

Alliance Amateur Radio Club

Affiliated with the "American Radio Relay League"



ZERO BEAT

June 1990

HAM RADIO IS DEAD !

Perhaps the announcement should have been listed in the Silent Key section of "QST" and not in the Happenings section as it was. In a surprise move at the 1990 Dayton Hamvention, Skip Tenny, the publisher of the well known magazine "Ham Radio" announced the sale of "Ham Radio" to CQ Communications Inc., publisher of "CQ Magazine". After 22 years of publication, as of the June issue "Ham Radio" will cease to exist. This is a very serious loss to the amateur radio community. "Ham Radio" was by far the best technical oriented ham magazine published in North America. I'm sure the sale was solely for the monetary gains of the owners and they did not consider the effect of the sale on the amateur radio community. We are the ones who suffer the loss.

CQ Communications will fill existing subscriptions with "CQ Magazines" after the final issue in June. Thankfully my subscription expires after the June issue and I didn't renew it early. In my opinion CQ is no replacement

for "Ham Radio" and will never be. In fact CQ isn't worth the paper they print it on.

The loss of "Ham Radio" will leave a void for the technically inclined. "QST" does a good job of covering the regulation and operating aspects of amateur radio. However, most of the better technical articles received by the ARRL are published in "QEX", which since its beginning in March 1982 has escalated in price. This price increase along with ARRL dues for "QST" has driven the price of subscriptions out of sight. Least I forget, there is one other amateur radio magazine, where occasionally mixed in with the normal garbage that spews from Wayne Green's mouth, "73 Magazine" sometimes hits on a good technical article. "73 Magazine", although not up to the quality it was in the 70s for technical articles, does sometimes provide a good source of information and construction information for the technically inclined ham.

73s "Ham Radio", We'll miss you
KC3CL

The next meeting of the Alliance Amateur Radio Club will be held on Thursday 7 June 1990. Meetings are held monthly at the Alliance Community Hospital at 7:30 PM. In the cafeteria on the first floor. Visitors are always welcome.

Zero Beat is published monthly by the Alliance Amateur Radio Club. All correspondence related to the Zero Beat should be addressed to:

Alliance Amateur Radio Club Inc.
Att: Editor Zero Beat
P.O. Box 3344
Alliance Ohio 44601

Articles for publication can be submitted to the editor by mail, in person, or electronic transfer. Electronic transfer can be made by telephone modem, radio teletype or an IBM PC formatted disk. Disks should be 5 1/4" 360Kb or 3 1/2" 720Kb. Disks will be returned. Files should be in ASCII format or if in an IBM PC wordprocessor format, the wordprocessor used must be specified to permit conversion. For radio or teletype transfer contact the editor to make arrangements.

Zero Beat Editor:
KC3CL
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12435 Beula St.
Alliance Oh 44601
(216)-821-4409

The activities of the Alliance Amateur radio Club are coordinated by an elected board of officers. The current officers and the respective positions are:

President - Jim Wilson - KB8GHZ
Vice President - John Meyers - WX8G
Secretary - Gladys Wilson - KB8GIA Treasurer
- Patti Hillier - KE8KH
Trustee - Jim Ferguson - N8DZA
Trustee - Dave Buckwalter - KC3CL
Trustee - Larry Ashburn - KE8VE

CALLS The latest calls as of May 1, 1990, are as follows:

- EXTRA - AA8BA (+ 13)
- ADVANCED -- KF8GC (+ 23)
- TECH/GENERAL - N8MEX (+ 98)
- NOVICE -- KB8JTR (+ 330)

This is the 3rd largest amount of novice tickets issued in any one month, since we started keeping records on them, December, 1986. By the way, 31 visitors to the AARC mall show, filled out slips requesting more information about becoming a ham.

