



Scuttlebutt

No. 68 April 1987

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Captain's Cabin Bill Santelmann, N1AU

The 1987 ARRL Contest is now history. I hope you did well and that your scores will be credited to the YCCC club scores. They will be if you submit your logs, both CW and SSB, before the postmark deadline of 30 days after the last weekend, which I calculate as April 7th. I managed to turn off packet and try an all-band single-op using a computer logger and dupe sheet under the inspiration of K1EA's report at the last meeting. I can report that the computer system worked very well on my Commodore, and my logs are ready for mailing now. No more last-minute panic, duping on the deadline! But I really missed packet, and next time I will be connected to AK1A.

Elections will be held at the April meeting for President, Vice President/Activities Manager, and Secretary/Treasurer. I will finish two terms as President at that meeting, and figure that's enough. Please come prepared with nominations so that we don't waste a lot of time trying to find a volunteer. We need someone who is motivated to develop the YCCC into a winning contest club, not just some guy in the corner who can't find an excuse. Actually, there is a lot to recommend the office of President, and I have enjoyed it (that's why I did two years). I have gotten to know many club members far better than before, and I have acquired a great deal of respect for the contesting abilities within the YCCC. The office requires planning five meetings (the summer cookout comes free), and writing six

"Captain's Cabins" for the 'Butt per year. What we need is someone who can lead the club to some victories. I hope that the present Secretary/Treasurer will agree to be nominated again; she has done a super job.

The big unresolved problem that remains for my successor is how to improve the functional organization of the club. The present system using Area Managers is almost totally ineffective. I have seen some groups grow and prosper within the club, such as those in New Hampshire and West Massachusetts, but I'm not aware of any other groups in close contact with each other. Both of these groups are centered around 2m FM repeaters and/or packet nodes which promote daily communications. It is my opinion that the present "areas" are of no value and should be discarded. They should be replaced with groups which organize themselves naturally around repeaters or packet systems, and select one of their own to represent them in the YCCC. These persons may of course be the present area managers, but I think they should carry a group name distinct from an arbitrary area.

There are many vital functions for these new "managers" which will contribute to the success of the YCCC. One is to arrange a link into the AK1A packet PCBS so that all within that group have access. Another is to provide a clearinghouse for all who need operators, or a place to operate, or who need antenna work or equipment for upcoming contests. Yet another is to get everyone who is able on the air during the important contests, and make sure log scores are

submitted before the deadlines. We should participate as a club in more contests, too, such as ARRL Sweepstakes, Field Day, and the CQ WPX. I think there could be some rivalry between groups within the club, too, such as a challenge with a free lunch at a meeting as a prize. Think about it, and let's share some ideas at the April meeting. 73.

Next Meeting

Paul Young, K1XM

The next meeting of the Yankee Clipper Contest Club will be on Sunday, April 5, at the Sheraton Sturbridge. The meeting will start at 1:00 p.m.

If you are interested in attending the pre-meeting luncheon, you **MUST** contact **Bill, N1AU**, by noon on Wednesday, April 1st. If we tell them too few people, they won't have enough food, and if we tell them too many, then YCCC gets charged. Lunch will be \$9.25. Charlotte and I probably won't make the luncheon, but we will try to be at the meeting. **Bill, N1AU**, will be taking care of the luncheon.

The Sheraton Sturbridge Resort and Conference Center is located on Route 20 in Sturbridge, Massachusetts, $\frac{1}{2}$ mile West of I-84 (first exit off I-84 when coming South from the Mass. Turnpike). Directions to the Sheraton are easy: Exit I-84 on to Route 20 West. You will pass through two sets of stoplights while noticing several motels on your right. Make a right turn just prior to the Burger King sign. This is the entrance to the Sheraton, and there is plenty of parking in front of the hotel.

The meeting dates for the rest of 1987 are:

DATE	DAY	DELI-LUNCH
April 5, 1987	Sunday	11:30 AM
June 6, 1987	Saturday	11:30 AM
August 2, 1987	Sunday	Lakeside Bar-B-Que
October 4, 1987	Sunday	11:30 AM
December 6, 1987	Sunday	11:30 AM

NOTE: The October meeting has been changed from Saturday, October 3, 1987, to Sunday, October 4, 1987, to avoid conflicting with Yom Kippur, so that our many Jewish members can attend.

A Question of Peer Pressure

Bill Myers, K1GQ

I have a problem. One of our club members is running illegal power and I want him to stop. I've talked to several other members about how to change this guy's behavior, and the consensus is that I should apply "peer pressure". My problem is that nobody can explain how to do this.

Maybe I should threaten to resign my membership un-

less the club does something? That's neat - it shifts the burden off me and onto a bigger target, in case the guy gets angry. But, what is the club going to do, threaten to revoke his membership? Probably he would quit the club and carry on as usual, costing the club an active member with no positive effect. Furthermore, exactly who in the club decides what to do? The officers, perhaps, or the meeting attendees, or ...? We have no guidelines, no ethics code, no disciplinary penalties. Remember the ill-fated ARRL ethics code of a few years back? Similar efforts within YCCC have also failed, for similar reasons, I think.

