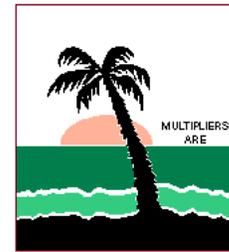




# Contest Gazette

## Florida Contest Group

<http://www.fcg.club>



**Volume 8 Issue 5**

**October 2001**

### From the President's Corner

*By Dan Street, K1TO*

**J**ust how vulnerable are we? I posed that exact question in the previous issue. Less than a week later, I found myself returning from vacation to deal with the aftermath of a pretty bad lightning strike. As I mulled that over and was feeling down, barely 2 weeks after that, the unthinkable happened. Even now, exactly three weeks later, the World Trade Center and Pentagon attacks are distinctly fresh on my mind, and I'm sure on yours. Just 4 days later, Tropical Storm Gabrielle paid us a visit. Ron, WD4AHZ and Al, N4LML spent countless hours manning emergency posts in Sarasota as the eye of the storm literally moved over us. It was heartening to see from the reflector posts afterward that few of us had any substantial damage.

Traveling as much as I do, I've seen the impact of the terrorist attacks (I know CNN takes the politically correct road and terms them "alleged hijackers", but c'mon, we know this was terrorism at its bloody worst!!). Nearly empty airports, vacant seats, canceled flights, somewhat heightened security and elongated travel durations are suddenly de rigueur. But what really hits home is the subdued faces of the travelers themselves.

FCGers marched to Melbourne in record numbers this year. We held both an informal lunch gathering at the traditional pizza joint and a full meeting at Eric, K9ES' place. Fred's review on the reflector and in this issue lists the attendees and the proceedings. Several members attended from the northeast section of the state, an area that has been "under covered" with meetings. We're working on another meeting to be held up that way. Meanwhile, next week's meeting at K4XS' place should draw well. If you have never seen Bill's fabulous setup, put this meeting on your calendar and find a way to get there!

Let's get ourselves geared up for a major run at the contest season. Sunspot activity has been extraordinarily strong lately, to the point that we may actually be at the peak of the cycle now, not a year and a half ago! What does that mean? It means fabulous DX conditions for the CQWW and ARRL 10 Meter tests and it also means lots of high band activity in SS. We moved up the lists dramatically last year to #8 in CQWW, #3 in SS and #1 in the 10-Meter Contest. What will 2001 hold in store for us?! A number of us are again headed out on Dxpeditions this year. Unfortunately, the N4BP and W4OV operations in KP2 for SS won't count towards the club effort this time. Still, it'll be great to make the sweeps easier for the rest of us.

The CQWW has another angle of teamwork that we have not exploited to date. Any team of 5 Single-Ops can form an ad hoc team and operate from anywhere. Team Contesting, as it is termed, has a separate competition for SSB and CW. It is not clear to me whether Single-Op Unlimited (i.e. single ops with packet) entries also qualify for this. Anyway, it'd be great to see a team or 2 of FCGers. What say, gang? Maybe we can find 10 of us on each mode and match up "against" each other for top team score.

We will be discussing strategy for operating CQWW SSB and SS CW at the next FCG meeting at Bill's. We will then follow that up with a discussion about SS SSB and CQWW CW at the November meeting at UCF. Finally, we will cover 10M operating strategy at the December meeting at the WCF section convention. I may be calling on a number of you for input ahead of time and during those meetings. The wealth of knowledge in this club is huge and expanding all the time. Perhaps before long, we will reach the point at which we can put together comprehensive "cookbooks" for operating those contests each year, tailored to the conditions expected that year and with input from many of our experts. For example, I'd love to hear input from Terry, K4RX on how he competes successfully with the northeast on 160 CW.

Also, a central factor in all of our operating this season will center around the FCG packet node, run by Dave, N2NL. Operating assisted is a great way to go in CQWW, SS or the 10M test. Why not improve your score by finding extra multipliers? In SS, the coffee cup incentive for the sweep has many folks using packet spots. Plus, you get the feeling of camaraderie as those Talk messages come thru at 0-dark-30. Many of us operate less than full time. As you know, we place no demands on any of our members. It is most important that you are having fun! If that translates into longer operating time, so be it. If you have other obligations, we understand. Still, using those packet spots can increase your score whether you are part time or full time.

#### Inside this Issue

Welcome Aboard, Events Calendar .....	2
ARRL Club Competition CAC Report.....	3
Comments from Vice Director Candidates.....	4
CQ Contest Mag goes QRT, WA4DRU SK.....	5
Comments on Lightning Protection by Ink N4OO.....	6,7,8
Notes from around the Club.....	9
W4 CW Sprint Teams ?? By Dan K1TO.....	9
Melbourne Hamfest Summary.....	10, 11
Directions to next FCG Meeting at K4XS.....	12

I'm particularly looking forward to CQWW this year. On SSB, the Multi/Multi at Vic's will grow this year from 4 to 6 stations and will be manned by more of us. We came "oh so close" to top W4 last year and hope to make that goal this year. W4MYA and NQ4I are formidable opponents and it should be an interesting race. On CW, I've been invited to a DX Multi-Multi. More details later.

I've already talked Vic into hosting 2 Multi-Singles for CW SS. This is a fun way to get a small group together and have a little internal competition while piling on the points. If you are considering hosting a similar effort for either of the SS weekends, just remember that an operator is not allowed to operate at both multis under the current ARRL rules. (Due to my CQWW CW trip, my hosting of two MS for SS SSB is off for this year.)

If you are an operator seeking a station or if you have a station that will go underutilized and you need operators, let us know. We've all toiled for countless hours putting our stations together. Let's put them to use!

