

ACT

THE HAMPTDEN COUNTY RADIO ASS'N. Inc.

SPRINGFIELD, MASSACHUSETTS

ZERO BEAT

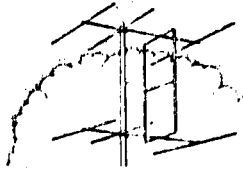
APRIL 1979

11st year ARRL
Affiliated

Winner, Certificate
of Merit, N.E. Newsletter
Competition, 1978

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CLUB OFFICERS

President	Larry Soltz	WBICJH	567-6707
Vice-president	Ron Beauchemin	WB1ETS	593-9852
Secretary	Frandy Johnson	N1FJ	584-9005
Treasurer	Steve Shore	WA1ZEV	(203)243-3030



Board of Directors

1978-1980

WA1PUX	Bruce Felper, 15 Cedar Ave, Unionville Conn
K1BE	Jeffrey J. Duquette, P.O. Box 346, Southwick, Ma 01077
WB1FIP	Moe Beauchemin, 56 Acre Brook Dr., Chicopee, Ma 01020
WB1EMN	Al Sittard, 37 Dunn St., Chicopee, Mass 01020
WLARA	Jim Spates, 106 Meadowbrook Ave., West Spfld, Ma 01089

1977-79

K1YQQ	Chet Wisiolek, 20 Nevada St., Springfield, Ma 01107
WB1BZW	Andre Bouchard, 650 Southwick St., Feeding Hills, Ma 01030
WA1YYW	Rich Melbourne, 142 Allen St., East Longmeadow, Ma 01028

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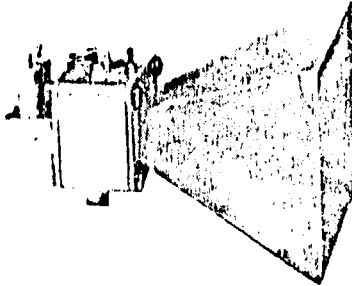
NEXT MEETING:

FRIDAY, APRIL 6TH

TOM McMULLEN, W1SL OF HAM RADIO HORIZONS

WILL SPEAK ON

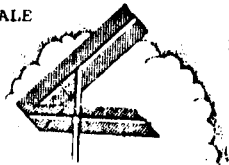
MICROWAVE COMMUNICATIONS!!!!



Tom is one our most popular speakers every year.
(He might bring free samples again, too.) Tnx-WB1FIP

ALSO:

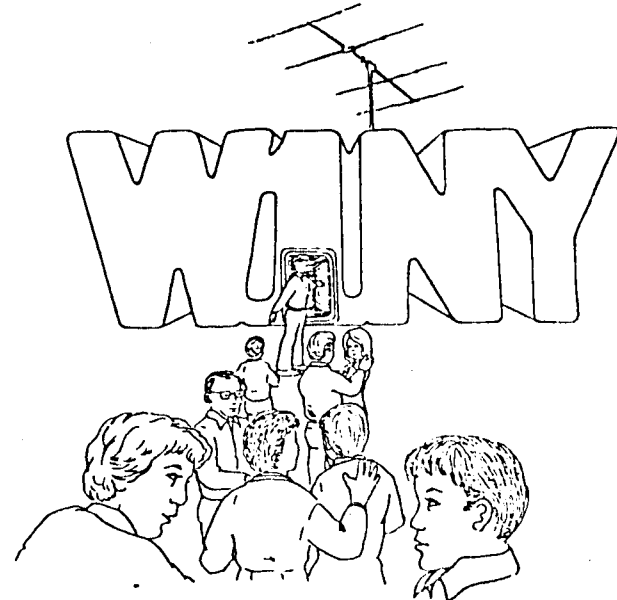
- FLEA MARKET RULES
- RAFFLE TICKETS ON SALE
- FIELD DAY PLANS



- HAM OF THE YEAR NOMINATIONS
- BANQUET PLANS
- RETURN HCRA WAS LOGS

The Hampden County Radio Association, Inc is a non-profit corporation of radio amateurs interested in the investigation of the technical aspects of the communication arts. The club is the base for the first district QSL bureau. We are affiliated with the American Radio Relay League and endorse their programs. The HCRA is a general interest radio club and does not operate any amateur repeaters. Meetings are held the first Friday of every month, (except July and August) and annual auctions, flea markets, banquets, and general interest programs make up the schedule. The association participates in many radio programs throughout the year and almost every operating event listed in "QST" has at least one club member's call. The club station's call is "W1NY", and is in memory of Hank Baier. "Zero Beat", our club newsletter, is sent out ten times each year to all members. If you would like to join us, we would be pleased to welcome you. Dues are \$5.00 for 12 months and can be paid at the meetings or sent to Steve Shore, 20 Valley view Drive, Bloomfield, Ct. 06002.

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APR 79



Hope you all got in on the "Science Happening"!

In building David Gray's 2-meter synthesizer (QST, Aug 78) for my TR-33C, I chose to design a circuit board. Several members of the club have asked to see the geometry I came up with, and to avoid the trouble (and expense!) of Xeroxing numerous copies, I have prevailed upon Jeff to publish it.

Anyone interested in building the synthesizer is apt to find it easier to draw and etch the board than to do point-to-point wiring on perf board. What's more, there is probably less chance of introducing stray inductances and capacitances.

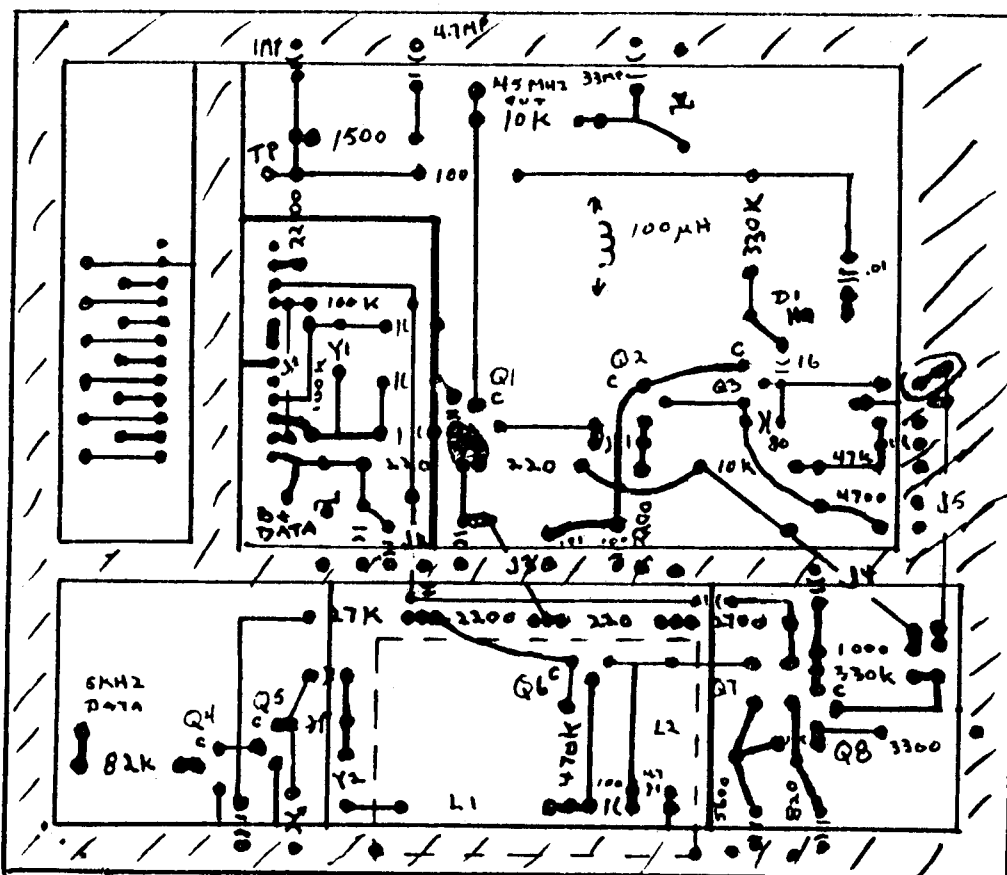
A complete description of all components, etc., appears in the August QST article, of course. But don't fail to read Feedback in the November issue where the author provides corrections for errors that crept into the original article.

The board has been checked and re-checked many times, but since my synthesizer is not yet completed, I can offer no guarantee that it is error free. In any case, constructive criticism would be most welcome. I'm still a neophyte at cb construction.