Besides, I don't want to quit YCCC - I get too much out of this club to discard my membership casually. But perhaps I should also be concerned about my own "reputation," which is affected by that of the club in general. We YCCCs perceive ourselves as straight-arrow contesters who carefully get the calls correct, rigorously check our logs, and play by the rules. Our single-ops who chose to use spotting nets while ignoring the ten-minute rule submit their logs in the multi-multi category. Our multi-single entries use only one transmitter. We're the good guys! Sure we are - ask any FRC member. In other words, if I were really worried about my association with YCCC tarnishing my reputation, I should quit right away. (Of course, such worries are silly. The opinions of those who judge individuals solely by the actions of their associates aren't worth cultivating.)

It seems clear to me that "group" peer pressure is not the answer. It's too impersonal, and lacks accepted procedures (and arguments about these procedures derail many disciplinary efforts). But can just one guy (me) apply effective peer pressure? I think not - peer pressure seems implicitly to be plural.

We all understand what's right and what isn't. Sure, there are gray areas, but why is it so hard to simply say: "That's wrong and I wish you wouldn't do it" when a fellow contester tells you he is running 2500 watts output? What are we (me again) afraid of?

Well, for one thing I don't want my complaint dismissed as simply sour grapes. I've been beaten by this guy in some contests. On the other hand, I've also won a few, so the sour grapes issue can't be the only things holding me back.

There are, I believe, two basic reasons why I have not spoken up. First, I am uncomfortable with confrontational scenarios: visions of loud voices, guy wire cutters, and (worst of all) lawyers begin appearing in my imagination. Second, I fear that, instead of accomplishing anything positive, my speaking my mind would only cost me a friend. But keeping quiet doesn't do any good; in fact, it may even reinforce my friend's attitude - if nobody tells him it's wrong, it is easier

to convince himself that it's OK. So, I must overcome my fears, and voice my objections.

One last question. Why haven't I named the "guilty party" in this article? Suppose I said: "He knows who he is, maybe this article will be enough to change his behavior." That's just a copout to cover the fears above. How about: "Actually, I suspect there are others and I'm hoping this will stop more than one guy." Still a copout. High-toned, untargeted letters-to-the-editor, like this one, typically have no visible effect (it's always someone else they're talking about). I haven't named him because I'm convinced that peer pressure has to be applied by each of us, individually and personally. I'll try, and I hope some of you will join me.

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Floating

Paul Young, K1XM

You may notice that this issue of the **Scuttlebutt** is quite early. That's because I had to get it out before leaving on vacation. Look for KC6MX on CW, and KC6IF on phone, from May 16-28. Try 3503, 7003 and 14022 on CW, 14195 on phone (we will move to avoid the VU4 operation). YCCCs can probably get through by calling 2 KHz above the announced listening frequency.

While we expect to be at the next meeting, Bill, N1AU is taking reservations for the luncheon.

If your ARRL DX contest score is not in this issue, give it to me at the meeting and I will put it in the next issue.

See you from West Carolines (where its warm)!

Secretary's Report Yankee Clipper Contest Club

The February YCCC meeting was held at the Sheraton Sturbridge on 8 February 1987 with 61 members in attendance.

The pre-meeting luncheon had reservations for 28, and 30 attendees. Since the original number of reservations made by the deadline was only 17, the luncheon was not served as a buffet, but the food was good, and plentiful. The Sheraton makes a good carrot cake! According to the caterer, the luncheon is served as a buffet if the original reservation is for 25 or more members, so get yours in on time!

Following introductions of members, Bill, N1AU, in-

troduced guest OH6KJ, a Finnish contest operator.

The treasurer's report was read and accepted.

Fred, K1VR, reported on the possibility of getting non-profit status for the club and reducing mailing costs for the **Scuttlebutt**. To save postage, we must send out at least 200 copies (the February 'Butt went to 193 people, 3 of them overseas subscribers), at 12.7 cents. If we were a tax-exempt organization, the postage cost would be 7 cents. Fred's recommendation is that we not pursue this issue until we have 250 members due to the large amount of paperwork and sorting required for each mailing.

Dave, KY1H, described Extra and Advanced license classes being held in the Pittsfield, Massachusetts, area.

Billy, KR1R, and Dick, AK1A, are working on ARRL dupe sheets based on the YCCC dupe sheets. The ARRL promises to credit YCCC on the new dupe sheets.

Ed, NT2X, had more club jacket order forms available.

Ed, WA1ZAM, presented "Ed the Red", NT2X, with a "big gun" award for his Field Day effort.

John, KB1T, had contest calendars available at a discount (usually \$9.95, available to members at \$8, \$1 of which goes to the club).

Dick, AK1A, reports that his Packet Cluster software is running during major contests, allowing Talk, Conference, and DX Spotting on multiple nodes. The regular BBS does not run as a cluster. The packet network is growing. Portland, Maine, members are now a part of the packet system.

Bill, N1AU, is trying to rejuvenate the Area Manager concept within the club, and held an Area Managers meeting before the pre-meeting luncheon. Bill believes that the current areas are too large for coverage, and should perhaps be split up more. He would like to see the Area Managers in charge of getting logs filed on time and scores reported to the 'Butt, including a claimed club total, after each major contest. The Area Managers should be the focal point for area news and information, and should encourage area rivalry. Each area may have a PCBS.

Rich, K2WR, introduced Doug, WB2KMY, a Vhf contester, who put up the 144.95 packet node on Mount Beacon.