As this is being written, the Contest Advisory Committee is wrapping up their review of the ARRL Club Competition. More details appear elsewhere in this issue. In summary, I think the CAC volunteers have done a terrific job at finding opportunities for improvement. The club area discussion is near and dear to us, of course, and even the "rectangle" approach is an improvement over the simplistic circle approach.

FQP 2001 log checking is under way. Ron, WD4AHZ keyed in dozens of paper logs again this year, so I have a full set of electronic logs to deal with. At this point, it appears that we will be checking manually again this year. Due in large part to the expanded mobile participation and to the great efforts to activate the school stations, the log count is in the high 300s. I just came across an FB NCJ article written by Bruce, N6NT about the evolution of the California QSO Party. Included is a chart with year-by-year log counts. Suffice it to say that we are in hot pursuit of even the venerable CQP in terms of log counts. Wow! FQP-2002 is barely 6 months away now.

By now, you have received your ballots for Vice Director for the Southeastern Division. Reflector discussion on our forum as well as other FL ham reflectors has been extensive. We asked each of the candidates, including FCG member NA4AR, to give us a short writeup so that we could further evaluate them and cast an informed vote. See page 4 for those commentaries.

That's all for now. Let's keep having fun, learning a few things along the way, and piling up those points for the FCG! See you at Bill's or another future meeting!

vy 73, Dan

## Welcome Aboard



The following new members have joined FCG since the last newsletter:

**W4QM** - Dale Strieter, 928 Trinidad Street, Cocoa Beach FL 32931 e-mail: w4dqs@juno.com

**N4JT** - Jeff Hutchinson, 1620 Neptune Drive, Merritt Island FL 32952 e-mail: jeff@hutchinson.org

**K4VUD** - 3100 N. Highway 426, Geneva FL 32732 e-mail: K4vud@hotmail.com

**KU4TF** - Eric Heard, 12603 Courtney Lks Dr 126, Orlando FL 32828 e-mail: ku4tf@inorbit.com

This brings our membership total to 97.

## Events Calendar

FCG Meeting - K4XS - 2930 Meadowood Drive, New Port Richey FL - Saturday October 13, 1 PM

CQ Worldwide DX Contest, SSB 0000Z, Oct 27 - 2400Z, Oct 28

ARRL Sweepstakes Contest, CW 2100Z, Nov 3 - 0300Z, Nov 5

FCG Meeting at UCF- Orlando Nov 10 or 11

ARRL Sweepstakes Contest, SSB 2100Z, Nov 17 - 0300Z, Nov 19

CQ Worldwide DX Contest, CW 0000Z, Nov 24 - 2400Z, Nov 25

ARRL 160-Meter Contest 2200Z, Dec 7 - 1600Z, Dec 9

ARRL 10-Meter Contest 0000Z, Dec 15 - 2400Z, Dec 16

## ARRL Club Competition - CAC Report

*By Dan Street, K1TO*

The Sept-Oct NCJ has an interesting article about the changes being considered for the club competition in ARRL contests. I'm surprised that nobody picked up on this yet, since some of the ideas are very significant for us in the Florida Contest Group!

Without getting into a lengthy explanation of the CAC and MSC, suffice it to say that at this point, these are only discussion points and that any changes will not take place immediately.

Quoting AA7A: "3 main areas have risen to the top of the stack:

- Definition of club areas
- Submitting scores for more than 1 club
- Membership and meeting requirements for clubs."

### 1) Club Areas

Definition of club areas has been a big beef with this club and with the Tennessee gang for years. Our voices have been heard. THANK YOU to all who took the time to submit comments about this important topic. The 175-mile radius circle around the club center causes much of our club territory to fall over water and causes our Panhandle members and others in very northern and southern reaches of FL to be outside the circle.

AA7A: "The approach currently favored by the CAC is to allow... clubs to define their club area as EITHER a 175-mile radius OR a rectangle (with the same area as that circle) with up to a 4:1 aspect ratio with the four corners defined by a specific latitude/longitude. ... A club could change its ... Boundaries not more than once a year."

K1TO: Well, the TN boys are no doubt celebrating. They can almost perfectly cover their state with a rectangle. We, on the other hand, are still faced with a tough decision on how to bound our territory. I interpret this concept as not allowing a "tilted" rectangle, so we will still end up with a good part of the Gulf of Mexico in our space. The good news is that we could eliminate most of the Atlantic Ocean area that falls under the current club circle, centered just west of Melbourne on the east-central coast. I still don't think we'd get a corner anywhere near Pensacola, though.

Note that the CAC said they also had other suggestions. If we can come up with anything more viable than their "currently favored" solution, they might still consider it. It will be interesting to see whether CQ considers a similar change. They use a similar circle (275 KM?).

### 2) Multiple-Club Submittal

The CAC is considering some interesting proposals here.

AA7A: "One proposal would allow the entire score of an individual to be submitted for BOTH an unlimited-class club AND a medium-class club. Another proposal would allow the entire score to be submitted for BOTH an unlimited ...OR a medium and local club. Other proposals would require that the score be divided between the 2 clubs. Yet another point of view maintains that no score should count for more than one club... no consensus has yet emerged."

K1TO: The FCG impact of this one is primarily that we could be able to submit a score for both the FCG AND a local club. The "fly in the ointment" that I see with this discussion is that there is not always a clear indication ahead of time of what category a medium club will fall into.

I expect us to soon pass the 50 entry level, thus becoming an Unlimited Club. But, there is no way to know at the time of entry whether we will end up as a MED or UNL level. Anyway, the underlying concept of being able to support one's local club as well as the larger FCG certainly looks to be a win/win. Perhaps the FL Dxpediton Group would consider a dual club submission, for example.

### 3) Attendance Requirements

AA7A: "...it has been suggested that the meeting attendance rules are no longer necessary." The concern from some is the formation of so called "paper clubs". The CAC states that they feel that the ARRL club affiliation process will keep that from becoming a problem. "One option currently being discussed would require that a contester whose score is to count for any class of club competition be a 'member in good standing' and leave the definition to the individual club."

