Scuttlebutt

Yankee Clipper Contest Club

No. 69 June 1987

Captain's Cabin
Bill Pedersen, KM1C

Upon re-reading the April editorial by Bill, N1AU, I reflected upon the many facets of the YCCC that have made membership in this club such an enjoyable experience for me. We are a diverse group of people bonded by common interests in the world of Amateur Radio, specifically Contesting and DXing. Our associations within this group allow for individual growth in many areas of the hobby: operating skills, technological achievement, station/antenna construction, and radio friendships that stand the test of time. Each one of us, in turn, can make valuable contributions to the club whether it be writing articles for the Scuttlebutt, serving as a Club Officer, contributing to the Contest Cookbook, helping start a YCCC Packet Bulletin Board, or just plain contributing those all-important "Points" to the YCCC in the CQWW and ARRL DX Contests. All of us participate at different levels, but let there be no doubt that, in this Club, every member counts.

It is my belief that the YCCC is in a position to combine all of the above listed skills and talents into a cohesive effort to win the Unlimited Club competitions in the 1987 CQWW (SSB and CW) and the 1988 ARRL DX (CW and SSB) Contests. Our efforts within the group can easily be directed by the primary goal of winning these four Contests while fully enjoying the numerous benefits of YCCC membership.

My personal objective is to try to contribute to the Club via effective administration and good communication. We are fortunate to have some very good people working for the YCCC this year:

- Tom Frenaye, K1KI, as Vice-President/Activities Manager will be organizing the programs for our meetings at Sturbridge.

- Charlotte Richardson, KQ1F, contributing her fine job as Secretary/Treasurer.

- Paul Young, K1XM, again Editor of the best Contest Club newsletter, the Scuttlebutt.

- Jeff DeTray, WB8BTH (4-letter "1" call soon to arrive), starting a new administrative position of YCCC Scorekeeper. Jeff will be tracking scores and making them available for publication and PBBS on a timely basis. He will also help expand the "Editor's Award" concept created by K1XM.

- Dave Robbins, KY1H, as the Club's Packet Coordinator, another new administrative position. Dave will be working to get new Packet Bulletin Boards up and running in the various geographic regions of YCCC and will be coordinating with AK1A in an attempt to get those boards "linked".

There are currently a number of areas being worked upon to improve the functioning of the YCCC. These

include a "resource" page in the **Scuttlebutt** for the benefit of the ever-increasing number of new members, an improved score-reporting system and Club awards program, and a Club Roster and Individual Member Record available on packet.

Perhaps the most important idea for the Club at this time, however, is the possibility of getting AK1A-style Packet Bulletin Board Systems available to each YCCC member throughout the Club territory. The initial goal would be to have boards running in approximately the same locations as defined by the Area Manager concept. The actual linking of these boards would come at a later date, but they would serve to tie the various club areas into very cohesive local groups with strong chances of attracting new members to the YCCC.

For those of you who have not seen the AK1A Packet System in action, I can only say that it is quite the treat in technology. It allows for quick and silent reporting of DX, call-up of most recent DX reports by number or band, electronic mail addresses to the individual or all users, instant call-up of DX Bulletins, ARRL Bulletins, archived files, etc., current announcements (like the next YCCC meeting date!), Sunrise-Sunset data for that day for all DX Countries (called up by prefix), Talk modes, Conference modes, and many other features, including up to 26 stations being connected to the Bulletin Board at the same time. Next to be added will be a current Club Roster and Individual Member Records that will show names, addresses, phone numbers, packet capabilities, status of YCCC dues, YCCC meeting attended, YCCC Luncheons attended, ARRL eligibility, reported/actual scores for that contest year, etc., i.e., All of the info that is collected by the Secretary and/or Scorekeeper will be available to each member on packet. This is a good method of checking your own status, and an excellent chance to see what the "competition" within the Club is doing!

It is important to remember that we are not a "Packet Club". We are, however, the first major Contest Club to utilize packet technology to enhance the operation of the Club, something particularly useful given the large geographical area of the YCCC. We do not have the benefit of single 2 Meter repeater coverage of our territory as is the case for many other clubs. We can, however, take every advantage of packet to increase our ability to communicate amongst ourselves: to set up local meetings, report DX, exchange messages/ideas, obtain Club information, etc. It is an excellent mode which supports our overall desires to operate HF, work DX and win contests at the individual and/or Club level. It should be noted that as the area PBBSs come on line, they will be benefiting the Club members who are not yet on packet, too. Much of the information traded on packet tends to be relayed on 2 Meter FM, via land-line, etc.

What does it take to get an AK1A-style PBBS on the air? The requirements are easy: an IBM PC-XT or Clone, a Kantronics KPC-2 TNC, the AK1A software, and a 2 Meter Transceiver in a good location will serve users over a large area. I would like to ask the Section Managers where boards are not currently in use to evaluate the possibility of getting one started. Do you have someone who can dedicate an XT to full-time board use? If not, what about some local fund-raising to buy an XT or its clone equivalent to help get a full-time PBBS on the air? 7 ops at $100 or 14 at $50 would buy the computer, another $159 buys the TNC, etc. If you are an op who would like to see a YCCC Board on in your area, please contact your Section Manager or Dave, KY1H, with your desires and how you can help. A cooperative effort on a local basis will turn into a very effective and fun system for all to use.