-----Shield
J1-J5 Jumpers

FOIL SIDE

*Part
WB1DTZ*



EDITORIAL

Members hold our club in special regard. This is evident by the large meeting attendance and many acts of charity. One person deserves special mention this month. The widow of a silent key phoned and offered numerous books and ham goodies to the club, to be given away to the needy novices. "He always had a special place in his heart for the Hampden County Radio Association and I'm sure you'll put this equipment to good use." The good that we do in our lives lives after us. How many present or future novices will use one of these free books to upgrade? They'll probably never realize who donated them. But amateur radio will benefit as a whole, as these worthwhile hams join our ranks. Our club callsign was sent out all over the world this past weekend. I never knew Hank, W1NY, but his influence is still strongly felt. I suspect that Elmer Dunscombe's gift will have an influence that will extend through the club for many years. The sound of his fist is no longer on the airwaves, but somewhere out by Saturn radio waves are still carrying his voice. It's the same way with this thoughtful and generous gift; the echos of W1ESG will continue to touch many lives.

73, R1BE

THE AMERICAN RADIO RELAY LEAGUE, INC.

OFFICIAL BULLETIN NR 17 FROM ARRL HEADQUARTERS
NEWINGTON CT APRIL 1, 1979 TO ALL RADIO AMATEURS BT

IN A NOTICE OF PROPOSED RULE MAKING, DOCKET NUMBER 79-61, THE FEDERAL COMMUNICATION COMMISSION WILL GIVE LICENSED RADIO AMATEURS AUTOMATIC PRIVILEGES IN THE CITIZENS BAND. AUTOMATIC PRIVILEGES IN THE 146-148 MHZ BAND ARE TO BE GIVEN TO LICENSED CITIZEN BAND OPERATORS. DETAILS AND A FULL REPORT WILL APPEAR IN MAY QST. AR

FOR SALE: Advanced/Extra Practice Study Exam, 50 multiple-choice questions based on the NEW FCC exams. \$7.00 post paid send check or money order to: J.J. Duquette, P.O. Box 346, Southwick, Mass. 01077 (Not available until May, but should be ordered ahead of time to prevent disappointment.)

TIDBITS: W1JP, W1IABF, K11JU, and K11JV spent a great time on Montserrat, and the folks back home had as much fun as they did! Watch for the complete story in "Intermod"...W1KUE, Tom Barrett is in Mercy hospital and has undergone surgery. He's in intensive care and we hope will soon be back to his old self...

MARCH MEETING REPORT

Larry, WB1CJH called the meeting to order at 8:04. Letters from PVRA, WALZRI, and others were read. The "Science Happening" was discussed, sign ups for the advanced/extra course, and other items took about fifteen minutes. WALGXN visited us from Boston, and sold tickets to benefit the blind. Howard Cutting was introduced, he goes back to the early days of the club. (See Jan. ZB)

Guest Speaker

Perry Williams, W1UED spoke to about ninety hams about WARC and the international ham scene. Third world countries are backing positive positions for expanded frequencies due to the ARRL's efforts. Those W1VD rcvr/xmtr rigs have been sent all over Africa. (Seen at the March '78 HCRA meeting.) A California DX group has designed a transceiver using Jay Rusgrove's design, and Perry brought the prototype to the meeting. An impressive rig to say the least! A positive item was that China has proposed no cuts in amateur frequencies, and you can expect to see some hams operating from China soon. Negative aspects are that the international propaganda broadcasters want more of the 160 meter band. There is also a proposal to use this segment for a "low range" highway safety broadcast, and this is being tried out. A domestic proposal to open up 10 1/2 meters to SSB-only CB may not pass. The behavior on CB has turned off most of its' support.

Perry addressed the problems besetting the League and U.S. amateurs. The recent dues increase would not have been necessary if WARC and OSCAR were dropped. WARC alone will cost us over 1/2 million dollars! Oldsters remember how the only test a message had to pass was whether or not it benefitted the operator. Recent missionary use of ham radio has hurt us in regards to third party traffic. Perry recommended superior operating habits to preserve our position at WARC. Some delegates bring tapes of hams swearing, etc and ask: "Is this what you want us to support?". Messages in languages you don't speak, or phone patches, should never be handled. Your license is on the line! A test of whether or not you should handle a message should be: "Is this something that should be sent commercially?" i.e. "Meet me at the airport" or "Send more bibles". It should be unimportant if it's on ham radio circuits. All of this applies to traffic within the United States, too.

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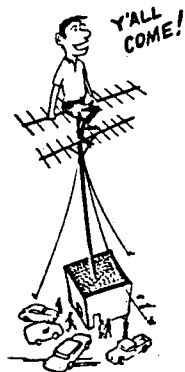
When illegal operating occurs, like repeater jammers or foul language on HF, Perry recommends complaint letters every two weeks to the FCC. They won't move on a problem until there is a file on it. Include information on how to catch them. Constant complaining gets the FCC to act!

Perry Williams, W1UED was an interesting speaker on topics near to the heart of worthwhile hams. You missed a good meeting if you weren't there. WB1FIP won the raffle.

P.S. Perry asked about some of the HCRA "old timers" that weren't there. The good name of our club goes way back with him, judging from some of the stories he had. FB!

TIDBITS

Rich, W1YYW, is recovering the use of his hand injured in an industrial accident...Andy, WB1BZW, has made great progress on the tower installation he began last year. The assortment of parts has been moved from the garage to the shed out back...W1RWU has bought a new car. If you know Frank, you'll know why this is news... W1BVR has almost perfect attendance on the WMN...K1IJV is going to upgrade via the HCRA license course.. WB1BPA has been working DX...Any ideas on a field day site? AC1T wants to go back to Otis, thousands of bugs are eagerly awaiting his arrival...K1ZOC picked up the NCS on the HCRA ten meter net Monday, March 5. Tnx, Joe...N1PF's license course is about to graduate a new crop of generals...



FIELD DAY! 79

K1A1PR IS STILL TRYING NEW WAYS TO KEEP HIS ANTENNAS UP!!! GOOD LUCK, FRED!

TRAFFIC RESPONSIBILITY
BY Red Barger, W3CVE

Every message handled via amateur circuits is important. The sender has placed faith in Amateur Radio and believes that the message will be delivered. The person who has sold the sender on Amateur Radio traffic relay has convinced the sender the value and public service of Amateur Radio. Therefore, the traffic operator who received the message must do all in his power to deliver the message so that the good will and public service aspect of Amateur Radio will be upheld. Agreed?

Now, here is the nitty gritty of this writing. Here at WB3IVO, Brass Pounders ARC, we originate a lot of traffic from the Elks Lodge, Community College, etc. We stress, of course, for the sender to include the full address and telephone number if known. Naturally some messages do not contain the telephone number and if the sender knows that the addressee has a telephone, "TEL LISTED" is included in the address.

During the past several months we have received service messages from operators in the towns of destination saying: "REF UR NR 444 to John Doe. No fone number given. QTA here." Can you imagine the operator who received the message was too blasted tight to put a fifteen stamp on an envelope and mail the message? Many times I have sent a message back to the operator telling him: "For heavens sake mail the message. Send me your mailing QTH and I will reimburse you for the stamp." One operator refused to mail the message unless I sent him a stamped envelope! What a liddy attitude for an operator to take who calls himself a "traffic operator."

It does not add up. A fellow will pay \$500 to a grand for some of this sophisticated gear selling today, and refuse to put a 15 cent stamp on an envelope to mail a message.

I have handled thousands of messages during my Amateur Radio activities and have mailed many of them. Conservative estimate

is that I spend at least \$25 per year on postage for traffic. Many responsible traffic operators exceed that amount, some average \$100 per year. If a message is mailed and returned with the note, "Addressee moved. Left no forwarding address," then it is time to send a service message back to the originator telling the situation. A responsible traffic operator will not dead end a message that has no telephone number.

Today we have a different breed of radio amateurs who call themselves "traffic operators." They want it the easy way, to push buttons. If they have a touch tone telephone, they like to hear the different pleasing tones as they push the buttons. An operator of such a category should not be permitted to handle traffic. He gives Amateur Radio a "black eye."

To you NCSs who want to build up a responsible traffic net sound out your members and if you find any of them who dead end a message because it contains no telephone number, do not permit them to be on your net. They are not "traffic operators."

Some times the addressee has an unlisted telephone number that the sender is unaware of, or possibly the addressee is in such circumstances that he cannot afford a telephone exchange but would be tickled to death to hear from his friend. Many times I have mailed a message and received a written reply, "Thank you very much for mailing my message. You Amateur Radio operators are performing a wonderful public service." Such public recognition is what Amateur Radio needs, especially since the WARC is coming up.