K1TO: My first take on this is to agree whole-heartedly with removing the 2-meeting-per-year requirement. I believe that the rule is somewhat nebulous as to what 12-month period is intended anyway. Despite our heavy meeting schedule, FL is a large state. If someone has conflicts on one or more dates of meetings relatively close to them, then they run the risk of not being ARRL-eligible, despite their sincere desire to remain a member in good standing. Note that CQ leaves this up to the club to decide who is eligible and dictates nothing about how often a member must attend a meeting.

### 4) Other stuff:

a) Consideration is being given to changing the definition of Unlimited vs. Medium to be based upon membership, rather than the number of entries. My personal opinion is that would hurt larger clubs who mount a less serious entry, but are still forced to compete as Unlimited. It would also cause clubs "on the bubble" to play games with membership numbers. Neither are good things. On the other hand, it would not force us to match up with the 400+ member YCCC should we eke out 51 entries (assuming that our modest 97 members would put us into the Medium category).

### b) Expedition Scores

AA7A: "Currently a club member must operate within the club's territory (except for DXpeditions in the ARRL DX Test). It should be workable to count scores from any location (appropriate to the contest)."

K1TO: Sounds great! This would allow the N4BP/W4OV SS operations in KP2 to count - very appropriate. It would also allow W4ZW to op from CO or KY and still count for the FCG - also appropriate.

### c) Multi-Operator Scores

AA7A: "Currently, if at least 66% of the operators at a multi-op are members of the same club, the entire score goes to that club. We have recommended dropping the 66% requirement and instead allocating the score among participating clubs in proportion to their number of members among the operators."

K1TO: Another good idea. CQ already does this. It prevents the situation where you operate with a non-member, maybe even in an attempt to nudge them towards club membership, but either the rule discourages you from doing so, knowing that your club gets nothing, or, it forces you to track down another club member to make a nominal QSO to bring the % up to 2/3 again. The new rule would allow people operating outside their home area to still contribute to their home club.

. That rule might ultimately hurt the FCG since contest season is when lots of folks flock to FL (to take back points to their club back home!), but this rule would still be better than the archaic rule in place now.

d) Guest Operator and Station Licensee

AA7A: "Currently, for the score from a single-op entry by a guest op to count towards a club score, both the guest and station licensee must be members... This requirement...should be dropped."

K1TO: Agreed.

Ed. Note - As seen elsewhere in this newsletter, Sandy W4RU and Paul NA4AR visited our Melbourne Hamfest meeting and outlined their priorities as they run for the Vice Director position. I requested that they provide a statement for use in our newsletter to that all our members could see what they had to say. On this page are the two statements provided. Thanks to both of you gentlemen for your inputs

### Statements from W4RU and NA4AR ARRL SE Division Vice



#### From Sandy Donahue - W4RU

The issues in this election are two! Experience and priorities. I have 40 years of licensing experience in a wide variety of amateur radio activities. Contesting, ARES, Traffic, VHF-UHF weak signal work, digital and DX. More importantly leadership. I am in my third term as Section Manager of Georgia. I am responsible for ALL activities in my section...the largest geographically with more ARRL members than any section in the Southeastern Division. I have been SM of GA almost as long as my opponent has been licensed! I have been Asst Director (AD) to Frank Butler, W4RH, since way before my opponent has been licensed. The AD job is an honorary one, with no official responsibilities.

Before becoming SM in Ga, I was the Affiliated Club Coordinator (ACC) and an Asst SM to K4JNL, the SM in the eighties. The ACC works with clubs to obtain and retain affiliation and works with affiliated clubs to progress to Special Service Club status. Georgia has about 55 clubs.

Priorities: My opponent says the CC&R issue is the most important issue we face. That is ridiculous. The most important transcendent issue, is defense of frequencies. If we don't have frequencies, we don't need to worry about deed restrictions on our antennas. A part of defense of frequencies is ARRL membership. The more members, the more clout we have with the decision makers in Washington and Geneva who decide our fate. CC&Rs are important but take a back seat to defense of frequencies. Please check out [www.w4ru.com](http://www.w4ru.com) for more details. This is an important election. The next Vice Director will probably be the next Director. I am by far the most experienced, best qualified candidate. RU4RU? 73  
Sandy



#### From Paul Toth - NA4AR

Some people would have you believe service is equated to longevity. Not so! Service is using your skills, talents and leadership capabilities to make a positive difference.

Leadership is more than just a title and a badge. Leadership is LISTENING to the membership, to their needs, their desires, their goals and ambitions and making them yours.

Leadership is setting goals and attaining success through teamwork. Leadership is having the vision to help shape the future and manage change responsibly.

Amateur Radio faces some major challenges in the next few years. The pervasive use of DEED RESTRICTIONS with most new housing developments threatens to displace Amateur Radio from the American landscape. I am firmly opposed to the continued use of private contract law to circumvent the "reasonable accommodation" provision of PRB-1 and will work to enable equal access for all Hams.

The future of Amateur Radio and the ARRL rests on bringing new, enthusiastic operators into our hobby. Our success depends on a smarter, coordinated approach. It's time we employed intelligent marketing techniques to this process. I will work for better coordination with our Affiliated Clubs on candidate recruitment, training and testing. And we need to expand our "post-licensing" Continuing Education program.

A vote for NA4AR is a vote for the future. Thank you!

