

# Scuttlebutt

# October 1994

# Issue 113

# Minutes of the August Meeting Rich Gelber, K2WR

The August meeting of the Yankee Clipper Contest Club was held in conjunction with the annual Club picnic at Streeter Dam State Park on August 6, 1994. 25 members and about 15 harmonics, other family members, and other guests were in attendance.

President Rich Gelber, K2WR, called the meeting to order at 1:30 p.m. The minutes of the June meeting were accepted as printed in the Scuttlebutt. In the absence of KQ1F, Club Secretary/Treasurer, the Treasurer's report was summarized by Rich. As usual, the Club is in a strong financial condition.

John, K1FWF, reminded the Club about the Internet YCCC mail reflector he has set up.

Rich, K2WR, called attention to, and specially welcomed, first-time picnic attendee K1ZM

Bill, K5FUV, manager of the ARRL DXCC desk, mentioned that a decision is still pending on the P5RS7 situation, but that recent developments had made approval less and less likely. [A couple of weeks later it was announced by ARRL that P5RS7 will not count.]

Rich reminded the members in attendance that the next meeting is on October 1 at the ARRL New England Division Convention in Boxboro, Mass., and that an outstanding program is being prepared.

The meeting was adjourned due to hot dogs being ready at 1:45 p.m. After the meeting, KC1XX organized a soccer game and actually persuaded K2WR to participate. This alone would have been worth the price of admission (which the Commonwealth has LOWERED to \$2. this year.) As it turned out, Rich scored a goal in the furtherance of a losing cause. K1TWF played goalie despite a broken foot and crutches. Also playing were DL7SI, AA2DU, K1FWF and several harmonics.

## Movers and Shakers

New address for Jack, K1KNQ: 15215 Amberly Drive Unit 1004 Tampa, FL 33647 work phone: (813)99-1281

New work number for Bob, K1XA: work phone: (203)722-2358

New address for Len, KB2R: 6R Johnson Street Woburn, MA 01801 home phone: (617)938-8582

New address for Mark, K1RX 120 South Road Kensington, NH 03827 home phone: (603)778-1222 work phone: (508)834-7408

# October Meeting Paul Young, K1XM

The next meeting will be on Saturday, October 1 at the New England division convention in Boxboro, MA.

The meeting will start at 12:00 Noon. That is one hour earlier than meetings usually start. The program tentatively includes:

Fred, K2WR on reducing inter-station interference.

Eimac the Magnificent, answering all your (or at least all his) questions.

Paul, K1XM and Charlotte, KQ1F showing a three-projector slide show on their CQ WW trip to Thailand.

Dean, N6BV on Propagation in the CQ WorldWide contests.

The convention is at the Hosts Hotel which is at the junction of I-495 and Rt 111.

From the west, take the Mass Pike (I-90) to I-290 in Worcester, East to I-495. Go North on I-495. Rt 111 is the third exit.

From elsewhere, take your favorite route to I-495. The Rt 111 exit is one exit south of Rt 2.

The remaining meeting dates for 1994 are:

DATE	DAY
October 1, 1994	Saturday
December 4, 1994	Sunday

#### YCCC Scuttlebutt

## Lifting BIG antennas the easy way David Robbins, KY1H

First some background. Several years ago I put an old 4 element Telrex 20m beam on top of a 150' tower. The lifting and jockeying around to get it up and over guy wires was a real pain. The ropes were all strained, as were the ground crew pulling on them to keep the antenna out from the tower as we pulled it up with my Jeep. Even with what I thought was enough room and rope we still ended up snagging one element on the top guy wire and bending the tip of it a bit, not enough to warrant taking it down, just enough to be annoying.

This year I acquired an old 6 element Telrex 20m beam. This antenna is a REAL monster. It weighs in at 157 pounds, and I'm not sure if that includes the boom brace wires and hardware or the mounting plate that must weigh 30 pounds alone. It was obvious that it would not go up the 150' tower the same way the 4 element one did. For this job I decided to use one of the many variations of the trolley lifting system that others have used for big antennas. These systems are called 'High Wire', 'Transom', 'Tram', or any of probably a dozen other names by different people in different parts of the country. But basically they amount to a wire or wires attached to the tower and ground that guide the antenna up to the top of the tower without the need for a large ground crew pulling it out and working against the lifting force.