It is up to you net managers to weed out the operators who refuse to QSP a message that has no telephone number. If you do not, the responsible traffic operator will refuse to place traffic on your net and your net will be labeled a lid net.

APRIL ZERO BEAT 1979

March 25th, 1914

David L. Moore, President,
Radio Club of Hartford,
18 Asylum Street,
Hartford, Conn.

My dear Mr. Moore:—

I am enclosing herewith copy of letter which I have sent to *Modern Electrics* and also to *The Electrical World*. As you will see it "opens the ball" on the subject of our Relay Scheme.

Now, what I want to do is to get you and Tuska together some time, within the next day or two, and organize the AMERICAN AMATEUR RADIO LEAGUE. We three can draw up in a few minutes a very simple straight forward statement of the objects of this League. We can then decide who the officers should be and elect them. Then, at the next meeting of the Radio Club of Hartford, we can let the Club decide if it is to become a member of the League. We will then be regularly started and can probably get the Connecticut Valley Radio Club in Springfield to join and it would not be long before we could get others also.

The object of securing the membership of the various Clubs, would be to have those Clubs advise us as to what stations in their locality are the best ones for us to appoint as OFFICIAL RELAY STATIONS. We probably would get wise advice in this manner, because it would be quite a distinction for a station to be appointed to a long distance relay point. It is the only way we will have of getting at the proper stations who could be counted upon to always be in working order and able to read and transmit at decent speeds.

My letter describes the whole matter. I am sending a copy of this letter to Tuska. I wish both of you would give this subject careful thought and be prepared to bring up all possible objections so that we will make no mistakes in the beginning.

Very truly,
HIRAM PERCY MAXIM

This letter, from the January '64 QST, was written by H.P. Maxim in regards to the origins of the ARRL. The Connecticut Valley Radio Club later merged to become the Hampden County Radio Club in 1947. (See article by W1KUE in June '78 ZB) The two other clubs that became the HCRC were the Springfield Radio Association and the Western Massachusetts Radio Club. The mistakes that had hurt the three clubs were left out of our club constitution, and much of the success of our club is owed to the foresight of the members of these three clubs. Too bad we didn't keep the CVRC name, we'd be one of the oldest affiliated clubs anywhere! The name was changed to HCRA in 1958.

Tnx to the
QCD Bulletin
for Spring '79



HOW I WORK DX GOOD By TOM SULLIVAN, WBLAUV

Inspired by the "How's DX?" column in ZB, I decided to share my special skills at working the rare ones!

On 2/9/ 79 at a few minutes after 2100 UTC, after announcing to all the stations waiting to work him, ZE2JH went ORT. This was my first encounter with Rhodesia so I was excited but failed to work him. I heard his last three QSO's, better luck next time.

On 2/10 I found and worked Paddy from Cavan, Ireland around 2040 UTC. He was on 28.002 and was a good 589 signal. On 2/11 I heard a TF from Iceland come on 29.017 at 2300 UTC. I had a few friends stop by just then and after drinking a few beers together, I could not hear him.

On phone I heard a DX net that has been active on 28.510 run by WA2BOT. It was announced in the Feb. QST DX column. While there I heard check-ins from a ZL, VK and a 5W station. On Tuesday at 0520 I heard a lot of DX on the phone band in the advanced portion. (Eat your hearts out all you generals!) There were even Russians. A JY3ZH from Jordon checked in and everyone wanted to work him. But a word to the wise. Please don't use lousy operating habits. The people who have lousy operating habits know who they are. (Don't be so sure...ed) I was disgusted by the garbage some U.S. stations put out trying to work the Jordon station. If you want to know how to work DX in a pile up, read the ARRL operating guide. Don't call the station while the U.S. station is giving a report to him. Don't use other interference tactics to get his attention. We are not giving the other countries a very good impression. Be patient, I know it's hard, but it will help you and the rest of the ham community in the long run. Just keep in mind Hiram Percy's old Maxim: "Never Transmit Without Intelligence!"

73, TOM

1980 WINTER OLYMPICS BULLETIN - By K1BUB

As reported in Zero Beat (January '79) Amateur radio will be used to augment communications services at the winter games. The amateur radio operations will be confined to the public area, and will be coordinated with established agencies. (police, etc)

The radio clubs in the Lake Placid area planned to have most of their members participate, however some members will be working at their occupations during the event. Amateurs from outside the area will be needed to fill their posts.

A problem exists as to where to house these people. Spectators will be travelling two and three hours to get to the events. Accommodations have been booked in Albany and Vermont.



Amateurs wishing to help out should:

1. Have a place to stay, a van or a camper
2. Plan on having their own food supply.

Anyone interested or wanting more details should send a card with their name, address and phone number to:

Bob Gravel, K1BUB
148 Pontoosic Road
Westfield, Mass 01085

Please send him your name even if you've already signed up. This is the person in charge of our effort. HCRA members only! ...Editor

Dear Editor,

ZB has been really very fine again this year, and I keep thinking how will you improve it, as it already was great, but now you cram even more items of value in it. Jack and I are always pleased when our copy arrives. Keep up the good work! 73, Barb WBLEHS

FOR SALE: Novice station Heath receiver, HR10B, Gonset Transmitter, AM and CW, Single 6146 plus operating accessories \$100 or less...Also Johnson Signal Sentry CW/Phone monitor -\$5.00...Omega-T antenna noise bridge-\$5.00 Art, W1KK 786-9115

SPECIAL YARD SALE: Moved to Sunny California! March 24, 25 at 92 Austin Street, Chicopee, Mass. Various electronic parts, 50' Rohn Tower, Oscilloscope, too many other items to mention! I'll miss all of the HCRA gang but hope you can stop by and pick up a bargain. 73,

Roger Ward, WA1ZRI (Look for ad in Springfield Newspaper and on .34 / .94)
EARN EXTRA MONEY!! Raise chinchillas in your bathtub! Write box 1755, Lenox, Mass 01240 for more information.

FOR SALE: Astatic D-104 "Silver Eagle" microphone with preamp. \$35.
Hickok model 650C video generator, bar-dot pattern, video and rf output instruction book, \$20. Times RG/331/U 50 ohm coax, vinyl jacketed, aluminum sheathed, low loss foamed polyethylene dielectric, low attenuation, i.e. .85 db per 100 ft at 100mhz. Used, excellent cx, .20¢ per ft
Hewlett Packard model 200j audio oscillator, 6 to 600 hz, rack mount, operating and service manual \$50.00 W1DGJ Ludlow 583-6678
For Sale: Original equipment cartons, all brands, new. Write to 69 Hazardville Road, Longmeadow, Mass

FOR SALE: National NCX-500 transceiver. 80-10 meters, 500 watts SSB, 360 watts cw, 125 watts AM, AC-500 power supply, Astatic JT-30C Microphone, 80-10 meters Hi-gain vertical antenna...\$250.00 W1DGJ, Mike in Ludlow 583-6678

For the benefit of K1KB0: Point arrow at ceiling in order to read this page.



EDITOR'S CORNER: From the January 1965 ZB

By Bill Hall, K1RPB

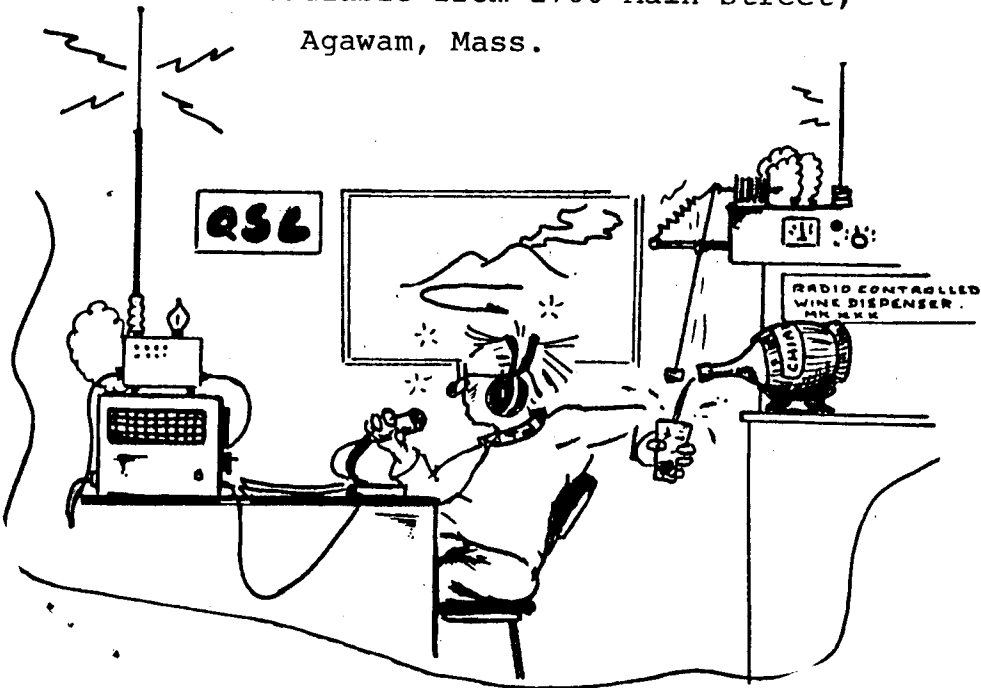
A few weeks ago I was catching up on my reading and I came across the November QST article, "Do It and Rue It" by K4KXR. Mr. Weinstein endeavors to discourage his fellow amateurs from home brewing their own equipment. I thought it a bit amazing to find this published in QST until I read the little blurb under the page heading.

