

Yankee Clipper



Contest Club

Scuttlebutt

No. 56 March 1985

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Captain's Cabin

Tom Frenaye, K1KI

The ARRL DX Contest is now safely behind us for another year. Hope everyone found a large chunk of each weekend to run up the QSO totals. Don't procrastinate on checking your logs! If you wait too long, they may never see the light of day. If you really are not able to find the time to check your log, contact your area manager, and he will be happy (hear that?) to help find someone to help you out.

With the sunspot numbers so low, we ought to be able to outdistance even the fanatics from south-eastern Pennsylvania - but only if everyone who was active sends in their log... Same goes for the CQ 160 Meter Contest. We were ahead of last year's score after the CW weekend alone, and lots of YCCC signals were on during the SSB portion.

3830 is dead. Remember when we all used to fight with the pig farmers on 3830 a year or so ago? Well, thanks to the decline in sunspots and the lack of local propagation on 80 meters in the early evenings, the competition from the South (plus the General Class crowd which gained some more bandspace), 3830 has not been a hotbed of YCCC activity. I'd like to suggest that we move the

early evening gatherings to 160 meters. No worry about whether to have it in the Extra or Advanced part of the band since there are no band segments to worry about. I'd suggest that we avoid 1800-1850 to keep friends with the CW and DX crowd, and head up towards 1900 kHz. Should you claim no antenna or no radio capable of operating on 160, you had better get one. There were more than three times as many multipliers to work on 160 as on 10 meters in the ARRL CW, and the sunspot minimum isn't due for another two years.

Maybe during the summer we can move back to 3830, but until the QRM gets too tough to tolerate, let's go for 1900 kHz Monday nights at 8 PM.

Oh, yes, don't forget the April meeting will include elections for the 1985-86 contest season. There will be a couple of new club officers, and if you organizers out there don't step forward voluntarily, I'll be the first to nominate you!

SECRETARY'S REPORT YANKEE CLIPPER CONTEST CLUB

The late winter YCCC meeting was held on 9 February 1985 in Bloomfield, Connecticut, with 51 members attending.

Paul, K1XM, gave out BY4AA cards from Bill's, K1MM, 40m cw effort in Shanghai to Bill, KM1C, Fred, K1VR, and Rich, KA1CI.

John, K1AR, talked about single-op strategies for the ARRL DX test. He expects his score to be 19% below last year. Mark, K1RX, talked about multi-2 operation, and Fred, K1VR, talked about monoband operation.

John, K1AR, and Doug, K1DG, have rooms for Dayton. Interested people should contact Doug. Jerry, WA1TZV, may have three plane seats available from Nashua, NH, to Dayton with one stop. Piedmont reportedly flies roundtrip from Logan to Dayton for \$139, and People's flies roundtrip from Hartford to Columbus for about \$150.

See John, K1AR, for club QSL cards at \$32 for 2000. For a club QSL card badge, get a copy of your card to Tom, K1KI, and \$1 to the club.

The W1 QSL BURO needs volunteer sorters and is also interested in comments, good or bad, about QSL service since the BURO changed hands last year. Volunteers, complainers, and praisers should contact Paul, K1XM, or Charlotte, KQ1F.

Joining the ARRL or renewing your membership through YCCC makes money for the club. Contact Charlotte, KQ1F.

Tom, K1KI, talked about FCC matters: repeater coordination, the potential loss of the top half of 160, and rights of amateurs to erect antennas.

The club welcomed five new members:

John Nelson	W1GNC
Hal Offutt	K8HVT
Dave Goonan	KV1Y (a returnee)
Dan Street	K1TO
Joe Fitzgerald	KM1P

Randy Thompson, K5ZD is now chairing the Contest Advisory Committee. Doug, K1DG, is still the representative to the committee from the first district.

Tom, K1KI, brought a collection of old radio books and magazines for anyone who wanted them.

Tom, K1KI, announced that the next meeting will be on April 6th in Worcester.

Tom, K1KI, showed two Japanese videos. Everyone especially enjoyed seeing "The JARL tours the ARRL", with interviews and station tours with several of our members, all in Japanese.