Fred, K2TR, wants a club standard for how CW frequencies are reported on the PCBS, since TS830 and TS930 owners have been reporting different frequencies. Paul, K1XM, suggested that the frequency re-

ported should be the zero-beat frequency; that is, the TS930 reads correctly for this purpose, while TS830 owners should report their transmit frequency. Then anyone reading the information will know how to convert the reported frequency into the dial setting for their own rig.

Bill, N1AU, brought current member eligibility lists for the ARRL DX Contests so that members could check their status.

Bill also reminded members that the next meeting is ELECTIONS. Bill reports that his XYL has told him that he is not a repeat candidate for club president this year. Anyone interested in running for office should talk to Bill and should plan on attending the next meeting.

Tom, K1KI, reported on several matters. With the recent passing of K2GL, the N2AA super-station will probably not be in operation for the spring contest season. Tom brought several copies of the W2PV antenna book (edited by Bill, K1GQ, among others), which he offered for sale at \$14 (usually \$15); Tom had a big pileup! Tom reminded members that there was a CW Sprint that evening, and several Sprint Teams were looking for additional members. K2SS wants logs from last year's contests for inclusion in a database analyzing unique calls in logs, and is willing to take computerized logs in a variety of formats. Other clubs have been watching our packet effort with great interest and are making plans to put up their own PCBSeS. The Barnstable Radio Club (on Cape Cod) would like a speaker to come in and talk to them about radio contesting sometime. Someone is putting together an order for Henry 3K 1500W amps (uses 3CX1200; reported cost around \$2495); therefore, Tom is selling a Kenwood TL-922, an L-7, and a 2m HT (see Tom about these). Tom also reported that the FCC released a week ago information on Novice enhancements. The details of this are not yet clear but the changes should take effect in about two months. Also, the Technician and General written exams have been split.

Dave, KY1H, has started plans for his Field Day effort. Talk to him if you'd like to help.

Bill, N1AU, read a letter from 4U1VIC requesting support for their bid for DXCC separate country status. He also read a letter from DJ6QT thanking the club for sponsoring his 1983 DXpedition trophy (which just arrived!).

It appears that YCCC will receive a prototype of a new TenTec rig, to be called the "Paragon", which TenTec is developing to compete with the TS930/TS940, for examination and review sometime this spring.

John, K1AR, had club QSL card order forms (\$35/2K). These cards have even better graphics, laid

out by K1GQ's new Macintosh. Contact John if you need more cards.

John also passed out his "Contest Ethics" questionnaire, which members filled out during the meeting.

Doug, K1DG, spoke on recent activities of the ARRL Contest Advisory Committee. The CAC is recommending that club competition remain 3-tiered and that clubs have no minimum number of meetings per year but that ALL members must attend two meetings per year, regardless of their distance from the center of club territory. The petition by the Frankford Radio Club to move the ARRL DX Contest CW one week earlier (to the second full weekend of February) to separate the CW and SSB contests by more than one week was approved. Also, beginning in 1988, VY1 and VE8 will count as separate multipliers in the DX Test but not in Sweepstakes. The Sweepstakes Awards Committee is considering a QRP category for SS. The CAC is still wrestling with banning DX Test QSOs arranged by non-radio means. There is also still controversy over the practice of letting one callsign submit multiple single-band entries for the same contest. K2NJ replaced N2LT as the CAC representative from the Hudson Division.

Doug would like YOUR input on the following new matters the CAC is currently considering: a VHF meteor scatter contest proposal, a change in the rules so that single-op operators using packet radio would not be classified as multi-multi and therefore be in competition with big multi-multi stations but instead perhaps fall under multi-single rules and be allowed to change bands whenever they want to, the ARRL 160m bandplan of 1830-1840 reserved for international QSOs only is in direct conflict with the CQ plan allowing only DX stations to transmit from 1825-1830, the CQ "Contest Hall of Fame" may be cosponsored by the ARRL, a proposal to change the Sweepstakes rules to allow working a station once per band and mode rather than once per mode (the club voted that SS should be a DX contest!), and a proposal for foreign club competition in the DX Contests. Write to Doug or to your ARRL Director with your ideas on these proposals.

The club voted in three new members:

John Webster, K1FWE
Larry Blowin, K1MNS
Doug Sharp, WB2KMY

Ken, K1EA, gave a technical presentation on his computer logging strategy and his logging and duping program.

John, K1AR, reported the results of his "Contest Ethics" questionnaire. Rich, K2WR, thinks that the results show that some of our members might "bend

the rules" in order to work something, but most of us would not falsify our logs to indicate working stations we did not actually contact.

Following this, the club members broke into two groups to discuss ARRL DX strategies for multi-2 operation (with Fred, K2TR) and single-transmitter operation (with Tom, K1KI).

The meeting adjourned at 4:10 PM. Many members then headed down the road to Rom's for an Italian dinner.

Respectfully submitted,
Charlotte L. Richardson, KQ1F
Secretary/Treasurer
10 February 1987

Flakey Ideas

Paul Young, K1XM

There are times when I wish the Yankee Clipper Contest Club had a bigger treasury. I would like to be able to produce a **Scuttlebutt** with glossy paper, color pictures, and a real binding. Of course, other people might want club-owned digipeaters, a club station, or free food at meetings.

