

PACK RATS'



PACK RATS

CLUB CALL: W3CCX

MT. AIRY VHF RADIO CLUB, INC.

CHEESE BITS



MT. AIRY VHF RADIO CLUB, INC., PHILADELPHIA, PENNSYLVANIA ARNS
50.125, 144.150, 220.125, 432.110, 1296.100, 903.1 MHz - W3CCX/R - 222.98/224.58
AFFILIATED CLUB: AMERICAN RADIO RELAY LEAGUE

MEETINGS: Third Thursday of each month at 8:00 PM
Southampton Free Library, 947 E. Street Road
Southampton, Pennsylvania 19866

VOLUME XXXII

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NUMBER 9

THE PREZ SEZ

It seemed that everyone had a good time at the Pack Rat picnic and I was hoping that more members and their families would have shown up; maybe next year.

Now that a no-code license seems inevitable, I hope the volunteer examiners and the theory that "there are a lot of technical people that think learning the code is nuts" work out for the best. For some reason in the past 15 years, lowering the standards has become the norm no matter what it pertains to. Our young people think that being smart isn't 'cool' if it doesn't 'rap' or look just right. Artificial intelligence won't do it.

Don't forget to come to the September meeting back at the library. We will be taking orders for new club T-shirts and discussing the Fall club project, the NO-TUNE 903 MHz TRANSVERTER.

I read in QST that a new 903 MHz band plan is being adopted. It seems that everyone I talked to from the Midwest to the East Coast (where all the activity is) didn't want the band plan changed. I thought the VUAC made band plan information available to the Board of Directors of ARRL and the Board made its ruling. What does the Membership Services Committee have to do with band plan decisions? The weak signal people and RF builders that do all of the tinkering with gear and antennas in UHF have no influence anymore -- only the 1's and 0's. It's the point of how it was done!

It's almost time for the annual Mid-Atlantic VHF/UHF/Microwave Conference and one of the biggest hamfests on the East Coast. The dates are October 7 - conference at the Warrington; October 8 - Hamarama at the Bucks Co. Drive-in. We need members to help out with both events.

If you would like to be a member of the Pack Rats, please get in touch with me. We're always looking for new members interested in the VHF and above frequencies.

73, and listen for the weak ones,
Dave Hackford, N3CX

Pack Rats CHEESE BITS is a publication of THE MT. AIRY VHF RADIO, INC. Philadelphia, PA. and is published monthly. SUBSCRIPTION RATE - \$5.00 PER YEAR

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PACK RAT REPEATER 222.98/224.58 MHz - W3CCX
LOCATED IN CHURCHVILLE, PA.

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215-672-5289

MONDAY NIGHT NETS

7:30 PM - 50.125 MHz
8:00 PM - 144.150 MHz
8:30 PM - 220.125 MHz
8:30 PM - 224.58 MHz
9:00 PM - 432.110 MHz
9:30 PM - 1296.1 MHz

NET CONTROL

W3CL
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WC2K
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WA3AXV
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* * *

THE AMERICAN RADIO RELAY LEAGUE

OST

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CALENDAR OF COMING EVENTS
By Harry Brown, W3IIT

SEPTEMBER

- 4 Labor Day
- 9-11 September ARRL VHF QSO Party. Starts 1800 UTC Saturday and continues through 0300 UTC Monday. See August QST, page 80 for rules. Get on and at least give out a few points.
- 10 32nd annual Gaithersburg Hamfest at the Montgomery County Agriculture Center Fairgrounds, Gaithersburg, Maryland. Talk-in on 146.52 and 146.04/.64 repeater. Admission: \$5.
- 14 Mt. Airy VHF Radio Club Board of Directors meeting will be held at the QTH of Pat Cawthorne, WB3DNI. Call 215-672-5289 for directions. Club officers and all interested parties are welcome.
- 16-17 ARRL 10 GHz Cumulative Contest, first weekend. See June QST, page 102 for rules.
- 17 41st SJRA Hamfest at the Pennsauken High School, Rt. 73 and Remington Ave., Pennsauken, NJ. 8:00 AM to 3:00 PM. VEC testing. Talk-in on 144.69/145.29 rptr. Admission: \$4.
- 21 First indoor meeting of the Fall season for the Mt. Airy VHF Radio Club will be held at the Southampton Free Library on Street Road in Southampton, Pa. All members and interested VHFers are invited to meet and share with us. Prez N3CX will speak on the 903 band and club project.
- 23-24 York Hamfest on Route 74 in northwest part of York, Pa, 2 miles south of the intersection of Route 74 and US 30. Talk-in on 146.37/.97 and 147.93/.33 repeaters. Admission: \$4 or \$6/both days.