The meeting adjourned for pizza at Tom, K1KI's, QTH.

Respectfully submitted,

Charlotte L. Richardson, KQ1F
Secretary/Treasurer
12 February 1985

April YCCC meeting

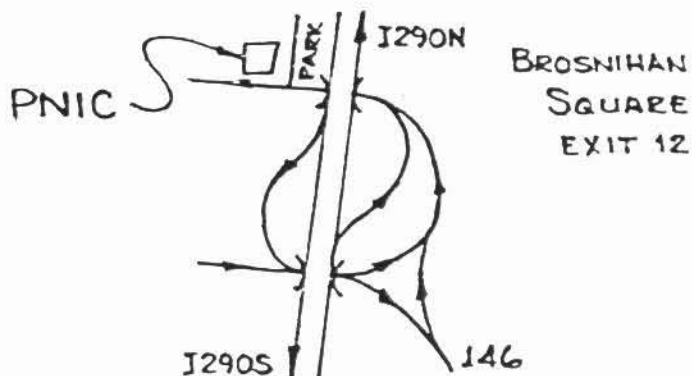
The next meeting of the Yankee Clipper Contest Club will be on April 6, 1985, at 1:00 P.M. at the PNIC in Worcester.

Directions to the PNIC:

From the Massachusetts Turnpike (I-90):
Get on I-290 North. Take exit 12 to Brosnihan Square. Go around the rotary under I-290, then take an immediate right and park in the lot on the right. PNIC is across the street.

From I-290 Heading South:
Take exit 12. Go around the rotary passing under I-290 twice, then turn right as above.

From Route 146 (RI, etc.):
Follow 146 into the rotary at I-290. Go around and under I-290. Turn right as above.



Score breakdowns for ARRL DX CW:

Clipper's Log

Score rumors for ARRL DX CW:				K1DG:			KT3M:		
K1AR	1929	330		160:	71	48	160:		38
W1BR	622	176	m/s	80:	406	72	80:		70
K1BW	1700	300+		40:	619	82	40:		83
KM1C	1670	274	m/s	20:	1149	99	20:		92
KA1CI	960	?		15:	478	82	15:		82
K1KI	500	165		10:	19	16	10:		15
K1EA	1650	286		TOTAL:	2742	399	3.28M		
W1FV	644	76	80m	K2TR:			K1TO:		
KM1H	603	79	80m	160:	105	57	160:	45	33
W1KM	1850	300	m/s	80:	277	73	80:	154	54
W1RR	139	60	160m	40:	663	96	40:	312	64
K1RX	2283	388	m/2	20:	1275	90	20:	934	76
K1TO	1711	308		15:	520	79	15:	249	67
K1VR	1198	220		10:	26	20	10:	17	14
KA1X	505	169	m/s	TOTAL:	2866	415	3.57M	TOTAL:	1711
W1ZM	563	77	80m	W3LPL:			K1AR:		
				160:		11359	160:	60	39
N2AA	1210	95	20m	80:	430	75	80:	280	60
KA2AEV	200	100	qrp	40:	945	104	40:	380	76
K2EK	660	88	15m	20:	1241	103	20:		73
N2LT	1910	311		15:	655	95	15:		70
KY2P	1100	245	m/s	10:	39	21	10:		12
K2RD	1050	257		TOTAL:	3423	457	4.7M	K5ZD:	
N2RM	2000+		m/2	K5RC m/2:			160:		28
W2RQ	900			160:	56	37	80:		53
W2VGN	1700			80:	177	68	40:		89
N2WT	290	137		40:	858	98	20:		79
K2WK	757	74	20m	20:	672	90	15:		76
W2XL	1100	256	m/s	15:	378	84	10:		18
				10:	35	21			
K3LR	1285	290		TOTAL:	2176	398	2.6M		
KT3M	2288	380	m/2	K1RX m/2 (2 ops):					
K3ZO	1650	277		160:	15	33			
WX4G	339	64	80m	80:	226	63			
N5AU	1458	344	m/s	40:	483	78			
K5MR	770	91	40m	20:	1072	82			
K5RX	1165	302	m/s	15:	430	75			
KJ9D	316	75	40m	10:	22	17			
W0ZV	94	44	160m	TOTAL:	2283	348	2.38M		
KP4BZ	4490	317	m/s						
N8IB/VP2E	1680	56							
K8WW/VP9	1515	54	40m						
KJ0D/VP2E	1720	56							
VP2E	1720	56	40m						

