

Left. Left. Left, Right, Left.

Saturday, November 11, 1995, is Cary bandday. As many of you know, CARC has supported this event for the past 15 years or so by providing communications for the parade officials, parade marshals, and medical teams. In the morning, we assist them with the check-in and staging of the parade units. During the parade, we assist the parade marshals and provide emergency communications as needed.

This year is the 37th year of Cary bandday which makes it the longest running continuous High School band event in the Southeast. The band and other unit participation are expected to be high this year due not only to the 37th anniversary but to generous monetary awards for the 3 winning bands in the parade.

The parade forms on Chatham Street and officially begins at the intersection of Chatham and Academy at 10:00 a.m. It continues south on Academy, around Cary Elementary School, and follows Walnut Street to Cary High School where it ends.

We need about 25 hams to provide communication support at the parade staging area, viewing and judging areas near the Cary library, at the Cary High School area, and at intersections along the parade route. We also need several bicycle mobiles. Although some of us will need to be available before 8:00 a.m., everyone will need to report around 9:00 a.m. The parade is over before noon. As the parade clears your assigned station you can be cleared from duty. In the past, this has been a fun event that requires little time but gives CARC good visibility in the community. It is an excellent opportunity to learn net and control procedure, watch a nice parade, and support Cary. So, call me early for assignments. I will give first choice to those who worked a position or station last year, but there will be plenty of assignments to go around. Call me at 467-8416 to sign up and help.

Tnx es 73, Glynn K4RKI

Your HT: how close can you be and still be safe?

The "E-field Safety Recommendations" ANSI/INIRC state that 0.2 mW/cm^2 is the maximum safe power density for the 30 to 300 MHz range. That includes the 6-meter, 2-meter, and 1.5cm bands. For 70 cm bands, the exposure is higher.

The minimum safe distances from the antenna for the two meter band are 10 inches at one watt, 14 inches at 2 watts, and 22 inches at 5 watts. Since your head is the most vulnerable part of your body, it would seem that speaker-mikes and belt clips would be a wise precaution.

Makes you wonder about those baseball cap clip-on antennas you see at hamfests!

Those Pesky Barcodes

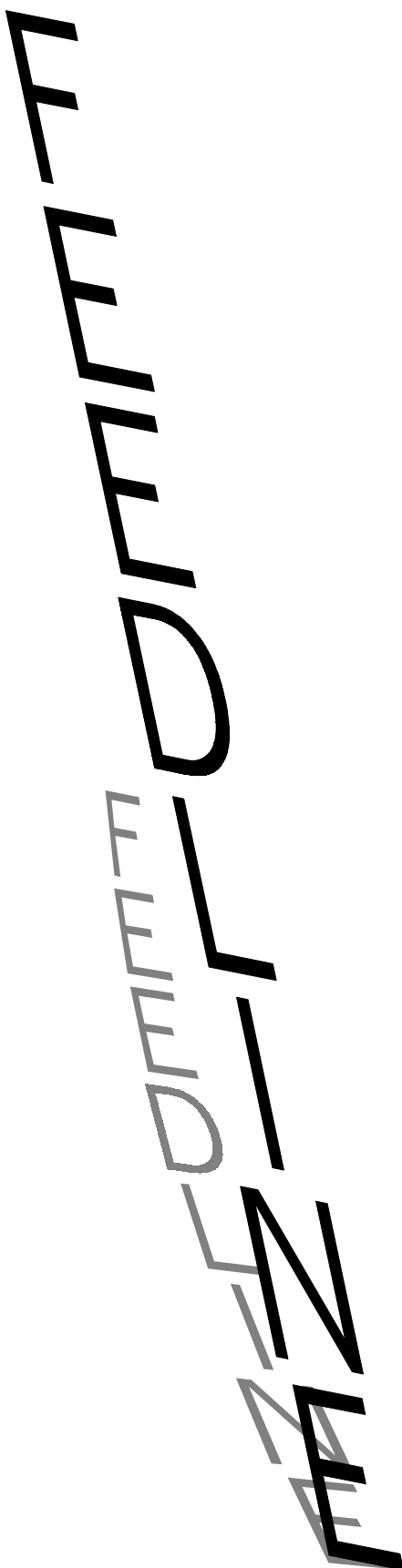
Do you recycle things like disk mailers, padded envelopes and parcel post cartons? Then be sure to obliterate any *OLD* Post Office barcode, which could delay, or prevent the delivery of the piece.

A laundry marker pen works nicely. If your package arrives without a zip code, the Postal Service will put a new one on, usually over the address.

Shuttle Snooping

During shuttle missions, the Goddard Amateur Radio club retransmits shuttle communications on the following frequencies:

3.860 MHz LSB,	7.186 MHz LSB,
14.295 MHz USB,	21.395 MHz USB,
28.650 MHz USB,	147.45 MHz FM.



INSIDE:

If you're interested in becoming an official Skywarn Spotter, see info on page three.