I disagree with the author for the following reasons. A lot of us have done at least a moderate amount of home brewing. A good deal of personal satisfaction results from this. The first couple of projects might have ended up being a flop, but as one learns more and more, things begin to work out better. I have found that the secret of success lies in thinking out the problem, then putting it on paper and attacking it head first. Little or no compromise on layout should be allowed. A grid dip meter and VOM are a must and can usually be borrowed. The complexity of the rig should be governed by one's own knowledge and pocketbook. Once the article is finished and really works, it becomes a matter of personal pride and satisfaction.

On my Christmas shopping tour I had the misfortune to be mistaken for a Cber who thought my 10 meter whip was for 27Mhz. When I came out of the store I found his QSL card stuck under my windshield. It made me think of these fellows and their phenomenal threat to our image and spectrum. About the only thing that sets us apart at the moment is that we know morse code and the technical know-how that the art permits. Rather than abuse these, let's cultivate our assets lest we become classified as "morons" too! Nuff Said....

Wlkk, our tireless inventor, has found another operating aid, especially of great value in contests. Complete schematics are available from 1700 Main Street,

Agawam, Mass.



Tnx K1ZOC and

W1ESG

APRIL 1966

Spark-Gap Times

OFFICIAL JOURNAL OF THE "OLD, OLD, TIMER'S CLUB".

BEFORE THE DAYS OF WRITTEN TESTS

HAMS GRILLED AT OLD BROOKLYN NAVY YARD

By: ALBERT E. SONN, 2GC

FEW OF YOU PROBABLY REMEMBER WHEN YOU HAD TO TAKE YOUR "HAM LICENSE TEST" AT THE BROOKLYN NAVY YARD. THERE WERE NO WRITTEN QUESTIONS AND YOU DID NOT HAVE TO SEND ANY CODE IF I REMEMBER RIGHTLY.

IN 1912 WE HAD TO GET A LICENSE OR GET OFF THE AIR. O YES, THERE WERE PLENTY OF "WIRELESS BOOTLEGGERS" WHO GOT BY FOR A FEW YEARS BEFORE THEY WERE CAUGHT OR FORCED INTO PASSING A TEST. BUT THE HONEST AMATEUR DID HAVE A GO AT IT, AND HE HAD TO KNOW SOMETHING PRACTICAL ABOUT WIRELESS.

I HAD BEEN ON THE AIR FOR YEARS BEFORE THAT IN 1907 WHEN WE MADE OUT OUR CALL LETTERS TO SUIT OURSELVES. MINE AT FIRST WAS AS AFTER MY NAME, LATER I CHANGED IT TO DV BECAUSE ABOUT SIX OTHER HAMS IN AND AROUND NEWARK, N.J. USED THE LETTER "D" AS SORT OF A WIRELESS SOCIETY. WE HAD 2DG, 2DH, 2DI, AND SO ON. THAT WAS THE DAY THAT WE TOLD THE COMMERCIAL STATIONS AND THE NAVY WHERE TO GO IF WE SAW FIT TO JAM THE AIR. THERE WERE NO LAWS TO GOVERN US.

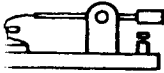
WE SIMPLY RULED THE AIR WAVES SO AS TO SPEAK. I REMEMBER GETTING IN WRONG WITH THE STATION AT FIRE ISLAND. THE OFFICER THERE WROTE MY FATHER A NASTY LETTER SO THAT I PLEASE LET UP ON THIS AMATEUR TRASH IN ORDER THAT FIRE ISLAND COULD GET THEIR TRAFFIC THRU. STATION WA AT THE WALDORF ASTORIA IN NEW YORK WAS SO SORE ABOUT HAMS OUT IN JERSEY KILLING THEIR TRAFFIC WITH WD AT WILMINGTON, THAT I, FOR ONE, CALLED PICKERIL AT THE KEY AND SAID, "I'LL STAY OFF FOR YOU IF YOU PROMISE TO LET ME HAVE A PAIR OF EAR-PHONES SUCH AS HE WAS USING". HE SAID HE WOULD GLADLY DO ANYTHING TO PLEASE ME IF I WOULD KEEP THAT NASTY SPARK GAP STILL. SO THE NEXT AFTERNOON I LEFT STEVENS PREP AT HOBOKEN, N. J., TOOK THE FERRY ACROSS THE HUDSON AND WENT UP TO SEE THE "BIG CHIEF." WHEN HE SAW ME HE WAS BUSY HANDLING TRAFFIC AND DID NOT PAY ATTENTION TO ME FOR ABOUT TEN MINUTES. I WAS FASCINATED AT THE WAY HE HANDED TRAFFIC WITHOUT THE USUAL QRN FROM THE REST OF OUR GANG. FINALLY HE LOOKED AROUND AND SAID, "WELL, WHAT HAVE YOU IN MIND? DO YOU WANT TO BECOME AN OPERATOR?" I SAID I WANTED MORE THAN THAT, I WAS 2DV,

THE SQUIRT THAT HE COMPLAINED ABOUT JAMMING HIM. "OH, YOU ARE THE KID WHO WANTS A PAIR OF EAR PHONES?" AND AT THAT HE TOOK HIS OWN HEAD SET OFF HIS BALD HEAD AND HANDED THEM TO ME. I TOLD HIM THAT I WOULD BE A GOOD BOY FROM NOW ON, AND I NEVER DID JAM HIM AGAIN. I WAS PROUD TO WEAR THOSE PHONES AND ALL THE O'S LOOKED ON ME WITH ENVY BECAUSE I HAD SOMETHING THEY NEVER COULD GET.

AFTER THAT LICENSING CAME ALONG. I WAS REQUESTED TO GO OVER TO THE BROOKLYN NAVY YARD AND TAKE A TEST. I DID NOT KNOW WHAT I WAS IN FOR BUT I GOT UP SOME COURAGE FROM SOMEWHERE AND MADE THE TRIP. I WAS USHERED INTO THE BIG STATION AT NAH. BOY, THE STUFF THEY HAD THERE! THEN A NAVY MAN IN CHARGE ASKED ME THE USUAL QUESTIONS ABOUT HOW LONG I HAD BEEN OPERATING WIRELESS AND I TOLD HIM OF MY HAMMING EXPERIENCES WITH COMMERCIAL STATIONS AND HOW I WANTED TO BE ON THE GOOD SIDE OF EVERYONE IN WIRELESS. HE ASKED ME A LOT MORE QUESTIONS ABOUT MY EXPERIENCES WITH A KEY AND I TOLD HIM THE TRUTH. THEN HE TOOK ME TO A SMALL SIDE ROOM FILLED WITH DISMANTELED GEAR AND SAID, "I KNOW SO MUCH ABOUT OPERATING, LOOK OVER THIS STUFF AND GET IT FIXED UP TO GO ON THE AIR." SCRATCHING MY THICK BROWN HAIR I WAS FLABBERGASTED AT WHAT TO DO NEXT. I SAW SOME BARE WIRES WHICH WERE NOT CONNECTED TO ANYTHING SO I DECIDED TO CONNECT THEM TOGETHER AGAIN. THIS ACCOMPLISHED I FELT BETTER. I CALLED THE OFFICER WHO WAS REALLY THE OPERATOR OF NAH. HE SAID, "WELL SONNY, YOU THINK YOU GOT IT GOING ALRIGHT AND IT WON'T BLOW ANY FUSES?" ALL I COULD SAY WAS TO GO AHEAD AND CLOSE THE CIRCUIT. TO THIS DAY I CANNOT SAY WHAT I DID, BUT I MUST HAVE DONE SOMETHING RIGHT. THE GENERATOR WHIRRED AND THE METERS SHOWED PROGRESS. I STOOD BACK, "PRESS THE KEY" THE OFFICER SAID. I DID AND THERE WAS ALOUD SPARK BETWEEN ELECTRODES IN THE GAP. I NEVER HEARD ANYTHING SO LOUD. THERE WAS OZONE ALL OVER THE SMALL ROOM. I HAD MADE IT WORK. THE OFFICER TURNED TO ME AND SAID; "YOU'LL DO SONNY, MANY FLUNK THAT KIND OF TEST. HOW DID YOU LEARN ALL THAT STUFF?" I TOLD HIM I REPLACED THE BATTERIES FOR OUR DOOR BELL AND HAD BEEN AN AMATEUR SETTING UP MY OWN STATION WITHOUT HELP.