Kenwood updates the TS-930

or

How I almost became the first US station with a TS-940

Hal Offutt, K8HVT/VE8

First of all, don't get too excited about the portable VE8. I'm not about to solve one of your biggest problems in life by making NWT more available in the next SS. I am in VE8 land only temporarily. Very temporarily. A few minutes ago I was portable KL7, and in about an hour I will be portable VE6. You see, I am penning this at 41,000 feet, aboard Pan-Am's flight 800, their daily non-stop between Tokyo and New York. At my feet under the seat in front of me is a large empty space which, with just a little bit better luck, would be filled with one of the first TS-940s to roll off the Kenwood production line. On previous flights I have gently rested my toes on a TS-830, a TS-930, and various other bargains from Tokyo's wonderful electronics paradise, Akihabara. Since prices in Japan are around 35% below the best US prices, I have always figured I can't afford not to take advantage of this benefit. I am the classic case of the guy who goes broke saving money.

By accident, I was one of the first outsiders to learn about the TS-940. I happened to wander into Rocket Radio, probably the largest ham outlet in Akihabara, the day my friend Suzuki-san himself found out about the new rig in mid-February. When I got the details about all the new features, I knew I just had to have one: what prestige to be the first ham on the block with a TS-940. Suzuki-san thought he would receive his first shipment at the end of February, which would be just perfect timing for my February 28 departure. I could put it on the air for the ARRL DX phone contest! To make a long story short however, Suzuki-san informed me just two days before my departure that it would still be another week before he could get his hands on any 940s. I thus sadly left Japan empty handed, with only the dream of my TS-940 to keep me company.

Now to the main point of this article - The TS-940 itself. First of all, I should point out that I only had about a minute to fool around with one, on the occasion of a Kenwood presentation to the Tokyo International Amateur Radio Association. They had

a sample, but only a short antenna, so I haven't really been able to operate it yet. Basically, the 940 is an upgraded 930, not an entirely new rig. The most important new feature is what Kenwood refers to as an LCD dot matrix sub-display. The display is green in color, and measures about 3 inches wide, by 3/4 inches high. It is designed to show 4 kinds of information, with 2 lines of data, each carrying a maximum of 16 digits. The four types of data are:

- A. Frequency. The upper line indicates the frequency of the VFO which is not shown on the main display, while the lower line shows the memory group and channel.
- B. Graphic characteristics. Shows graphically the effect on bandwidth when VBT or slope tune controls are in operation.
- C. Messages such as "Antenna Tuner Tuning".
- D. Clock. Shows current time or timer time. Battery backup included.

The other main new features are as follows:

1. Dynamic range improved to 102 DB from 100 for the TS-930.
2. FM capability for both TX and RX.
3. 40 memories (versus 8 for the TS-930) in four groups of ten, including memory or frequency range scan. Lithium battery backup.
4. XIT in addition to RIT.
5. Squelch control.
6. Mode buttons. Send first letter of mode in morse code when pressed. For example it sends "dididah" when you press the USB button.
7. Antenna tuner works on 160.
8. A new cooling system and heat sink for the finals permits continuous duty operation on CW and RTTY.
9. The band switch buttons also function as a keypad, allowing manual entry of a desired frequency.
10. 140 watts on AM (versus 80 watts for the TS-930) (this is an improvement?).

Finally, Kenwood has two new options available for this rig. The first is a voice synthesizer unit, which announces the frequency of the main display on demand. The second is the SM-220, a station monitor which permits visual display of frequency range around the receive frequency, as well as monitoring of the transmitter signal.

