words (although some keyers help with these, too)

However fancy the keyer, there's plenty of opportunity for sloppiness if you're not careful. Once you've mastered an electronic keyer, it is usually easier to increase your sending speed substantially.

Electronic keyers often include memory features that allow you to store certain words that you send often (usually your call or CQ TEST). Sending the stored text is as easy as pressing a single button.

Bugs- are semiautomatic keys that make dits mechanically with you providing the dashes. These require more dexterity on the part of the operator. they're capable of very high speeds in the right hands, but few operators these days have the time or patience to master them. Straight are the least expensive and the easiest to learn. However high speed sending is difficult and using one for long periods of time can be tiring.

In terms of quality, I've heard outstanding code generated by all three. It isn't so much the mechanism as the person who is using it. As someone once said, "Keys don't send code--people send code." TNX QST 10/93

New CW Band Segment

Following a suggestion offered by a California Ham, Wallice McIntire, AA6HA the FCC has issued proposal, PR Docket 94-127. This Notice of Proposed Rulemaking was issued January 15 and will be open for comment until April 15. Wallice suggested that the two meter band is a mess in southern California. It is overused and overcrowded to such an extent as to be worthless. This proposal would create a new band segment in the two meter band. This new segment would be located between 146 /148 Mhz. The Mode to be used in this segment is CW, and only CW. this is because CW is more spectrum efficient and modulated CW can be transmitted over FM and thus use existing equipment.

The FCC is aware that this might pose a problem for the new NO-code Techs, but it is felt that the wise use of spectrum space is a fair trade off. The late word received from the ARRL is that, they will back the proposal because the required new skills will encourage CW use. Some of the new skills involved would be: left handed mobile keying, two finger HT keying and ear training for CW ID's and QSO's.

This proposal looks like a sure thing because of past abuse of the band and this is the FCC's way of telling us to shape up. Remember you have until April 15 to let the FCC know of your thoughts on Docket 94-127. (As for me, I am limbering up the old index finger, See ya on April 1, 1994, KA8NJW)

Klub/ARES Net on
146.970
Tuesday's at 9 p.m.
Valley Girls Net
146.970
Thursday"s at 9 p.m.

CONTINUITY TESTER

What follows is an article submitted by Perry Rupe, WD8IFR. To say the least, I am impressed with the quality of work and design involved. Any other builders out there? Earl copy one of those designs off the napkin and submit it. If you find this useful, please take the time to let Perry know.

I needed a continuity tester for MOS memory circuits which would not damage the IC's. It should not respond to forward biased semiconductor junctions, only to the foil paths. Ohmmeters apply at least 7.5 volts and some more than 12 volts. even 1.5 volts will forward bias junctions, giving misleading readings and higher readings can cause damage. Am audible output would eliminate the need to look at the meter each time.

This design supplies less than 200 millivolts to the circuit being tested. At this voltage even germanium junctions will not be biased enough to give unwanted indications. Any resistance less than about 20 Ohms will give an audible output. As with any ohmmeter this continuity tester is for use on UNPOWERED circuits only.

A and B are the continuity test leads. (refer to figure #1) R1, D1 and D2 give some protection to the tester form expected voltages. R1 should be a low wattage resister, 1/10 of a watt if possible, but 1/4 of a watt is OK and easier to find. All other resisters can be a 1/4 of a watt or whatever you have. D1 and D2 can be any 1 amp. power diodes you have, 1N4001's are fine.

The LM339 is a quad comparator IC. The R2, R3, R4, and R5 bias the first comparator so that its output is low impedance to ground when idle. A short across A and B causes the output to go high impedance which allows C1 to start charging.

The second comparator acts as a square wave oscillator with C1 (and R9) setting the frequency.

The last two comparators are used as amplifiers and are wired in parallel for more current, as the LM339 is a low power device. R13 and R14 are equalizing resistors.

Two AA penlight cells in series supply power and should last a very long time (unless you forget to turn the switch off after use). Idle current is less than 2 mA. and with output is around 20 mA.