The normal way to get a bigger treasury is to increase dues. But YCCC dues are already pretty high. We need a more imaginative solution, and I think I have found one worthy of the world's best contest club:

After my HC8X Galapagos DXpedition, I gave slide shows to local clubs around the area. Many of these clubs were similar in certain key respects. Their meeting attendance was maybe twenty or thirty. They discussed, perhaps, their Field Day plans, or perhaps lamented how they are not getting as much club participation at meetings as they used to. And, they have over a thousand dollars in the treasury.

So what do we do? We target selected clubs, and we join them. When we have enough members, we go to the meeting and vote to merge the club with the YCCC. We pick up the treasury, which will easily pay for the extra copies of the **Scuttlebutt**. With luck, some of the new members might find a living club interesting enough that they stay on. As our membership increases, and as we offer more services, such as a color **Scuttlebutt** and a full packet backbone, we will be able to go after slightly larger clubs. The bottom of the sunspot cycle is a good time to hit some of the area DX clubs, for example.

There are a few things to watch out for. For example, we must avoid, at all costs, owning a 2 meter repeater. It would be a tragedy if YCCC meetings were taken up with fights about the repeater, as I have heard in

other clubs. Of course, if we are quick, we can sell the repeater. Any repeater, in any condition, is worth lots of money now, since buying one is the only way to get a coordinated 2 meter frequency.

So, think about it - Do you know of a lethargic ham club, with big treasury, just waiting to be taken over by a ham club raider?

CATV Hardline

Fred Hopengarten, K1VR

A great many hams are now using reel ends from cable TV companies. If you have some CATV hardline with goop between the PVC and the aluminum sheath, you may be interested in the following article, provided courtesy of Fred Hopengarten, K1VR.

Connector Installation for Flooded Semiflex Cables

Tim Duggan, Product Engineer,
Times Fiber Communications Inc.

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Special precautions must be taken when installing connectors on flooded cable in order to avoid jacket movement. This phenomenon is common to all manufacturers of flooded cables and is a result of the lubricating effect introduced under the jacket. Before looking at those precautions, however, let's first review some of the special properties of flooding compounds.

The primary use of a flooded cable is for additional corrosion protection. This extra protection is desirable in burial applications and under certain conditions for aerial installations. Currently, Times Fiber uses two types of flooding compounds.

Flooding Compound Types

Polyisobutylene is used for semiflex burial cable because its permanent fluid properties allow it to cold flow inside the cable jacket. In applications such as cable burial, where jacket damage is always a major concern, the flooding compound can actually provide a seal by filling in the damaged area. A lower molecular weight polyisobutylene with more viscosity is used for drop burial cable. This flooding compound will flow readily within the interstices of the cable's outer braid (Vistanex brand polyisobutylene is one of several that are available).

Black asphaltic flooding compound is usually specified for jacketed aerial applications where additional cor-

rosion protection is desired. Unlike the compounds used in burial cables, the asphaltic material has the limited flow properties necessary to prevent the flooding compound from dripping onto the underlying areas (Farboil brand asphaltic tar is one of the several types that are available).

In addition to the required viscosity and flow properties, flooding compounds are chosen for compatibility with the cable materials used and for overall chemical, oxidation, and UV resistance. Flooding materials are also compounded for high tackiness to aluminum, Polyethylene and PVC.

Avoiding Jacket Shrinkback

Since the underground flooding compound is designed to have good cold flow properties, the jacket, if not restrained to the sheath by some external means, can move independently to relieve the normal longitudinal stresses that are built in during the jacket extrusion process. This condition usually makes itself known by means of jacket shrinkback, where the unrestrained jacket can move exposing anywhere from a few inches to as much as 10 inches, thus leaving the aluminum vulnerable to the environment. As indicated, this phenomenon is inherent in the jacket extrusion and will be experienced by any manufacturer using an appropriate flooding compound under the polyethylene jacket.

As the area around the connection may be exposed to water submersion or a corrosive atmosphere, precautions should be taken to prevent the shrinkback, and to protect the aluminum sheath. While heat-shrinkable tubing offers good protection of the exposed aluminum sheath on standard jacketed cables, it may not be sufficient to prevent jacket shrinkback on flooded versions. The following method supplements the shrink tubing and provides a reliable solution.

1. Prepare the cable end per the connector installation instructions (Figure 1). An important step to remember here is that the installation of the connector requires the removal of flooding compound from the aluminum sheath. Times Fiber has evaluated several removal agents and has found that pre-packaged cleaner wipes, Scotchcast Brand 4415 manufactured by Telcomm Products Division/3M, worked very well. The cleaning agent was safe, easy to work with, and did not damage the cable.



Figure 1: Prepare cable end

2. Slide a common hose clamp over the jacket and tighten. Care must be used to avoid excessive tightening which could degrade the electrical properties of the cable. Install the connector (Figure 2).