Now back to the "big" picture. I am already thinking about the CQWW SSB and CW. Which category/categories am I going to enter? How can I improve my scores? What antenna work am I going to get done? What are my goals? I already have a good idea as to the answers. Now let me ask, "What about You?" These same questions should be asked by you now, and their answers should be put into motion so that you will be prepared for this major radio event! If you need help from your fellow club members, ask for it! Conversely, try to give a hand where it is needed. The YCCC will win the CQWWs if we all motivate and operate. It makes no difference if your final score is 50,000 ... 100,000 ... 1,000,000 ... 2,000,000 ..., or more: this Club is made up of operators with varying skills, experience, station capabilities, etc. Every one of us counts as an individual member, and every one of our scores counts, too. It is going to take all of us operating in concert to pull off a Club win, and I plan to have as much fun in the attempt as in the actual event. Remember, however, that the attempt starts now!

I look forward to working with all of you in the 1987-1988 Contest Year.

Next Meeting
Paul Young, K1XM

The next meeting of the Yankee Clipper Contest Club will be on Saturday, June 6, at the Sheraton Sturbridge. The meeting will start at 1:00 p.m. Presentations scheduled for this meeting include the West Africa 160m DXpedition (K1MM, KA1ESR, K1MEM, N1CPC, K1ST, and WA1RCA), freelance writer Rick Booth, KM1G, describing his visit to several Yugoslav contest stations, including YU1AKL and YU1CBM, and John Kenny, W1RR, on VHF paths and geogra-

phy, using packet paths as examples.

If the weather is nice, bring your family along! After lunch, they can swim at the public beach adjacent to the Sheraton while you attend the meeting.

If you are interested in attending the pre-meeting luncheon, you **MUST** contact Charlotte, KQ1F, by noon on Wednesday, June 3rd. 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.

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 and 1988 are:

DATE	DAY	DELI-LUNCH
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
February 6, 1988	Saturday	11:30 AM
April 9, 1988	Saturday	11:30 AM
June 5, 1988	Saturday	11:30 AM
August 6, 1988	Saturday	Lakeside Bar-B-Que
October 2, 1988	Sunday	11:30 AM
December 4, 1988	Sunday	11:30 AM

NOTE: The October, 1987, 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.

Me and My Yaesu
Ken Wolff, K1EA

I bought my FT-980 for a number of reasons:

- It has a computer interface so my contest program can interrogate it for frequency information when dumping stuff into the packet network.

- I saw an advertisement that claims the last VCO in the frequency synthesizer has 7 separate oscillators for low phase noise.

- The main tuning knob is also the RIT knob. I'm SOOO tired of the tiny little RIT knob on my TS-930.

- The TS-930 is susceptible to RFI during the VHF contests in June and September.

- The FT-980 has FM so I can use one radio on CW, SSB, and FM in VHF contests.

- The 'up/down 5KHz' buttons are nice in Sprint contests.

- The separate HAM/GEN modes led me to believe the front end might have better front end filtering for M/S and M/M operations.

- Frequencies can be entered directly from the keyboard.

I hate my FT-980 for a number more:

- The timing of the breakin sequencing was all wrong. At 40 wpm dots are shortened to the point of no output at all. I do not use the FT-980 handshake with my Alpha 78; instead I adjusted the sequencer's timing to work with my vacuum relay box.

- While tuning the CW band I stop for a little chirp and search for the Polish station I know is in there, but, no soap, he's gone. On I go and here another chirp. Hmm. Two weeks and $2,000 worth of engineering time later I know the story and can't fix it. Hold on, this is sick.

The PLL responsible for 10Hz steps is automatically incremented by the optical encoder in the main tuning knob. As it rolls from 90 through 100Hz the PLL drops down 90Hz and sets an interrupt to the 8085 CPU. The CPU notices the 10Hz counter has rolled over and increments the 100Hz PLL. Amazingly, the CPU does not do this at interrupt time, but waits until it is done polling. Therefore, the synthesizer drops 90Hz for up to 10ms, then jumps up 100Hz to the final frequency. Depending on where in the polling cycle the CPU is, the chirp lasts from 0 to 10 ms.

The radio's schematic shows the 90Hz to 100Hz transition decoded to drive the interrupt line on the CPU, but the radio actually does this jumping around act on 00 to 10Hz. The reason is an ECO (Engineering Change Order) on the digital board to decode the 00Hz to 10Hz transition. I can't be sure, but I think that someone complained that the radio chirped on the 90 to 100 Hz transition, so they changed it to chirp on the 00 to 10Hz transition.

I have done a couple of things trying to fix this. First, I changed the digital circuits to interrupt the CPU when the 10's counter tries to roll over, but inhibit the counter until the CPU actually services the 100's PLL. This would work, but the CPU expects the frequency to go from 00

to 10Hz and the arithmetic gets messed up. A couple of changes later I decided to change the CPU's program in ROM. Pulling the ROM, I wired a socket to fool the PROM burner into thinking it was a PROM and dumped the code. We had a Z80 disassembler at work which, with a few changes, managed to read 8085 code. Now I decoded a few hardware addresses and was ready to digest the code. What a pain. This can't be worth it, I still had to change the Z80 assembler to produce 8085 output and they say the phase noise fixes for the 940 actually work ... By the way, there are two Japanese names in ASCII in the middle of the ROM. Maybe I should write to them care of Yaesu and beg for a source listing with comments.

- The following bug is the one which made me give up on the radio. After 1 to 3 hours of contesting, the synthesizer seems to get sick and die. With the cover off the radio always comes back to life however. By pulling the box apart and blowing a hair dryer on one board at a time I found the PLL UNIT fails. Using cardboard, the hair dryer, and freeze spray, I narrowed it down to one chip, Q19, a 74LS90.

  It is one of the divider chains in the synthesizer, a divide-by-10 counter used as a divide by 3 counter. The design bug is a beginner's bug: the lowest two bits are fed back into the reset pins of the 74LS90 (Q19). The counter is supposed to count: 00, 01, 10, then 11 for just a couple of nanoseconds while the chip resets to 00 again. Unfortunately, this circuit is only guaranteed to reset one of the two low-order bits. It is possible, even likely, to have one left set. The cure is to replace the 74LS90 with a 74LS92 (a proper divide-by-12 with a divide-by-3 built in), cut one pin and add a jumper wire.