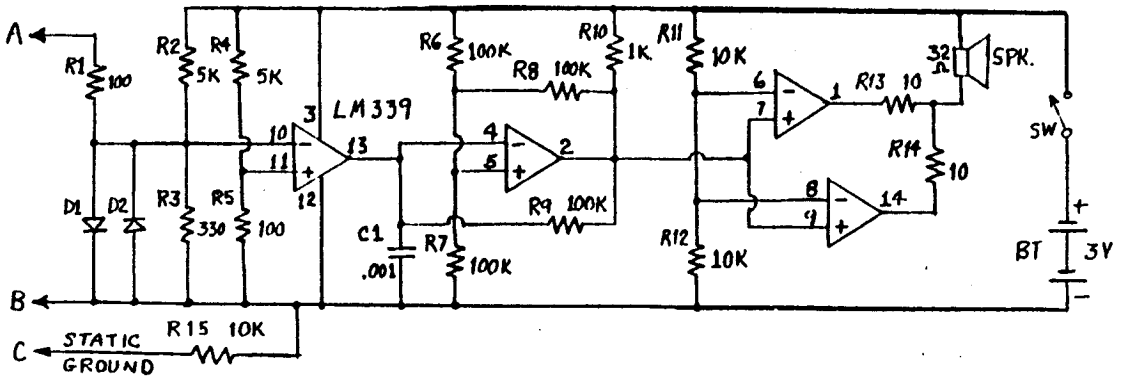
The C lead is to discharge static electricity if working with especially sensitive circuits and goes to the common ground for the circuit under test, wrist strap, etc. It is not used for most testing.

The speaker is a 32 ohm unit form a cheap AM radio; actually, the tester was built into the radio case. If a 32 or 45 ohm speaker can't be found, use an output transformer with an 8 ohm speaker. Any output transformer with a primary (or tap) from 100 to 1000 ohms will probably work. If you are buying new parts consider the Radio Shack #273-073 piezo transducer. I suspect it would replace the 32 ohm speaker but have not tried it, you are on your own. It will be much cheaper than an 8 ohm speaker and an output transformer.

The circuit was built on half of a Radio Shack #276-159 Dual IC Board. It is a little tight but it is convenient. Radio Shack also hes the LM339 and the other parts.

The continuity tester makes a passable code practice oscillator, Just add a key across the A and B leads. C1 can be changed if you prefer a different frequency.

Perry WD8IFR



Testing Results

According to Larry Dale, KF8NW, VE-Team Liaison, the following are the results of the testing given at the Red Cross Center at Parkersburg, WV on April 5, 1994.

Total elements administered	38
Total elements passed	26
Total elements failed	12
Percentage of success	68.5%

Of the licenses earned this session one was Novice, three were Tech, five were Tech/HF, two were Advanced, and two were Extra Class licenses. There were no General Class licenses earned this session. There were 18 appliicants served this session.

How many HAMS are there in the Mid-Ohio Valley? (Try to answer this yourself before reading on..)

There are:

65,277 Extra Class;

112,637 Anvanced Class;

126,898 General Class;

227,681 Tech Class (including no-code and Tech with HF); and

99,105 Novice Class for a total of 631,598 HAMS in our area. The Technician and Extra Class licenses showed the largest percentage of increase in 1993.

Antenna On Glass

If installed properly, on-glass antenna can be a good performer. just remember to read the manufacturer's instructions and follow them to the letter. For example, most on-glass antennas require a ground connection inside the car. Any nearby screw may do the job, but make sure that it is really connected to the body of the car. Take a volt-ohm meter (VOM) and measure the resistance between the -negative- terminal of your car battery and the screw (you will need a couple of insulated extension wire for your VOM). The reading should be low, less than 29 ohms. If it is higher, then the screw isn't grounded!

Also beware of special tints used in some rear-window defrosting systems. Am on-glass antenna works by transferring radio frequency (RF) energy through the glass. Many of these tints are metallic and will block RF. If your rear-window defroster uses wires embedded in glass, DON'T mount your antenna over these wires!

Tnx QST "new Ham Companion" 4/93

Additions this Month

You will find a Net Roster included with this newsletter. Please check for your name and dates to see when you are scheduled to be Net Control or if you are back-up for Net Control. Help our Net run smoothly by being prepared.

There is a puzzle thanks to Tim, KB8JWF. The answer will be in next month's newsletter.