Price wise, the new rig lists in Japan for yen 349,800 (about \$1350) compared with a list price of yen 299,000 (about \$1150) for the TS-930 (both prices are with the automatic antenna tuner - this is no longer optional in Japan). These prices are normally discounted by 15 to 20 percent in Japan. Of course, the US prices will be higher, but I would guess that the price difference between the two rigs here will be similar to the difference in Japan.

I heard that Kenwood will be showing the TS-940 at Dayton in April.

Floating

Paul Young, K1XM

Another contest season, shot. I came down with a bad case of busted rotor. I played in the CW contest a bit, and didn't bother in the Phone contest (it's tough on phone when your beam is stuck at Japan). I did a bit of listening though, and it was real nice to hear all the YCCC stations burning up the bands!

It looks like the fun this year was in multi-two. K1OX and K2TR were everywhere on CW, the best intra-club competition I've heard in a while.

K1AR seems to have found a solution to the lack of sunspots: John had the highest numbers I've seen on both phone and cw.

I am looking for prop pitch motors and indicating hardware. If you have any you don't need, or know where I can get hold of any, please let me know.

I have heard, from several sources, something which may be of interest to owners of ICOM radios. ICOM uses a lithium battery to back up the memories. This battery has a life of about 5 years. This battery does more than just back up the memory; the program which makes it a radio is in RAM. If the battery fails, or is disconnected, it will forget that it is a radio, and have to be sent back to ICOM for reprogramming. Don't disconnect that battery!

Fox Tango CW Filters for the TS-930S

Bill Myers, K1GQ

I've been curious about the Fox Tango crystal filters for more than a year, but figured I would wait until someone nearby installed them so I could make some measurements. Just before the ARRL DX CW weekend, I impulsively ordered the set of four filters (on "sale"). This article explains what I've learned about the pair of CW filters; I'll discuss the SSB filters another time.

The 8.8 MHz and 455 kHz CW filters come with an installation kit and reasonably clear instructions. However, the result is a kludge. Both filters are mounted with double-sided sticky foam and tacked into the circuit with "flying" capacitors. The space reserved for the Kenwood 455 kHz CW filter is occupied by the Fox Tango 455 kHz SSB filter, so the Fox Tango 455 kHz CW filter is mounted clear across the chassis and wired in through a pair of 12 inch long coax runs. The Fox Tango 8.8 MHz CW filter occupies the same space as the corresponding Kenwood filter, but the size and pinout is different. The Kenwood filter comes on a neat little plug-in printed circuit board; with a little effort I think Fox Tango could have provided the same setup.

The Fox Tango instructions warn you that you may hear some "sidetone" leakage with the new filters, particularly in older radios. My unit had no trace of this problem with the stock CW filters, but it did show up with the new filters. The source is leakage of the 8.8 MHz carrier oscillator into the 8.8 MHz IF. After using the radio for a week, I removed the Fox Tango 8.8 MHz CW filter and reinstalled the Kenwood filter. This removed all trace of the leakage. The haywire Fox Tango arrangement appears to be the culprit, and I intend to try fabricating a printed circuit assembly someday.

John, K1AR, used the radio during the CW contest. His comment was that he could always find a hole for CQing. My own subjective impression is that the Fox Tango filters are not much different than the Kenwood filters. This isn't unexpected; the filter bandwidths and shape factors are comparable.