- On ten meters the synthesizer still has problems, but I just haven't had the inclination to look into it.

- The human interface to the radio is in some ways moronic. For example, you can load the memory from the VFO, but you can't load the VFO from memory. This must be the legendary WOM (write-only memory). When changing bands you have to step through all the intervening bands (including WARC!) to get to the band of interest. Try doing this fast from 160 to 20 on the second night of CQWW at 10:30Z. I nearly started sobbing when I couldn't find 20 meters... There are two buttons labeled 'shift/LDS' and 'check/vu'. I suppose they do something, but I keep forgetting after fifty hours without sleep.

- I had planned to use the FT-980 as an automatic multiplier hunter in M/S operation by connecting the packet network TNC, the computer, and the radio. Packet reports of DX needed would trigger the computer program to send the radio to the right frequency. A human op would bust the pileup and go back to another rig. However, when the computer releases the radio back to front panel operation, the radio automatically jumps back to its pre-computer-control frequency. GRRRR.

- This is the only radio in history K1AR refuses to operate. After being off the air a month while he moved, 'AR came over to visit ready to operate. Five minutes after sitting down John got up and has not been back since.

In all fairness to Yaesu, there are a few good things about the radio. During CQWW phone two different Europeans called in to tell me I was one of the very few stateside stations with good audio. I was using a Beyer Dynamics headset and boom mic at the time. The radio has performed admirably on Mt. Wachusett in the VHF QSO parties with no RFI problems. The fact that the memories remember mode as well as frequency makes it easy to check WWV during CW contests. Some receiver measurements made by me at K1GQ's house show phase noise and dynamic range comparable to the TS-930, while the noise figure is better. There have been times on 15, in side-to-side comparisons, stations could be heard on the FT-980 but not on the TS-930. The FT-980 technical documentation is excellent. I had no trouble finding my way around the circuits or getting to the boards. My wife thinks I should own equipment at least a month before I modify it. I think all radios are meant to be improved on.

My new TS-940 arrives next month. I hope this radio works out better.

DXpedition Help?
Tom Frenaye, K1KI

Ever been out of the country? Were you able to get on the air while you were there? Please keep reading!

We're trying to compile a listing of YCCCers who have been active from DX locations so that we can begin to share some of the tricks of the trade and make it easier for the next visit (and perhaps to improve the YCCC's score in a contest or two).

Please tell me what countries you've been to, what callsign(s) you've used and the year you were there. Once we get some meaningful data accumulated we'll make sure it gets into your hands!

Thanks!

CQ WPX Prize winner
Paul Young, K1XM

The YCCC prize for winning the 1986 CQ WPX contest will go to Kele Kecman, YU1AO. Kele managed 1878 QSOs and 675 multipliers for a total of 3,455,325 points.

Kele also won the Terry Baxter, N6CW trophy for the contest.

Yugoslavia allows amplifiers, so Kele will receive the following:

- A Kenwood TS-830 Transceiver (donated by YCCC)
- An AEA CK-1 keyer and Bencher paddle (donated by K1XM/KQ1F)
- A 4-1000 amplifier with spare tube (donated by K1EA)
- A Telex/Hy-Gain Rotor (donated by K2RD)

We hope Kele will enjoy his new station, and that he works all of us on six bands in the CQ World Wide contest this fall.

There were also several YCCC winners in the contest. John, K2VV won the Gene Walsh, N2AA trophy for top score on 14 MHz. And Bob, KQ2M, won the Kansas City DX Club Trophy for top single band score.

And, last but not least, YCCC won the Northern Ohio ARS trophy for high U.S. club score!

High Claimed Scores
1987 ARRL International DX Contest
Billy Lunt, KR1R

Single-Op All Band

CW		PHONE	
KM1H (KQ2M op)	1,796,871	K1AR	1,584,375
KC1F	1,742,832	KC1F	1,492,542
K1KI	1,634,382	K1ZM	1,479,870
N2LT	1,466,388	W3BGN	1,239,390
K1TO	1,462,272	W9RE	1,227,963
K1AR	1,414,842	KM6B	1,111,560
AA1K	1,352,295	N2LT	1,070,118
K3TUP (KR0Y op)	1,316,826	N2IC/0	993,510
K1BW	1,312,038	K0UK	908,988
W3BGN	1,309,608	WZ4F	905,154
KT3M	1,301,724	K4VX/0 (KM9P op)	850,356
K1CC	1,296,822	K5ZD/1	824,460
N5RZ	1,272,414	N2MM	766,422
K1ZZ	1,265,010	NN7L	721,494

Single-Op All Band, cont.

CW		PHONE	
K3WW	1,259,250	K1DG	720,114
W2REH	1,191,105	K5MM/7	718,115
WX4G	1,163,484	K1VR	707,400
N2MM	1,163,307	KE9A	673,014
K5ZD/1	1,117,368	W6MKB	627,000
K3LR	1,067,469	W3XU	618,975
KC8C/3	1,053,360	K8AZ	542,646
K1DG	1,042,152	KC7V	541,833
W9RE	975,360	K3ZJ	512,736
W1WEF	960,915	N4ZC	501,102
W3VT	907,776	KY2J	492,228
K2LE/1	834,606	N4UH	469,569
W0JLC	826,560	ND1X	468,585
K1XA	800,667	KI6CG	456,840
W8UA	775,341	WZ6Z	428,778
N2RM	775,284	WG6P	413,316
W4XJ	691,020	VE2AYU	396,990
K1IU	667,116	K6EID	384,930
K6NA	661,365	VO1MP	367,233
VO1MP	618,000	W6TMD	366,876

