

July

1987

PAARA

GRAPHS

Featuring:

PAARAGraphs
Dueker, KB6BPM,
Johnson assumes
Editor-In-Chief!
results of Field



Editor Kenneth S.
resigns and Chuck
the position of
Stay tuned for the
Day. More inside.

**THE OFFICIAL NEWSLETTER
OF THE PALO ALTO AMATEUR
RADIO ASSOCIATION
AND
THE MENLO PARK C.D. AMATEUR RADIO CLUB**

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Editor	Chuck Johnson	no call	408-258-4857
Associate Editor	WE NEED TO FILL THIS POST.	PLEASE HELP.	
Advertising	Swede Swenson	N6CHL	368-9808
Mailing	Bill McElhinney	KA6LZI	325-9808

And a few anonymous, but *very* important publication people!

PAARA Policies

Membership in PAARA is \$6.00 per calendar year which includes a subscription to *PAARAGraphs*. Make payment to the Palo Alto Amateur Radio Association, P.O. Box 911, Menlo Park, CA 94026

Club Net on 147.45 MHz Mondays at 8:30 P.M.

Meetings monthly at the Menlo Park Recreation Center at 7:30 P.M., the first Friday of the month.

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From the Editor's Desk:

QST: Please be advised that the July PAARA meeting will be on the tenth of July due to the Fourth of July Holiday. Due to the resignation of Editor-In-Chief KB6BPM, any materials submitted to PAARAGraphs must be sent to our new Editor-In-Chief, Chuck Johnson (no call yet) at 3309 Mt. Logan Drive, San Jose, California 95127, or to PAARA's P.O. Box 911, Menlo Park, California 94026. Chuck can be reached at (408) 258-4857.

Speaker of the Month:

Paul Schuch, N6TX, will be present his lecture entitled "Professor Turns Ground Hams into Human Bats" or "Aerospace Amateur Microwave Techniques and Air Collision Avoidance". This lecture starts at 7:30 P.M. Don't miss this one!

Coming Attractions:

Andy, VE3FZK, is working hard to line up some of the following speakers for our benefit. Be looking forward to:

Next month and beyond:

Rod Stafford on the ARRL, Tom McShane on RFI, and others. Dinner with the speaker is at the Su Hong Restaurant on El Camino at 6:15 P.M.

CURING TELEPHONE INTERFERENCE

by Bip Bachman, W6BIP

Several NCDXC members have had serious cases of telephone interference, and others may have the problem too. It therefore seems worthwhile to summarize here in the *DXer* what is known about curing such interference.

Recent editions of the ARRL *Handbook* have pointed out some of the general features of the problem today. An excerpt from the *Handbook* is given here, followed by some new information.

"Because of a change in FCC rules, subscribers increasingly own their telephone instruments, leasing only the lines from the telephone company. Interference-prevention measures to the instrument are the owner's responsibility. If a fault occurs in the line, the telephone company must make the necessary repairs. Responsible instrument manufacturers should provide necessary modification to minimize RFI.

Telephone interference may be cured by connecting a bypass capacitor (about 0.001uF) across the microphone unit in the telephone handset. Telephone companies have capacitors for this purpose, but will only service their own instruments. When such a case occurs, get in touch with the repair department of the phone company, giving the particulars. If you have purchased your instrument from the phone company, you will be billed for the service call if the warranty has expired. Section 500-150-100 of the Bell System Practices *Plant Series* gives detailed instructions; for the General Telephone System, refer to *General System Practices Engineering - Plant Series* Section 471-150-200. This section discusses causes and cures of telephone interference from radio signals. It points out that interference can come from corroded connections, unterminated loops and other sources. It correctly points out that the RF can be picked up on the drop wire coming into the house, and also on the wiring within the house, but the RF detection usually occurs inside the telephone instrument. The detection usually takes place at the varistors in the compensation networks, and/or at the receiver noise suppressor and the carbon microphone. But interference suppression should be handled two ways: Prevent the RF from getting to the phone, and prevent it from being rectified."

The *Handbook* article continues with a discussion of compensation networks available from the phone companies. Unfortunately, the compensation networks listed have been discontinued and deleted from the AT&T inventory.

Some modifications to the *Handbook* approach are sometimes necessary. W6GO and W6OG both recommend the smallest size 0.01uF ceramic capacitor across the microphone and another 0.01uF ceramic capacitor across the earphone to reduce interference. I found that 3/16" diameter ceramics were superior in RFI reduction to the common 3/8" diameter ceramic capacitors. My correspondents report that the value 0.01uF is not a sacred value for certain frequencies. If there is no reduction in RFI with 0.01uF, try different values 0.001uF to 0.047uF. When used in conjunction with the new AT&T RF filter module Z100A, they substantially reduced the interference.