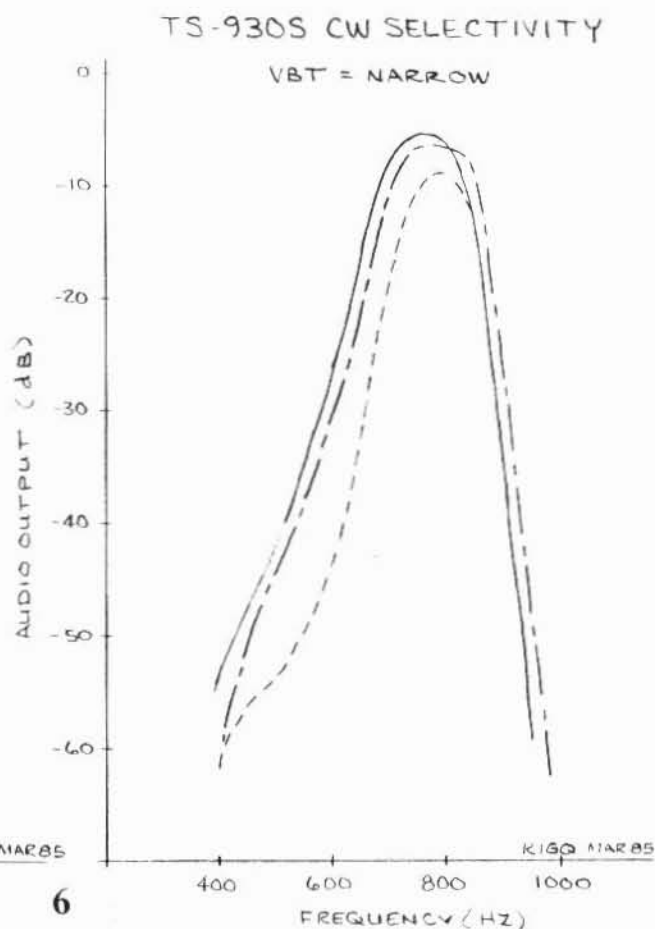
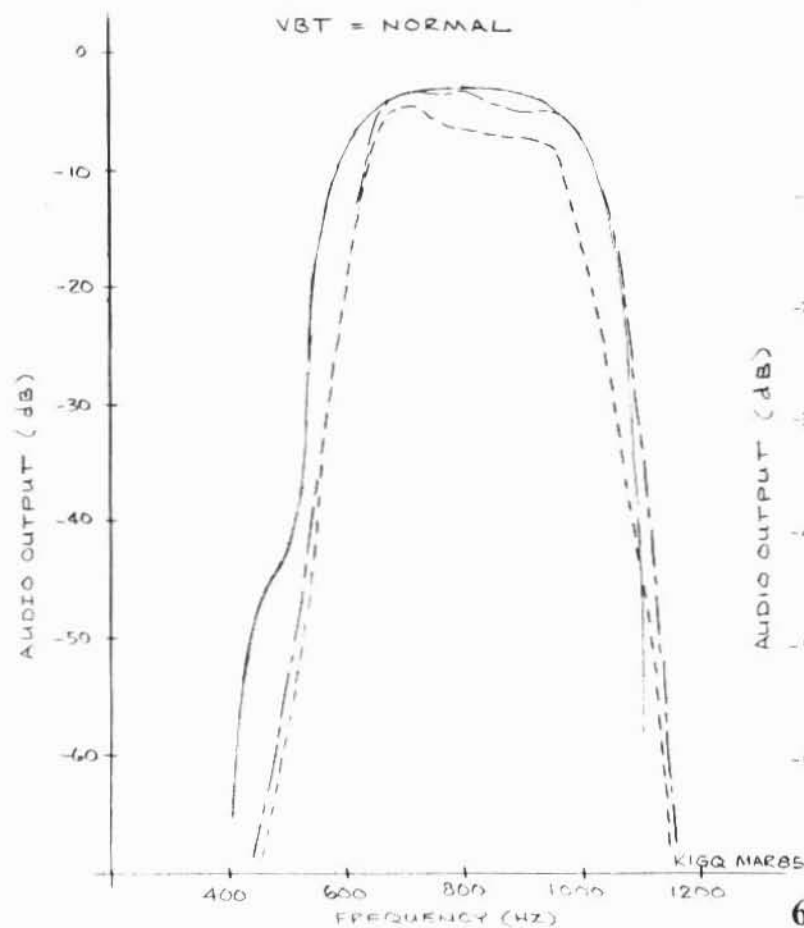
I measured selectivity curves for three sets of filters and two selectivity settings (VBT normal and VBT narrow). The filter combinations were two Kenwoods, two Fox Tangos, and 8.8 MHz Kenwood with 455 kHz Fox Tango. The measurements were made with a crystal oscillator signal source through a calibrated attenuator, and a Fluke 8060A true RMS digital multimeter reading output audio voltage and

