

APR. 23, 2011 No.352

APRIL

MEETING

The Beaumont Amateur Radio Club will hold this month's meeting, at 7:30 PM Monday, March 4 28, 2011 at Wesley Methodist Church, 3810 N. Major Drive (at the end of Folsom Drive) in Beaumont. This month's meeting as of press time the program for this month's meeting has not been set, but there will surely be an update on the progress of a second balloon launch attempt.

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The BARN

PROGRAM TO BE ANNOUNCED AT THE MEETING

If you have some idea for a program you could present at this months meeting, bring it on down to the meeting room and share it with us. We have been have a bit of a lull in available programs. Steve Gomez, KE5O was to present a program about military radios but has to go out of town and did not have time to get his program together. He has promised it for the May meeting and it should be very interesting.

DUES DUES DUES

Those of you who have not paid your 2011 dues, should not be reading this BARN, so please delete this file immediately. If you continue to read this issue and have yet to pay your 2011 dues, all your DX contacts and QSL card from them will be confiscated and burned at the next possible date. All your antenna SWRs will rise to the level you will only be able to make extremely close non-repeater contacts and you will never have the corona arc you desire.

A "J" Driven 2-Meter Beam Antenna

A "J" element has plenty to offer for a small Yagi — and it simplifies feed line installation.

By Jim McDonald, WB0JQH

The "J" antenna, shown in *The ARRL Antenna Book* for many years, has appeared in various articles from time to time. Usually the antenna has been depicted as an alternative to the quarter-wave whip in mobile service or to the ground plane for base operation. However, it can be very effective as a driven element in a vertically polarized Yagi.

One difficulty encountered by builders of vertical beams is how to dress the coaxial transmission line away from the feed point of the antenna so that it does not degrade the performance of the director elements. By using the "J" for the driven element, the transmission line is below the elements and if used as shown in the illustration, it also acts as the support for the entire antenna.

The "J" element is made of 1/2-inch dia EMT conduit. The radiator portion is constructed from a 70-inch length of conduit and the matching section is 21 inches long. A 2-inch aluminum strap connects the two sections at a point 10 inches up the radiator. This results in a matching section 19 inches long and a radiator 39 inches long, which is about right for a center frequency of 147 MHz. A phenolic block is used as a spacer near the top end of the matching section to add some rigidity.

PVC pipe, 1/2-inch in dia, is used as the boom but any nonconducting material light enough in weight can be substituted for it. A small U bolt secures the boom to the driven element 18-1/2 inches down

from the top. Aluminum rods are used as the directors and reflector. Their lengths

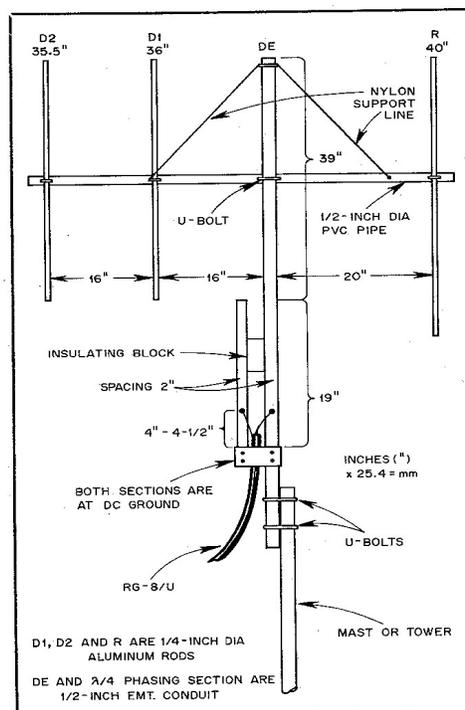


Fig. 1 — Details of a "J" driven 2-meter vertical beam antenna. The "J" consists of a half-wave vertical radiator fed by a quarter-wave stub matching section. The spacing between the two sides of the matching section should be two inches or less. The feed line may be moved along the matching section to determine the point of minimum SWR.

and spacing can be determined from the diagram.

As the drawing indicates, the antenna is supported off-center. Light nylon line keeps the boom perpendicular to the "J" element. Some question may arise concerning the 20-inch (0.25- λ) spacing of the reflector. A 16-inch (0.2- λ) spacing should yield slightly greater gain, but this small increase was sacrificed in lieu of better mechanical balance.

The adjustment for the proper match between the matching section and transmission line is quite simple. I find that securing the base of the beam to the side of a metal tower at a height of about six feet and pointing the directors skyward saves lots of tower climbing while making the adjustments. The outer conductor of the coaxial cable is tapped along the 19-inch section and the center conductor along the radiator until the lowest value of SWR is obtained. In my installation the point was found between 4 and 4-1/2 inches up the matching section.