There are many reasons to use a system like this for large antennas, and even in some cases for smaller but hard to handle antennas. The most important ones can be seen if you do a quick comparison of the forces on the lifting rope in each case. The figure below shows the forces involved in lifting an antenna while pulling it out from the tower it is going on. A little playing with the equations shows that the forces on the ropes can easily be several times the weight of the antenna. This is especially true if the ground crew isn't far enough from the tower to reduce the angle 'b', or if the antenna has to be pulled too far out from the tower so that angle 'a' is large.

#### **Excess Cargo**

Heath SB-200 desktop HF power amplifier for sale. Uses two 572Bs to develop 500 or more watts output on 80-10 meters with less than 100 watts drive. Excellent for use as "low profile" or backup amplifier.

Asking \$300.00. Price includes personal delivery anywhere in Conn or Mass.

Bob Halprin, K1XA, tel: 203-722-2358, or via Internet or MCI Mail.



a=angle between rope and tower b=angle between rope and ground W=weight of antenna L=force on lifting rope P=force on ground crew rope

P = tension on ground crew rope =  $W \frac{\sin a}{\cos (a+b)}$ 

L = tension on lifting rope =  $\frac{W + P \sin b}{\cos a}$ 

Other interesting formulas

LH = Side force on tower = L sin a

LM = Downward force on mast =  $L+L \cos a = L (1+\cos a)$ 

(Assuming lifting rope goes through pulley on mast and then straight down tower. Pulley at base of tower would have to hold 1.414 L total force at 45 degrees to take rope out horizontally from there.)

PV = Lifting force on ground crew = P sin b

Examples:

W	a	Ь	Р	PV	L	LH	LM	comments
100	38	45	505	357	581	358	1,038	example in text
100	30	45	193	136	272	136	507	closer to tower
100	30	30	100	50	173	86	322	move ground crew out
100	0	30	0	0	100	0	200	lift straight up
100	80	0	567	0	575	567	675	near horizontal

a,b in degrees W,P,L in pounds-force, slugs, newtons, dynes, etc. as long as they are all the same units.

As an example, take pulling a 100 lb antenna up 150' with the ground crew 200' from the tower. Near the top, if the antenna is out at 45 degrees from the tower the ground crew is pulling with 505 lbs of force and the lifting rope has to hold 581 lbs, ignoring friction in pulleys. The breaking strength of  $\frac{1}{2}$ " stranded poly rope that I use is about 750 lbs, not much of a safety margin! And how many people would it take on the ground to pull that hard? I have even seen one boom fold in half due to these forces.

#### October 1994

Now, on to the easy way. First run a steel cable from the tower to the ground and anchor it with a come-a-long to adjust its tension. Hang an antenna on it somewhere and the force calculations are exactly the same as if you were using rope to lift with a ground crew. Using steel cable you can exert much more force and therefore keep the antenna much farther out from the tower. It is even possible to take it up at almost a 45 degree angle with very little sag in the cable.

But now, how do you get it to move? Using a winch with cable is possible, but very expensive and I would worry about controlling the side forces on the tower if things bound up momentarily. Plus there are all sorts of easier options. I prefer attaching the wire up high on the mast and hanging a pulley on it that the antenna can hang from. Add a pulley on the mast for the lifting rope and a second wire off the back of the mast to balance the lifting forces and away you go.

The table below shows the forces on the guy wire for lifting angles near 45 degrees. The formulas are the same as in the figure above except for LM. Here I assume there is a back guy wire to balance the side force from the lifting guy wire. Assuming this wire is at the same angle from the tower 'a' as the lifting wire, and is tensioned to just balance the guy wire side force LH the equation for LM gets more complicated. (The extra 2Wcos a term is from the pulley for the rope that is pulling the antenna up the guy wire.)