OCTOBER

* * Best wishes to those celebrating ROSH HASHANAH, September 30 * *

- 1 Penn Wireless Tradefest '89 in Bensalem, Pa. at Route 152, 1 mile south of Route 132. Talk-in on 146.37/.97 and 146.52.
- 7 Mid-Atlantic VHF Conference will be held at the Warrington Motor Inn, Route 611 and Street Road, Warrington, Pa. Admission: \$5 in advance or \$6 at the door. (Prices include Hamarama)
- 8 Mt. Airy VHF Radio Club 'HAMARAMA' will be held at the Bucks County Drive-in Theater at Route 611 and Street Road, Warrington, Pa. Admission: \$5 person or \$7 car load.
- 5-8 Microwave Update '89 will be held in Arlington, Texas. Contact Al Ward, WB5LUA, 2375 Forest Grove Estates Rd., Allen, Texas 75002.

* * * * *

CHANGE OF CALLSIGN AND
TELEPHONE NUMBER:

KA2JKI now KE2OI
John C. Grove
917 Bay Ridge Ave.
Toms River, NJ 08753

New phone:
(201) 286-4062

PROPAGATION REPORT
Paul Drexler, WB3JYO

Propagation during the past month has been better than average for this time of year. There's been plenty to work on 6, and with several openings to South America and a reported opening to Great Britain. I can't provide any specifics since I'm temporarily off of 6 but should be back on by next month. On Thursday evening, July 28th, N3CX (home of the Pennsburg beacons) worked K4CAW, FM06 NC with good signals on 1296! Dave also reports some enhancement on the evening of the 30th with tropo to Ohio. Conditions during the August UHF Contest were average with the exception of coastal enhancement Sunday morning. Although most of the Philadelphia area couldn't get in on the opening, Pack Rat W4LYHO reports working a portable Rat, WB2ONA, FM26 on 432! Signals were very strong but the opening didn't last long. On the same morning, N3CX worked VE3LNX, FN03, on 1296 with 53 SSB signals!

The predicted peak of the Perseids meteor shower was on the 12th of August. The general feeling I get is that it wasn't all that great this year. It is reported that W2RS worked the CYØDXX expedition around 1500Z on the 13th. WC2K worked CYØDXX on successive 90 second meteor burns on 6 meters at 0213Z on the 13th. Several W1's, including W4LOUB, K1WHS, and K1GVM worked the expedition on 2 meters. CYØDXX was active from Sable Island for about one week and ran VHF in addition to their primary HF operation. WC2K completed two random 2-meter contacts and two skeds on that band via meteors. I operated for several hours on 2, looking for random contacts, but heard few entire calls and made no complete 2-ways. There are a lot of factors to consider, including solar activity. Based on information from Mike Owen, W9IP, showers during high solar activity years produce fewer available meteors, but those that do ionize are at higher altitudes and very intense. This might explain why there were several long haul MS contacts completed this year, but fewer bursts heard than normal.

On the 15th of August, a 2-meter Aurora was observed around 2030 local (0030Z) to New England states Me, WNY, and Mich. Our DownEast Pack Rat, W3HQT FN54, had a FB signal on 144. Bill and I tried on 220 but nothing was heard. Although the Aurora wasn't extremely strong, it lasted for over an hour and a half. WC2K bagged a new grid VE1BVL FN95 during another Aurora at 2351Z on the 17th at 2-meters.