MY LICENSE CAME IN A FEW DAYS AND I HAD TO CHANGE MY CALL FROM DV TO 2GC, I WAS THE ENVY OF ALL THE YOUNG WHO WERE STILL IN THE PRE-DAWN LICENSING AREA.

WELL, I AM W2GC SINCE 1912 AND KEPT THE LICENSE GOING WITH THE SAME CALL EVER SINCE. IF YOU DON'T BELIEVE IT JUST LOOK IN THE 1912 CALL LETTER BOOK AND YOU WILL SEE 2GC AMONG THE EARLIEST HAMS OF RECORD.

PART I CRADLE TO COLLEGE

I first saw the light of day in sunny, Central Italy four score and 12 years ago from wine making/drinking folks. The evolving social justice in Italy circa 1910 made it legally possible to buy up and own the family farm from the then feudal landlords, so over to the good old USA came the OM to provide the bucks by working on the RR. After several years on various jobs in NY, OH, MA, CT, he liked and settled in Hartford, working for what might now be called the DPW. By 1913 he had sent back enough money so my grandparents were living and cultivating land which after long last was their own, free and clear: Then mother, younger brother, and I made the three-week Atlantic crossing on the Arcona to New York, thence by RR to Hartford.

I remember my first couple of grades in elementary school in America as lots of fun compared to the long hours of highly structured classroom work and rigorous discipline of my 1st grade in Italy. Especially vivid is my recollection of the way the nuns in St. Peters School in the Hartford South End used to hold my head over the sink and brush out all the naughty words of my new English vocabulary. It seems I was pretty good in English and math so the elementary teachers took a special interest in me, pointing out the benefits and advantages of the academic route, as opposed to the wayward antics of my ghetto school chums. During and following WWI some gardening plots became available just across the bridge in the Meadows of East Hartford. With an abundance of manpower in the family, the folks wisely bought several lots and we built our own two-tenement house there in 1919, with help from paesano carpenters, bricklayers, electricians, plasterers and painters. In addition to the house we also constructed a barn for our horse "Terry", used by my father with the city-owned dump truck. The horse and barn items were fortuitous for me since the hayloft of the barn later became my private wireless shack, and years later, the little extra revenue from the horse served to make the first semester college tuition payment. Once settled in East Hartford, a dramatic change in lifestyle ensued for all of us. No more gang wars and daily bickering with close-in neighbors or picky landlords. Our classes in school were smaller and the kids more friendly, from families similarly dedicated to the work ethic. I joined the Boy Scouts, Troop #1 that met in the basement of the big white church, a nice one-hour jog/walk from where we lived. And in the basement of that church, circa 1920, is where my signaling hobby began: I was the kid that was selected to scamper up the backs of my buddies to the top of the human tower and promptly send a letter or two with semaphore flags, at which time the judges would click stopwatches to determine the winning troop. Guess you could call those my first contest contacts. From semaphore code it was a natural step to morse code and a wireless crystal receiving kit for Xmas made by A. C. Gilbert toy manufacturer.

Early at East Hartford High I met another wireless nut and in addition to perfecting our code together, and since we were both on the football team, he as Captain, and R. T. Tackle, and I as R.H.B., the signal "CQ" meant I would scramble over his back if necessary to get those last couple of yards for the touchdown. My father was not yet a citizen at that time, and since I was born in the old country I could not legally qualify for a station license but I had already passed the 10 WPM and did have an operator's license. So this friend of mine applied for a station license in his name with my equipment, such as it was, with the QTH in the hayloft where the horse lived, and away from the inquisitive eyes and hands of family, friends and neighbors. We used to pull up the outside

ladder behind us during wireless sessions. Those were the days in the early twenties when public radio broadcasting was just coming in. Also it was the time of transition from spark to tubes for ham transmitting. More than once, irate neighbors would come down the road and throw stones at that closed door to the barn attic where that darn kid was lousing up the broadcast program they were struggling to get from WBZ way up in Springfield. At about that same time, The Hartford Courant Station was trying to get started and those darn kids across the river were raising hell with the trial broadcasts. I don't know whether we had anything to do with their giving up on the project in favor of The Travelers', WTIC. I did have one heck of a big Fan antenna 80 ft. high and a unique counterpois consisting of all the cross wires that supported the families extensive red grape arbors under the antenna. With all the aggravation from the spark-gap transmitter, I changed over to a single tube tri-tet rig with the tube dunked in a glass jar containing my mother's olive oil as a heat sink. And with such an apparently puny setup, I well remember the thrill of working my first California W6CGW from the barn attic using a squirrel cage flat top. I must hasten to add that this was one spring time when the immediate surroundings were under a few feet of almost annually recurring flood waters that produced a good ground for the squirrel cage Marconi. This was a lot of fun and though I was able to weather a few storms with my dad, who didn't relish the confrontations with unhappy neighbors or my frequent occasions of playing hooky from school to make necessary antenna improvements, I was not able to cope with the FCC. To wit: One day Wally Butterworth, from the Boston Custom House Tower paid the barn a visit. Apparently, the complaints from the spark days had caught up to WLAIG. Wally was a nice guy, and a ham himself. He didn't get too technical with us, merely checked my operator's license and the separate station license, then told me of the broadcast complaints, and advised me to "cool it". Since I was now using a EW tube oscillator with electrolytic rectifier D.C. on the plate, the signal was ever so much cleaner but he said that if the complaints persisted, the Dept. of Commerce would have to close us down on the presumption of evading the law. I told him there would be no problem because I would put the station in "moth balls" and concentrate a little more on school work so I could get into college a year or two later.

In the fall of 1926, when I did get to Worcester Polytech, one of my first inquiries was the Radio Club and its Ham station W1YK. Indeed there were a dozen or so hams on campus, and because no one else wanted it, I was elected President in my Freshman year. Among the calls of other student operators I noticed in the station log was W1BVR, Perce from Westfield. You can imagine my delight; from wireless rags in a barn in the meadows of East Hartford to kilowatt riches in the EE Lab on Boynton Hill at WPI, and everything perfectly legal with my alien operator's license. It was too good to be true, but here again I had to throttle my radio involvement because of part-time outside work, and the study skeds were rough: No electives or gut courses then in Chemical Engineering!

(to be continued next month)

ZERO BEAT APRIL 1979

MISCELLANEOUS NOTES

FROM ZERO BEAT IN THE '60s!



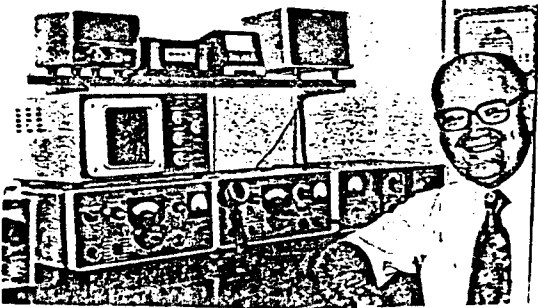
November '65- Bob and Eunie Gordon using their going away present, a microphone, in their new St. Louis QTH. (Do you still have it?)... Membership list of 39 members, with usual request to pay dues on time... ARRL National Emergency frequencies listed... Editorial on incentive licensing, now hams are going to have to make the grade"...

