

The Framingham Circuit

Newsletter of the Framingham Amateur Radio Association

March 2006, Vol. 73, No. 3

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Thursday, March 2 This Month's Meeting

Alan Pitts, W1AGP, PR and Media Relations Manager of the ARRL, will talk about an unprecedented Ham Radio PR campaign.

Submitting Material to the Circuit

Material may be submitted for publication by sending it directly to the editor. This can be done by US Mail, or via the Internet (preferred). The deadline for each issue is the **Wednesday**, one week before the monthly meeting.

by mail

Robert Hess, N1UVA
1175 Farmington Ave 3-204
Bristol, CT
06010

by internet

circuit@fara.org

President's Message

Greetings, everyone! We had a nice gathering for Mike Neilson, W1MPN's talk on getting the youth back into ham radio. The discussion that followed was very active and informative.

This is the final call for you to help YOUR club by taking part in the flea market on March 26. We definitely need more people to step up and volunteer, even if only for a short time. You will get free admission and a coffee and donut for helping out; sounds like a good deal to me! Please talk up the flea market on the area repeaters!

The FARA EMCOMM team has been very busy getting the WCVB project moving. If anyone wants to join them in this invaluable endeavor, please contact our EC Victor, K1VEA, or James, KB1LOY. I am sure there are more of you EMCOMM people out there who would like to get involved.

This month's meeting should be one of the highlights of the season! Our speaker will be Allen Pitts, W1AGP, who is the PR and Media Relations Manager of the ARRL. He will be making a presentation on an unprecedented, large scale Ham Radio PR campaign, the likes of which has never been attempted before! Please make every effort to attend this one and let's have a great turnout for this special guest speaker direct from ARRL HQ!

73, Gordy, K1GB

Donate your Old Equipment

Your radio club makes extra money each year by running a Club Table at our Flea Market. We need your donations to make it work. If you have any old or unused radio equipment, radio books, parts, etc., please consider donating them to the Club Table. The best way is to bring them directly to the FARA Flea Market on March 26, preferably by 9 am if possible. Or, you can bring them to the March club meeting on March 2. Give them to Sumner Weisman, W1VIV.

Thank you in advance for your donations.

2006 Scholarship Rules

By Richard, AA1VI

1. Must be an active member of FARA.
2. Applications must be turned in or post marked by April 15, 2006.
3. Must be a license radio amateur.
4. Preference will be given to graduating high school seniors.

For applications contact Richard Cosma AA1VI 508 877 8241.

Don't Miss the...
FARA Flea Market
Sunday, March 26th

Six Meter J-Pole A Great Do-It-Yourself Project

By James Cahill, KB1LOY
(Part 1 of 2)

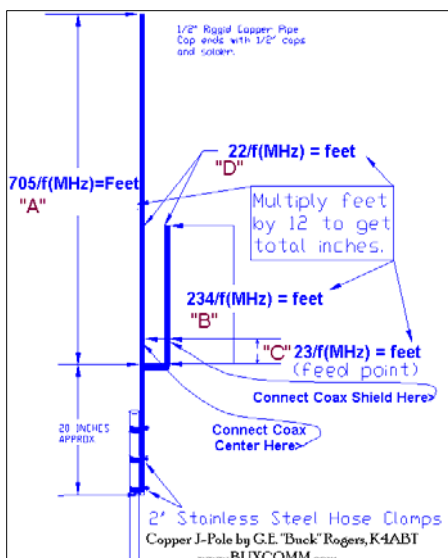
DECISION TO BUILD A HOME-BREW ANTENNA

This article is written more to encourage you to go ahead and build your own antenna than provide you with any electronic theory or wisdom. If I can build one with limited knowledge and skills in electronics, so can you. My decision to build a homebrew antenna emerged from three factors: 1) my dual band antenna did not perform well with my new quad band radio (Yaesu FT-8900R); 2) I heard other hams on the air describing their homebrew projects and felt a j-pole was within reach for me; and 3) I figured that by studying the theory/details of antenna construction my skill as an operator would improve.