CU in the September contest!

* * * * *

HAMARAMA CONFERENCE ANNOUNCEMENT
By John Sorter, KB3XG, Chairman

We would like to include Pack Rat homebrew projects as part of a show & tell display in the conference room. Please bring any project, finished or in the works, that will promote VHF/UHF/SHF homebrewing. We want to show other hams that building your own gear is not impossible and can be done on a modest budget.

I am still seeking a few speakers for the conference. Please contact me with any names or calls of people (yourself included) that would be possible candidates. TNX, John Sorter, KB3XG, (h) 215-766-2643 (w) 215-354-1635.

TID BITS

- Our best wishes to the Taylor family (K3DMA) on the arrival of Daniel James on August 14, 1989. Weighing in at 101lbs 3 oz., he's a future linebacker!
- To reserve a room at the Warrington Motor Inn call: 215-343-0373.

SWAP SHOP

WANTED: Crank-up tower (TRI-EX, TELEX, EZ-WAY, ETC). Looking for 40 ft. or greater.

CONTACT: JOHN SORTER, KB3XG 215-766-2643

FOR SALE: KLM Multi-2700 all-mode 2M transceiver \$125.00. Heath IM-4100

freq. counter to 30 MHz. \$35.00. Knight TR-106 6M AM transceiver, mint \$75.00. Various lengths of 1/2" and 7/8" Andrew and Cablewave hardline. All pieces are new and between 45 and 250 ft. long.

Have vast assortment of connectors for above. 6M 2X6146B PA strip \$5.00.

CONTACT: RICK CONNOR, WC2K 609-268-0736

FOR SALE: 2 element tri-band GEM quad.

20-15-10 meters. \$100.00. Ten Tec 2M HT, synthesized 144-148 w/TTP. \$100.00.

CONTACT: FRED MUNZENMAYER, KB2BF

PHONE: 609-228-4580

FOR SALE: HRO-5TAI rcvr. Bought new in 1946. With set of 4 coils, spkr, and homebrew power supply. Not used since 1949 - a real cream-puff. Will deliver within 50 mile radius.

CONTACT: W3AJF, HORACE DEACON

3625 W. Moreland Rd.

Willow Grove, Pa. 19090

PHONE: 215-657-0673

WANTED: PACK RATS to assist in the 1989 HAMARAMA Hamfest. Members are needed to sell tickets, park buyers and sellers, obtain prizes, announce and talk-in. PLEASE pitch in and give the club a few hours of your time. BREAKFAST is provided by the club for participants.

CONTACT: PAT CAWTHORNE, WB3DNI,

PHONE: 215-672-5289

COMMERCIAL ADS

LOOP YAGIS: 902 MHz 33 element \$82 kit, \$99 assembled and tested. 1296 MHz 45 element \$82 kit, \$99 assembled and tested. 1296 MHz 55 element (new "Super Looper") \$99 kit, \$119 assembled and tested. 2304 MHz 45 element \$67 kit, \$80 assembled and tested. Also available: element and hardware kits for above. 2 and 4-way power dividers. Discount on complete arrays. Solid state linear amplifiers, 13.8VDC: 1296 MHz, 8W in 35W out \$305, 1W in 20W out \$155. Coming soon, 65W solid state PA for 1296. GaAs FET preamps: 902 MHz .8DB NF \$80, 1296 MHz .8DB NF \$80, 2304 MHz 1DB max NF \$125. Universal 1 GHz LO kit \$48 less crystal; 700-800 MHz LO kit \$48. Xtals available. Write for complete catalog: DOWN EAST MICROWAVE, Bill Olson, W3HQT, Box 2310 RR-1, Troy, Me. 04907. Telephone: (207) 948-3741

HAM RADIO MAGAZINE is the leader in Amateur Radio state-of-the-art! Projects for every interest. Plus Joe Reisert, W1JR. Act now. Don't miss another exciting issue! HR Magazine, Greenville, NH 03048. (603)878-1441.