## CQ Contest Magazine to Cease Publication the May 6 Meeting

For release: Immediate (9/5/01)  
For more information, contact:  
Dick Ross, K2MGA, Publisher  
516-681-2922 / k2mga@cq-amateur-radio.com

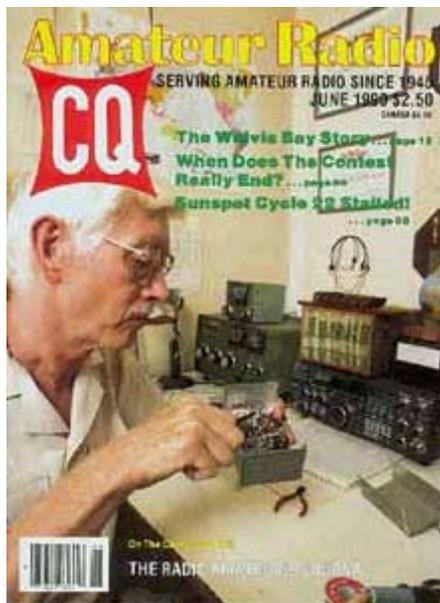
(Hicksville, NY) -- "CQ Contest," a magazine devoted to the art of amateur radio contesting, will cease publication with its October, 2001, issue. "CQ Contest" has been published 10 times per year since 1996. CQ Communications President and Publisher Dick Ross, K2MGA, said the move was "a purely business decision" and that subscriptions to the specialty magazine would be fulfilled "on a dollar-for-dollar" basis with the company's flagship magazine, "CQ Amateur Radio."

Writing in the final issue, "CQ Contest" Editor Bob Cox, K3EST, explained that "good business economics" dictated that CQ Communications could no longer continue to publish "CQ Contest." He thanked the readers for their "ideas, generosity and loyalty." Cox also said he's working on developing an independent contest magazine on the World Wide Web, which would fulfill subscribers' terms if it is launched.

In a separate "Message from the Publisher," Ross explained that approximately \$750,000 has been invested in "CQ Contest" since its launch in 1996, with cumulative losses exceeding \$150,000. "As much as I love contesting," Ross said, "it no longer makes sense from a business standpoint to continue to subsidize CQ Contest..."

Ross also noted that the decision "in no way" diminishes CQ's "half-century dedication" to contesting. In addition to publishing magazines, books, and videos, CQ sponsors several major amateur radio contests, including the CQ World Wide DX Contest, "the world's largest in terms of participation."

"CQ Contest" subscribers will begin receiving "CQ Amateur Radio" as of the November issue. Those who already subscribe to CQ will have their subscriptions extended based on the value remaining in their CQ Contest subscriptions. If K3EST is able to launch his web-based contesting magazine, fulfillment of these subscriptions will be transferred to that magazine.



**Allen B. Harbach, WA4DRU, SK:** The man who had made life a bit easier for fans of vintage Heath gear, Al Harbach, WA4DRU, of Melbourne, Florida, died August 15. He was 73. He was a Life Member of ARRL and had authored several items that appeared in *QST*.

A native of Orchard Park, New York, and an engineer, Harbach was first licensed in 1948 as W2YNI. In 1954, he transferred to Texas with Bell Helicopter and became W5IXH. Upon taking a new position in Florida in 1960, he obtained WA4DRU. In more recent years, he became known to many as "Mr Heathkit" and a source of parts and information about Heath amateur gear.

A longstanding member of the North Florida DX Association, Harbach was a prominent DXer and DXCC Honor Roll member with 351 entities. He was known for his travels to various islands, frequently at VP5 as well as other exotic locations. His contesting experience using SB-200s and SB-220s led him to design several modifications to those amplifiers that he offered as products. He also sold antenna hardware. Survivors include his wife, Pat. has taken over Harbach's antenna hardware business. Jeff Weinberg, W8CQ, has assumed operation of Harbach Electronics. (Ed Note : Although Al was not an FCG member, he was well known to many members, and has attended several of our function over the years.)

## Comments on Lightning

*By Ink Bowen, N400*

(Ed Note - This article is a summary of the procedures that Ink has used at his QTH. Hopefully some of them can also be put to good use around your shack. )

Recent reports of lightning damage by club members and a local friend suggest that a review of procedures might be in order. There are some things that can be done RIGHT NOW to minimize or preclude damage to equipment.

I have sustained 4 hits from lightning in the past 6 years. As a result, I have done a lot of reading on the subject and have some ideas on what can be done to minimize damage to towers and equipment. I think I have made progress. Some of the ideas and suggested practices have been implemented and some are still in process. A lot of this has been gleaned from inputs to the Towntalk Reflector and from various publications including the ARRL Antenna Book, publications by Polyphaser and private communication with people in the commercial communications sector.

Let us dispense with all the background stuff and get right to the things that need to be done. We all know that Florida and particularly Central Florida, has the highest incidence of thunderstorms in the USA. We also know that nearby strikes cause considerable current flow in ANY conductor in the area. The magnitude is a function of distance. Let's see what can be done to minimize damage to our equipment.

The first priority is to DISCONNECT. That means power, antennas and control lines. After we have the first set priorities taken care of, we will address the second set which has to do with grounds and grounding.

I disconnect and ground all coax cables coming into the shack during the onset of storms or when I am away. That way I know where the transient energy is going. This should also apply to any other 2 wire or single wire transmission lines: Disconnect and ground them. For a time, I disconnected but laid them on a grounded plate. I now have a burn hole through the tile flooring.

Unless you have a need to operate during storms and are willing to spend the money for the necessary hardware, I would not depend on any of the so called in-line lightning arrester devices. Most of these devices are spark gap types. The transient energy must first build to hundreds of volts before it arcs and by that time, the damage may done. The safest thing to do is disconnect and ground the transmission lines.

AC power should also be completely disconnected by unplugging or going through a double pole switch with large spaces between the contacts.