DESIGN RESEARCH

Three primary sources were used to research the details of the 6M j-pole antenna. The 2005 ARRL Handbook, the Amateur Radio Resource Guide located on the website www.dxzone.com, and K4ABT, Buck Rogers <http://www.hamuniverse.com/jpole.html>. The ARRL Antenna Handbook is also an excellent reference; I just did not have a copy at the time I was building the antenna. You may find slight variations of the basic designs you find on-line, study them closely.

A word of caution while conducting your research: watch out for information overload. Select a design you feel most comfortable with and stick with it. I found K4ABT's plans the most straightforward and used them for the most part.



Framingham Circuit

You will need to decide your “target transmit frequency” in order to calculate the lengths of the various elements. I reviewed local and emergency six meter repeater frequencies and selected 52.23 MHz (TX, Mt Greylock) as my target. There are several other repeaters near this TX frequency (TX 52.19MHz-Monadnock, TX 52.25MHz-Waltham, TX 52.27MHz-Framingham, and TX 52.31MHz-Mt Wachusett). I reasoned: better to have a design length to a target frequency of a distant repeater than to try to reach it by boosting watts during transmitting.

MATERIALS

Calculate the TX frequency and buy the materials.

- 1 EA - 3/4" copper pipe, 10 ft length \$10.00
- 1 EA - 1/2" copper pipe, 10 ft length \$9.00
- 1 EA - 3/4" X 3/4" X 3/4" copper Tee \$1.22
- 1 EA - 3/4" copper 90 deg elbow \$0.66
- 1 EA - 3/4" copper end cap \$0.50
- 1 EA 3/4" X 1/2" copper coupling \$0.98
- 1 EA 1/2" copper cap \$0.45
- 2 EA 3/4" copper clamps \$3.49
- 3 EA 2 1/4" stainless hose clamps \$2.98
- 1 EA SO-239 connector \$3.29
- 1 EA Mast Pole – 5 FT \$7.85
- 1 EA ground rod clamp \$2.50

TOTAL \$42.92

FABRICATION

Cut the copper pipe to length and dry fit to check dimensions with the design lengths prior to soldering. A plumber's tube cutter was used to cut the pipe to length. Measure to the inside face of copper pipe (dimensions “A” and “D”). The location of the transition from 3/4” to 1/2” on the longer pipe does not affect

License in a Weekend

March 17, 18, 19 2006

For Sale

All proceeds to benefit the club scholarship fund. Contact Gordy, K1GB. Donated by Dick, WA1HRV

Heathkit dummy load

2 Rohn 25 Sections, 1 top section

Ham II rotor and control box

50 feet Beldon 8214 coax

Cushcraft A4

Upcoming FARA Meetings

Contact Gordy, K1GB if you have any meeting ideas.

March:

ARRL Media and Public Relations Manger Allen Pitts, W1AGP

April:

Pizza Party

May:

George Maier, K1GXT, on Collins Radio and collecting Collins gear.

June:

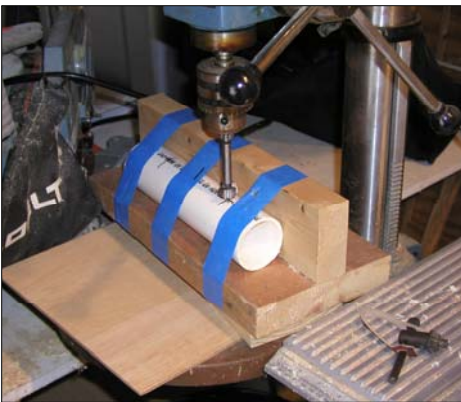
Dave Bernstein, AA6YQS

the performance of the antenna; use the length to minimize waste (see drawing below).

Apply plumbers flux paste to the joint you are working with. Use a propane torch to heat the pipe, and apply plumbers solder. Wipe excess solder from the joint immediately after applying. Assemble in smaller modules; lower part of J-Pole first, then add transition from 3/4" to 1/2" extension after.

During the research phase, I learned that the antenna performs better if both the long leg and the short leg of the j-pole are aligned and parallel. This is easily accomplished by carefully drilling a piece of PVC pipe to the OD of the copper pipe. Secure the PVC to a block to support it while drilling to maintain parallel holes. If available, use a forstner bit (a precision carpenters bit) for a snug fit to the copper pipe using a drill press if possible. Yes, you may notice that I initially drilled the PVC at the wrong spacing. I then turned the PVC 90 degrees, measured twice, and finally drilled at the correct spacing.