MICROWAVE PARTS FOR SALE: All prices shown are POSTPAID. Check with a ham call-sign accepted. 10 GHz Gunn sources: all work the same, all run on +7.5VDC, put out about 5 mw, come on 10.525 GHz, tune down to 10.1 GHz or lower with no modification. They include a detector diode to allow for transceive operation. SOLFAN style \$20. ROUNDHORN style (lightest, either 5" or 8" long) \$20. Most of the time, we also have odd units around, like FLATPLATE units, or SQUAREHORN units with mount tabs, or GUNN SOURCES without horns or detector diodes, from \$10-\$20, SASE if interested. Spare Gunn diodes for all above \$5 each. "Beginner Microwave" 10-page booklet describes fuzzbuster-busters, listening through walls dopler, and our experiment using K-Mart and auto radios for audio links. Don't expect too much! \$2 postpaid. SHF MICROWAVE PARTS CO., 7102 W. 500 Street, La Porte, IN 46350.

* * ***** *

MORE TID BITS

- Mike, N3BBI, will be only operating on 6-meters from his QTH. Hey Mike - how about the Pack Rat repeater?
- Only about 2% of the Atlantic Division, s 15,000 members took the time to express their views regarding the no-code issue. The results were evenly divided as was experienced by most Directors of the other Divisions.

VHF/UHF DX RECORDS SET
FROM WESTLINK REPORT

Four new world's VHF/UHF DX records were established the middle of last month. Between July 13th and 15th, Paul Lieb KH6HME, camping on the Mauna Loa Volcano in Hawaii, and Jack Henry XE2GXQ, in Baja, California, Mexico, established new world records for the 144, 220, 432, and 2304 MHz bands. The 2 meter record of 2659 miles was set on July 13 at 1046 AM by Paul at the Mauna Loa site in contact with Jack who was at Rosarito - about 640 miles south of San Diego. They exchanged a 52 signal report on SSB. KH6HME was running 80 watts to a pair of 7 element yagis and XE2GXQ ran 160 watts to an 18 element yagi.

The 70 cm record was made the next day at 1547 PM at a distance of 2573 miles between the two operators. This time Paul was running 100 watts to an 18 element quagi. Later the same day, the 13 cm record fell. The Hawaiian end of the contact ran 10 watts to four loop yagis to complete the SSB QSO. Finally, at 0755, July 15, the 220 MHz record was established when Paul and Jack had S-2 FM signals on 223.56 MHz. Small yagis were used at both ends.

The best conditions for a west coast to Hawaii path occurred on July 14 when KH6HME confirmed hearing XE2GXQ who was running only one watt at the time on 144.170 MHz. During the same time period, KH6HME worked numerous other VHF stations in the Los Angeles and San Diego areas.

UHF COMPENDIUM

Pack Rat Chuck Steer, WA3IAC, reports that he just received his copy of the "UHF Compendium" from the Ham Radio Bookstore. Chuck sez, " This is a two book set from DJ9HO, K. Weiner containing tested designs covering 144 MHz to 24 GHz. Subjects include: antennas, filters, receive and transmit converters, power amps for 432 and 1296. Also covered are some general design data." Each book sells for 29.95 plus shipping. "This is well worth a look by anyone interested in UHF and above."

FROM ARRL BOARD OF DIRECTORS MEETING

At the ARRL Board of Directors meeting, July 21 and 22, the Board directed counsel to initiate a rulemaking petition seeking a secondary allocation to the Amateur Radio Service in the 216 to 220 MHz band segment. This action should not have the effect of delaying or impeding an appeal of the earlier FCC decision reallocating 220 to 222 MHz to the Land Mobile Service. Counsel is also to pursue appropriate action to ensure that due process rights are afforded amateurs prior to imposition of operating restrictions in radio interference cases.