LM = downward force on mast = 2Lcos a + 2Wcos a = (W+L)2cos a

W	a	Ь	Р	PV	L	LH	LM	comments	3
170	38	38	432	266	553	340	1139		1
170	40	40	629	404	750	482	1409	target for my 20m lift	3
170	42	42	1088	728	1208	808	1795	just a bit less sag!	11000
170	44	44	3383	2350	3504	2434	5285	just 4 degrees tighter!	

Note how quickly the tension on the wire goes up if you try to keep the sag low (angle a+b near 90 degrees). It is much better to let it sag a few extra feet in the middle than to make it nice and tight.

Now what about the lifting rope and ground crew, what do they have to pull in this set up? Well, since the ground crew isn't trying to supply the force to pull the antenna out from the tower they are just controlling the orientation of it. This requires very little force on the ropes and can be pretty well ignored. That means the lifting rope is essentially pulling the antenna up an inclined plane at the angle 'a' from the figure above. If you ignore friction, the force supplied by the lifting rope is just w cos a. Therefor the worst case(a=0 or straight up lift) the lifting rope has to lift the whole weight of the antenna, at any other angle the force is less. After adding friction and the tag lines I would plan on at least double the weight of the antenna, then add a safety factor. Even at that it should be no where near the limit on my 750 lb breaking strength rope.

I have heard of running two wires from a cross arm on the tower and sliding the antenna up on top of them, but that seems like it would require an extremely strong cross arm or complex bracing. Also if the antenna wasn't well balanced or restrained in some way it could slip off the wires. Hanging it from the wire gives a natural stability to the lift. You could also attach the guy wire below the mast, pull the antenna up to it, disconnect the wire and lift the antenna in place with the rope.

This way you could avoid the extra forces on the mast but still get most of the advantages of using the guy wire. The only problem would be disconnecting the wire with the antenna hanging from the rope.

OK, so what hardware is needed to do all this? For the most basic system like I used you need the following:

- 1 Two pieces of guy wire to reach from highest point on mast to ground anchor points. I used <sup>1</sup>/4" EHS guy wire because I had it handy. It is a bit hard to handle, but has plenty of strength. I terminated each end with a regular guy grip.
- 2 2 (or more) screw anchors or other anchor for ground end of cable. Check forces on cable and be sure what you use has enough holding power. Remember the back guy has to hold just as much as the lifting one to keep from bending the tower or mast. The best way I could think of attaching the guys to the anchors was with a come-along at each anchor.
- 3 A way to attach the wires to the mast on the tower. A spare boom to mast plate works well for this, just remember it has to hold the force down on the guy wires times 2 (2Lcos a from equations above). If you have a thrust bearing make sure it is tight, and if not you may want to remove your rotor and put in a steel plate to support the mast or add extra support to keep the weight off the rotor. Remember, you will have to take the wires off the tower after the antenna is in place, having to pull a wire all the way over the boom because it is permanently attached to the plate would be a real bummer. I used heavy duty (½" shaft or so) screw type "D" rings to release the wires from the plate.
- 4 A lifting rope with pulleys. This is the same stuff you would use to lift an antenna without the wire to guide it. I think it is safest if the rope is sized to hold the antenna out from the tower a ways anyway. Just in case the wire comes loose you could still lower the antenna safely or continue the lift without the wire assistance.
- 5 A pulley to ride on the guy wire. This pulley must be strong enough to hold the antenna up. The only real force on it should be the weight of the antenna. A snatch-block pulley would be nice so you can put it on the guy wire after it is in place, otherwise remember to put it on the wire before you attach the guy grips or attach it to the anchors. I think a bigger diameter pulley is nice, but just be sure that there isn't too much slop on the sides that the guy wire could jump into and jam it up.

In my recent case of putting up the 6 element 20m Telrex. I made a plate out of a 2 hole guy wire equalizer plate and a couple Telrex boom to mast clamps (the wide strap things). The plate was just as high as I could comfortably reach while

#### YCCC Scuttlebutt

standing on the top rung of the Rohn 45 tube top section, maybe 3' above the tube top. The pulley for the lifting rope was tied just above the plate so it couldn't slip down the mast. I put the guy wire anchors (6" screw type guy anchors) about 150' out from the tower resulting in an almost 45 degree lifting angle.