The beam is mounted atop the tower, approximately 4 feet above a triband beam and fed with RG-8/U coaxial cable. Results have indeed been gratifying. While the antenna offers a fairly broad pattern, as may be expected with a vertical beam, it also shows significant gain in the forward direction. Mobiles have been worked 30 to 40 miles distant on simplex with dependable results and repeaters as far as 125 miles away can be accessed easily. Not everyone will obtain such results because of differences in topography, but for a small Yagi the "J" driven beam has plenty to offer.

*15701 E. Amherst Pl., Aurora, CO 80013

From the Internet

By Stan Horzepa, WA1LOU
Contributing Editor

This week, Surfin' relays an invitation to tell how ham radio touched your life and news about some new allies on the GPS QRM front.

Ham Radio Story Project

Dan Romanchik, KB6NU -- of [KB6NU.com](http://kb6nu.com/) (<http://kb6nu.com/>) fame -- has started a new website called the [Ham Radio Story Project](http://hamradiostoryproject.com/). (<http://hamradiostoryproject.com/>) The goal of his new site is to capture the human spirit of ham radio by collecting stories from hams around the world -- personal stories of how ham radio has touched lives, either the lives of ham radio operators themselves, or of the people who hams serve.

“I don't want to lose another great story because there isn't a place to tell it,” says Dan. He invites any and all hams to sign up as an author and contribute. Or, if you would prefer, you can tell your story to Dan and he will write it up for you.

Got GPS? Maybe Not For Long!

[Last week's Surfin'](http://www.arrl.org/news/surfin-got-gps-maybe-not-for-long) (<http://www.arrl.org/news/surfin-got-gps-maybe-not-for-long>) discussed a perceived threat to GPS (Global Positioning System) coming from a new nationwide broadband wireless network. On the heels of that blog post came [news](http://www.aviationweek.com/aw/generic/story_channel.jsp?channel=defense&id=news/asd/2011/03/30/02.xml) (http://www.aviationweek.com/aw/generic/story_channel.jsp?channel=defense&id=news/asd/2011/03/30/02.xml) that the US Departments of Defense and Transportation officials have expressed concerns to the FCC that the new service could potentially interfere with military GPS devices. So it looks like we are not alone in this battle and we have some big guns on our side!

Until next time, keep on surfin'!

Editor's note: Stan Horzepa, WA1LOU, is still worried (about GPS QRM).

To contact Stan, send e-mail (wa1lou@arrl.net; or add comments to the [WA1LOU blog](http://horzepa.blogspot.com/). (<http://horzepa.blogspot.com/>)

Local Happenings

rlrh.hudginc@gmail.com, Christian Holidays, US Holidays

May 2011 (Central Time)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3 7:30am - BTARC Meeting	4 8am - JCARC Net	5 8am - BTARC Net @ 146.25 7am - BARC Net	6	7
8	9	10 7:30am - Jcars meeting @	11 8am - JCARC Net	12 8am - BTARC Net @ 146.25 7am - BARC Net	13	14
15	16	17 8:30am - Dinner Social @ Ilaten	18 8am - JCARC Net	19 8am - BTARC Net @ 146.25 7am - BARC Net 7:30am - ARES meeting @	20	21 8am - BTARC Breakfast @ Mams
22	23	24	25 8am - JCARC Net	26 8am - BTARC Net @ 146.25 7am - BARC Net	27	28
29 7:30am - Beaumont Club	30	31	1 8am - JCARC Net	2 8am - BTARC Net @ 146.25 7am - BARC Net	3	4

Local Repeater Frequencies and Access Codes...

52.525 6 Meter FM National Calling Frequency
 145.010 BPT (W5SSV) Packet
 145.050 Packet
 145.070 Packet
 145.210 S.W.L.A.R.C. (W5BII, pl 103.5)*
 145.230 B.T.A.R.C. (N5BTC, pl 103.5)*
 145.470 J.C.A.R.C. (Open Patch, pl 103.5)*
 145.350 Sulphur A.R.C. (KC5PNH, pl 103.5)*
 146.450 Mid County Simplex
 146.520 National Simplex
 146.700 B.A.R.C. (W5RIN, pl 107.2)*
 146.730 S.W.L.A.R.C. (W5BII, pl 173.8)#
 146.760 B.A.R.C. (SW Lynx Link) pl 107.2
 146.860 Port Arthur (WD5GJP) pl 103.5

146.980 H.A.M.S. (Devers, N5FJX, pl 103.5)*# Down
 147.060 DuPont (AA5P, pl 103.5)
 147.180 Orange A.R.C. (W5ND, pl 103.5)*
 147.300 Mobil Oil (W5XOM) (pl 103.5)*
 147.420 Simplex
 224.920 Devers (KA5QDG) Down
 442.575 Devers (KA5QDG, pl 103.5) Down
 444.500 Beaumont-(WB5ITT, pl 100.0) Down
 444.700 B.A.R.C. (W5RIN, (Salt Grass) pl 107.2) on low power
 444.900 Mobil Oil (W5XOM, pl 103.5)

* Denotes transmitted PL tone. # Denotes echo link.