After extensive discussion, by a vote of nine directors in favor to six opposed, it was agreed that a proposal recommending a codeless class of amateur license be presented to the FCC in the form of a Petition for Rulemaking. It shall incorporate the following elements:

- 1) The examination will consist of element 2 and expanded element 3A which will include questions about Morse Code.
- 2) License exams will be given through the VEC Examination System.
- 3) To upgrade to Technician, the new licensee will pass a 5 WPM code test by VEC.
- 4) Callsigns shall be assigned from the Group D callsign block.
- 5) Frequency privileges shall be 220 MHz and above with output power limited to 250 watts.
- 6) The licensee shall not be the control operator of a repeater or auxiliary station.

The new class of license is proposed to be named "Communicator".

903 MHz YAGI (DL6WU DESIGN)

By Dave Hackford, N3CX

Here is a real nice yagi for the 33cm band which is light weight, low wind resistance, and an all around great antenna to work with up on the tower. Back when we first got on the 33cm band, I built two loop yagis which performed well for two years. Wanting to put up four antennas for the band, I was looking for new antennas that would be easy to work with, had good structural characteristics, good gain and pattern, and would have easy to obtain parts. The DL6WU yagi filled the bill and here's the scoop:

BOOM MATERIAL: 12ft. X 7/8 in. OD -- 6061ST Aluminum -- .049 in. wall
(I used .058 in. wall)

ELEMENT CONSTRUCTION: 3/16 in. aluminum rod mounted through the boom with insulators and retaining clips. All element tips are chaffered approx. 1/32 in.

DRIVEN ELEMENT: 3/16 in. brass brazing rod, chamfered tips, with attached .081 in. folded dipole element, phasing line, and 'N' female connector. (See diagram)

GAIN: 17.4 DBd

FIRST SIDELOBE: >17.5DB down

STACKING DISTANCE: 54 in. vert. (H-plane), 51 in. horiz. (E-plane)

The spacing between D13 and D14 is 5.265 in. and this spacing is the same out to D30. I had my son spray a fine mist of water on the completed antenna to check its affect on SWR; it hardly changed at all.

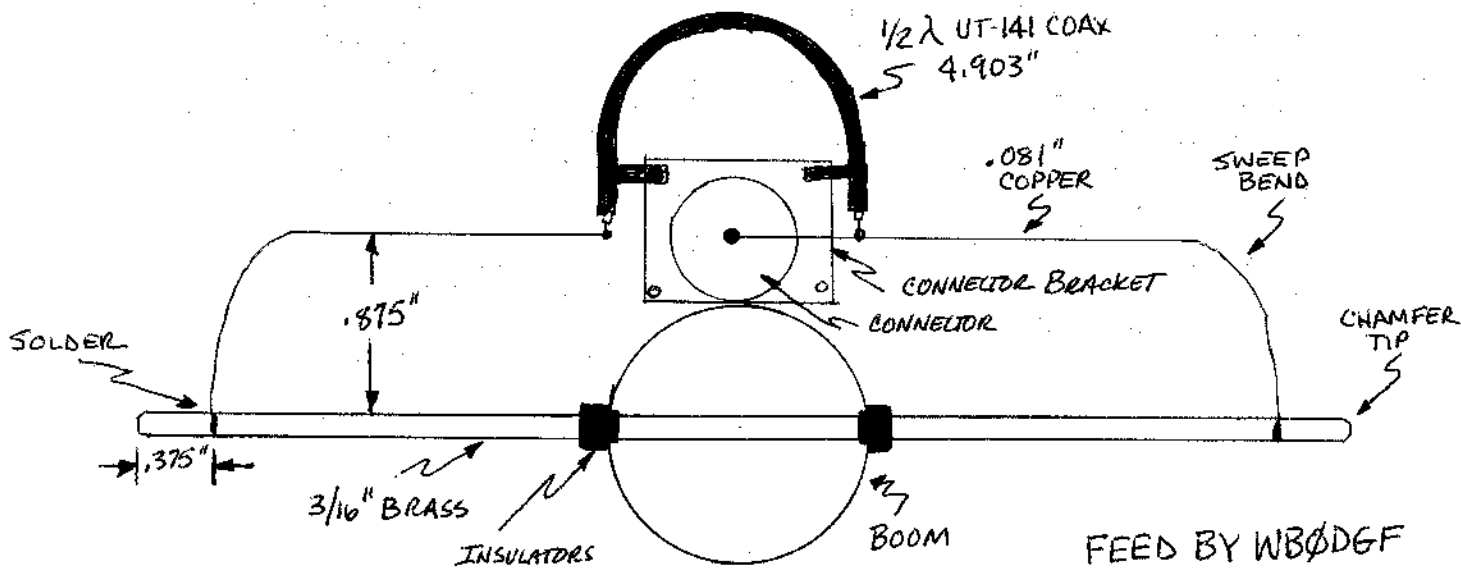
I use four of this type antenna on 33cm. I extended the booms to 14.5 ft. (3/4 in. X .049 in. slides inside of the .058 wall) and the gain is approximately 18.1 DBd. The insulators, element keepers, and N connector bracket are available from Rutland Arrays, 1703 Warren St., New Cumberland, Pa., 17070. Hope to hear you on 33cm in the near future. Let's get our 33cm band populated so we don't end up with a blunder similar to 220-222. If you need any help, give me a call on the landline. I'd like to thank K3BPP for his help in measuring the antenna performance. I'd like to hear from people who are planning to get on the band. Maybe we can exchange ideas on homebrew projects or set up some skeds. Check into the Pack Rat 903.1 net on Monday nights at 10 PM; N3CX NCS.