The wooden spacer was changed to a PVC spacer from the K4ABT design. The snug fit from the forstner bit allowed me to press it on by hand and it did not need to be secured to the copper pipe. Adding the PVC stiffened the entire bottom portion of the j-pole and I highly recommend



using it since the overall length of the antenna is over 13 feet (above the mast).

Prepare one end of the feed line to attach the coax center wire to the long leg of the copper j-pole and the coax shield braid to the short leg. Using copper clamps to attach the feed points to the copper pipe allows for adjustment should you change the target frequency selected during the design phase. Add silicone sealant to weatherproof the exposed end of the coax. Belden 9913 cable was used and found easy to work with. Mount a PL-259 at the end of the feed line closest to the radio.



Roll 4 turns of coax in a 5" diameter coil or use a 1:1 balun and support it from the j-pole with Ty-wraps. I checked the location of the feed point clamps while on the ladder. To get the correct height

without measuring up on the ladder, use a spacer block of wood pre-cut so the centerline of the clamp is located at the design height (dimension "C") then tighten the clamps to the copper pipe.

Thanks James for this excellent article. The conclusion will be in the April Circuit. Diagram used with permission from K4APT. -ed.

Sunday Net Control Schedule

W1VIV	3/5	4/16
W1NXC	3/12	4/23
K1GB	3/19	4/30
W1NAU	3/26	5/7
WA1R	4/2	
W1EQW	4/9	

Membership Dues

Annual membership dues are as follows: (Make checks payable to FARA)

Regular FARA \$15

Student / Retired \$10

Repeater (voluntary) \$10

FARA Email Reflector


If you have email and aren't signed up for the FARA email reflector, you're missing out on the last-minute news and updates. To sign up, send an email to Sharon at kc1yr@kc1yr.com requesting her to add you to the reflector.

FARA Horizons

March 2:	Club Meeting
March 17-19:	License in a Weekend
March 26:	Flea Market
March 27:	Board Meeting

This month's Circuit sponsored by:

WORLDWIDE DISTRIBUTION



Peter Cantara
Assistant Manager
KI1M

224 N. Broadway, Salem, NH 03079
(603) 898-3750, 1-800-444-0047
Fax (603) 898-1041
email: ki1m@hamradio.com

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Framingham Amateur Radio Association
PO Box 3005
Framingham, MA 01705

Club Information 2006

President	Gordy Bello	K1GB	781-891-5572	president@fara.org
Vice President	Leo Cantin	WAIHAM	508-877-3319	vp@fara.org
Secretary	Tom Malloy	N1FTB	508-655-0392	secretary@fara.org
Treasurer	Peter Simpson	KA1AXY	508-429-7069	treasurer@fara.org
Director	Bev Lees	N1LOO	508-626-2012	director@fara.org
Director of Training	Ed Weiss	W1NXC	508-881-2301	
Director of Testing	Jim Weckback	W1EQW	508-435-6487	testing@fara.org
Publicity Coordinators	Sharon Gartenberg	KC1YR	508-877-6692	
Emergency Coordinator	Victor Anderson	K1VEA	508-877-8299	
Activities Director	Gordy Bello	K1GB	781-891-5572	vp@fara.org
Scholarship Comm. Ch.	Dick Cosma	KD1BF	508-877-8241	scholarships@fara.org
Public Service Coordinators	Bev Lees	N1LOO	508-626-2012	
	Jim Weckback	W1EQW	508-435-6487	
Newsletter Editor	Robert Hess	N1UVA	508-435-2055	circuit@fara.org
Webmaster	Sharon Gartenberg	KC1YR	508-877-6692	webmaster@fara.org

Meeting: Club meetings are normally held on the 1st Thursday of each month at 7:30PM in the basement of the Danforth Museum, on Lexington St.

Club Nets: FARA Net: Sunday, 7:30PM, 147.75/147.15 - social/chat, ARES preparedness

Club Station: W1FY, the club station and shack, is open Saturday mornings from 8:30-12:00. Call the club number, 879-8097 to confirm.

Club Web Site: <http://www.fara.org>