BARN YARD

The list of the last items donated to the club by a most gracious club member, Jack Covington, NG5F are listed below for your consideration. If you are interested in any of these items please contact Walt, W5CPH 892-5663

Description	Condition	New Value	High Sale price or make offer		
J. W. Miller 1000 watt low pass transmitter filter & Specification Card. Compare to *5 MFJ-704.	Good (???) Sealed - looks very good.	*5 60	35		
Bencher paddles, dust cover (custom made) and Instruction Sheet.	Very Good	110 (now)	100		
(1) straight key	Fair				
Co-Axial Cable Lightning Arres-tor (mfg. c. 1975)	(???) Sealed - looks good.	(Incl.†)		2	5

Please check with Walt, W5CPH if you are interested in any of the items, for its availability.

Here is another installment of:

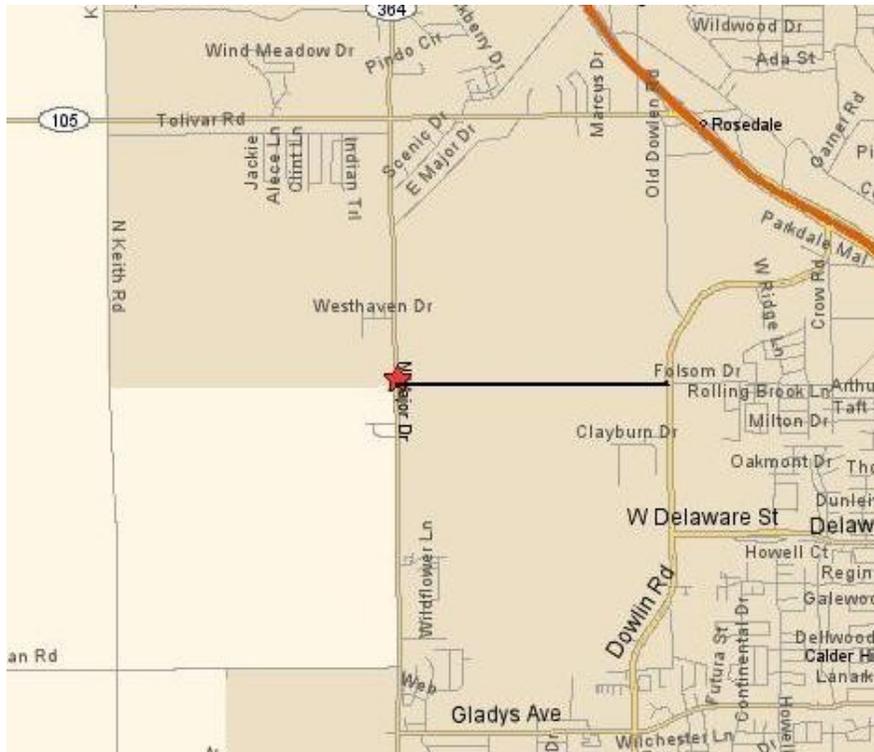
LB's Tips and Techniques.

Fuel economy tip this month: Keep a well tuned engine, including having fuel injectors cleaned periodically. Keep your tires inflated properly. Also keeping front end aligned. That will not only keep your tires from wearing prematurely but also will help fuel economy in some severe cases.

Thanks to LB Little, WB5YDA

The BARN

A Publication of the
BEAUMONT AMATEUR RADIO CLUB
 P.O. Box 7073 Beaumont, TX 77726



Club Directory...

BEAUMONT AMATEUR RADIO CLUB OFFICERS

PRESIDENT	WALT LOMBARD	W5CPH	892-5663
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EDITOR	EARL OSTER	K5UJC	833-4449

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VIVID PEEVEY	KF5CEF	
JOHN HARRINGTON	W5EME	665-6311

MEMBERSHIP INFORMATION

- | | | |
|---|---------|----------------|
| <input type="checkbox"/> FULL MEMBERSHIP..... | \$20.00 | |
| <input type="checkbox"/> ADDITIONAL FAMILY MEMBER.... | 5.00 | (ANNUAL RATES) |
| <input type="checkbox"/> BARN SUBSCRIPTION ONLY..... | 7.50 | |

NAME	CALL	LICENSE CLASS	ARRL (Y/N)	PHONE
ADDRESS	CITY/STATE	ZIP CODE	E-MAIL	

NEW MEMBERS: DUES ARE PRORATED MONTHLY THROUGH DECEMBER. SUBSCRIPTIONS TO THE BARN ARE GOOD FOR ONE YEAR (12 ISSUES) STARTING WITH THE FIRST ISSUE AFTER RECEIPT OF THE APPROPRIATE AMOUNT. MARK THE CORRESPONDING BOX ABOVE AND MAIL WITH YOUR REMITTANCE TO "TREASURER" AT THE ADDRESS ABOVE.