73, and listen for the weak ones!
Dave. N3CX

903 MHz YAGI DETAILS

<u>ELEMENT</u>	<u>BOOM SPACING</u>	<u>ELEMENT LENGTH</u>
Reflector	Ø"	6.452"
Driven Element	2.825"	6.168"
Director 1	1.064"	5.695"
Director 2	2.168"	5.616"
Director 3	2.813"	5.533"
Director 4	3.271"	5.455"
Director 5	3.626"	5.387"
Director 6	3.920"	5.329"
Director 7	4.161"	5.279"
Director 8	4.374"	5.235"
Director 9	4.562"	5.196"
Director 10	4.729"	5.161"
Director 11	4.881"	5.129"
Director 12	5.020"	5.100"
Director 13	5.147"	5.047"
Director 14	5.265"	5.049"
Director 15	5.265"	5.026"
Director 16	5.265"	5.005"
Director 17	5.265"	4.985"
Director 18	5.265"	4.966"
Director 19	5.265"	4.948"
Director 20	5.265"	4.931"
Director 21	5.265"	4.915"
Director 22	5.265"	4.899"
Director 23	5.265"	4.884"
Director 24	5.265"	4.870"
Director 25	5.265"	4.857"
Director 26	5.265"	4.844"
Director 27	5.265"	4.831"
Director 28	5.265"	4.819"
Director 29	5.265"	4.808"
Director 30	5.265"	4.796"

DRIVEN ELEMENT DETAILS



An open letter to all Microwave Experimenters

As of October 1989 the "New Frontier" column will no longer appear in QST. The following is an extract from a letter dated August 1st by Paul Rinaldo, Publications Manager for the ARRL to Bob Atkins, contributing editor of the "New Frontier":

"The League's continuing red ink has forced us to take a careful look at expenses and to make some painful decisions about the size of QST. We must print fewer pages. For each page we don't print, we save about \$1,000. So, we have an opportunity to make some significant savings by trimming the page count.

In reviewing the status of all QST columns, we have decided that the time has come to discontinue publishing the New Frontier effective with the November 1989 issue. In large part, this is because the column's original mission has been accomplished. Also, we believe that the League is adequately serving the needs of amateurs interested in 900 MHz and above through other channels, notably QEX, VHF/UHF conference proceedings, QST feature articles and expanded coverage in our other books. QST will continue to report activity and record contacts on the UHF and microwave bands, but in *The World Above 50 MHz*."