Single-Op, Single-Band

160 CW			160 Phone	
K1ZM	16,560		K5UR	14,310
K4TEA	8,760		WB9HAD	12,126
N4IN	4,608		WA4SVO	8,910
N4SU	4,500		VE1BNN	6,216
K1IK	3,444		AB1A	5,883
80 CW			**75 Phone**	
W1FV	150,696		W5WMU	29,736
N4ZC	112,860		KW8N	17,820
KC1Q	89,043		KS9K	14,841
KD2RD	69,540		KN5S	10,332
K2SX	15,867		N3AHF	10,209
40 CW			**40 Phone**	
K4XS	194,400		W6AQ (WA6OTU op)	70,875
WN4KKN	180,810		KA5W	40,863
W7EJ	170,718		K4RIG	31,980
W0UA	137,592		K0DD	29,646
KU2C	123,516		K5KT/6	29,298
20 CW			**20 Phone**	
K1RM	336,900		VO1SA	643,560
K1RU	289,170		K1RU	515,040
K0RF	240,219		AK1A	453,675
K2SS	205,452		W7WA	451,572
WD8LLD	191,241		N7TT	309,060
15 CW			**15 Phone**	
W5VX	78,192		K6SVL	154,566
N4VZ	43,680		K6VI	73,788
N6ND	43,056		KE7C	62,436
WB4TDH	42,411		K3RV	59,427
W5AC	26,928		K3KG	57,324
10 CW			**10 Phone**	
K9LA/5	3,060		KE5FI	22,680
WB7FDQ	2,520		N4EJW (N4EJV op)	12,288
KD1U	1,782		WA7KLK	6,006
WB8JBM (KW8N op)	1,488		K9LA/5	3,192
N4JF	1,350		KD1U	1,764

Single-Op QRP

CW		Phone	
NN4Q	112,791	K3WS	152,055
W8VSK	81,753	KD6PY	92,295
K1CGJ	72,765	N6OJ	79,230
KD6PY	58,032	KB7VD	59,013
KW6O	54,900	WA8AGH	38,376

Multi-Single

	CW		Phone
K3KG	1.464.300	K3TUP	1.742.004
K1YR	1.431.102	N3RS	1.399.380
K8AZ	1.144.746	K1CC	1.215.396
KY1H	1.129.464	WB2ULI	1.109.469
W3GG	1.105.425	N0XA	1.067.346

Multi-Two

	CW		Phone
NR5M	2.598.114	K5RX	2.811.240
N3RG	2.593.800	K2TR	1.967.868
N3RS	2.535.456	N3RG	1.817.244
K2TR	2.191.140	AA1K	1.297.812
KS8S	1.715.112	K9MWM	1.193.508

Multi-Multi

	CW		Phone
W3LPL	3.418.959	KX4S	2.647.296
W3GM	1.870.914	NR5M	2.427.696
K3OO	1.459.785	W3LPL	2.297.061
K4JPD	7.353	K5NA	1.590.177

Administrivia
Charlotte Richardson, KQ1F

In an effort to streamline the way the club works, and make things happen in a consistent way, our new President has asked for a list of new club "policies".

CLUB RESOURCES PAGE Starting with the next issue, the **Scuttlebutt** will include a "Club Resources Page" inside the back cover. This is **the** place to look for general information about the club.

DUES Dues are due at the April election meeting, which begins our club "contest year". There is a grace period until the end of June for late dues payments. According to Article VI of our club constitution, "Payment of current dues shall be a pre-condition for continuing membership." Therefore, membership in the club will **lapse** at the end of the grace period if dues are not paid up. In order to re-join the club, a lapsed member must attend a meeting, like any new member, and be welcomed back into membership, or may become a subscriber to the **Scuttlebutt** by paying up (see below). Club members who move out of club territory and so are not eligible to contribute to club aggregate scores automatically become subscribers. New members who join at the last meeting of the club's contest year (February) are credited with dues for the following year (that is, the contest year beginning that April). You can tell if you owe dues by checking your **Butt** mailing label. It is important to keep your membership current, both so that the club stays solvent, and so that you don't miss any issues of the **Scuttlebutt**.

FAMILY MEMBERS Members of the same family living at the same address may elect to receive only one copy of the **Butt**. One member of the family must pay full dues, enabling the rest of the family to join as family members. Being a family member is currently free.

STUDENT MEMBERS Full-time students are eligible for dues at half the regular rate.

SCUTTLEBUTT SUBSCRIBERS Anyone may subscribe to the club newsletter, the **Scuttlebutt**. A subscription costs the same as club membership. At the present time, overseas subscriptions cost the same as domestic (we have very few overseas subscribers). The subscription period begins at the beginning of the club year, in April. New subscribers who begin their subscriptions after the December issue are considered to have paid for the following year (that is, they receive as many issues as new members joining at that time do). You can tell if your subscription is current by checking your **Butt** mailing label. The grace period for late subscriptions is the same as for late memberships.

CLUB ROSTERS The club roster appears in the summer issue of the **Scuttlebutt** every year. (That's the next issue! Check your mailing label and the master roster at the next meeting to make sure that your information is correct and up-to-date.)

CONTRIBUTIONS The YCCC welcomes your contributions, be it money to help offset the cost of the **Scuttlebutt** and club operations, scores for the club aggregate score, time spent helping other members, articles for the **Scuttlebutt**, or presentations at club meetings. This month, we'd like to thank Bill, KM1C, for his contribution to the club treasury.