This new AT&T RF filter module Z100A (consisting of 2 each 7.2mH 8 ohm RF chokes) which can be plugged into the telephone jack, is now sold at local AT&T Co. Phone Stores. Stores are located in San Mateo, San Francisco (3), San Bruno, Redwood City, Mountain View, Cupertino, Concord, and Walnut Creek. Check your phone book for the one nearest you. Ask for Stock #SKU-52610. Surprisingly, prices vary from store to store. The San Mateo AT&T store asks \$13.95, the Sansome St. store in San Francisco asks \$15.95, while all other Bay Area locations want \$17.95. Older OMs may qualify for a Senior Citizen discount of 10%.

The Z100A filter may also be ordered from the AT&T National Service Center, St. Louis MO, phone #1-800-222-3111, under a different stock #SKU-52710, for \$11.95 plus sales tax and \$4.75 shipping and handling charge. They will ship one or more filters for the \$4.75 shipping and handling charge. VISA and MC accepted.

A second AT&T RF filter Z101A, Stock #SKU-57293, for wall mounted telephones, is available for \$15.95 plus sales tax and \$4.75 shipping and handling - ONLY from the AT&T National Service Center in St. Louis.

The above filters should work satisfactorily for those using 1 Kilowatt input with their horizontal antennas at least 25 feet above the roof. For those using vertical antennas with radials on the roof, slopers with ends close to the roof, indoor antennas, and end fed antennas, so much RF will usually be going into the house electrical wiring and indoor telephone lines, that the filtering described above may be inadequate.

If your horizontal antenna system is at least 25 feet above the roof and you continue to have problems with AT&T telephones, I suggest you or your Pacific Bell repairman contact Mr. John Chimenti, AT&T Corp. Associate Engineer in Charge of RF Interference Problems, AT&T Telephone Repair Center of California, Oregon and Nevada, 2200 Williams St., San Leandro, CA 94577. Phone 415-678-1284.

I'd appreciate hearing from any who successfully clear up interference in these more difficult cases. Good luck!

Thanks to Jerry Starkey, WA6LIJ, for submitting the above article.

73's de KB6BPM

As most of you already know, I am scheduled to QSY to college in August and have accordingly resigned my post. I will be attending Pomona college in Claremont and will be studying International Relations. Chuck Johnson (as yet unlicensed) will take over my position as Editor-In-Chief of PAARAGraphs. I would like to say that I have enjoyed being the Associate Editor and Editor-In-Chief of PAARAGraphs over the past few years. Seriously, it really has been great to have been PAARA's Editor and a part of so many PAARA activities. I hope that the membership will show its support for Chuck by submitting material for publication and by making his job easier.

I would like to personally thank my staff, the publishers and producers of PAARAGraphs, and all of you who have contributed material and assisted me as Editor. I would also like to thank Chuck Johnson for taking over the tough position of Editor for me. Thanks again!

de KB6BPM

Kenneth Sutherlin Dueker

Field Day A Preliminary Report

Those members who had the courage to attend this year's PAARA Field Day already know what a nice operation was in action June 27th and 28th. Phone Captains Tucker and Dueker and CW Captain Buonocore kept themselves and others on the air all of the 24 hour stint. VE3FZK made the required contacts under the emergency power catagory with yours truely (KB6BPM) generating power for the 45 watt 2 meter rig with an old Navy hand-crank generator. The novice tent did a spectacular job. More details about the operation and our score will appear in next month's and following issues of PAARAGraphs.

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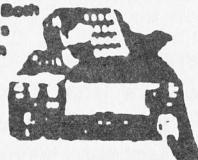
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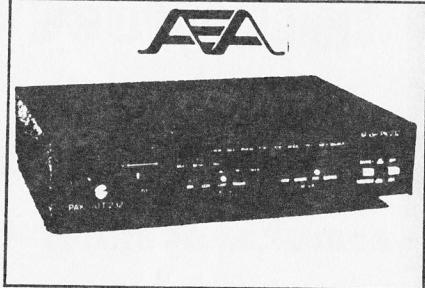
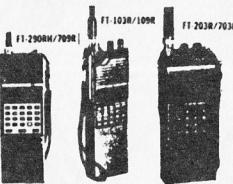
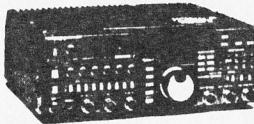
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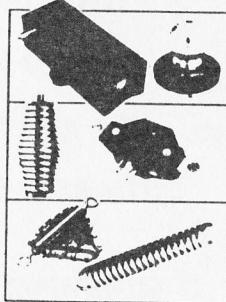


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