I spoke with Paul on August 3rd and was told that the "New Frontier" column was in fact the ONLY column being dropped from QST. "YL News" was also being cut, but not dropped. To the best of my knowledge, no-one outside of the staff at ARRL HQ participated in, or was consulted about, the decision. Since then I have spoken with others at HQ and I now understand that a number of columns will be affected, but not cut. Some may appear bimonthly, and there may be some merging of columns. One report is that the "World above 50 MHz" may be reduced in length, carry microwave news and merge with FM/RPT! Don't take my word on this as there appears to be some confusion even at HQ.

Some of the points in Paul's letter are undeniably valid. The first priority of any organization is self preservation, and to that end the prime directive to ARRL HQ staff is not to lose money. Everything else is secondary. If the League does not exist it can't promote any aspect of amateur radio. We all understand this and agree with it. QST is expensive. It probably rates as the most expensive item in the ARRL budget. It is the prime candidate for cuts if savings are to be made.

I realize that cuts must be made and we will all have to suffer for a while, at least until the present financial problems are sorted out. My argument is with the nature of the cuts related to microwave coverage, not with the cuts themselves. If QST expenses are to be reduced there are a number of ways to do this. Columns can be canceled. Columns can be shortened - where is it written that a column shall occupy an integral number of pages? Columns can be printed on a bimonthly basis. Color is expensive, so the number of color "Up Front" pages can be limited. The "look" of QST should be secondary to its content. That doesn't mean we can print it on newsprint, but it does mean we should recognize priorities.

Cutting regular microwave coverage in QST is certainly a quick and easy way to save money, but is it the way which serves ARRL members best. Q: Why do we need a regular microwave column in QST? A: (1) To serve as a focus for the microwave community. Somewhere (and someone) which all ARRL members know they can write to for information. (2) To provide a place where issues of importance to the whole microwave community can be discussed. (3) To provide an place where short technical items can be presented or technical questions asked. (4) Perhaps most importantly, to show to the *whole membership of the ARRL* what is going on in the 99% of all amateur spectrum allocations found above 1 GHz and to encourage them to participate in that activity.

Full technical articles, QEX and conference proceedings fill none of the above functions. They address the different, but equally important, issue of providing detailed technical information to the microwave community. In "the World above 50 MHz" Bill does a fine job of reporting what is happening on the VHF/UHF bands, but he does not have space to cover technical and constructional matters, never mind microwave activity as well.

The ARRL should take a position of leadership. Microwaves will take on increasing importance in the future. Satellite links will increasingly use microwave frequencies. New "no-coders" will be restricted the UHF and microwave bands. A commitment to microwaves is in the best interests of amateur radio. Some amateurs see amateur radio as the ability to sit in an armchair, bring up the patch on the local repeater and order a pizza. Alternate views are needed.

Microwave activity is beginning to flourish in the US. 10 years ago the European countries were ahead of us in terms of both activity and technical expertise. This is no longer the case. As I write this I have just received word of a new 5.7 GHz world DX record contact (N6CA/N6SNA - XE2GXO/N6XQ 613.4 miles). I recently had lunch with a New Jersey microwave group and later in the parking lot we had five 10 GHz ssb/cw narrowband systems set up. This is not the time to cut microwave coverage. If the RSGB can serve as an example, they have both a microwave column and a newsletter devoted entirely to microwave matters. They also have an official microwave committee and supply hard-to-get parts and pc boards for a number of projects. Then we wonder why microwave activity is higher there? No code licensees have long played an important role on microwaves in the UK (I first got on the air with a no-code licence in the UK as G8EKB) and we should try to encourage similar activity here when the opportunity arises. A regular microwave column can serve an important agent in achieving this goal.