frequency. The radio was first tuned to produce an 800 Hz output tone with PITCH set at the detent, VBT set at normal, and the filter switch set at wide. Then the input signal level was reduced to about S1 and the AGC was turned off. This is the reference level shown as 0 dB on the plots. Next, the appropriate sensitivity was selected, and the radio was tuned in 50 Hz increments. At each point, the output relative to the reference level was recorded. The input signal was increased in 10 dB steps as necessary to keep the output level within 10 dB of the reference level. Note that readings more than 60 dB down are unreliable due to reciprocal mixing noise.

The plots show that the three filter combinations aren't much different. The Kenwood 8.8 MHz filter evidently has about 3 dB lower insertion loss than the Fox Tango filter. The Fox Tango pair produce somewhat narrower responses, particularly with the VBT at the narrow end of its range (100 Hz narrower at -40 dB).

Overall, the improvement available by using Fox Tango filters on CW is unimpressive. Furthermore, the 8.8 MHz Fox Tango filter installation introduces an objectionable level of 8.8 MHz carrier leakage. Unless you are a fanatic CW op, or you want to work DX through the OFCers on 160 meters, I recommend the standard pair of Kenwood filters.

TS-930S CW SELECTIVITY



Clipper's Log

Score rumors for CQ 160 SSB:

K1KNQ	234	44	
AK1L	457	56	m/s

Excess Cargo

For sale: Cushcraft 4 element 15m beam \$75. Wilson 4 element 15m beam \$75. Wilson 4 element 10m beam \$50. Hy-Gain 2 element 40m beam \$125. Heath SB-200 \$295. Contact Ron, K1BW, 203/848-3796.

Clipper's Log

Score rumors for ARRL DX SSB:

K1AR	1409	303	
W1BR	897	255	m/2
KM1C	900	218	
(WB8BTH)			
K1DG	154	86	
KG1E	193	63	40
KC1F	59	43	
KA1GG	1420	276	m/2
KM1R	83	50	
K1RX	1443	284	
K1UO	284	149	qrp
K1VR	1161	56	
KE2C	1015	240	
N2LT	1210		
N2RM	1665	343	m/2
W2RQ	1200	240	
K2TR	1601	363	m/2
W2XL	287	139	m/s
W3BGN	1410		
K3KG	1067	315	m/s
W3LPL	1929	391	m/m
K3TW	100	60	80
K3ZO	975	225	
WX4G	216	149	80
WA4JXI	996	293	m/2
N4KG	750	260	
W4PZV	39	31	160
K4VX	1135	316	m/s
N5AU	1448	358	m/2
K5LZO	1100	318	m/m
NR5M	1450	300	m/2
NA5R	890	295	
KN5M	1275	332	m/m
KS8S	760	105	20
KJ9D	186	62	40
KS9K	1336	276	m/2
W0MJ	300	88	80
HH2CQ	7700	265	m/s
J87J	9562	291	m/2
KP4BO	3650	240	m/s
KP4BZ	6250	261	m/s
KK9A/PJ7	2500	55	80
VP2EAG	3140	56	20
VP5SBX	432	44	160

Score breakdowns for ARRL DX SSB:

K1AR:		
160:	30	28
80:	100	62
40:	85	52
20:	1122	113
15:	71	47
10:	1	1
TOTAL:	1409	303

K1RX:		
160:	36	28
80:	70	59
40:	100	52
20:	1157	105
15:	75	38
10:	5	2
TOTAL:	1443	284

K2TR:		
160:	59	39
80:	136	73
40:	192	67
20:	1045	115
15:	157	65
10:	12	4
TOTAL:	1601	363

N2RM:		
160:	43	31
80:	146	72
40:	144	59
20:	1175	111
15:	138	64
10:	19	6
TOTAL:	1665	343

W3LPL:		
160:	56	37
80:	165	78
40:	310	83
20:	1162	108
15:	202	76
10:	34	9
TOTAL:	1929	391

N5AU:		
160:	32	24
80:	197	72
40:	280	73
20:	644	104
15:	254	70
10:	41	15
TOTAL:	1448	358

Ground Systems: The Forgotten Factor

Bradley Wells, KR7L

(reprinted from the Western Washington DX Club

Totem Tabloid)

The establishment of a good earth ground is of fundamental importance to an amateur station. For a variety of reasons, ranging from TVI prevention to improved antenna performance, good ground systems should be the goal of every DXer.