JUNE EVENT CALENDAR

- 3 Breezeshooters Hamfest - Butler PA
- 7 AARC MEETING - 7:30 PM In the cafeteria at the Alliance Community Hospital
- 9 Ravenna VE exams - contact Joanne Solak, KJ3O (274-8240)
- 10-11 ARRL June VHF QSO Party
- 10 Goodyear Hamfest - Wingfoot Lake Park
- 12-13 Alabama/Georgia QSO Party
- 14 Eastern Stark County ARES Net - 9 PM on 145.37
- 16-17 All Asian DX Contest, Phone
- 21 Eastern Stark County ARES Net - 9 PM on 145.37
- 23-24 Field Day
- 29 Eastern Stark County ARES Net - 9 PM on 145.37

CQ CQ CQ

This column is from the President of the AARC and its purpose will be to inform you of what is happening at the monthly club meetings along with my views on topics of interest to the club. If you are unable to attend the meetings this column will help keep you informed of the activities of the club. As we move into the 90s myself and the board members will be trying different ideas to move the club forward. Please pass on you ideas.

The May meeting was attended by 23 members and 3 guests. N8DZA reported that the classes at the YMCA now have a few girls involved and the class is coming along very well. He also reported that the Fox Hunt will be held on May 20th (read about the outcome elsewhere in this newsletter). Dan N8LVO won the 50/50 drawing and if you misplaced anything from the mall show contact Larry, KE8VE. He may have it.

The annual meeting (Election Meeting) of the AARC is over and for those of you who couldn't make the meeting a few changes were made. Dave KC3CL, replaced Larry N8EWV as trustee. Jim KB8GHZ is the new President and John WX8G replaced Gary KB8GAB as the new Vice President. Gladys KB8GIA and Patti KE8KH both retained the offices of Secretary and Treasurer. Thanks go to all of the out going officers for a job well done.

Have you been listening to the 5.37 machine lately? There has been a scratchy Q5 signal fading in and out. Well it's been discovered that this signal has been originating from WX8G's basement. It seems that John has been working with an experimental antenna. Reports indicate that it is some sort of dipole suspended from the rafters. This new and unique antenna has been named the "Subterranean Dipole". Keep an ear to the repeater and try to work John on his new and rare antenna. It will make his day.

By the time you have read this the June meeting will be close at hand (If it's not over, Ed). Come out to the meeting and help make

the final plans for Field Day and eat a few doughnuts while your there.

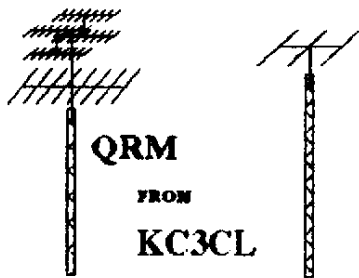
Speaking of meetings, the last meeting was also the drawing for the prizes in the annual AARC fund raiser. You should have seen the look on N8DZA's face when he was announced as the winner of the lcom "2GAT" (What kind of name is that for a hand held? It sounds like half of a call sign. Ed). The reaction was from Jim was something to see. The second prize, an antenna rotator system, was won by Fred Hobbs. Fred is the son of Bob W8ACP. Congratulations to both winners.

On the subject of the club newsletter, each of the past editors did a good job trying different things. You each gave it what you could and you are to be commended for your efforts. Now we must move in to the 90s with new ideas and formats. KC3CL our new Zero Beat editor will be experimenting with a few ideas that are a little different. One of these is the two column page, which for me is a little easier to read. The interjection of the (Ed) comments is a plus that adds that professional touch to the newsletter and I hope it will continue. Keep trying those different formats Dave.

On May 16th my wife and I attended a banquet that honored one of our club members for his outstanding effort to help others. This member, with his dedication to ham radio and outstanding support to the community, has given much to support good values, direction and leadership to so many that on this evening he was presented with an award acknowledging his efforts. Jim Ferguson, N8DZA, is that club member. He received this fine award for his dedication to the boys and girls at the YMCA's amateur radio youth program. Again Jim, congratulations.

In closing I'll leave you with this thought to ponder. "Why is it that the severity of an itch is inversely proportional to the length of your reach?"

73s KB8GHZ Jim



Well here we are again. The end of another month and the meeting is sneaking up on us. It has been a busy month. We started out with the annual meeting and elections, the drawing for the fund raiser prizes, and ended up with the Fox Hunt. The Fox Hunt was one of the big highlights for AARC this month. It was a good day for all who attended. Even those who didn't find the Fox (You know who you are!) had fun. WI8T, Alan Dicks was the lucky (?) winner. He will be the Fox for the next big hunt to take place later in the year.

Congratulations to N8DZA on winning the ICOM IC-2GAT Handheld. I understand that it came with very explicit instructions.