So, what do we do now. We can sit back and say "O.K. guys, whatever you want" or we can make known our views on this subject. I am in an awkward position here. I am lobbying for the retention of a column of which I am the contributing editor. In view of this I feel I must offer to decline to continue writing the column if we can save it. I will carry on with the column if requested, but will gladly stand down as editor if that is what is needed to save the column.

Silence implies consent. If the league does not hear, loud and often, that we want a *REGULAR* microwave forum in QST then we will not get one. The hearts and minds of ARRL HQ do not appear to be with the microwave community. We need their attention. How do we get it? To start with, letters, phone calls and BBS messages to ARRL Hq. I guess Paul Rinaldo and Dave Sumner would be the ones to target. Lobby local League representatives, VUAC members.

I have already received communications from some saying they will not renew ARRL membership. If that is how you feel, tell league HQ. If you want to get their attention, prospects of a loss of revenue will do it. Each individual must take the action which he or she thinks appropriate. If you want to assess league priorities on microwaves look at the long awaited "Microwave Handbook", always relegated to the bottom of the pile when other editing jobs come up. Will it ever be published? Will it be out of date if it ever does see the light of day? What is the first column QST drops when in trouble? (note: I am informed that the first part of the microwave book *should* be out by the end of this year.....)

I think volume of opposition to dropping a regular microwave column will be more important than reasoned arguments, though if you do have time to write a long letter so much the better. The more letters HQ receives the more they will take notice, even if the letters only register protest. If you want a column let them know. Don't leave it to someone else - everyone must write. The microwave community is small in relation to the general amateur population. We need every voice we have.

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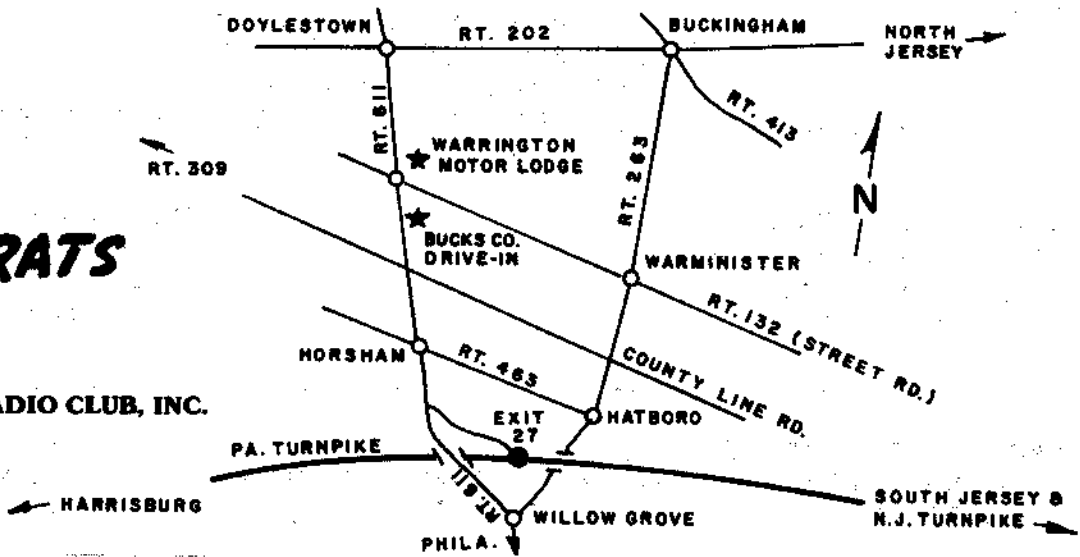
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OCTOBER 7-8, 1989

CONFERENCE — SATURDAY, OCTOBER 7, 1989
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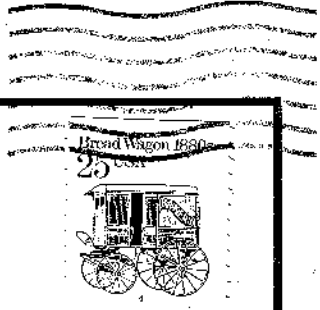
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