Figure 2: Install connector and hose clamp over jacket

3. Slide heat-shrink tubing over the connector and clamp (Figure 3).



Figure 3: Slide heat shrink tubing over connector and clamp

4. Apply heat and shrink down tubing onto cable (Figure 4).



Figure 4: Apply heat and shrink tube on cable

!@#\$ My Radio Just Died
What to do when your TS-930S display vanishes

Bill Myers, K1GQ

While operating in the 1985 WAE phone contest at my station, Dick, AK1A, encountered a well-hidden "feature" of the Kenwood TS-930S transceiver. If any of the three phase-locked loops unlocks, the following events occur:

- All of the blue electroluminescent display is blanked

- The receiver is blanked
- Transmit mode is inhibited
- The owner is challenged (mutely) to discover any reference to these actions in either the Owner's Manual or the Service Manual.

Dick found that he could bring the radio back to life by cycling the power off and on. It took me six months to find a more satisfactory solution.

Once I had determined that one of the loops must be unlocking, by tracing the display blanking logic in the circuit diagrams, I decided the obvious thing to do was to perform the PLL alignment described in the Service Manual. The procedure is pretty simple – all you need is a reasonably accurate DC voltmeter, and enough dexterity to get at the PLL adjustments. I found that all three loops were considerably out-of-tolerance, so I concluded that the problem was resolved by the PLL realignment.

Not for long. The frequency transition that triggered unlock was changed, but the problem persisted. Of course, its primary characteristic was that the loops *never* unlocked whenever I had the covers off to debug the loops. Eventually I began to suspect the 19.5 to 30 MHz VCO loop, and tried tweaking the peaking coil – L68 on the Signal Unit. Sure enough, a little bit one way crashed the radio, and lot the other way made the loop more solid.

The alignment procedure for the VCO loops calls for a sweep generator. I don't have one, so I just twiddled the coil to maximize the S meter reading with the receiver tuned to the calibrator near the high end of the loop's range (for example, 29.5 MHz). This helped matters a lot, but I still have to readjust things every four to six months to keep the loops away from the hairy edge.

I believe the reason my unit got so far out of alignment, and has become relatively demanding in terms of maintaining alignment, is thermal abuse. During the 1985 CW WAE, the power supply fan failed, but I didn't notice anything for several hours. The hot transformer smell finally woke me up, and I finished the weekend with a muffin fan sitting over the transformer vents. I now routinely run this fan during contests, just in case, even though I have replaced the internal fan motor.

So, if your TRS-930S display goes away and the receiver goes silent, be sure to perform the phase locked loop and VCO alignments before you begin taking out parts.

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Score Rumors:

(Thanks to Randy Thompson, K5ZD/1, and the NCJ for providing some of this information.)

CQ WW CW:

Call	QSOs	Zs	Cs	Score
KA1KPH (m/s)	317	72	166	196K

ARRL DX CW Single-Op:

Call	QSOs	Cs	Score
AK1A	978	185	542K
K1AR	1685	289	1.46M
K1CC	1702	253	1.29M
K1DG (30 hrs.)	1406	256	1.07M
K1EA	1158	174	604K
KC1F	1876	312	1.75M
KA1GQW	530	144	228K
KM1H* (KQ2M op.)	2036	299	1.82M
K1IU	1080	191	641K
K1K1*	1827	304	1.66M
KT1O	155	65	30K
K1T0*	1906	255	1.45M
K1VR	1004	174	523K (duped)
KB1W	1045	184	576K
W1WEF (33 hrs.)	1360	230	938K
K1XA	1253	213	800K
K1ZZ	1702	253	1.29M
A13E	408	150	183K
K3LR	1452	287	1.25M
K3TUP (KR0Y op.)	1525	296	1.35M
WX4G	1565	275	1.29M
N5RZ	1507	278	1.25M
K5ZD/1	1488	252	1.12M
KC8C	1534	230	1.05M
K8CC	848	218	554K
NP4A (NP4Z op)	4800	331	4.8M
P40GD	5238	310	4.8M

ARRL DX CW Single-Op Single-Band:

Call	Band	QSOs	Cs	Score
K1ZM	160	115	48	16K
K4TEA	160	73	40	8K
K8WW/VP9	160	600	48	86K
K1IN	80	193	45	26K
KC1Q	80	454	67	91K
W1FV	80	736	69	152K
KD2RD	80	380	60	68K
N4ZC	80	575	66	113K
WN4KKN	40	780	80	187K
K1ZX/4	15	300	73	65K

ARRL DX CW Multi-Single:

Call	QSOs	Cs	Score
NC1B	286	100	85K
KM1C	1450	252	1.1M
KY1H	1514	246	1.12M
KA1KPH	145	99	43K
K1YR	1859	271	1.5M
K8AZ	1480	257	

KM1C ops: KM1C, W1PH, WB8BTH, KM1P, KB1T

ARRL DX CW Multi-2:

Call	QSOs	Cs	Score
K1RQ*	1604	233	1.1M

K1XM	801	222	533K
K2TR*	2231	331	2.2M
N3RG*	2740	337	2.77M
N3RS*	2477	349	3.5M
NR5M*	2618	344	2.7M
XE2FU	5800	300	5.2M

K1XM ops: K1XM, KQ1F

ARRL DX CW Multi-Multi:

Call	QSOs	Cs	Score
W3LPL*	3098	376	3.4M
ZF2KE	5500	297	4.9M

***ARRL DX CW Score Breakdowns:**

KM1H (KQ2M op. s/o):

band:	Qs	Cs	
1.8	90	40	
3.5	370	62	
7	400	65	=1.82M
14	1100	88	
21	60	33	
28	15	11	
TOTAL	2036	299	