1. Get Licensed
2. Turn On
3. Press Button to Transmit
4. Replace Dead Battery
5. Call Factory
6. Trade in for Kenwood

Field Day is coming. This is the single most active Ham Radio event all year. Its lots of fun too. Make plans to come out to the next meeting (7 June) and hear all about Field Day and help make plans for the AARC Field Day 90. Field Day is scheduled for the last full weekend in June. The current plan is to have some internal club BAND vs BAND competitions this year. I heard from an anonymous source that N8DZA will operate 20 meter CW and will whip any other band or mode operators. KB8GAB is going to try to take top honors on 10 meter SSB. But before he gets his hopes up, he better wait and see if I can or will fix his rig! Make plans to join us at the meeting and again at the soon to be decided Field Day Site.

73s Dave KC3CL



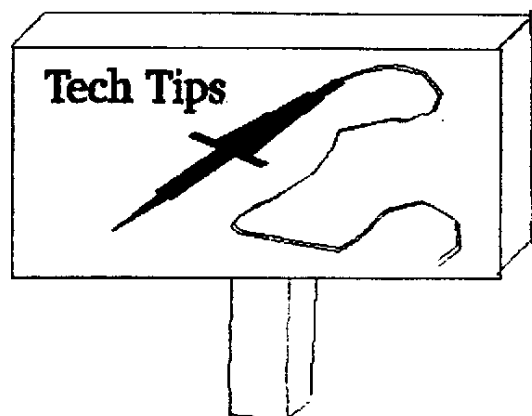
QST
 DE W1AW PROPAGATION FORECAST BULLETIN 22
 FROM ED TILTON, W1HDQ
 SPRING HILL FL MAY 29, 1990
 TO ALL RADIO AMATEURS

THE SOLAR FLUX WAS AS LOW AS 121 EARLY IN MAY. FROM THERE, IT ROSE TO 268, THE HIGHEST READING THIS YEAR SO FAR. THE FLUX TURNED DOWNWARD ON MAY 19 AND BY THE 29TH, IT WAS DOWN TO 138. IT MAY GO LOWER THIS WEEK, BUT NOT FOR LONG.

GEOMAGNETIC ACTIVITY HAS BEEN HIGH MOST OF THE TIME THIS MONTH, MAKING FOR POORER PROPAGATION ON HIGH LATITUDE PATHS, SUCH AS FROM THIS COUNTRY TO NORTHERN EUROPE. SHORT SKIP HAS BECOME FREQUENT ON 28 and 50 MHZ. IT WILL TEND TO DOMINATE PROPAGATION ON THESE BANDS THROUGH JUNE CKPPVXLAT LEAST. E SKIP IS LARGELY RANDOM, BUT IT IS MOST COMMON IN EARLY SUMMER AND FOR A FEW WEEKS EITHER SIDE OF THE SHORTEST DAY OF THE YEAR.

FOR THE LATEST ACTIVITY, LISTEN TO WWV OR WWVH AT 18 OR 45 MINUTES AFTER THE HOUR. THE K INDEX, THE MOST USEFUL ITEM, IS CHANGED EVERY 3 HOURS. ALL OTHER INFORMATION IS CHANGED AT ZERO HOURS UNIVERSAL TIME ONLY.

AMERICAN SUNSPOT NUMBERS FOR MAY 17 THROUGH 23 WERE BETWEEN 135 AND 181 WITH A MEAN OF 163.6.



Numerous comments have been made over the past few years indicating that the Zero Beat needs technical articles. Well here is one. If this type of article is acceptable more will follow. Inputs from club members will also enhance the quality of this column and the newsletter.

This article is reprinted from the Kenwood service bulletin notes. The modification described can be applied to Kenwood TS-520 and TS-820 series radios that have CW filters installed. This modification is quite simple in nature and can be accomplished by almost anyone. The exceptions and precautions that must be observed are:

1. If you are afraid of heights do this modification in the basement.
2. Do not use a hammer larger than 3 lbs.
3. If soldering with a propane torch, keep the flame small and off the transistors.
4. Do not spill your 807 or 5U4 (807 lite) into the chassis.
5. **DO NOT, I repeat, DO NOT** attempt this modification on your ICOM 2AT!