Just turning off the equipment does not get the job done. Most of the "surge protector" devices which are sold for protection of electronic equipment, are not 100 percent reliable. The reason is that the limiting device, usually a metal oxide varistor (MOV), can fail open after 1 or 2 stout transients. If the MOV is defective, you might never know unless you did periodic checks. I examined 2 of these devices after a lightning hit. The MOV in one of them simply blew apart, leaving 2 leads. In the second device, the MOV also failed causing a short circuit across the power line which blew the fuse. The MOVs that I saw in both devices were only good for relatively small transients.

The most expensive surge suppressors usually come with a guarantee or insurance policy, but they are pricey. I recently paid \$70 for one to put on a new satellite TV system. I do use the cheaper ones in my station, but they protect only while I have the equipment on. When I shut down, the power goes off everything. I also pull the plugs on the computer and the telephone line. Sorry, but I do not trust the telephone line transient limiters either. I have a couple of defective modems to prove that point.

To keep things simple, this is how I have the disconnects arranged. I have a 240V AC line coming into the shack. I route this through a large 50 amp, motor control switch which opens both sides of the line. One side, 120 V, feeds the transceiver and all the peripheral equipment. The amplifier is across the entire 240 V. When the switch is open, the "hot" power leads are disconnected. While there have been instances reported where transients arced across a switch gap, I have had no problems in 35 years of using this type of switch (gap more than 1") in the Florida environment. The metal case of the switch is of course connected to system ground.

Transmission lines should go through an earth grounding panel or plate, before they come into the shack. This "strips" the transient energy from the shield. In my case, the "panel" consists of a copper plate 2" X 8", drilled for 5 feedthrough bulkhead connectors which is just outside the entry port for my shack. The bulkhead connectors are double female devices about 1.5" long, threaded and they mount in a 5/8" hole in the plate. The nuts that came with my connectors were steel, which is no good for outdoor use. I substituted cut off rings from discarded PL 259 connectors (everyone saves these, don't they?) to bond the feedthroughs to the plate.

The plate is mounted on 2 pieces of 3/4" copper pipe which are driven into the ground (I use copper pipe instead of ground rods). Each coax coming into the house passes through this panel. This plate/ground rod assembly is also connected to the peripheral ground system which I will discuss later.

I have subsequently devised a new system that uses 2, 5 position relay boxes out at the tower (MFJ RCS 8V). I will then have only one main coax coming in the house and one other coax from the 6 M array.

These cables still go through the plate. Yes, it is a lot of work to put connectors on the cable ends and then make up the shorter pieces coming into the house. But the object is to keep the majority of the transient energy outside.

I have subsequently devised a new system that uses 2, 5 position relay boxes out at the tower (MFJ RCS 8V). I will then have only one main coax coming in the house and one other coax from the 6 M array. These cables still go through the plate. Yes, it is a lot of work to put connectors on the cable ends and then make up the shorter pieces coming into the house. But the object is to keep the majority of the transient energy outside.

We still have to deal with the center conductor of the cable. While it is shielded, there will still be substantial energy on it. I made up a plate (this one is inside so can be aluminum) with 5 female connectors, SO239 types, with the center pin shorted to the plate with a #12 wire. The plate is mounted a few inches below a coaxial switch and connected back to the outside entry panel-earth ground with a heavy conductor. I used a piece of 1/2" wide by 3/32" thick copper strap, but copper tubing or other heavy conductor could be used. Shield braid is not the best for this application. If you lack a heavy conductor, use parallel wires such as 3 X #10s.

At the end of each coaxial cable inside the shack, I use a "quick disconnect". These devices are available from The Wireman ([www.thewireman.com](http://www.thewireman.com)). The outer shell is a friction fit over the barrel of SO239 female connectors found on most coaxial antenna switches. When I hear a storm approaching, the coax cables are removed from the coaxial antenna switch and connected to the grounding plate. I do not depend on the grounding action of the coaxial switch because I had a radio damaged 5 years ago, even though the antenna was earth grounded via the switch. The energy coming down the cable melted the switch contacts and arced to the switch body which was connected to the outside earth ground. My radio was connected to the switch and sustained some damage to a printed wiring board, probably due to circulating ground currents. Fortunately, the repairs were not extensive. There would not have been any damage had I grounded the incoming coax line directly.

OK, so far we have disconnected the power and the antennas but what about the control cables for rotators and external relays? After the first hit, 6 years ago, I made up a box to place out at the base of the tower. In the box are a number of terminal strips to which all control lead are routed. From each control lead wire to ground, I use an MOV. They are red or black and about the size of a dime, but twice as thick.

If you use these devices, they must be selected to limit at the proper voltage, which is at least 30 percent above the potential they are connected to. Mine (purchased at a flea market) begin limiting at around 50 volts which is satisfactory for the rotator control voltages (30 VAC max) and the relay control voltages around 13-15 VDC.

These devices are not fool proof. First of all, there should be MOVs right at the rotator and again at the entry panel, in order to limit all induced transients. The next best and most practical way to handle this is to have a multi pin connector just inside the entry point for each cable. The only way your control boxes are safe is to be completely disconnected. I use the MOVs outdoors plus a disconnect in the house.

Something else that can be done is to make a coil of the control cable before it enters any junction box or comes into the house. The choking action of 5 or 10 turns of the control wire will help limit the transient energy.

Last summer, I had a hit on the 80M vertical. All the coax lines were grounded, but I failed to disconnect the control leads to the remote relay. As a result, I had damage to the power supply for my remote relays. Had I been completely disconnected, I could have avoided this problem. I could only find a few pieces of the L network at the base of the vertical and the connector male and female were welded together. I probably need a spark gap of sorts right at the base of the vertical.