This wouldn't give quite enough clearance to take the antenna up flat so I added an extra tag line to a short pipe attached to the boom to mast plate so when the antenna was near the top we could control the tilt. The boom to mast plate on the antenna was tilted so that once it was up there we wouldn't have to try to tilt the elements down until the mast clamps were in place. I have had to fight too many antennas with the lifting ropes in the way of the boom to mast plate to get stuck in that trap again.

Results: Once everyone was in place the lift took about 10 minutes, the elements cleared the guy wires on the first try with no fighting, the ground crew had no rope burns or strained muscles, and the antenna was undamaged.

The following are my observations about the advantages and disadvantages:

Disadvantages: More expensive, needs guy wires, anchors, mast plate, pulley, come-alongs, etc. Of course those things are reusable and also have other uses. Since the antenna is farther from the tower at takeoff you have to have a bigger area clear to take it up in.

Advantages: Lifting line doesn't have to be nearly as big. Ground crew job much easier. Less chance of antenna damage. Less chance of tower damage due to side force from lifting.

Cautions: Don't try to make the wires too tight, adding just a bit more sag reduces the force on the wire by quite a bit. Its better to tilt the elements a bit to help clear the guy wires than to pull the antenna way out from the tower. Make sure the ground anchors are solid, calculate the tension for your situation and be sure your anchors can handle it. Because of lots of rain and shallow topsoil I used a pair of 6" screw anchors on the antenna lifting wire to split the load. Use good pulleys, hardware, and ropes, they cost a bit more but are worth the investment in the long run. Don't forget the downward force on thrust bearings and rotors!

Finally, this seems to be the only reasonable way to lift a big antenna to the top of a tower. It could be used in tighter confines if you can rig the antenna up to pivot the elements almost vertical after it is clear of the ground.

Another helpful thing we used while preparing this antenna were a pair of tripods. I used the old Boy Scout tripod lashing with 3 pieces of 10' TV mast. The antenna was supported near the driven element and next to last director by these tripods. With these I was able to get the antenna about 7' up, high enough to drive my Jeep under it to get ready to lift. I was also able to 'walk' the tripods back and forth to line up the antenna with the lifting lines without breaking my back. By spreading the legs of the tripods out the antenna could be brought down to a nice height to work on the elements and feed point. As a pleasant surprise when the driven element was tuned while supported on the tripods at 6' it changed very little at either 60' when we put it up to test or at 150' in the final installation.

As a note for others interested in old Telrex antennas. The old electrical designs for both the 4 element and 6 element versions are real dogs by todays standards. However, a short session with Yagi Optimizer (after I found how to keep it from moving the elements on the boom) produces a much more competitive design. It is a bit limited by the element spacings, but for the given boom length it is quite satisfactory. I was a bit worried about the T-match range, but it handled the impedance change just fine with just a bit of tweaking.

# Propagation Predictions for 1994 CQWW

Dean Straw, N6BV

As I sit typing this note at the end of August about 1200 UTC, 15 meters is dead as a doornail, while 20 meters is wide open to Europe. Several years ago at this time of day 15 meters would have been hopping. Welcome to the low side of the solar cycle.

The following charts show predictions generated by *IONCAP* for the months of October and November to Western Europe, Eastern Europe and Japan for the level of solar activity expected in the 1994 phone and CW contests. Each chart overlays the predicted signal strengths (in dB compared to 1 microvolt) for 80 through 10 meters. For reference, 34dB microvolts is shown on each chart as S9. Each station is assumed to be equipped with 1.5 KW transmitters and 100 foot high inverted-V dipoles on 80 and 40 meters, 3-element Yagis at 100 feet on 20 meters, 4-element Yagis at 60 feet for 15 and 10 meters. Scale your expectations up or down according to your own hardware setups.

IONCAP does not predict 10 meters to open to these DX areas, although some contacts to Europe could conceivable be made sidescatter off Africa. However I wouldn't waste much time on 10 meters when 15 meters is open, since the opening on 15 will be notably shorter than it has been in the last few years. In fact, IONCAP is quite pessimistic about 15-meter openings to Eastern Europe too, although I think some of the better-equipped Eastern Europeans will get through on 15. Milk 15 meters for all the Euros you can! The multipliers will be crucial. Higher antennas will dominate under these solar conditions, or lack of them.