K1KI (s/o):

band:	Qs	Cs	
1.8	32	24	
3.5	250	59	
7	485	79	=1.66M
14	976	84	
21	63	42	
28	21	16	
TOTAL	1827	304	

K1RQ (M/2):

band:	Qs	Cs	
1.8	13	12	
3.5	270	52	
7	180	52	=1.2M
14	970	75	
21	171	41	
28	1	1	
TOTAL	1604	233	

K1TO (s/o):

band:	Qs	Cs	
1.8	38	28	
3.5	269	58	
7	362	61	=1.45M
14	1196	79	
21	33	22	
28	8	7	
TOTAL	1906	255	

K2TR (M/2):

band:	Qs	Cs	
1.8	89	42	
3.5	296	59	
7	530	75	=2.2M
14	1209	93	
21	86	48	
28	21	14	
TOTAL	2231	331	

W3LPL (M/M):

band:	Qs	Cs	
1.8	86	40	
3.5	620	75	
7	908	86	=3.4M
14	1280	95	
21	163	59	
28	41	21	
TOTAL	3098	376	

N3RG (M/2):

band:	Qs	Cs	
1.8	54	39	
3.5	610	70	
7	737	75	=2.77M
14	1200	90	
21	119	55	
28	22	8	
TOTAL	2740	337	

N3RS (M/2):

band:	Qs	Cs	
1.8	48	34	
3.5	436	70	
7	628	79	=3.5M
14	1211	94	
21	128	58	
28	26	14	
TOTAL	2477	349	

NR5M (M/2):

band:	Qs	Cs	
1.8	27	19	
3.5	182	55	
7	744	77	=2.7M
14	1252	95	
21	367	74	
28	46	24	
TOTAL	2618	344	

ARRL DX SSB Single-Op:

Call	QSOs	Cs	Score
K1AR*	1650	326	1.6M
N1AU	555	152	253K
K1DG (25 hrs.)	940	253	713K
KC1F*	1765	286	1.51M (duped)
KA1SR*	1370	275	1.13M
K1VR*	1048	225	707K
K1VSJ	460	172	237K
K1ZM	1581	309	1.46M
K1ZX	300	115	103K
N2IC/0	1338	?	?
WZ4F	1100	260	858K
K4VX (KM9P op)	1054	270	853K
KE5FI	109	40	13K
K5ZD/1	1059	250	794K
W9RE	1400	?	?
HR6A	7200	324	6.99M
V31CV	7785	335	7.8M
ZF2JR	6560	308	6.06M

ARRL DX SSB Single-Op Single-Band:

Call	Band	QSOs	Cs	Score
WA2QNW	15	164	63	30K
AK1A	20	1315	115	453K
W2YV (KQ2M op)	20	1752	125	657K
K4XS	20	800	95	228K
KK9A/VP2V	20	3800	57	649K
9Y4AA (N6TJ op)	40	2245	58	390K
W5WMU	75	172	61	
K0KX	75	88	49	12K
WA4SVO	160	66	44	8K

ARRL DX SSB Multi-Single:

Call	QSOs	Cs	Score
K1CC	1423	293	1.25M
KQ1F	421	177	223K
KY1H	669	220	441K
K1IU	227	143	97K

K1TO	1184	268	951K
WB2ULI	1520	271	1.23M
K3TUP*	1926	318	1.83M
NP4CC	7640	311	7.1M
PJ9J	7145	319	6.8M
VP2MU	7684	300	6.9M

ARRL DX SSB Multi-2:

Call	QSOs	Cs	Score
NB1H*	1977	284	1.68M
K1RQ*	1184	265	947K
N2MG	?	?	900K
K2TR*	1933	345	2.0M
N3RG*	1774	375	1.94M (duped)
K5RX*	2335	411	2.85M
K2SS/VP2V	10292	296	9.2M

ARRL DX SSB Multi-Multi:

Call	QSOs	Cs	Score
W3LPL*	2090	365	2.28M
NR5M*	2288	363	2.35M
K5NA/2*	1918	285	1.63M

ARRL DX SSB Score Breakdowns:*K1AR (s/o):**

band:	Qs	Cs	
1.8	39	32	
3.8	100	58	
7	104	57	=1.6M
14	1304	117	
21	115	20	
28	20	12	
TOTAL	1650	326	

KC1F (s/o, duped):

band:	Qs	Cs	
1.8	33	27	
3.8	92	49	
7	62	42	=1.51M
14	1465	110	
21	96	45	
28	17	13	
TOTAL	1765	286	

NB1H (m/2):

band:	Qs	Cs	
1.8	40	31	
3.8	100	50	
7	67	36	=1.68M
14	1620	109	
21	130	45	
28	20	13	
TOTAL	1977	284	

K1RQ (M/2):

band:	Qs	Cs	
1.8	26	23	
3.8	87	50	
7	74	44	=947K
14	857	100	
21	140	48	
28	0	0	
TOTAL	1184	263	

KA1SR (s/o):

band:	Qs	Cs	
1.8	30	19	
3.8	98	51	
7	140	51	=1.13M
14	1002	107	
21	37	29	
28	10	8	
TOTAL	1370	275	