## TS-940S Phase Noise Improvements – New Kenwood Modification
John Kaufmann, W1FV

Kenwood recently released Service Bulletin #917 describing a new modification to improve the much-discussed phase noise performance of the TS-940S and superseding their previous Service Bulletin #911 modification. The details of the new Bulletin are given below. Current production '940s (serial number 711xxx and beyond) already incorporate this change.

Does the new fix represent an improvement over the earlier Bulletin #911 and the Lowe mods described in my article in the December 1986 **Scuttlebutt**? The attached plot of Kenwood's own measurement of receiver phase noise output (supplied to me by John Wilson, G3PCY, of Lowe Electronics in England) does indeed show a 10-12dB improvement over stock for 0-25 kHz offset. It also shows what I (and others) discovered about the earlier Kenwood mod – it was only a small improvement over a stock TS-940S, a fact now apparently being acknowledged by Kenwood.

I have not tried this latest Kenwood improvement in my TS-940S and therefore am not able to independently confirm Kenwood's measurement. However, their data on the stock TS-940S vs. their earlier mod appears to agree closely with the results I reported last December and thus I am inclined to accept the new data as being accurate.

On the other hand, the choice between the Lowe and the new Kenwood fixes seems to be a toss-up. My results showed the Lowe modification to reduce receiver phase noise output by 12 dB – just about the same as indicated here for Service Bulletin #917.
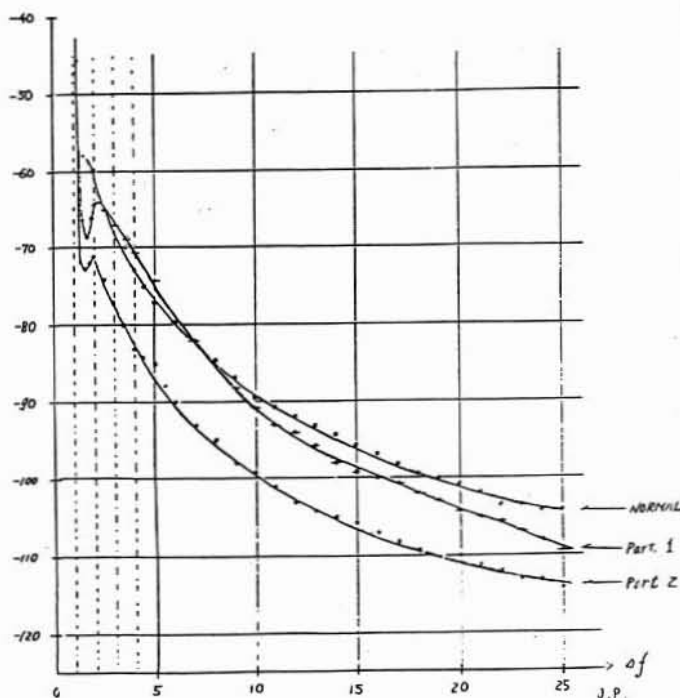
Kenwood measurement of TS-940S receiver phase noise output for 0-25 kHz offset. (Normal = stock TS-940S, Part 1 = Bulletin # 911 mod, Part 2 = Bulletin #917 mod).

[You can obtain copies of the new Service Bulletin by sending an SASE to the **Scuttlebutt** or to John. – ed.]

Number 2 Is Trying Harder
Tom Frenaye, K1KI

While the YCCC is generally recognized as being the innovator in utilizing packet technology to support club communications and contest efforts, we are usually not the #1 club when it comes to the final club scores.

We have about a one-year head start in getting things

going over our competition, but for others intent in closing that gap it will take much less time. Looking over out shoulders we find the Frankford Radio Club (the ones that usually beat us) gaining quickly. In their April newsletter there is a lead story about their recent activity. Twenty people had packet capability (and that was March 25th, a full month *before* Dayton) and their first PCBS (AK1A software) was ready to go on the air.

Their network plans include dedicated digipeaters and additional PCBS sites, including a link with W3LPL. In another six months they will have a capability at least equal to that of YCCC today, unless we keep moving!

Being rather proud of the YCCC packet network during the last year has given many of us a warm feeling, almost making up for not winning the CQ WW or ARRL DX Contests last year. We'd better do some work on improving the contest scores, and the tools we use to build it because being #2 at both won't be any fun at all!

Secretary's Report
Yankee Clipper Contest Club

The February YCCC meeting was held at the Sheraton Sturbridge on 5 April 1987 with 41 members and their guests in attendance.

Bill, N1AU, reminded everyone that ARRL DX Contest logs were due in two days, and that you have until May 21st to file your response to the 220 MHz proposal with the FCC. He also had low frequency, high-loss ferrite donuts available for RFI filtering (these quickly disappeared).

The Treasurer's Report was read and seconded. Members are reminded that dues for the 1987-88 contest year are now due.

Elections were held, with the following members elected for the 1987-88 season:
President: Bill Pedersen, KM1C
Vice President: Tom Frenaye, K1KI
Secretary/Treasurer: Charlotte Richardson, KQ1F

Bill, KM1C, appointed the following members to chair two new committees:
Packet Coordinator: Dave Robbins, KY1H
Score Keeper: Jeff DeTray, WB8BTH
He also reappointed Paul Young, K1XM, as editor of the **Scuttlebutt**.

Ed, NT2X, brought previously-ordered club jackets for pickup, and found himself with orders for another dozen jackets.

Bruce, K2OY, reported that Dave, W2YV, has been transferred (by I've-Been-Moved) to North Carolina, effective in mid-July. His QTH near the Taconic Parkway, including towers and antennas, is for sale, asking price under $200K.

Don, KB1KE, reported that the sample TenTec "Paragon" should be available for testing by the beginning of May, and he hopes to take it to Deerfield.