TS-520, TS-820 CW Filter Select Control

On the TS-520SE, the heater switch has been replaced with a CW WIDE/NARROW select switch. For those operators who desire this type feature for their transceiver, the following information may be considered as a guideline.

TS-520S Series Transceivers

1. A miniature SPDT switch may be installed at the operators preference, on the rear side, or bottom panel. Use this to switch the CW or SSB filters by wiring the BROWN lead, which normally is transferred to the CW terminal on the IF unit, between the SSB filter, for WIDE and CW for NARROW.
2. A Traditional solution has been to use the FIX CH switch, position 3 and 4 for filter switching. This may be done by completely rewiring the switch, or by leaving the switch wiring and the filter wiring as for normal operation, and bridging the following terminals:

- A. FIX CH C terminal to IF SSB Terminal
- B. FIX CH 4 terminal to IF CW terminal

Placing the FIX CH switch to 4 will operate the SSB filter in CW mode.

TS-820S Series Transceivers

1. Similar to the TS-520 series, a miniature SPDT toggle switch may be installed at the operators preference a the rear or on the bottom cover.
2. The FIX CH switch, or Digital Hold switch may be rewired to control the CW wide/narrow function.
On the MODE switch, S6-1, the SSB filter control is GREEN, and the CW filter control line is GREY. Break the GREY line and connect it from the MODE switch to the SPDT common terminal. Connect the GREY line to the IF unit to one terminal, and bridge tht GREEN SSB line to the other Switch terminal.

Taken From 73 Amateur Radio- May 1990

Ham Profile

Fascinated with electronics, Lt. Col. Kenneth D. Cameron, KB5AWP became an astronaut with NASA in June 1985. He's currently assigned as a Capsule Communicator (CAPCOM), and he's in flight training as the pilot on the crew of SFS-37. This mission will feature the deployment of the Gamma Ray Observatory for the purpose of exploring Gamma Ray sources throughout the universe. Ken, KB5AWP has logged over 2,700 hours flying time in 46 different types of air-craft. Flying heads the list of his recreational interests, followed by athletics, hunting, fishing, woodworking, reading, and of course Amateur Radio. KB5AWP enlisted in the Marines in 1969 and earned his Naval Aviator Wings in 1973, after receiving many special honors and commendations. A Vietnam veteran, he served as a Platoon Commander, and later with the Marine Security Guards at the U S Embassy in Saigon. After obtaining his masters in Aeronautics and Astronautics at the Massachusetts Institute of Technology in 1979, he became a test pilot. Ken Cameron obtained his Amateur Radio operators license in 1986. He's always been fascinated with electrical engineering and has found that his experiences in amateur radio really helped him learn and enjoy the practical application of electronics. He enjoys kit-building and the challenge of QRP (low power) operation. A particular thrill was contacting his father, KB1WC in Connecticut on 40 meters using just 1 watt from Houston. Ken has been instrumental in convincing his fellow astronauts to obtain their ham tickets.

POLISH LOTTERY
One Million Dollars
A DOLLAR A YEAR FOR A MILLION YEARS

1 for 10¢
 2 for 25¢
 3 for 50¢

A. KIELBASA
 Lottery Commissioner

CONTROL SERIES E I F I O	DRAWING DATE February 31	LOTTERY NOS. 14U - 244E
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Through his efforts, we may see even more hams in space. Ham in space fortunes took another jump when shuttle pilot Ken Cameron secured his license and the call KB5AWP. Ken is scheduled to fly on SFS-37. Another joint ARRL/ AMSAT letter proposing amateur operation on this flight went to NASA Headquarters and was accepted, so plans are underway for yet another SAREX. This time, it appears that there will be room for the entire package, including two-way SSTV as well as voice and packet. Plans also call for an P3TV uplink experiment. Successfully receiving P3TV aboard the shuttle would be a first, although NASA has downlinked hours of P3TV, they have yet to uplink it. Equipment and software are ready. Flight date is currently for SFS-37 on Nov. 1st, 1990.

KB8GIA

FROM

KENNETH D. CAMERON

I hope that all of you enjoyed last months recipe.