K1VR (s/o):

band:	Qs	Cs	
1.8	21	17	
3.8	97	53	
7	54	32	=707K
14	803	83	
21	69	37	
28	4	3	
TOTAL	1048	225	

K2TR (M/2):

band:	Qs	Cs	
1.8	64	42	
3.8	128	63	
7	164	58	=2.0M
14	1388	114	
21	154	53	
28	35	15	
TOTAL	1933	345	

W3LPL (M/M):

band:	Qs	Cs	
1.8	69	41	
3.8	316	77	
7	190	58	=2.28M
14	1182	100	
21	260	63	
28	73	26	
TOTAL	2090	365	

N3RG (M/2, duped):

band:	Qs	Cs	
1.8	45	35	
3.8	183	73	
7	135	58	=1.94M
14	1187	119	
21	169	67	
28	54	22	
TOTAL	1774	375	

K3TUP (M/S):

band:	Qs	Cs	
1.8	36	27	
3.8	113	56	
7	121	51	=1.83M
14	1560	127	
21	77	45	
28	19	12	
TOTAL	1926	318	

NR5M (M/M):

band:	Qs	Cs	
1.8	36	25	
3.8	130	56	
7	386	66	=2.35M
14	987	107	
21	611	73	
28	138	36	
TOTAL	2288	363	

K5NA/2 (M/M, one tower):

band:	Qs	Cs	
1.8	51	35	
3.8	95	53	
7	87	46	=1.63M
14	1600	111	
21	76	33	
28	9	7	
TOTAL	1918	285	

K5RX (M/2):

band:	Qs	Cs	
1.8	58	38	
3.8	161	64	
7	305	70	=2.85M
14	948	116	
21	769	87	
28	94	36	
TOTAL	2335	411	

160M Receiving Antennas for City Lots

Mike Crabtree, ABOX

(Reprinted from the **Kansas City DX Club Newsletter**, February, 1987.)

There's little doubt that Beverage antennas are the best receiving antennas for serious 160 Meter operation. Yet, for the average ham, especially the city dweller, such an antenna system is out of the question. If you have 4 or 5 acres of open land around your QTH, pursue a Beverage antenna and read no further!

However, if you use a vertical or shunt feed your tower for 160 operation the following ideas may be of some practical use. Verticals can be used as effective radiators on 160 but usually are very noisy. Of course, the urban 160 operator gets a double dose of this problem as atmospheric noise and man made noise combine to make his life really miserable at times.

My QTH unfortunately, falls into this category and has caused considerable frustration the last 2 years I have been active on 160. My shunt fed tower has been an excellent transmitting antenna as my recent DXCC on 160 verifies, but it certainly leaves a lot to be desired on receive. As a result several different receiving antennas have been experimented with in this time period. My garage looks like a graveyard of discarded 160 antennas. Three small receiving loops (used with a quality pre-amp) along with a mass of tangled wire from numerous inverted-Ls all received unceremonial burials in the "Wire Room" (this is what my wife calls our garage). Even though all of the designs of antennas tried had received rave reports at some other guy's QTH in some previous article in one of the journals, none of them worked effectively at my QTH!

N0XA, Fred, a well-known 160-Meter DXer and good friend, had some success with a full size loop suspended 8' above the ground (a 525' square) on receiving before he completed his Beverage system and suggested that I try it at my QTH. Much like a quad element turned on its side Fred fed it with a 1:1 balun. However, with an 80' x 120' lot I found it would not quite fit on my property. I experimented briefly with a shortened version of about 300' in length with a loading coil inserted to make it resonant at 1.830. Only limited success experienced, but I believe more research might be justified with this shortened version. Certainly, if you could get the full 525' loop in your yard, it would be rec-

ommended that you try it. However, keep it low to the ground. At heights above 10' the loop begins to pick up lots of noise. In my experience, the loop would probably rank second only to a Beverage for receiving on 160.

Because of the limited space at my QTH I had to look for another solution. N0XA passed on another idea he heard about on the air that worked for some people who could not get up a Beverage. The idea is called a Snake because it just stretches out across your yard like a giant reptile. To construct it, simply stretch as much coax as possible out in a straight line with the far end shorted together but separate the braid of the coax from the coax plug in the shack. Pull the braid back an inch or so and make sure the shield does not come in contact with the PL-259. This in effect folds the wire back on itself and doubles the length of the run of wire. Again my limited space would only allow a little more than 100' of coax to be stretched out in a line. However, limited success was achieved with this antenna as it occasionally out-performed the vertical on receive, but only in the direction that the coax line was running. This was encouraging but didn't seem quite to be the answer. I believe it would be more effective if a run of over 200' could be stretched in a straight line. Also, I didn't test running this antenna through a tuner. This offers another possibility that readers can experiment with.

Still looking for a better receiving antenna than my vertical, I measured out wire for a half-wave dipole cut for about 1.830 MHz. However, again I was faced with a space problem as each half of the dipole turned out to be 127' long. There was no way I could fit it on my city lot. Yet I could get over half of it out in a straight line if I bent the ends of it a little. I supported the antenna above my chain link fence along the property line at about 7 to 8 feet above ground for over half the length of the dipole. However, the end of the fence only runs to the front of the house so the rest of the antenna had to be tacked to the side of the house for the remainder of the length. As with the loop the dipole was fed with a 1:1 balun.