If you're interested in search and rescue activities, see Mike's invitation on page four

Condo Communicator - Volume V

More tips on operating from restricted locations.

Welcome to the fifth exciting, thrill-packed issue of Condo Communicator, a newsletter devoted to those amateurs who, for various reasons, must configure their stations to operate from restrictive areas such as condos, apartments, townhouses, neighborhoods with outdoor antenna restrictions, ships/boats, mobile homes, or wherever they fry their burgers and call QTH.

SOAPBOX

Whilst struggling to get a little homebrewed transmitter to work, I gave some thought to the concept of matching. Just as it's important to match the impedance between different circuit components to maximize the transfer of power, it's important to have a good match between your ham radio activities and station requirements in order to maximize the pleasure you can derive from the hobby.

For example, if you enjoy providing telephone patches between overseas military personnel and their families stateside, you'll derive considerable pleasure from smoothing the radio links for troublefree communications. It certainly is no waste of money to purchase the best equipment available, including beam antennas, high and sturdy towers, and amplifiers to overcome any obstacles placed in your path by mother nature. In this case, there is a good match between the activity and the station, maximizing the pleasure derived.

But if you live in an apartment, you're going to face considerable frustration pursuing the same activity. Even with sensitive receiving apparatus and an amplifier, you'll not provide the same quality of communications as often as the fellow with the space for large antennas. The families you're trying to help will not be happy with the scratchy and fading signals. In addition, your neighbors will certainly not appreciate the RF overload into their televisions and other appliances, and they will quickly let you know of their

displeasure. Given such a mismatch between the activity and the station, you'll not derive much pleasure. On the other hand, if you enjoy just trying to get a signal out of a "covert" location, then living in that same apartment could provide great deal of fun indeed. Imagine the jollies I got when receiving a QSL card from a station I worked in Finland on 20 meters with less than a watt into an attic wire loop. Or the fun of building a small transmitter and getting it on the air, with no RFI and good, solid contacts. (So what if I had to seek troubleshooting advice from all my friends and loads of folks on Internet and packet?) The point is, there's a good match between my activities and station capabilities given the set of environmental restrictions within which I choose to live.

If you find operating from restrictive space frustrating, you may want to try reconciling your operations with your circumstances. If you want to run overseas phone patches from your apartment, you can fight the unit's management to install a tower, fight your neighbors so you can run high power, make a scientific breakthrough in the science of wave propagation, move, abandon the hobby, or you can examine what you're doing to see if you can make any modifications to produce a better match with your station and operating restrictions.

TECHNICAL ADVICE

Dave, W8NF of Denver, Colorado, offers some advice about radio frequency interference. I had mentioned RFI problems with an old DX-20 transmitter. Connected to a dummy load, and sitting on top of the family TV, the DX-20 produces zero interference. But, just hook it up to the attic antenna and the TV picture gets wiped out, worst on channel 2 but bad enough on all the others. Dave says:

1. Reduce RF currents on the coax. Wind the coax at the feedpoint to the antenna into a coil, about 5 or 6 turns at 6 to 8 inches diameter.

2. The signal from the antenna is probably coupling into the AC power lines, and from there it's saturating the TV tuner. Filter the TV's AC line. As the first element, use some series impedance, like a ferrite bead or coil.

I wonder what would be a good ferrite composition to use and if anything of the appropriate mix is sold that will just clamp over the AC cord. I've had no luck with the variety sold by Radio Shack. Anyway, for those of you having similar problems, give Dave's suggestions a try.

Some more technical advice from Dave regarding limited space antennas, who suggests using the G5RV design. As radiation from a wire antenna occurs at high current points, then it's important to get the middle of a center-fed antenna (the high-current point) as high as possible, and it's less important to get the ends as high. Neither is resonance as important as getting as much current as possible into the wire. If you're not overly concerned about directivity or radiation angle, and if you can match the thing, then you're getting current into it, and it'll emit a signal.

The G5RV antenna is essentially a configuration of wire that shows an SWR of less than 5:1 on all bands when no tuner is used. The G5RV is a center-fed, 102-foot wire. You feed it with ladder line that's about 30 feet long (or 1/2 a wave length at 20 meters). Now you have an antenna that's 3/2 wavelength of 20 meters and resonant on that band. Then, to the ladder line, attach your coax, first making a coaxial balun composed of 5 to 6 turns at about 6 to 8 inches in diameter. This produces an impedance at the transmitter side of the coax that most tuners can match from 80 through 10 meters.

If, like me, you don't have enough room in your attic for 102 feet of wire, even snarled, then Dave suggests cutting everything by half for an antenna you can match from 40 meters through 10 (with a tuner). That means a 51-foot length of wire, center fed, with the open wire feeder cut for about 15 feet (a half wavelength on 10 meters).