With the summer months approaching, cool and refreshing desserts will be the favorite thing to serve. If you are going to be making a cool refreshing cream pie or any dessert that calls for a graham cracker crust, try a change and let everyone see if they like it.

Crunchy Pretzel Crust

- 1 1/2 - Cup finely crushed pretzels
- 1/2 - Cup margarine or butter
- 1/2 - Cup sugar

Mix well and press into a 9 inch pie-plate, add your favorite filling.

Tip Of The Month

For a lighter filling, when making any cream filling, fold 1 stiffly beaten egg white into the filling mixture. proceed as directed.

Till next month

73'

clady

(Name)
 (Address)
 (Phone)

FIELD DAY OPERATING

By Bud Trench, AA3B, 6/88 X-MITTER, FROM 6/87 X-MITTER

From May QST the objectives of Field Day: "To work as many stations as possible and in so doing to learn to operate in abnormal situations under less-than-optimum conditions. A premium is placed on skills and equipment developed to meet the challenge of emergency preparedness and to acquaint the public with capabilities of Amateur Radio."

Here are some simple contest operating tips that will help you "work as many stations as possible." Information is provided for both phone and CW. The majority of the techniques described are applicable to all contests.

Field Day is a unique contest in several respects. Besides the obvious additives, such as emergency power and portable stations, this is one of the few contests in which there are no location multipliers. In other words, there is no advantage in looking for rare sections or DX. The most important aspect of FD operation is to maintain the MAXIMUM POSSIBLE QSO RATE! A high QSO rate is a function of many parameters, some of which are beyond human control. However, certain factors deserve careful consideration.

BASIC EQUIPMENT

Band captains must give careful thought to their rigs, antennas and station accessories. Receivers should be of the highest possible quality with particular attention paid to front end overload performance. All CW receivers must be equipped with IF CW filters, preferably in the 250 to 400 Hz range. Transmitters should run at or near our class power limit, 150 watts output, and should be as clean as possible.

Antennas are perhaps the most challenging aspect of assembling a FD station. Band captains must accept a tradeoff between antenna simplicity and performance. Bringing a super antenna may not be worth the effort if it cannot be erected and operational by 2 p.m. Saturday. In previous winning QSO efforts we've used dipoles for 80 & 40 and beams for VHF, 10, 15 and 20.

Station accessories are a major factor in maximizing the QSO rate. Memory keyers are an absolute must at all CW stations. Operators should bring along their favorite

paddles and headphones and should verify prior to FD that the connectors on these items are compatible with the rig or keyer. It often is desirable to be able to pipe the audio signals into headphones and a speaker simultaneously, as this facilitates use of a logger, training, demonstrations, etc. Phone band captains should consider techniques for allowing the operator to use both hands, such as a headset microphone and foot switch. But note that VDX is not desirable because of conversations between the operator and his logger.

Other accessories that the band captains should provide include a station clock, SWR bridge, antenna tuner, scrap paper and writing utensils. Make sure the clock is not susceptible to RFI. A backup rig is also very desirable.

Band captains must be sure their operators are familiar with the equipment being used.

OPERATING PROCEDURE

Operating in contests is a skill. It requires both experience and talent. Band captains must keep this in mind and schedule their most productive operators during the prime hours. However, Field Day is a Club effort, and band captains must ensure that everyone has a turn behind the key or microphone.

What is meant by a "high QSO rate?" A high QSO rate means that the operator is making contacts as fast as possible given the band conditions and equipment capabilities. For example, a QSO rate of 30 contacts per hour should be very low on 40 meters at the start of the contest, but would be considered very high at the end. The important thing is that the operator is doing everything possible to make the highest number of contacts.

A high QSO rate requires efficiency. This efficiency can be obtained by establishing a rhythm of movements. A typical sequence of movements might be:

1. Solicit a call!
 2. Enter the responding station's call in the log
 3. Give your exchange while simultaneously checking the cross check sheet.
 4. Record the received exchange in the log
 5. Confirm the exchange and solicit another call while simultaneously filling the cross check sheet
 6. Repeat from step 2
- Log entries should be limited to the minutes of the

hour, station call, class and section. Do not record the signal report (unless it is a DX station) or frequency. The entire call should be entered on the dupe sheet.