May '67-Guest speaker spoke on transistors and equipment using these wonders. Predicts we'll be using them more and more... WLIUB is bending S meters with his new two meter rig... WJALL is teaching a Civil Defense course in Southwick... January '67... Phil, WA1CTQ joined the club... February '69- Chet Kalis, K1LDT is president... Jon Sheldonglick WA1IUO talked about the Talcott Mountain Science Center. Art, W1MNG is now W1KK... K1YQQ teaching a radio course... W1QWJ is working aurora on 2 and 6 meters... W1UKR, W1KUL, W1KUE journeyed to Brassua Lake in Maine, mostly to freeze at the stove!... Dues are still \$3.00... January '66- W1KK, W1STR, W1GIV, W1QWJ, W1LRE talked on Oscilloscopes... Wiped out the Hartford RC again in the VHF SS.. Oscar Four has first contacts... September '69- Paul Wing, W1VWX working behind the coffee/donut bar... DXers in the club asked to help with the QSL bureau... President, Bill Stacy, K1ANF, VP is W1LS, Secretary is Bob, W1ADNB, Treasurer is Al Brousso... Field Day report- Cal, W1MDM, would have strung copper for his multi-element inverted V to New York if chow wasn't called... W1QWJ awarded ARRL Plaque for best article in May QST... W1BVR appointed SCM... February '67- Journey to League headquarters for the meeting, FB... Bill Hall gave talk in January on home brewing... Hartford RC again wiped out by the HCRA in the VHF SS. Getting to be a bore to win against them!

March '67- Incentive licensing with two year novice license begins... Big wind knocked down many members towers... K1ANF top scorer in VHF SS... List of paid up members, all others will no longer receive ZB....

*****END OF THIS SERIES. (No more old ZB's!) *****

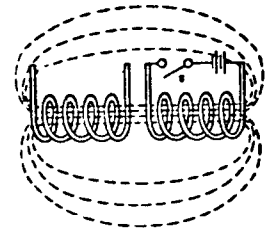
Many thanks to Howard Cutting for the old issues!!!



A DISTINCTIVE QSL USING OUR "COLLINS S LINE" LIFE-SIZE POSTER: CAN YOU TELL IT'S FAKE?

FOR SALE:
COLLINS S LINE!!!
 COMPLETE LIFE-SIZE POSTER
 IMPRESS YOUR FRIENDS
 WITH A DISTINCTIVE QSL CARD
 (PASTE TO CARDBOARD BOXES
 AND THEN TAKE A PHOTOGRAPH
 FOR YOUR QSL CARDS! WHO'LL
 EVER KNOW THE REAL JUNK
 YOU OPERATE?)

Technical Topics
 by
 Ed White, W1NPL



COILS

Coils are usually made up of smooth, nicely curved material. There seems to be a never ending variety of coil forms. Sometimes you can wind them up yourself, but you have to be prepared - as they may unwind with a snap and a snarl you'll remember for quite a spell. Occasionally you will find a square coil.

Most coils are variable, and do indeed vary from day to day. Coils are also known as inductors, because at times they can induce. (or is it seduce?) (See Figure #1)

There are many types and arrangements of coils, namely: High Q coils, pickup coils, "if" coils, and a most troublesome coil - those associated with bad joints. (See Figure #2)

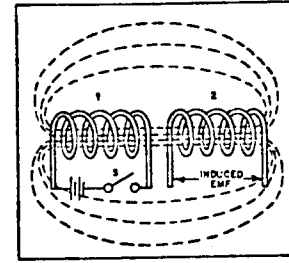
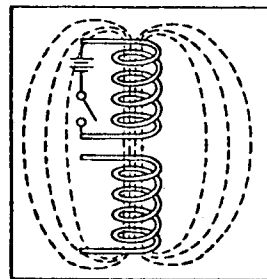
Most coils exhibit an unexplained magnetism which exert quite an attraction to surrounding objects. And according to the accepted theory, coils attract the opposite, and like coils tend to repel. (See Figure #3)

The larger the coil the more work they can do, up to a point. When coils are giving trouble, any attempt to use a fault detector, will usually make them blow up!

An important point to note, is that the resistance of coils can be reduced by plating with gold and/or silver. (See Figure #4)

The best and only way to determine if a coil is operating satisfactory, is to test it in an osculation circuit.

Coils look best in a mini - and the plural of coil is a coupler.



APRIL ZERO BEAT '79

MISCELLANEOUS NOTES

HAM OF THE YEAR AWARD

The HCRA will present a plaque to the "Ham of the Year", as voted by the membership. Nominations are being accepted until APRIL 15th. (Written Nominations, Only!) Please mail them to: Zero Beat c/o JJ Duquette, P.O. Box 346, Southwick, Mass 01077, or you can bring them in person to the meeting to give to Larry Soltz, WB1CJH. Ballots will be printed in the May ZB and the election will end on May 20th. The award will be presented at the June banquet.

Rules:

- 1. Nominations can be made only by HCRA members. However, Non-members can be nominees.
2. Ballots by mail and at the May flea market will be accepted until May 20th. Members may vote only once.
3. Decision of the board of Directors is final, and will be based on the votes taken from this balloting.

Return this or a facsimile to: P.O. Box 346, Southwick, Mass before May 12th.

I Nominate _____, Amateur Call _____, to be placed on the ballot for the HCRA "Ham of the Year" Award.

Signature, call sign

Additional comments

Letter

Dear President of the HCRA,

Let me start by commenting that I really appreciate the service performed by the Association's QSL Bureau. I realize the hours and devotion spent on this job so that hams like myself can benefit. My best regards to the whole gang there!

My Best 73, Jonathan A. Cunitz, WBWS

And we appreciate the efforts of our Bureau manager, Eleanore Grey, who is feeling better, but is not yet back to her old self....Editor

FOR SALE: 40 foot telescoping mast, with guy wires, etc. \$75.00... Study sample exams for the Commercial tickets, I, II, III- \$7.00 postpaid K1BE, Jeff 569-6739 (Mail to ZB)

Job opportunity- Starting with September '79 issue- Zero Beat Editor. See WB1CJH

Bill Porter is eagerly awaiting his new novice ticket, reports WB1CAC... W1ALCTQ worked a large number of states during the Novice Round-up... ACIT reports that the slow speed net for cw on Monday nights at 7 pm on 28.150 is doing well with many checkins... W1DVW has been in the hospital, is out and doing better. W1GQP phone patched Bob from his hospital bed into the barnyard net so he could say hi to his friends... K1ZOC was testing a new mike on the ten meter net, and sounded poor. Never try to use a tomato soup can on ten meters as a microphone, Joe. Only Chicken and Rice cans will work on ten!... WB1GTR, Jack, checked into the ten meter net with a big signal from Forest Park. He's using a vertical antenna... Ron, K1CHI made his first novice QSO, and worked South Dakota.....

SILENT KEY

Wes Thayer, W1LRE, passed away on February 26th. This past summer while preparing to enter the hospital for major surgery, Wes took the time to dig out some of his old "Zero Beat"s from 1949 and sent them to me by way of W1GQP. Wes was club treasurer for many years and always helped the HCRA in big and small ways. He'll be missed by all of his friends.

Auctions / Flea Markets

April 1: Framingham Amateur Radio Association electronics flea market at rear of Framingham police station. Set up from 9 to 10 am, open at 10 am. Talk in 52/52 and 75/15. Food available. \$5 for tables in advance, if any left \$7.50 at the door. More information via P.O. Box 3005, Framingham, Massachusetts 01701.

April 7: Wellesley Amateur Radio Society Auction, check in at 10 am, auction starts at 11 am. Wellesley High School, 50 Rice Street, Wellesley, Mass. Talk in 96/36, 04/64, 63/03.

April 21: South Shore Repeater Assn. auction. Central Junior High School, Broad Street, Weymouth, Mass. Check in starts at 9 am, auction at noon. Talk in on 90/30 and 52/52. Details via SSRA, Town Hall Annex, 402 Essex St., Weymouth, Massachusetts 02188.

April 22: PVRA second flea market and auction, 10 am to 5 pm. Newington High School, Newington, Conn. Further information via Arnie K1NFE at 203-589-3333.

April 27: Central Mass. ARA auction, 7 pm at the American Legion Post, 1024 Main Street, Worcester, Mass.

NEW ENGLAND LIBRARY

HAM FLEA MARKET

SATURDAY, MARCH 31 9:00AM - 4:00PM at WORCESTER POLYTECHNIC INST., WORCESTER, MA. IN THE MORGAN HALL DINING ROOM

ADMISSION \$0.50 (includes table fee)

TABLE SPACE AVAILABLE ---

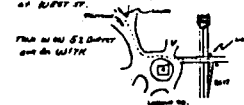
3x8 table --- \$5.00
3x6 table --- \$3.50

RESERVE TABLES AHEAD with \$1.00. WORCESTER POLYTECHNIC INST. 1000 WASHINGTON ST. WORCESTER, MA 01099

FULL SNACK BAR

ONLY AN HOUR FROM SPRINGFIELD

There will be a full snack bar at the flea market. All of the food is sold at a special price. Please bring your own cash. There will be a cash register at the flea market.