The money bands will however will be 20 and 40 meters, and stations with big, high antennas on these bands will be most successful. 80 meters will also be crucial for winning efforts. Most stations in the Northeast will be opening the contest on 40 meters since Europe is not expected to be coming through on 20 meters although South Americans will be commanding big pileups there. At the start of the contest, 40 meter phone especially will be tough going, since the Europeans will be working Europeans. Hang in there eventually they'll listen for us too.

#### October 1994

From New England, Month of October



Custom Prediction for YCCC by N6BV

From New England, Month of October



5

#### October 1994

#### YCCC Scuttlebutt

From New England, Month of November



Custom Prediction for YCCC by N6BV

From New England, Month of November



6

From New England, Month of October



Custom Prediction for YCCC by N6BV

From New England, Month of November



7

our Callsign (optional):		Co	ontesting Experience (years):
Do you favor the concept of limitin	g contest operation I	to portions of bands, the	us creating "contest-free" operating zones?
		8 N	Ĵ , Ĵ
Who would you recommend as the	e next inductee into t	he CO Contest Hall of F	ame?
,,			
What do you predict the winning C	Q WW scores will be	e in the year 2000 for th	e following categories:
Single Operator/USA SSB		ž.	, ,
Single Operator/World SSB	65×		
Single Operator/World CW			
Do you support the elimination of t	he traditional 59/599	portion of contest exch	nanges in favor of more meaningful information
□YES □NO			
Should the single operator categor	ry:		
Be limited to using only one radio? Be allowed to use packet spotting	? YES		181 D
What was your first contest operati	ion?		
A			
How did you become interested in	contest operating?	(Circle all that apply.)	
a. Contest Elmer			
b. Discovered contest operating v	while operating radio	)	
c. Local radio ciub			
a. Magazine			
e. Other		_	
e. OtherAt what age did you start operating	g contests?	_	
e. OtherAt what age did you start operating	g contests?	_	
<ul> <li>a. magazine</li> <li>e. Other</li> <li>At what age did you start operating</li> <li></li> </ul>	g contests?		
e. Other At what age did you start operating  Do contests still have the same ap	g contests? peal for you that the	y did when you began?	
<ul> <li>a. magazine</li> <li>e. Other</li> <li>At what age did you start operating</li> <li></li> <li>Do contests still have the same ap</li> <li> YES NO</li> </ul>	g contests? peal for you that the	y did when you began?	
<ul> <li>a. magazine</li> <li>e. Other</li> <li>At what age did you start operating</li> <li></li> <li>Do contests still have the same ap</li> <li> YES NO</li> <li>b. As a contest operator, what feature</li> </ul>	g contests? peal for you that the re(s) would you like t	y did when you began? to see in the next gener	ation transceiver?
<ul> <li>a. magazine</li> <li>e. Other</li> <li>At what age did you start operating</li> <li></li> <li>Do contests still have the same ap</li> <li> YES NO</li> <li>b. As a contest operator, what feature</li> </ul>	g contests? peal for you that the re(s) would you like t	y did when you began? to see in the next gener	ation transceiver?
<ul> <li>a. magazine</li> <li>e. Other</li> <li>At what age did you start operating</li> <li></li> <li>Do contests still have the same ap</li> <li></li> <li>YESNO</li> <li>b. a</li> <li>b</li> </ul>	g contests? peal for you that the re(s) would you like t	y did when you began? to see in the next gener	ation transceiver?
<ul> <li>a. magazine</li> <li>e. Other</li> <li>At what age did you start operating</li> <li></li> <li>Do contests still have the same ap</li> <li> YESNO</li> <li>b. a contest operator, what featu</li> <li>a</li> <li>b</li> <li>c</li> </ul>	g contests? peal for you that the re(s) would you like t	y did when you began? to see in the next gener	ation transceiver?
<ul> <li>a. magazine</li> <li>e. Other</li> <li>At what age did you start operating</li> <li></li> <li>Do contests still have the same ap</li> <li></li> <li>DYESNO</li> <li>b</li> <li>b</li> <li>c</li> <li>d</li> </ul>	g contests? peal for you that the re(s) would you like t	y did when you began? to see in the next gener	ation transceiver?
a. magazine e. Other At what age did you start operating Do contests still have the same apYESNO b. As a contest operator, what featu a	g contests? peal for you that they re(s) would you like t itter output power to	y did when you began? to see in the next gener	ation transceiver?