Dave, KY1H, read a schedule of radio events in Western Massachusetts. The local swap net meets on Thursday evenings on 28303. The WMA boys are planning a 2m foxhunt April 26th at 1 pm in Pittsfield. As in previous years, Dave is planning a big Field Day effort in the 2A category; talk to him if you're interested.

For club QSL cards, contact John, K1AR.

After the completion of this routine business, Dale Clift, NA1L, spoke on the legal aspects of tall towers and PRB-1. Dale used to work for the ARRL and is now an attorney in private practice in Connecticut. Following Dale's talk, Jack, W1WEF, showed slides of the PJ9J DXpedition to Curacao for the 1987 ARRL DX SSB contest. The operators were W1WEF and W1BIH. They made 7064 Qs, which is probably good for a third place finish in the M/S category. QSL via W1AX.

Dave, KY1H, provided a bit of comic relief with an ad for infinitesimal dipoles (your next antenna project?), and then spoke on packet conferencing. His system currently allows conferencing, DX reports only to be forwarded to bulletin boards (such as K1KI and AK1A), local communications (to talk to Dave), and single-op "monitor" mode (which allows you to send out information but not to receive it).

Following these presentations, the hungry crew adjourned to Rom's and other local eateries for much-needed refreshment!

Respectfully submitted,
Charlotte L. Richardson, KQ1F
Secretary/Treasurer
16 April 1987

Summer Gossip and Picnic
Tom Frenaye, K1KI

We're all invited to go to the joint Frankford and Potomac Valley Radio Club meeting on Saturday, June 20th, this year. It's being held at the new QTH of Frank, W3LPL, and well worth the trip to see his brand new multi-tower, multi-operator station, plus all the competition from the Philadelphia and Washington, DC, areas at once!

This is two weekends after the next YCCC meeting. If you're planning on going, let me know so we might arrange some car-pooling and to let them prepare for our visit as well. I'll try to have copies of the directions available at the June YCCC meeting.

Preventive Maintenance, or "Should I fix it if it ain't broke?"
Jack Schuster, W1WEF
reprinted from **The Murphy Message**, March, 1987.

In anticipation of ARRL DX, the NCJ Sprints and some other upcoming contest activity (including my trip to PJ2 for ARRL DX Phone), I decided it was about time I did a little PM on the '830S. There were a couple of minor problems to straighten out at the same time, like repairing the rf attenuator, which had failed a few years ago, and a loss of sensitivity on 10m that hadn't bothered me much lately.

The Kenwood TS-830S Instruction Manual includes a section on Maintenance and Alignment, along with a Troubleshooting section that is fairly well written and worth getting acquainted with. If you're like me (and I suspect most are in this respect), the day after you unpacked the rig you put the manual in the file and left it there until you had a problem!

Let me tell you what happened on my 1985 expedition to PJ2. After setting up the rig — which I carried all the way and guarded against baggage handlers — I found I had no output. Prepared as I was, I removed the top and bottom covers, got my multimeter out, and started making some voltage checks. Meanwhile, W1BIH, who was unfamiliar with the '830S, started skimming through the manual. About the same time that my voltage check revealed no screen voltage on the 6146s, John read the first line in the Troubleshooting section:

Symptom	No output
Cause	No voltage on screen grids
Remedy	Turn screen grid switch ON

Sure enough, the rear panel switch had been bumped to the OFF position in transit! If all else fails, read the manual.

There are some routine preventive maintenance measures that I feel are worthwhile. The manual on the '830S recommends cleaning the fan and lubricating the fan bearings once every eight months (not years!). Actually, after eight years it wasn't as dirty as I would have expected, a tribute to my good shack-keeping. The fan is easily removed by removing four screws in the corners of the fan housing. It was a bit dirty, and was easily cleaned with Radio Shack cleaner/degreaser and lubricated with a couple of drops of household oil.

I let the fan run a bit before reinstalling it, to let any possible excess oil spray go somewhere other than on the bandswitch contacts.

A word of caution should be inserted at this point — and in the '830S manual. Note the orientation of the fan when it is removed. Also, be careful to dress the 110 VAC line to the fan motor away from other components. I found it necessary to use a tie-wrap to retain the power leads. Unfortunately, I found this out the hard way. The 110 line initially wound up close to the 15m tank coil. When I tuned up on 15, an rf arc to the 110 AC line melted the plastic insulation, which caught fire and fell to the chassis below, igniting other plastic insulation. At the same time, the 110 fan wire fused open, as did the rf choke across the pi-network output and the flexible little wire inside the relay that runs from the movable contact to the connector base. Four hours later I had all the problems isolated, repaired and better than new! All kidding aside, fan maintenance is important. Fans are the biggest single component that fails in computers and peripherals, often leading to other component failures from lack of adequate cooling.

Other than the fan fiasco, I did go through the RF and IF alignment procedure spelled out in the Instruction Manual and found all adjustments right on after eight years – except for ten meters. Peaking ten restored the lost sensitivity. One note on alignment not mentioned in the manual – a non-metallic alignment tool should be used.

Another PM item easily done is cleaning front panel potentiometers. Pots get noisy and are easily cleaned in one of two ways. With Radio Shack TV tuner cleaner or their cleaner/degreaser (catalog no. 64-2322) and the rig tipped face up, the cleaner can be sprayed around the shaft and allowed to seep inside the pot while rotating the shaft. The knob must first be removed either by prying carefully or removing a setscrew. A better way – at least on the '830S pots – is to spray the cleaner through the small opening in the rear of the pot. Remember, on dual ganged pots do both sections.

The spray cleaner can also be used to clean bandswitches. Spray both the front and back of switch wafers while rotating the switch. The cleaner dries quickly with no residue.

While the covers are off, I like to rock the dinky little white connectors to reseat them. I have had problems in the rig on a couple of occasions which were caused by poor contact in these connectors.