March 31: Worcester Polytechnic Inst. Wireless Association, W1YK, flea market, at Morgan Hall, WPI (off Rt. 9). Hours are 9 am to 4 pm, admission 50¢. Full snack bar. Tables are \$5 for a 3x8 and \$4.50 for a 3x6. Talk in on 52/52 and 147.99/39. Reservations and further information via Box 2393 WPI, Worcester, Massachusetts 01609.

I constructed a very strong high gain 5 element beam for use during the summer months two years ago. It is still in excellent condition in spite of being exposed to the elements (pun not intended) for two years. The beam can be built by almost anyone at a cost of under two dollars. In fact, because of a mistake on my part, two of these beams were made for a total cost of \$1.40. I forgot to bring the aluminum elements along to the summer QTH and substituted wire coat hangers - and, to my surprise, they worked out fine. Here is how the beam is constructed:

Refer to the diagram Figure 1: Secure a 10 foot length of EMT electrical conduit $\frac{1}{2}$ " size at your local electrical supply house (cost 9¢). Cut it in half and make two beams for

a stacked array or sell the other half to a friend. Drill four $\frac{1}{8}$ " holes as marked on the diagram. Keep the drill level and drill completely through from one side to the other. These holes will hold the three directors and reflector. At right angles to these holes (using a #30 drill) drill four more holes. These are for sheet metal screws and will keep the elements from slipping. Do not drill all the way through the boom - just the bottom. Drill two $\frac{1}{8}$ " holes completely through the top and bottom of the boom as shown $\frac{1}{2}$ " apart; this will hold the barrier strip which supports the driven element.

Drill two $\frac{1}{2}$ " holes 2" apart as shown to hold the "U" bolt clamp. This completes the drilling. A hint on drilling the holes: Center-punch all holes first and secure the conduit in a vise or between two pieces of wood before you drill. The conduit is thin walled and is easy to drill, even with a hand drill. In fact, using a Parker Kalon steel nail I have punched the holes through with a hammer! This is mentioned as a last resort only, however.

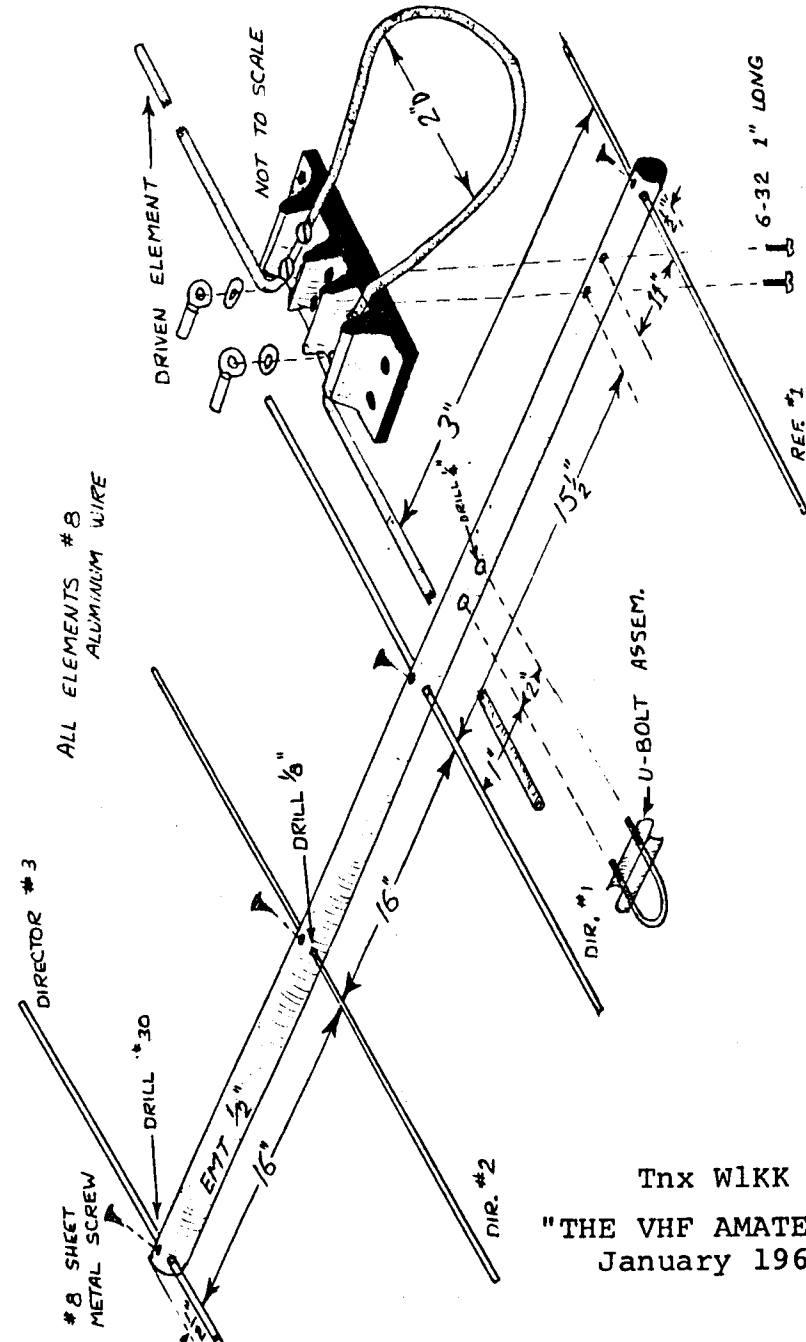
The elements for the directors and reflectors are cut to size according to the diagram. The aluminum used is #8 TV ground wire; while not the best, it's cheap and does the job. I bought it from a local TV service man for 2¢ a foot.

The driven element will be made from a piece of #8 wire 43" long. Find the center and bend it into a "U" shape around a 2" diameter object - this can be a piece of pipe, jar or can. I now use a Jones barrier strip #354-11-03-001 as a mounting. The strip has three double mounting screws. The "U" shaped wire will be placed under the double screws on the two outside barriers. This is done by removing all six screws from the strip. Place the "U" shaped wire in the two end barriers (you will have to form the wire and squeeze it down to an inch so it will fit). Replace the four screws by first placing washers under all four and then spade lugs under the two screws away from the loop. Tighten up the screws. It should now be a simple matter to bend each end at right angles so they form the element as shown in the diagram. A hint on using the aluminum wire: It comes in a reel and will have bends in it. To straighten it, place one end in a vise or have someone hold it tight. Then use the handle of a hammer and press down on the wire and draw it to you at the same time. This will press out all the wrinkles.

To assemble the elements, start with the driven element. Use two 6/32 by 1" screws and fasten the barrier strip to the boom as shown by running the screw through the bottom of the boom and up the bottom of the strip into the threaded hole in the center barrier. The other elements are slipped through the holes and centered, then locked in with four #8 self-tappers that have had the sharp ends filed or ground off. Do not pull them up too tight or they'll bend the aluminum. Slip the TV type "U" bolt clamp assembly in place, straighten out the elements, and your beam is ready for the feedline. If you have used coat hangers instead of aluminum, just clean off the paint where they have to make contact on the barrier strip. The black paint will keep them from rusting.

I fed the single bay as follows: Connect a length of 300 ohm TV twinlead on the two outside terminals where you have placed the spade lugs; this method is a steal from a commercial beam and matches up very well. Run the lead down and away from the beam at right angles using standoff insulators where needed down and into the rig. At this point I constructed a coax balun as shown to match the low impedance unbalanced output of the converter and rig. However, you might want to use the 300 ohm balanced feed. Other methods of feeding are to put a balun up at the loop on the driven element and run coax down into the shack - either method is OK - I used twinlead because it was available (cheap) and

worked just as well. If you have built two of the beams described and wish to stack them, use a coax balun at each driven element as described above. Space the beams 6' 9" apart on the mast and connect a piece of 75 ohm coax 5' 7" long to each balun. Run the ends of these to the mid-point of the mast, connect together with a piece of 52 ohm coax, solder all connections, and run the 52 ohm coax to the shack. This system is also "borrowed" from a commercial beam and works very well. This will give you about 12 db of forward gain. The single bay is rated at about 9 db...



Tnx W1KK and
"THE VHF AMATEUR"
January 1962

"Timeout!"