<ul> <li>a. magazine</li> <li>e. Other</li></ul>	g contests? peal for you that the re(s) would you like t itter output power to	y did when you began? to see in the next gener	ation transceiver?
<ul> <li>a. magazine</li> <li>e. Other</li></ul>	g contests? peal for you that they re(s) would you like t itter output power to ne and only one asp	y did when you began? to see in the next gener 100 watts for domestic pect of contesting, what	ation transceiver?
o. magazine e. Other At what age did you start operating Do contests still have the same apYESNO b. As a contest operator, what featu a	g contests? peal for you that they re(s) would you like t nitter output power to ne and only one asp	y did when you began? to see in the next gener 100 watts for domestic ect of contesting, what	ation transceiver?
o. magazine e. Other At what age did you start operating Do contests still have the same apYESNO 0. As a contest operator, what featu a b c d Are you in favor of limiting transmYESNO 9. If you had the power to change o In a few words, how does your spectropower approached.	g contests? peal for you that they re(s) would you like t itter output power to ne and only one asp	y did when you began? to see in the next gener 100 watts for domestic pect of contesting, what	ation transceiver? contests? would you recommend? est operating? (Spouses, feel free to answer this
a. magazine e. Other At what age did you start operating Do contests still have the same ap YESNO b. As a contest operator, what featu a b c d Are you in favor of limiting transm YES NO 2. If you had the power to change o In a few words, how does your sp question personally!)	g contests? peal for you that the re(s) would you like t itter output power to ne and only one asp pouse <b>really</b> feel abo	y did when you began? to see in the next gener 100 watts for domestic eect of contesting, what	ation transceiver?
a. magazine e. Other At what age did you start operating Do contests still have the same apYESNO b. As a contest operator, what featu a b c d Are you in favor of limiting transmYESNO 9. If you had the power to change o 4. In a few words, how does your sp question personally!)	g contests? peal for you that they re(s) would you like t itter output power to ne and only one asp pouse <b>really</b> feel abo	y did when you began? to see in the next gener 100 watts for domestic pect of contesting, what	ation transceiver?
A. magazine     e. Other  At what age did you start operating  Do contests still have the same ap	g contests? peal for you that the re(s) would you like t itter output power to ne and only one asp pouse <b>really</b> feel abo	y did when you began? to see in the next gener 100 watts for domestic ect of contesting, what out your interest in conte	ation transceiver?
a. magazine e. Other At what age did you start operating Do contests still have the same apYESNO b. As a contest operator, what featu ab b cd d YESNO f. If you had the power to change o I n a few words, how does your sp question personally!) Iditional comments:	g contests? peal for you that the re(s) would you like t itter output power to ne and only one asp pouse <b>really</b> feel abo	y did when you began? to see in the next gener 100 watts for domestic eect of contesting, what	ation transceiver?
o. magazine e. Other At what age did you start operating Do contests still have the same apYESNO b. As a contest operator, what featu a b	g contests? peal for you that they re(s) would you like i neter output power to ne and only one asp	y did when you began? to see in the next gener 100 watts for domestic pect of contesting, what	ation transceiver?
At what age did you start operating       Do contests still have the same ap	g contests? peal for you that the re(s) would you like t itter output power to ne and only one asp pouse <b>really</b> feel abo	y did when you began? to see in the next gener 100 watts for domestic bect of contesting, what but your interest in conte	ation transceiver?
a. magazine e. Other At what age did you start operating Do contests still have the same apYESNO b. As a contest operator, what featu a b c d c d d YESNO fut you had the power to change o i. If you had the power to change o i. In a few words, how does your sp question personally!) ditional comments: (use extra sheets if necessary) hurn your survey responses to: hn Dorr, K1AR	g contests? peal for you that they re(s) would you like i nitter output power to one and only one asp	y did when you began? to see in the next gener 100 watts for domestic pect of contesting, what	ation transceiver?