(Continued on page 3)

STATION DESCRIPTIONS

While we're on the topic, Dave will be using the G5RV design at his new house where the attic is larger. Currently, Dave lives in a house with two attics. His station is:

1. Tiny attic: 6/10/15 meter dipole. Also works on 12 and 10 meters. No tuner. 10 watts. No RFI.
2. Larger attic: 40-meter dipole, with center point as high as possible and the ends "bent, twisted and gnarled in whatever shape needed to get the thing to fit." Tuner used. Won't match on 80 or 20, but operates on 40, somewhat on 15.

When Dave fires up the SB-220 amp, however, his garage door goes up and down!

As you know, I've asked folks who live in buildings higher than two stories to send in their station descriptions. While no one living in on the 20th floor of an apartment has sent in anything yet, Howard Miller, N9RUI of Skokie, IL, near Chicago, has sent in a description of his third-floor setup.

Howard uses an inverted vertical. It's made of thin magnet wire and is 35 feet long. With a small stone weight on one end, it's lowered from the window and blends in nicely with the brickwork on the side of the building and can't be seen. Howard has taped two counterpoise wires in opposite directions to the inside wall near the floor of his apartment. With this setup and a one-watt HW-8 Heathkit rig, Howard has worked into Indiana on 40 meters.

Howard's inverted vertical works fine from his third-story perch. I wonder how height affects the signal pattern of a vertical. Is the low-angle radiation of a vertical enhanced by being elevated? Although the building would block a good part of the signal, would an inverted vertical hanging from the 40th floor of a high-rise radiate as well in the free-space direction as an inverted vertical nearer to the ground? And what does inverting the vertical do to the signal pattern? Some of you antenna wizards write in and let us know. You could be helping a high-rise ham. The newsletter is pretty short this month. After all, it's only as long as you make it. So, if you'd like more station descriptions and less editorializing from me, then send your notes, ideas, station description, war stories, editorials, and so on to me at:

CompuServe: 72064,374
Internet: awinterb@du.edu
Packet: n0oqs @ w0ljf.#neco.co.usa
US Snail: Art Winterbauer
10047 E. Mexico Ave.
Denver, CO 80231

73,72. Art.

September Program

Scheduled for this month's meeting is a Skywarn Spotters training session.

The meeting will begin at 7:31 and end promptly at 8:00 so the training session can start at 8:00 p.m.

Come report and learn how to properly severe weather events to the National Weather Svc.

Letter to the Editor

Dear Sir,

I need your help. I live next door to a lunatic who makes my life a living hell with a radio transmitter. When I try to watch Geraldo, the television develops patterns, bars and buzzes. And when Geraldo does appear, he is a bright green.

My cow has gone dry, my dog has run away and my cat bit me for no reason. Also, my daughter's moral fiber has been eroded - if you know what I mean.

Just this morning when I went to put my teeth in, a big spark jumped from my upper plate to my lower. I called the FCC and the police, but they are no help. What can I do?

Thelma Neidermeier

*Thelma,
Sorry about your cat. Can I have your daughter's phone number?*

the Editor

What the "95" in Windows 95 really stands for

Number of floppies it ships on.

% complete when shipped..

Mb of hard disk space required.

CPU MH required to run it.

% of users who must upgrade their hardware before they can install it.

Number of pages in *Easy Install* manual.

Number of tech support calls needed.

Number of minutes to install.

Number of people who actually pay for the upgrade.

Cary Amateur Radio Club

The Cary Amateur Radio Club meets on the fourth Thursday of the month, 7:30 p.m. in the lower level of the Christian Life Center of White Plains United Methodist Church. The June, November, and December meetings are held off-site. Call for location of those meetings. **Next Meeting: September 28, 1995.**

1995 Officers

KB9MS	Bob Lukaszewski	833-0199	President
KB4LFH	Mike Crowder	319-9556	Vice-President
K4IWW	Will Harper	467-0224	Treasurer
N4UE	Herb Lacey	467-9608	Secretary

Feedline

Feedline is a member-supported publication of the Cary Amateur Radio Club and is published monthly. Deadline for submissions is the second Thursday of the month.

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Cary, North Carolina 27511

Search Group Forming

Wake County Emergency Management is looking for a few good searchers. In August, *Wake County Search and Rescue* announced the formation of a search and rescue overhead team in Wake County.

If you are interested in joining this team, contact John Callaway, Wake County Public Safety, 856-5587. They are especially interested in retirees, or soon to be retirees, with experience in law enforcement, fire services, or search and rescue.

Wake County A.R.E.S. has been called to assist in searches, and will be called in the future. If you are interested in providing communications support to the search group, join A.R.E.S. If you are looking for a leadership position in local search and rescue, call John.

If you are interested in receiving a calendar of search and rescue courses, contact John and asked to be put on the mailing list. For example, there is a three-day exercise at Falls Lake this weekend, September, 22, 23, and 24.

Mike, AC4AN