Many times, amateurs are advised to ground their rigs to the nearest cold water pipe. In reality, unless your equipment is in the laundry room or you operate off the toilet seat, it is impractical. The use of water piping, in place of a good earth ground, is only justified if you live above the first floor of an apartment building.

The construction of a proper ground system, while not difficult, does involve a bit more than driving a metal rod into the closest piece of dirt. The basic electrical conductivity of any soil is a result of electron transfer through dissolved electrolytes within that soil. A number of factors influence this electron transfer and the natural soil resistance. Soil type has an important bearing on this basic conductivity. Resistance values can range from 200 ohms/cm for wet clay-loam to over one megohm/cm for coarse gravels. This is why commercial BC stations locate in swamps rather than mountaintops. When installing your own system, be aware that soil type can change markedly over short distances.

Two other related factors also affect soil conductivity. In addition, the actual freezing of soil will cause an immediate jump in resistance. This is due to ions being trapped within the crystalline structure of the ice.

The best ground rods are those of steel which have been heavily plated with either copper or aluminum. The length of a ground rod is more important than its thickness. Doubling the length will cut resistance by 40 percent, while doubling its diameter will cut resistance by only 10 percent. To be effective, ground rods must be driven to a depth

of constant soil moisture and temperature. Therefore, the use of ground rods shorter than 8 feet long is not recommended. Chemical treatment of the soils around a ground rod will pay big dividends in improving the effectiveness of your ground system. Rock salt, copper sulfate, or magnesium sulfate (epsom salt) will inject large quantities of ions into the soil reducing its resistance. However, these salts are gradually washed away by the action of rain and groundwater. They need to be replaced every 3 to 5 years, depending upon location. Since all these salts can be toxic to both plants and animals, avoid their indiscriminate use.

Spaced ground rods will provide large reductions in system resistance. They should be separated from each other by a minimum distance equal to their length. However, this diminished resistance is not proportional to either the number of rods or their spacing. Three eight-foot rods spaced 15 to 25 feet apart will provide an optimal configuration for most amateur stations.

The construction of a low-resistance ground system is both simple and straightforward. However, it is an often overlooked factor in station design. It can reduce your TVI potential and improve the performance of your low-band antennas. Several hours of weekend yard work can provide a significant increase in your DX potential... not a bad trade-off.

Key Strategies for 1985 John Dorr, K1AR

For those who missed John's presentation at the February meeting, these were his recommendations for the ARRL DX Tests:

- Single op has become a low-band contest
- Change bands often - think of 160-10 as one big band
- Run when you can - don't be tempted to chase multipliers when Europe is "bombing in"
- One multiplier is equal to 5.6 QSOs
- Pass, pass, pass...

40 Meter Phone Band Expansion

Walt McGugan, W3FG

(reprinted from the Potomac Valley Radio Club newsletter)

By now you have surely heard or read about the expansion of the 40 meter phone band for amateur stations in KH6 and KL7 land. The March 1985 issue of *QST* reports that KP4AM has filed a petition with the FCC proposing a similar expansion for KP4 and other U.S. Caribbean territories. One of the reasons given by KP4AM is that "during nighttime, the segment above 7100 KHz is almost useless due to ... interference, especially from broadcast stations. This particular situation does not exist in the continental states."