# THE CLUB RESOURCES PAGE

## The Place to Find Club Information

DUES are due at the April election meeting, which begins our club "contest year", with a grace period until the end of June. 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. Only paid-up members are eligible to contribute to the club score in contests.

FAMILY MEMBER Members of the same family living at the same address may elect to receive only one copy of the Scuttlebutt. 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 currently costs \$10 per year. 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

SCUTTLEBUTT ARTICLES should be sent to the Scuttlebutt editor, Paul Young, K1XM, 11 Michigan Drive, Hudson, MA 01749, home phone (508)562-5819. The deadline for each issue is usually three weeks before the next meeting.

CLUB BADGES are available from WZ1R. Send two dollars, Your callsign, name, and mailing address to WZ1R-YCCC Badge, P.O. Box 9106, Pawtucket R.I. 02862

CLUB JACKETS Len, KB2R coordinates group purchases of club jackets.

CLUB QSL CARDS are ordered through John Dorr, K1AR, 8 Anchor Lane, Mt. Sinai, NY 11766.

PACKET NET information is available from Charlie Carroll, K1XX, Candlelight Rd, Ringe NH 03461.

CONTEST SCORES are sent to the club scorekeeper, Kurt Pauer, W1PH.

CLUB ROSTER appears in the summer issue of the Scuttlebutt every year. Updates are published when members move or change callsigns. If you want a new copy of the club roster, contact the club secretary/treasurer, Charlotte Richardson, KQ1F, 11 Michigan Drive, Hudson MA 01749, home phone (508)562-5819.

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.

CTCONTEST LOGGING SOFTWARE is available from K1EA Software, 5 Mount Royal Avenue, Marlborough MA 01752 for \$69.95 plus sales tax. Telephone (508)460-8873, FAX (508)460-6211, BBS (508)460-8877.

W1 QSL BUREAU is sponsored by the YCCC. Keep your account up to date with SASEs, or send a check. Stamps are sold at face value, envelopes are 10 cents each. W1 QSL Bureau - YCCC, PO Box 216, Forest Park Station, Springfield, MA 01108.

ARRL LIAISON For ARRL matters, contact Tom Frenaye, K1KI, PO Box 386, West Suffield CT 06093, home phone (203)668-5444.

Dues are \$15 per year, payable 1 April. Non-members may subscribe to the Scutttlebutt 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 \$10 towards dues.

The Scutttlebutt may be reprinted in whole and in part, except for separately copyrighted articles, provided proper credit is given.

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, usually in the Sturbridge, Massachusetts area. The deadline for article submission to the Scutttlebutt is usually three weeks before the next meeting date. The next meeting will be on Saturday, October 1, 1994. Attendance at an official meeting is required in order to become a member. Club members congregate on 3830 after contests. The packet frequencies for DX spotting are 144.95, 145.69, 144.93, 144.97, 144.99 and 145.57 MHz.

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

Officers:					
President	Rich (	Gelber	K2WR	212-580-1075	
VP–Activities Manager	JP Kle	inhaus	AA2DU	914-739-6318	
Secretary-treasurer	Charle	otte Richardson	KQ1F	508-562-5819	
Editor	Paul Y	oung	K1XM	508-562-5819	
Area Managers:					
Area	Call	Name	Home	Work	
CT/RI	K1RU	Gene Frohman	203-393-1772	203-386-6137	
EMass	N1AU	<b>Bill Santelmann</b>	617-862-1753	508-692-6000	
WMass	W1GG	Gary Gaudette	413-443-3404		
VT/NH	K1GW	Glen Whitehouse	603-673-6290	603-627-7877	
ME	N1AFC	Peter Archibald	207-767-2169	207-797-8931	
NLI	NQ2D	Jim Metcalf	516-744-9422	516-467-4800	
NNY	K2TR	Fred Lass	518-355-4813	518-346-6666	
SNY/NJ	K2EK	Bill Gioia	914-221-1672	914-697-3250	

YCCC 11 Michigan Drive Hudson, MA 01749

#### First Class