So far, we have (hopefully) disconnected antennas and connected them to a ground plate. We have removed power to the equipment by opening both sides of the AC power mains by double pole switch or unplugging. We have also disconnected the control wires going to rotators and remote relays. In this case, we protect the power supply, but we could still sustain some damage to the remote relay. I figure this is the price I pay for keeping the lightning energy out of the shack. Some of the potential for damage can be reduced by coiling the coax at the base of the tower before entering any relay enclosure.

#### Grounds and Grounding.

At least one book has been written on the subject: The "Grounds" for Lightning and EMP Protection (Block, Polyphaser Corp, 2nd ed., 1993). This book badly needs technical editing but it does show what needs to be done where continuous operation is necessary. Since we are going to do some disconnecting during storm periods, we can probably do with something less and not spend so much money and time.

The standards in the Lightning Protection Code (National Fire Prevention Association) show only 1, 8 foot ground terminal (rod) per tower. The Polyphaser book shows a rather extensive ground system with something like 32 ground rods, radially about the tower and spaced about 16 ft apart. A practical approach for us is probably somewhere in between. The object is to provide a really low impedance path for the lightning energy.

K4RX posted a short piece on grounds on the club reflector during July, which is worth reading again.

. Each of those is connected to a second and 3rd ground rod, spaced about 16 ft out and 32 ft out. The rods are connected together with #6 wire. Copper strap would be better.

To connect the tower leg to the first ground rod, I used 3/8", "soft copper tubing, flattened on both ends. To minimize the galvanic action of copper in contact with galvanized steel, I placed a small piece of stainless (salvaged from a hose clamp) against the tower leg, then the copper tubing, then a stainless steel hose clamp around the tower leg. An anti oxidant grease should be applied to all the pieces in this "sandwich". Note that periodic maintenance is also required. I took mine apart after about 18 months. The grease had dried and there was evidence of beginning corrosion.

My second tower has an extensive radial system around it, so I used only 3 ground rods there. Each of the legs is bonded to the system as above. In addition, 3 parallel #10 wires connect the 2 towers (I had a large roll of #10). Three #10s are equal to a #5.

Unless very low inductance conductors are used (wide strap), additional grounds per tower leg may be superfluous, according to the experts. Additional grounds, placed in close proximity to each other are also much less effective due to saturation of the area around a ground terminal which is taken to be a radius equal to the length.

As a final step, the tower grounds, the station ground and power entrance ground should all be tied together with a #6 wire, minimum. In fact, it would be a great idea to install a wire all the way around the house (or shack if external to house). An example of this is shown in chapter 1 of the ARRL Antenna Book, 16th-19th editions. This is also discussed in the K4RX posting mentioned above. He recommends larger conductors. In my case, this task is waiting for cooler weather. I hope I do not regret the procrastination. I also plan to add more interconnected ground rods between the shack and the first tower, 70 ft away.

It is my belief that if you practice the disconnect and ground procedures, damage will be virtually eliminated. A lot of work? Yes, but it strikes me that it is a lot more productive than replacing or repairing equipment and dealing with an insurance company.

Some thoughts about materials.

I use 1/2" rigid copper tubing for my ground terminals (rods). The cost is about \$5 each compared to 11 or 12 for a plated steel ground rod. Of course, the tubing will only work well in soils where there are no rocks or other major obstructions. If rocks or hard substrate limit the length, either use more of shorter grounds or bury pieces of copper tube horizontally.

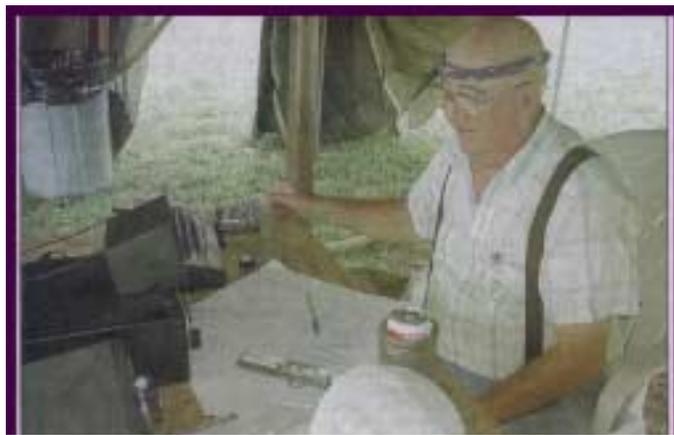
On the rods at the tower base, I used bronze clamps purchased from Alan Bond at the Orlando Hamfest. Contact him at [www.mgs4u.com](http://www.mgs4u.com) to see if he still has any. For the connections further out, I flattened the tubing using 2 hammers and drilled a 1/4" hole through.

. A stainless 1/4-20 screw and brass washer holds the wire against the tubing. I then soldered that joint with a torch. Clean beforehand of course. The best way to do this process is with "Cadweld", a brazing process, but I figured my system would work fine and not be as expensive. Note that the soldering only serves to protect the joint from corrosion. Solder cannot be depended on to conduct high transient currents.

I obtained several pieces of soft copper tubing from a technician who is in the refrigeration business. These folks usually have a number of old coils removed from refrigeration devices. They often save the copper for sale as junk. Soft copper tubing is also reasonably priced in the larger hardware stores. Do not use wire braid.

Pieces of stainless steel for tower leg interfaces can be cut from old hose clamps that have been discarded because of rusted or stripped screws. A 1" piece is sufficient.

For the multi connector feed through plate at the entry: most large hardware stores sell a brass "kick" plate for doors which should be satisfactory for this application. One plate would make both the outdoor and indoor ground panels. Avoid aluminum outdoors.



*Ink, N400 working field day with the Wakulla County Radio Club*



*Bob, WICW is home after successful open-heart surgery. Best wishes Bob from all FCG members for a speedy recovery. Looking forward to seeing you back on the bands !*

## Notes from around the Club

*By Fred Perkins, K4LQ*

### *October FCG Meeting Scheduled*

The second annual pre-contest season FCG meeting will be held at K4XS's QTH on October 13 beginning around 1PM.