The exchange is probably the most time consuming portion of the exchange outlined above; thus it is important to keep the exchange as brief as possible. An example of an efficient phone exchange:

* W1AW this is Whiskey 3 Sierra Kilo 7 Alpha Eastern Pennsylvania

An example of an efficient confirmation:

* Thank you GRZ Field Day from Whiskey 3 Sierra Kilo.

On CW a good exchange would be

* W1AW de W3SK 7A EPA K

and the corresponding CW confirmation

* TU GRZ FD de W3SK FD K

All of the examples above are based on the premise that only the absolute minimum information should be provided in the exchange. Things to be avoided include repeating the call sign more times than necessary, and other comments such as "thanks for the call," "hope to see you again," etc. They also assume that band conditions are good. If conditions are poor or marginal it may be necessary to repeat the call sign several times.

There are many different ways to solicit calls. If the band is really hot it is important to keep the CW's short and to call CW as often as possible. A short CW on phone would be

* CW Field Day from Whiskey 3 Sierra Kilo W3SK Field Day

and on CW

* CW FD de W3SK W3SK FD

It is important to avoid using non-standard phonetics such as "Sky King" or "Sugar Kilowatt." These phonetics are difficult to pull in a pileup; "Sugar Kilowatt" could easily be read as W3SKW.

Often an operator must decide whether to sit on a frequency and call CW or tune around looking for contacts. In general, it is preferable to call CW; however, after calling CW for five minutes without success it might be advisable to tune for QSO's. It is a good idea to start at either end of the band and tune in one direction only. When calling a station it is extremely important to call him precisely on his frequency, especially on CW. Be sure you know whom you are calling. Avoid doing things like sending a question mark or saying GRZ if you missed the call sign of the CW'er.

Field Day is characterized by a problem common to all contests: QRM. If a station begins to QRM you, remember that a frequency fight is a waste of time. If a station comes onto your operating frequency simply ask him to move. If this does not work move to another clear spot. At all costs avoid getting into an argument with the interfering station.

GROUP EFFORT

The most important factor in FD is teamwork. Teamwork will be necessary to accomplish our objectives and to resolve any problems that may arise over the FD weekend. We should continually ask ourselves what can I do to maximize the PWA score? With this kind of thinking, Penn Wireless should have no problem taking our transmitter class.

ODDS AND ENDS OF INTEREST

Origin of the term DEBUG.

During WWII, the war department was using the Mark I computer, your basic monstrous machine that gobbled up electricity and radiated a huge amount of heat. The machine was used for targeting, trajectory and fuel consumption calculations. Since these were the days before air conditioning, the machine was run mostly at night. The machine was made up of a lot of mechanical flip-flops (one of the primary gates in any computer). One night the computer failed to function and it was found that a moth had given up the ghost when caught by one of the flip-flop contacts. It is not hard to imagine, that the running joke was something to do with whether or not someone had "debugged" the machine lately. The rest is history or frustration or something.

GOODYEAR AMATEUR RADIO CLUB

Akron, Ohio



23rd Annual Hamfest Family Picnic and Flea Market

Sunday, June 10, 1990
Goodyear Wingfoot Lake Park

Dealer Set-up in Pinetree Shelter - 7:00 A.M.
Family Picnic and Flea Market - 8:00 A.M.-4:00 P.M.

FAMILY ADMISSION - ADVANCED - \$4.00, GATE - \$5.00

Flea Market (outside) - \$3.00 per vehicle

Dealers inside shelter - \$6.00 per table

(Advance Reservations suggested)



For tickets and information, call or write (include SASE):

Bill Dunn W8IFM (216) 673-8502
4730 Nottingham Lane
Stow, OH 44224

1990 Goodyear Hamfest Major Prizes

ICOM 735 XCVR with PS-55 Power Supply
ICOM IC 228H, 2 Mtr, Mobile, 45 watts
ICOM IC 4 SAT, UHF HT
Cushcraft R5 Vertical Antenna
ICOM GC-5 World Clock

Major Prizes Courtesy GARC, R & L Electronics, ICOM.

** Prize drawing throughout the day **

-- Ladies Prizes Too --

Grand Prize Drawing 3:00 PM Sharp
(Winners need not be present)

Hamfest Directions and Check-in: 146.985 WA8UXP
Mobile Check-ins end at 1:00 P.M.