A common problem source has always been relay contacts. In the '830-S, the antenna relay can be removed and the plastic cover can be carefully pried off. The contacts can be burnished with a tool sold by General Cement (GC 9337) in the radio supply stores. The relay is very delicate and should be handled accordingly, but an intermittent receive problem I once had was found to be due to poor contact in the antenna relay.

One last word of caution. If you drop a screw or anything else gets into the rig while you're working on it, make sure you find it! Also, put back every screw you removed. The shields were screwed down for a good reason, and screws left out can result in rf leakage into or out of the compartment.

So – if you have to guts to dig in, PM your rig. If not, wait 'til it breaks!

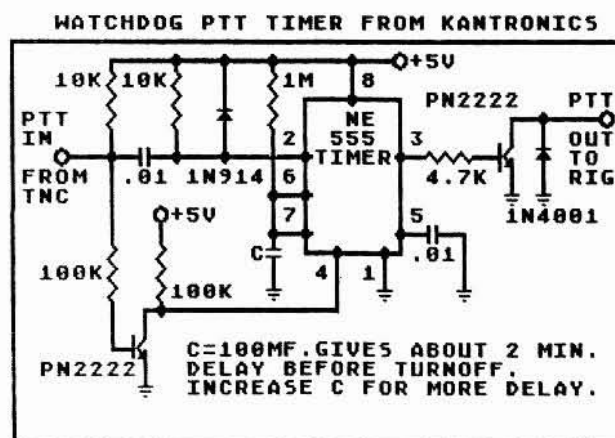## Worried About Your Unattended Packet Station?
Tom Frenaye, K1KI

Summertime lightning or powerline fluctuations may do funny things to your TNC. Last summer I came home one afternoon to find that I'd been transmitting a steady carrier for a couple of hours (I think). The radio and TNC were very hot and the power supply was screaming for relief. Nearby lightning had apparently put the TNC into a key-down state.

Kantronics suggests using a watchdog timer in the PTT line from your 2M radio to the TNC (and is building it into their newer models). The circuit and parts list below should get you started. After two minutes in a key-down mode, the timer cuts the PTT line. To reset, turn off the TNC or cut the power to the timer.

If there is enough interest, we may be able to come up with a source of PC boards to make the job easier.

Thanks to KA1LMN and KB1H for the help!

WATCHDOG PTT TIMER FROM KANTRONICS

C=100MF. GIVES ABOUT 2 MIN. DELAY BEFORE TURNOFF. INCREASE C FOR MORE DELAY.

Parts List

1N914	1
1N4001	1
PN-2222	(2)
NE-555	1
4.7K	1
10K	(2)
100K	(2)
1M	1
.01 μf	(2)
100 μf	1

What a (*%&$#/kTk̂) QSL Card!
Tom Frenaye, K1KI

We've all got shoeboxes (file cabinets?) full of QSL cards gathered over the years. It's like a one-way street most of the time. They arrive, we send one in return and then they go into the box to be neglected for years. Once in a while we might dig through them to find a missing card for 5BDXCC or 5BWAZ or some exotic award. Some of us are even neurotic enough to file them all in order so that needed card can be pulled out at a moment's notice.

The reality is that for all of the effort, most QSLs go into the dark corners of a box or closet. So here's a good reason to go digging through those boxes one more time.

Bring your favorite card (just one) to the next meeting. It might be the rarest DX, the one with the sexiest picture, the one with the most colors, the smallest/largest in size, or simply the first one you ever received. We'll even find an interesting prize for the best one.

Score Rumors:
ARRL DX CW Single-Op:

Call	QSOs	Cs	Score
N1AFC (QRP 4w)	227	77	52K
K1CLN	149	91	40K
KA1DWX	550	172	283K
W1FJ	845	198	501K
AI3E	290	142	123K

ARRL DX SSB Single-Op:

Call	QSOs	Cs	Score
NB1B	183	117	64K
K1CLN	247	133	98K
W1FJ	322	113	112K
K1VSJ	459	174	239K

Let's BUY the CQ WW!

Ever pore through all of the details of the CQ WW results to figure out why the YCCC didn't come in first? I did. The answer is that us Yankees are *cheap*, saving our pennies for other things like our families or our future.

The way to win the CQ WW is to spend money. We can BUY first place by fielding enough DXpeditions:

- An average DXpedition score is double that the operator would be able to get using his home station with a superior antenna system.

- You are more likely to put in a full effort by going on a DXpedition once you've gone to all the trouble to get there.

- A DXpedition during a contest is a lot more fun than operating at home. The beaches and adventure don't hurt either!

- A single-operator DXpedition is the best way to go to maximize points but a two-person multi-multi is a good second choice.

- For a typical Caribbean DXpedition you will have to budget about $400 to get there and about $100/day per person for food and accommodations (or less if you spend the time to find the bargains or are fortunate enough to know someone to stay with!). The "in" season doesn't start until *after* the CQ WW SSB weekend.

So, in short, loosen up a little, spend some money, enjoy life a bit and let's put the YCCC contest effort over the top for a change. Add it up, for $20,000 we can send twenty people to twenty countries for nearly a week. It ought to generate more than 100 million points – about four times the score DXpeditions gave us last year. I'm going, are you?

[I'm planning to go to Curacao, PJ2, for CQ WW CW. – ed.]

Movers and Shakers

Update your club roster to indicate these changes:

Al, KA1FBY, has moved:
Albert Kinnon, KA1FBY
5 Argilla Road
Andover, MA 01810
home phone: (617)475-3279
work phone: (617)423-3814

Bob, KQ2M, has also moved:
Bob Shohet, KQ2M
12 Balsam Court
Selden, NY 11784

Brian, ex-WB1EYL, is now NJ1F.