I will be grilling some goodies and will be providing soft drinks. For those of you who prefer 807s please bring your favorites. Also, if you could bring a lawn chair or two, it would be appreciated

73, Bill K4XS (See directions to K4XS on Page 12)

I'm very pleased to announce that Dave Curran WD4RCO has submitted a valid application for USA-CA 3076 and is hereby awarded #1030 dated September 15, 2001. Mixed bands and modes.

His e-mail address is: WD4RCO@CYOU.COM

Congratulations Dave.

Ted Melinosky K1BV  
USA-CA Custodian

Ed Note: Working all US Counties is certainly a remarkable achievement. Congratulations from all FCG members Dave!

FCG Member Jim Knowlton, 5U7JK will be hosting the same crew that aired 5U2K, 5U3T & 5U5A in March 2001 in Niger in January/February 2002 for a two week DXpedition. The group will be enlarged with the participation of 3/4 new operators from Italy and USA. At least 3 stations will be put on air with special attention to 80/160 meters. Operations will take place on 10 through 160 meters on CW/SSB/RTTY/PSK31 and on 6 meters CW/SSB. A dedicated web page will be shortly put on-line and it will include all information about the upcoming activity. Three call signs will be announced later.

Dave, WD4RCO has changed his call to KB4ET effective 9/19/01

Congrats to Joe, W4SAA for placing in the top 10 in last years Stu Perry Top Band Distance Challenge . You may remember the picture of Joe in an earlier Gazette shivering his way through a very chilly operation while set up on a picnic table in a Tiki Hut in the Florida Keys, for which he was nominated for FCG Hero of the year by Dick, N4RP.

## W4 CW Sprint Teams ? ?

*By Dan Street, K1TO*

Bill Fisher, W4AN wrote recently:

"It has been suggested to me since the Sprint that we might have the ability to pool resources among the FCG, TCG, SECC, and PVRC to actually win this contest. At first I was against it, but the more I thought about it... the more I liked it.

Back when I started contesting I immediately latched on to the CW Sprint. I knew this was the place where the best showed their stuff. Back in those days, W8LNO and N0SS organized teams of Midwesterners called the Midwest Poppuns. If memory serves, I believe we used to have 3 or even 4 teams. The team lineup was decided based on previous results. I recall being very motivated to improve my skills to move up a team (my first Sprint I made 167 QSOs I think).

We are all competitors, or we wouldn't be interested in contesting. So I would like to propose that this rag-tag group of southern CW Sprinters work together to see if we can win the team competition. Looking over the numbers, it doesn't seem unreasonable that we could actually take first AND second place."

K1TO's two cents: The CW Sprint dates are poorly chosen, of course. They conflict with Orlando in Feb. and Melbourne in Sept. Still, the CW Sprint is a premier contest and one that only requires 4 hours out of one's busy life. We did organize a full 10-person FCG team for the 9/00 CW Sprint and the noise from FL was definitely heard. Several of us who first participated in recent Sprints were intrigued and overwhelmed at the same time, but most said that the exhilaration was enough to bring them back for more. So, what say, shall we join the "4's Force" and see if Bill is right that a 4-land team can win?

## Melbourne Hamfest Summary

*By Fred Perkins, K4LQ*

Several things distinguished the Melbourne get-togethers this year.

1. More FCG members than ever before were spotted in the Melbourne environs, (31) these included AE4RO, AE4SW, K1TO, K4FB, K4LQ, K4VUD, K4XS, K9ES, KD4BRJ, KD4RWN, KE1F, KJ4UY, KK4TA, KU4TF, N4EK, N4GM, N4IG, N4JT, N4PK, N4RP, N4TO, NA4AR, NA4CW, NW5E, W0EBA, W4AA, W4IR, W4QM, W4SAA, WB4FNH and WC4E

2. Members had an opportunity to experience the outstanding hospitality of Eric, K9ES and his wife Sylvia for a place to conduct our meeting and consume great quantities of burgers, hot dogs and chicken with all the fixins including birthday cake! Thanks folks for a great evening.

3. Our meeting was attended by the ARRL SE Division Director, Frank Butler, W4RH, as well as the two candidates for Assistant SE Division Director, FCG member Paul Toth, NA4AR and Sandy Donahue, W4RU from Atlanta.

4. Four new members signed on at Melbourne, Dale Strieter W4QM, Jeff Hutchinson N4JT, Eric Heard KU4TF and returning member Charly Harpole, K4VUD, who during a year's sabbatical from FCG traveled extensively in the far East. This brings our total to 97 members, only 3 short of the Century mark.

5. Camera problems encountered by both K1TO and K4LQ resulted in only a few pictures of Melbourne action for the newsletter.

### Meeting Summary:

Dan opened the meeting by thanking Eric and Sylvia for their hospitality.

31 logs were submitted last year by FCG for Sweepstakes. With our increased membership we should be able to reach a higher number than that this year. Members are encouraged to give SS a try if they haven't done so before. The Medium Club competition allows up to 50 logs, so we have room to "grow" and hopefully move up even further from our FB 3rd place finish in 2000! One topic for the next meeting will be operating strategy for CW SS.

The ARRL DX CW results are out on the ARRL Members Only web site. FCG had some significant scores. N2NL at K4XS ran away with the W/VE SOLP category shattering the one year old record previously held by K1TO. N4BP at C6AKQ took World High in the SB 40 Meter Category.

The FQP reports continue to be delayed while waiting for Dave K8CC who volunteered the use of his log checking software. Dave has been tied up in other areas and has not been able to assist as planned. In the interests of getting the results published and the awards out, we may have to again do the job manually. Dan said he would again ask for assistance from members in getting the job done.