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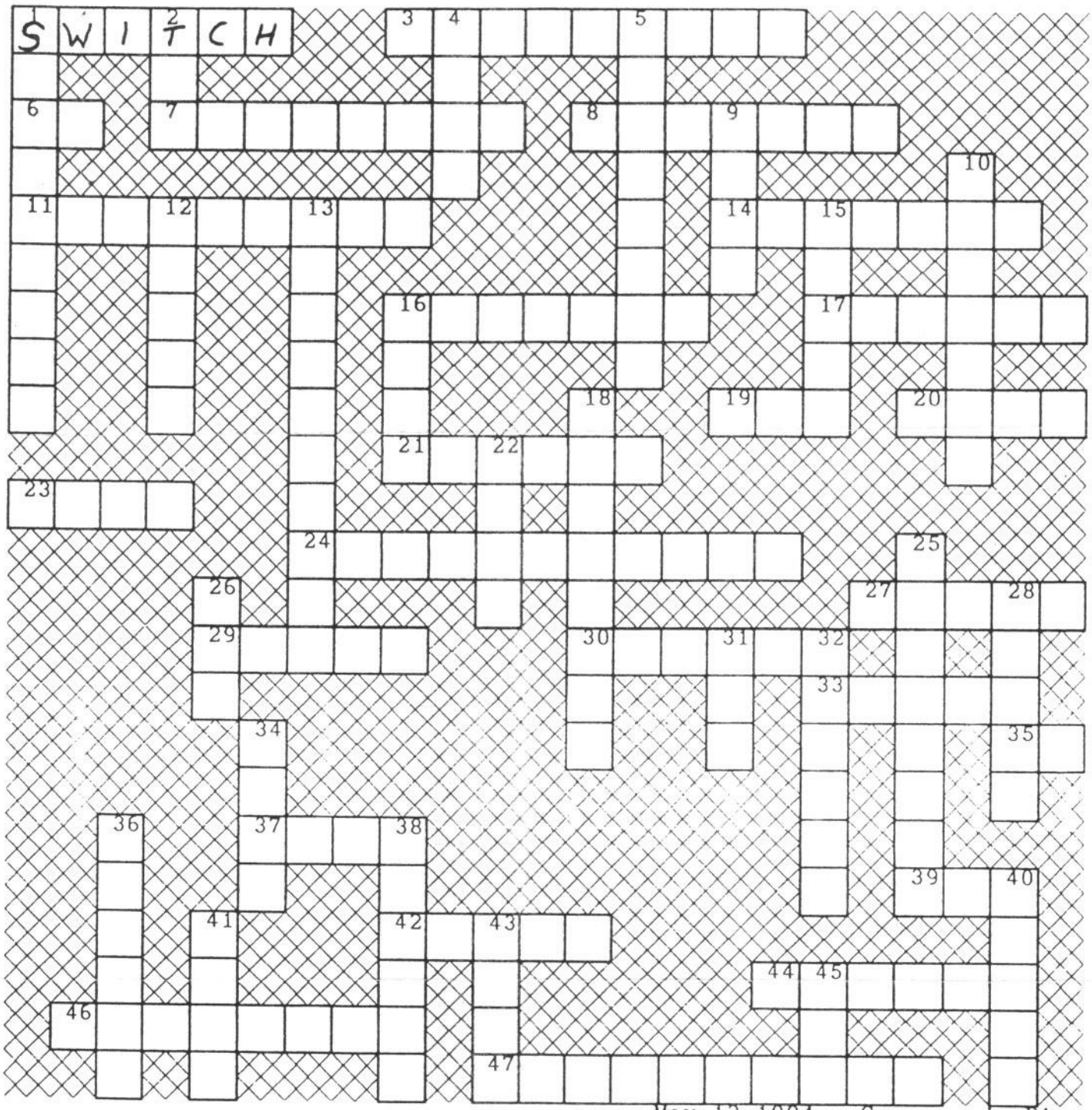

Word List

ARRL
BANDS
BANDWITH
BATTERY
CIRCUITS
DIGITAL
DIODE
DIPOLE
DX
EMISSION
FREQUENCY
FUSE
GIGA
GRID
GROUND
HAM
HERTZ
HF
ICOM
KENWOOD
KEY
KILO
METER
MODEM
MORSECODE
OFFSET
OHMSLAW
OSCILLATOR
PACKET
POWER
RADIO
RESISTOR
RIG
RTTY
SCHEMATIC
SHACK
SWITCH ✔
SWR
TENTEC
TICKET
TNC
TRANSMITTER
TRIODE
VERTICAL
VHF
VOLT
WATT
WAVELENGTH
WIAW