I am relieved to hear that we stateside hams do not have a problem with broadcast station interference above 7100 KHz. Nevertheless, the time now seems ripe for those of us on the mainland to join the 40 meter phone band expansion "band" wagon. I propose that the PVRC file a petition with the FCC on this matter, and I have listed below a number of points that should be included in our petition. I expect these points to be discussed further at the March 11 club meeting. (Anyone not showing up will be appointed to a committee to draw up the final petition).

1. General, Advanced, and Extra class amateurs located in the mainland U.S. shall be allowed SSB privileges, in addition to existing CW allocations, in the 7030-7100 KHz band segment, subject to several minor restrictions listed below.

2. Realizing the valid concerns of many DX stations over the amount of QRM that would be caused by U.S. amateur operation in this band segment, U.S. amateur SSB operation from 7030-7100 KHz will be restricted to the following time periods: (a) the 48 hours of the CQ World Wide DX Contest (phone weekend only); (b) the 2 hour period immediately preceeding the CQ World Wide DX Contest phone weekend for the purpose of station testing and establishing your frequency; (c) the 73 Magazine 40 meter SSB Contest, provided contacts are with DX stations; and (d) during the 40 meter operation of any announced DXpedition, provided the contact will result in a new country on 40 meters SSB. For the purpose of this point, an "announced DXpedition" is defined as one appearing in any recognized DX bulletin published at least 12 hours before the DXpedition starts, or a DXpedition announced on a local 2 meter spotting frequency.

3. Power limitation - Output power in this band segment shall be limited to that level currently established by FCC regulation. EXCEPTION: Any station operating zero-beat with a foreign broadcast station stronger than S6 at his operating QTH may run 2.5 KW output power. Any station operating zero-beat with Radio Moscow may run any output power whatsoever, provided said power level does not interfere with the safety of commercial aircraft operating in the general vicinity.

4. During the CQ World Wide DX Contest phone weekend, only BIG GUN stations may call CQ CONTEST in the 7055-7080 KHz band segment while the band is open. For the purpose of this point, a "BIG GUN" station is defined as a station that is running Europeans at a rate of 30 or more per hour, or JAs at a rate of 36 or more per hour. Any station claiming BIG GUN status who has not, during any 10 minute period, worked 5 Europeans or 6 JAs immediately loses his BIG GUN status and may not call CQ CONTEST in the 7055-7080 KHz segment for a period of 30 minutes after losing said status.

5. In regards to point 4, any station may answer a DX station who is calling CQ in the 7055-7080 KHz segment, provided the contact is a new multiplier. EXCEPTION: During the last 3 hours of the contest, any U.S. station may answer any DX station who is calling CQ in the 7055-7080 KHz segment, provided the operator thinks the contact is not a dupe.

6. During the CQ World Wide DX Contest phone weekend, any U.S. station located within 500 miles of the Canadian border may call CQ VE anywhere within the 7030-7100 KHz band segment. In order to avoid conflict with point 4 above, calling CQ VE between 7055-7080 KHz is permitted only during the time period from 2 hours after local sunrise until 2 hours before local sunset. The times of local sunrise and sunset shall be determined by watching a weather report from the TV station located closest to your QTH, or from the Farmers' Almanac.

7. During the CQ World Wide DX Contest phone weekend, any U.S. station contacting a UA6 may, as a bonus for this rare accomplishment, call CQ CONTEST anywhere in or near the 40 meter band for a period not to exceed 20 minutes. This bonus may be taken only once during the contest weekend.

The **Scuttlebutt** is the newsletter of the **Yankee Clipper Contest Club** and is mailed about nine 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.

The **Yankee Clipper Contest Club** (an ARRL Affiliated Club) holds four official meetings per year, on Saturday afternoons in March/April, October (at the New England Division Convention when possible), November/December, and January/February. The next meeting will be on Apr. 6, 1985 in the Worcester area. 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) 271-3096	(203) 265-8825
EMass	W1FJ	Al Rousseau	(617) 598-3744	(617) 599-7500x173
WMass	K1RQ	Dana Cobb	(413) 655-8096	(413) 655-2797
VT/NH	KM1C	Bill Pedersen	(603) 673-1678	
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

YCCC
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ARRL DX TEST SCORES