New Crew

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

Ron McElroy, KA1IDC
Outlook Avenue
Cheshire, MA 01225
home phone: (413)743-0515
work phone: (413)499-5951

Steve Boone, WA8SWM
15 Diane Drive
Medway, MA 02053
home phone: (617)533-8769
work phone: (617)841-3351

Your Help Wanted!

Recently, YCCC received the following letter from
Sevilla Contest Club
P. O. Box 12.345
41.080 Sevilla
Spain

Dear friend:
We are a contest group from southern Spain. We try to participate in all big tests. Our worst problem is to make the dup sheet and also to make the QSLs. As we can see in your QSL you have solved the problem. We own an IBM/XT and a Commodore 128. Wonder if you use any of those computers to do your contest work and if you'll be so kind to send us a copy of the program.

We'll be very grateful to you.

73 de EA7BU

Anyone who has any useful suggestions for this Spanish club please send them to the 'Butt or directly to the Sevilla Contest Club.

Mt. Beacon Hamfest

This year's Mt. Beacon Hamfest will be held on Saturday, July 11, 1987, at the Arlington Senior High School, Poughkeepsie/Lagrange, Dutchess County, NY, from 8 am to 3 pm. Admission is $3. Talk-in on 146.37/.97 and 146.52 simplex. For more information, call or write:
Julius Jones, W2IHY
RR 2, Vanessa Lane
Staatsburg, NY 12580
(914)889-4933

Excess Cargo

TS530S with VFO240, 250 and 500 Hz filters $600.
Pair 3-500Z 160-10 with 3KV PS $300.
Ham M Rotator $60.
Contact David, W1WAI:
(617)443-9867 (home)
(617)480-4026 (work)

New Rohn 45: 2 straight sections and one top section, $85. Also a rotor plate, house bracket, and two sets of guy brackets, make an offer. Contact Al, W1FJ.

Contest Winning QTH of KM1H: 3 Bedrooms, 2 bath, 16 X 33 foot pool, 100' and 140' towers, big beams, 6 Beverages, satellite TV system, much more. $174,900 Negotiable. Call Carl Huether at (603)635-2235 days or (603)635-3048 eves.

The World from UM8NAP
Tom Frenaye, K1KI

NSKR AZIMUTHAL EQUIDISTANT MAP CENTERED ON
UM8NAP

SCALE OF DISTANCE FROM CENTER
KILOMETERS
MILES
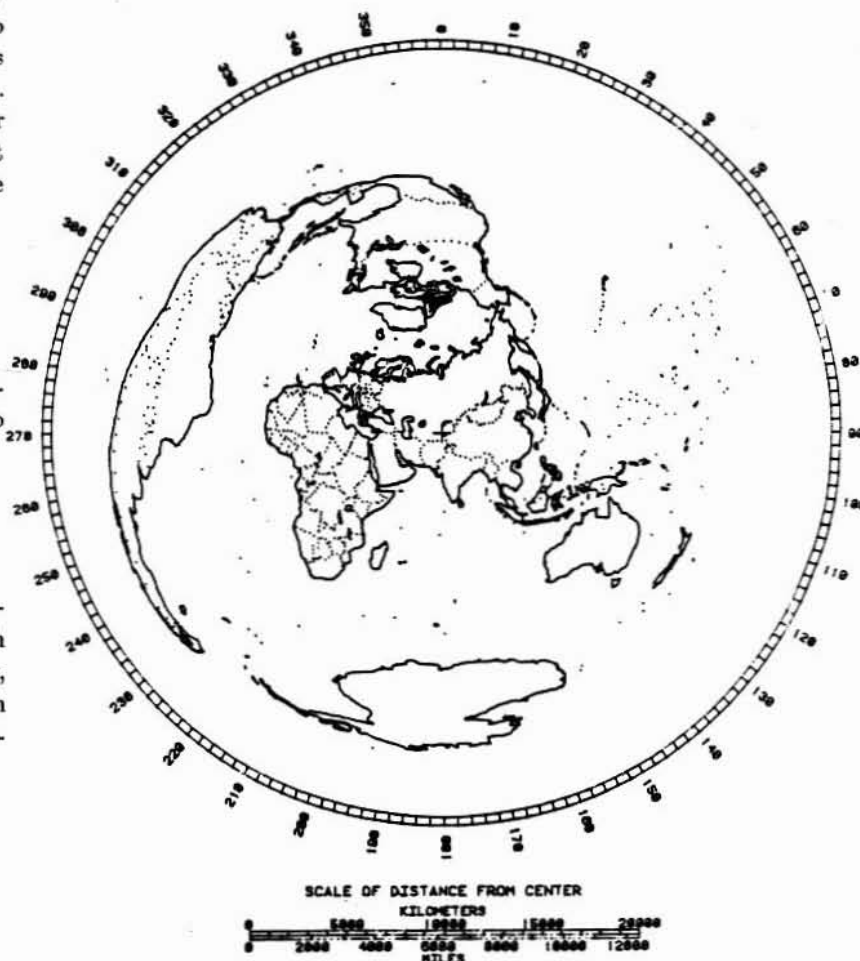
The **Scuttlebutt** is the newsletter of the **Yankee Clipper Contest Club** and is mailed six times per year to all paid up members. Dues are $10 per year, payable 1 April with a grace period through 30 June. Non-members may subscribe to the **Scuttlebutt** by sending $10 to the Treasurer: Charlotte 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 Saturday, June 6, 1987, in Sturbridge, Massachusetts. Attendance at an official meeting is *required* in order to become a member. Club members congregate on 3830 KHz after contests. The packet frequency is 144.95 MHz.

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

YCCC
11 Michigan Drive
Hudson MA 01749

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