By Mike Adlerstein, K1FB

Did you ever wonder how your 100 watt peanut whistle could be heard thousands of miles away? It would seem that after that much power spread out over such a great distance, there would be little left to wiggle the electrons on a tube grid. It's interesting to play with a few numbers to get a feel for where the power goes.

If you get an "S9" report from Australia, that implies that 50uv is appearing at the receiver antenna input. From the formula $P=V^2/R$, assuming a 50Ω antenna ($R=50\Omega$). This means that the antenna is intercepting a power level of .0000000005 watts (5×10^{-11}). Your signal has suffered an attenuation of 123 db!

Let's assume that both you and the station you were contacting were in free space. How far apart would you have to be before your signal would be at the S9 level? It can be shown that when power is radiated uniformly in all directions, that the power impinging on a given receiving antenna decreases as the square of its distance away. This is so because the radiation can be viewed as expanding outward as an inflating balloon. The surface area of the sphere increases as the square of the radius. Hence the power over any given area must decrease by this same proportion.

A half wave dipole intercepts all the incoming energy over an area approximately $(1/4\pi)l^2$, where l is the wavelength. Thus the total power intercepted from a transmitter with power output of P_{out} , a distance of d away is approximately:

$$P_{absorbed} = (1/(4\pi)^2)(l^2/d^2)P_{out}$$

Therefore, to produce an S9 signal in outer space on 40 meters with a 100 watt transmitter, two stations could be up to 4500 km or 2810 miles apart. The distance to Australia is about ten thousand miles and signals can be much stronger than S9.

The above exercise is just to show the role of skip and directional antennas in focusing radiated energy at far away places. This effect is often overlooked when considering the major effect of skip: bending waves around the curved surface of the earth. Without this bending, no amount of power would put your signal into Australia. □

Amateur Radio In The USSR

Any Amateur operating the bands and particularly CW can't help but be impressed by the proficiency of Russian Amateur operations. They really move along with good accuracy. If an American Amateur works them, he has to move his electronic keyer's speed or get his straight key really hot to stay up with them. Although, at times, their tones may leave something to be desired, which is understandable from some of their locations, their operating ability and lack of errors should be emulated by American Amateurs.

One has to wonder: Here is a capitalistic country where we have all the advantages, how did these Amateurs get so good? Why isn't the average American operator as good? To find the answers to these questions, one has to look at the background of the average Russian Amateur and how he got his license. It is a lot harder to get a ham ticket there than here, is one of the reasons. To become a ham, a Russian must take an electronics course, join a radio club, and take a test. The applicant is then allowed to LISTEN, we emphasize, listen, on the Amateur bands and log stations and be able to send code at 10 wpm. This may be one of the reasons that we American Amateurs receive quite a few cards through the bureau from Russian SWL's.

After six months as a SWL, a third test may then be taken. This allows 10 watts on 80, 40 CW and 10 meter phone. The next step up, the second class license is harder and permits 40 watts and CW operation on most bands. The top ticket is the first class license and requires the operator to send and receive at 18 wpm, build, design, and troubleshoot advanced radio gear. Maximum power on all bands is 200 watts. All applicants must demonstrate also an elementary knowledge of the English language. Russia does not want any "dumbkoff" operators and they must know the Q signals extremely well. One can see that by the time a Russian has received his first class ticket, he has been exposed to a lot of required operating time and particularly listening.

Another factor is the following: to

What is a Radio Club?

By Jim Matherley, WA1TSV

What is a Radio Club? What does it do? Why should I join a club and if I did, what benefits would I gain from doing so? These questions are some of the ones I have heard during my short hamming experience of five years.

First of all, a radio club is an organization made up of fellow Amateurs who are interested in a hobby and by sheer weight of numbers, can help enhance the furtherment of the art by exchanging ideas together. They can lend their expertise in the many areas of Amateur radio as well as receive the same from the more knowledgeable. A club is a central point for aspiring future Novices to come to learn through our Amateur classes. A club plans many other activities to help you get further enjoyment out of our hobby. It is a focal point for planning emergency communication procedures. I could go on and on, but I am sure you are aware of the many functions of a radio club.

A club helps keep its members informed of the latest news pertinent to the hobby. It provides interesting speakers and films at the club meetings and in general, complies with the first rule of being there as a public service vehicle.

As good as all this may sound, no club is any better than the members it has in it and how much they are active in keeping the club going. Manpower is necessary to any club's success. But, at the same time, it also provides the active member with a greater sense of fulfillment by being part of it.

make up for their personal lack of funds or access to radio equipment, every Russian town has its Amateur radio club where newcomers are brought up through the ranks and have the further advantage of observing experienced operators in action and offers a place to gain actual practical experience before they ever get on the air.

One can't help but wonder, would we have as many American Amateurs if such a required procedure prevailed in this country? What do you think? □

Thanks to Triple States RAC, Adena, Ohio, "Bull'n'ten" via ARNS.

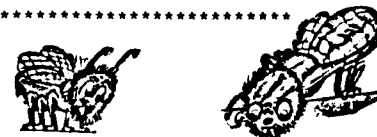
I have seen this club grow from a small group into one of the best clubs in the area and as much of a great job they did, many sat in the woodwork letting it all happen. Many felt that since such a great job was being done, their contributions would be of little or no consequence. WRONG! Everyone has something they can give no matter how large or small it may be. Many a great idea has come out of one of those so called 'stupid' thoughts. Ask big business and they will tell you story after story of this. So come on to the meetings and get in your "two cents worth". If you are unable to get to the meetings, then write a note or a or letter to J. Duquette, K1BE, P.O. Box 346, Southwick, Mass 01077 and make your views known. He would be happy just to hear from you about what you've been doing. Mind reading is a poor source of information on the members.

With so many events just around the corner, our auction May fourth, the "Science Happening", Advanced/Extra course, flea market, banquet, and field Day, there are plenty of activities for you to engage in. See the fulfillment that goes with those who are active as compared to those who sit back and watch things pass them by!

The Spark Gap

Official Journal of the Wellesley Amateur Radio Society

TNX TO THE WARS!!



HCRA FLEA MARKET, FRIDAY

MAY 4th! DOORS OPEN AT 7 pm

ANNUAL BANQUET, FRIDAY JUNE 8th

ZERO BEAT

FIRST CLASS MAIL

ACTV

NOV 79 E ARL

HAMPDEN COUNTY RADIO ASS'N
 J. J. DUQUETTE
 P.O. BOX 346
 SOUTHWICK, MASS 01077

FREQUENCY ALLOCATIONS FOR POPULAR AMATEUR BANDS
 All in Megacycles. "X" indicates no privileges.

CLASSES→	NOVICE		TECHNICIAN		GENERAL AND CONDITIONAL		ADVANCED		EXTRA	
	BANDS↓	CW	PHONE	CW	PHONE	CW	PHONE	CW	PHONE	CW
80 METERS	3.7 to 3.75	X	3.7 to 3.75	X	3.525 to 3.775 and 3.89 to 4.0	3.89 to 4.0	3.525 to 3.775 and 3.8 to 4.0	3.8 to 4.0	3.5 to 4.0	3.775 to 4.0
40 METERS	7.1 to 7.15	X	7.1 to 7.15	X	7.025 to 7.15 and 7.225 to 7.3	7.225 to 7.3	7.025 to 7.3	7.15 to 7.3	7.0 to 7.3	7.15 to 7.3
20 METERS	X	X	X	X	14.025 to 14.2 and 14.275 to 14.35	14.275 to 14.35	14.025 to 14.35	14.2 to 14.35	14.0 to 14.35	14.2 to 14.35
15 METERS	21.1 to 21.2	X	21.1 to 21.2	X	21.025 to 21.25 and 21.35 to 21.45	21.35 to 21.45	21.025 to 21.25 and 21.27 to 21.45	21.27 to 21.45	21.0 to 21.45	21.25 to 21.45
10 METERS	28.1 to 28.2	X	28.1 to 28.2	X	28.0 to 29.7	28.5 to 29.7	28.0 to 29.7	28.5 to 29.7	28.0 to 29.7	28.5 to 29.7
6 METERS	X	X	50.1 to 54.0	50.1 to 54.0	50.1 to 54.0	50.1 to 54.0	50.0 to 54.0	50.1 to 54.0	50.0 to 54.0	50.1 to 54.0
2 METERS	X	X	145.0 to 148.0	145.0 to 148.0	144.0 to 148.0	144.1 to 148.0	144.0 to 148.0	144.1 to 148.0	144.0 to 148.0	144.1 to 148.0