In the WAE contest, significant cheating was going on regarding the use of packet, so the contest sponsors changed the rules so that all participants can use packet. This resulted in reduced participation from contesters who did not approve of packet use in any manner. Ben, DL6RAI is now on the rules committee for WAE and will work toward eliminating this rules anomaly.

WPX CW high claimed scores were reported in the last issue of CQ Contest. Many FCG calls were noted, i.e. WK4R (N2NL), WC4E, KN4Y, WD4AHZ, N4IG, N4GM, K4LQ.

Dan noted that it had been announced that the October edition will be the last edition of CQ Contest, as it had been losing money, CQ decided to stop publication as a business decision.

The subject of WRTC - 2002 funding was discussed at length. Many options as to how the club or its members could contribute to either the general fund to help fund our own member who will be going (Dave N2NL). were discussed. It was decided that Dan would address this as a separate subject on the FCG reflector, so the details of that discussion will not be reported here.

The FCG meeting schedule for the rest of the year was reviewed briefly. Bill N4XS volunteered to sponsor a meeting at his QTH on Saturday October 13. The November meeting will be at UCF with a pre-meeting lunch at Applebees the same as last year. Date TBD. It will be either Saturday or Sunday the 2nd weekend of Nov - between SS Weekends.

Dan concluded the meeting by asking the two SE Division Asst. Director candidates to speak briefly about their priorities if elected. We heard from Sandy W4RU and Paul NA4AR, after which the meeting concluded. I have solicited equal length messages for inclusion in the next Gazette from each of them.

Attendees at the meeting at the K9ES QTH included: AD4ES, K1PT, K1TO, K4FB, K4LQ and Sheila, K4XS and Holly, K9ES, KD4RWN, KE1F and Ann, KF4OD, KG4FEQ, KK4TA, KU4TF, N4GM, N4IG, N4PK, N4RP, NA4AR, NA4CW, W4AA, W4RH, W4RU, W4SAA, WC4E, W0EBA.

*Random Pictures from Melbourne*



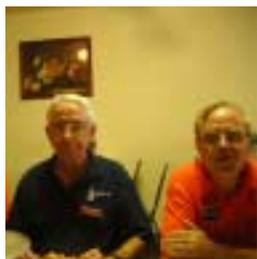
*Vic N4TO and Joe, W4IR sporting their FCG Orange polo shirts .*



*Left to Right—We welcomed new members Jeff, N4JT and Dale W4QM aboard at Melbourne.*



*Returning Member Charly, K4VUD on the right tells a flowery story of his Asian travels to Byron WOEB*



*Dick N4RP and Joe, W4SAA*



*The "Antenna Farm" at K9ES*

*45 ft Tower*

*D3W @ 52'  
WARC*

*TH6DXX @ 45'*

*2M Packet @ 40'*

*Gap Titan on Ga-  
rage as OMNI  
Monitor*

*80 ft Tower*

*2M J-Pole @ 105'*

*2 el 40 @ 95'*

*DB10-15 @ 88'*

*204CD @ 81'*

*Inv-Vee 80 @ 75'*

*TH3 (SSE) @ 32'*



*K9ES Operating Position*



Real-time picture of the famous K9ES antenna osprey in action as we left Eric's. Ask Eric about his "osprey solution".

## Directions to October 13 FCG

*By Bill Kollenbaum, K4XS*

### From the North:

I 75 south to the State Route 54 exit. Head west on SR 54 for about 20+ miles until you reach the traffic signal at Rowan Rd/ Seven Springs Blvd(7-11 on the corner, Kash and Karry) Make a left at that light and head south on Seven Springs Blvd. At the third stoplight (there will be another 7-11 on this corner too), make a right on to Perrine Ranch Rd. Continue for about half a mile and make a right on to Meadowood Dr. Conitnue for about 3/4 a mile. Look for mailbox(2930) and enter down the dirt drive.

From the East: Come in on SR 54 and follow the directions from the North.....OR:

I 4 west. Head north on I 75 and take the SR 54 exit west. Follow the directions for the northern members.

### From the south:

Head north on 75. Follow I 75 to SR 54 and follow the northern boys' directions....OR

I 75-I 275 north to the Skyway Bridge...over bridge. Continue I 275 for about 10 miles. At Roosevelt Blvd (688) (exit 16, last exit befor Tampa) exit and head west toward Clearwater. Continue for about a mile or so and then head west on Ulmerton Rd(688). Continue about one mile and at 49th St (611) make a right, heading north. Continue on this road for about 15-20 miles. The road will go over a big bridge and will undergo several different name changes along the way.....McMullen Booth Rd, East Lake Road. The road will eventually become Little Rd as it enters Pasco County. There should be a sign saying you are entering Pasco County. You will also be able to tell you have entered Pasco because the grassy median between the lanes disappears. The next light you come to after this, make a left on to Seven Springs Blvd.

LOTS OF GUYS MISS THIS TURN AND WIND UP LOST! Ther is a big shopping center with a Publix and an Eckard's on the right at this intersection. Continue about a mile on Seven Spring Blvd. At the first light, make a left on to Perrine Ranch Rd. Continue for half a mile and make a right onto Meadowood Dr. Conintue for about 3/4 mile and look for the mailbox (2930), turn down the dirt drive.

My phone nr: 727 375 9503 if you get lost.



Dan, K1TO hard at work atop one of the N4TO towers. Dan and Dale W4QM on the towers and Vic N4TO and Fred K4LQ on the ground have been working over the past few weekends helping to get the N4TO antenna field ready for the upcoming contest season, beginning with a M/M effort planned for the CQWW SSB



Picture provided by Jim, NU4Y of the "other approach" to antenna erection/repair. Jim helped with some antenna work at W4FDA's QTH that used this mobile crane

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