The bent dipole I ended up with runs north and south but is folded back to the northwest. However, this does not seem to effect performance that much, as it consistently hears JAs better than the vertical. It beats the vertical on signals from Europe and South America about 60% of the time. When switching over from the vertical to the dipole signal levels are about 1 to 2 S-units weaker on the low dipole, BUT the noise almost disappears. The noise level on the vertical usually averages about S-8 or 9, but drops to about S-2 or 3 on the low dipole. Occasionally, the vertical hears better than the dipole but this happens sometimes even to Beverage owners. I believe this is due to the angle of the incoming signals. Also, presently only a manual

coax switch is being used to go back and forth between the antennas. Of course, this could be accomplished with a relay, if so desired.

Of course, my evaluation of the above-mentioned antennas has been mostly subjective. Yet, I've worked more DX in the last couple of months than the combined 2 winters I've spent on the band. However, don't be misled, the low dipole and loop are compromise antennas and don't come close to the performance of a full-size Beverage system. But it sure beats the heck out of listening to S-9 noise levels on the vertical!

Hopefully, some of the ideas presented in this article will be helpful to the urban ham. Many of the ideas need further experimentation and refinement. Also, remember that each QTH has its own unique set of conditions that can affect the noise levels and performances of low-band antennas.

Movers and Shakers

Update your club roster to indicate these changes:

New phone numbers for Ron, K1BW:
Home: (617)797-4190
Work: (617)793-0405

New work phone number for Brian, WB1EYL:
(413)499-3333
Brian also reports that he has passed his Extra and will soon have a new call.

New work phone number for Dave, KY1H:
(413)494-2023

New home phone number for Don, KB1KE:
(413)623-5892

"New" work phone number for Billy, KR1R:
(203)666-1541

New work phone number for Len, KB1W:
(413)494-4325

New work phone number for Paul, K1XM:
(617)264-5165

New Crew

Please welcome the following new members, who joined at the last meeting:

John Webster, K1FWE
74 Redfield Circle
Derry, NH 03038
Home phone: (603)432-4159
Work phone: (617)438-4300

Larry Blowin, K1MNS
52 Warner Hill Road
Derry, NH 03038
Home phone: (603)432-5866
Work phone: (617)329-4050

Doug Sharp, WB2KMY
24 Walnut Hill Road
Poughkeepsie, NY 12603
Home phone: (914)471-0946

Excess Cargo

FOR SALE:

Kenwood TL-922 amplifier, 160 thru 10 meters, pair of 3-500Z finals, with spare tubes, \$900.

Drake L-7 amplifier, 160 thru 10 meters, pair of 3-500Z finals, mint condition, \$900.

Kenwood TH-21BT handi-talkie, 1 watt 2 meter HT, very small - 5.5" x 1.25", has DTMF pad and PL board, with extra heavy duty battery pack and charger, used little, 2 months old, \$225.

Tom Frenaye, K1KI
23 Pinehurst Road
Unionville, CT 06085
or packet at AK1A or W1AW

Dave, KC1Q, needs Rohn 25G sections. You can reach him at home at (617)668-1609.

FOR SALE: TS-930S with AT and 500 Hz filter, \$1100. TS-530S with VFO-240, \$500. Model 25 58' tiltover, \$300. A3 tribander, \$80. Ham-M rotator, \$70. Also, homebrew KW amps. Call David, W1WAI, at (617)443-9867 (home) or (617)480-4026 (work).

The **Scuttlebutt** is the newsletter of the **Yankee Clipper Contest Club** and is mailed six times per year to all paid up members. Dues are \$10 per year, payable 1 April with a grace period through 30 June. Non-members may subscribe to the **Scuttlebutt** by sending \$10 to the Treasurer: Charlotte Richardson, KQ1F, 11 Michigan Drive, Hudson, MA 01749. Subscribers who subsequently become members will be credited as having paid dues.

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The **Yankee Clipper Contest Club** (an ARRL Affiliated Club) holds six official meetings per year, on the Saturday or Sunday afternoon of the first full weekend of every even month in the Sturbridge, Massachusetts, area. The deadline for article submission to the **Scuttlebutt** is three weeks before the next meeting date. The next meeting will be on Sunday, April 5, 1987, in Sturbridge, Massachusetts. Attendance at an official meeting is required in order to become a member. Club members congregate on 3830 Khz or 1900 Khz Monday evenings; many routinely monitor these frequencies other evenings as well.

Rosters are mailed to all paid members each summer. For more information and/or assistance, contact the area manager nearest you on the following list:

Area	Call	Name	Home	Work
CT/RI	K1RX	Mark Pride	(203) 271-2076	(203) 265-8825
EMass	W1FJ	Al Rousseau	(617) 598-3744	(617) 599-7500 x 173
WMass	KY1H	Dave Robbins	(413) 655-2714	(413) 494-2023
VT/NH	K1GW	Glen Whitehouse	(603) 673-6290	(603) 627-7877
ME	K1SA	Bernie Cohen	(207) 773-6589	(207) 797-3585
NNY	K2RD	Ira Stoler	(518) 439-5804	(518) 445-8474
SNY/NJ	K2EK	Bill Gioia	(914) 221-1672	(212) 888-2102

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