FEEDBACK

The OFFICIAL Newsletter of the
Georgian Bay Amateur Radio Club Inc.

Sponsoring
VE3OSR FM REPEATER 146.940- BARROW BAY
VE3OST FM REPEATER 145.290- OWEN SOUND
VE3GBT FM REPEATER 146.895- MARKDALE
VE3IJD PACKET BBS 145.630 KEADY

June 1996

REGULAR EVENTS

GBARC MEETINGS: 4th Tuesday of each month at the Billy Bishop Airport 7:30 P.M.

BREAKFAST MEETINGS: 2nd and last Saturday of each month at the Rockford Esso , 9:30 A.M.

GBARC INFORMATION: Information regarding membership should be directed to VE3NEM Tom Merner RR#4 Owen Sound, N4K5N6 371-0655

FEEDBACK: Submissions or letters to the editor should be directed to VE3TSA Tom St.Amand, 1232 3rd Ave . East, Owen Sound N4K2L5

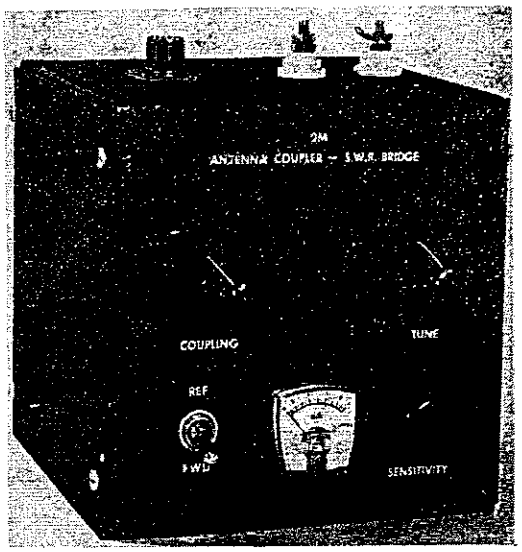
MINUTES OF THE MEETING OF MAY 28, 1996:

The meeting was opened by president Brad with 17 members and 2 visitors present. Jack VE3DTS moved acceptance of the minutes of the last meeting. Bob VE3XOX indicated the date shown for the atlantic ham radio presentation was incorrect. John VE3TXB seconded motion to accept the minutes. John VA3JRF and Bob VE3XOX reported that there was approximately sixty tables sold for the hobbymarket on June 1st. Steve VE3XKM gave the members present a report on the club's recent involvement in the O.S.C.V.I. parade in Owen Sound. There were seven members at the parade providing communication to the organization committee. Steve's use of his 2 meter to 440 mhz. crossband rig improved communications along the parade route. The parade committee was very pleased with the clubs assistance and will be providing a written letter to the club. Steve informed the club of the recent Canwarn training session held in Tiverton. John Hukstra from the Toronto weather office provided the training sponsered by the Kincarding club. Five club members attended the two hour session along with members of the Port Elgin and Kincardine clubs.

Brad VE3RHJ reported that Rick VE3HIO has changed the squelch board in the Owen Sound repeater and this has helped greatly with the recent repeater problem. Brad noted that the Markdale repeater output appears to be down. A similiar situation with the Barrow Bay repeater is occuring. Tom VE3NEM reported that he had discussed the use of M.T.O. road signs with local sources. The use of these signs appears to be cost prohibitive and it has been decided not to pursue the use of them.

Acceptance of the nominations as posted for 1996/1997 officers was moved by Jack VE3DTS and seconded by Aubrey VE3TUQ and passed. The officers will be President Bob VE3XOX, Vice President Steve VE3XKM, Treasurer Tom VE3NEM, Secretary Norm VE3NBJ, Bulletin Editor Tom VE3TSA, Program Director Dave VA3DSI and Technical Director Rick VE3HIO. Brad VE3RHJ presented Jack Ward from the Wiarton & Keppel District Airport. There was discussion of the clubs interest in setting up an emergency station at this location. A committee will be reviewing what type of station and equipment would be required and will report back. The committee members are VE3TUQ,VA3JRF,VE3RHJ, VA3CJM,VE3XKM and VE3XOX. Brad VE3RHJ announced that a new ham was attending the meeting and introduced Bob Henderson to the members present.

A presentation of new radio equipment was given by Mike Walker of Atlantic Ham Radio along with Ken Smith. The products were distributed for the members to see hands-on. The 50/50 draw was won by Mike Walker of Atlantic Ham Radio.....Minutes by Norm Ve3nbj



Two Meter Antenna Coupler and SWR Bridge

Richard Van Wickle W6TKA
P.O. Box 4051
Santa Barbara, Calif.

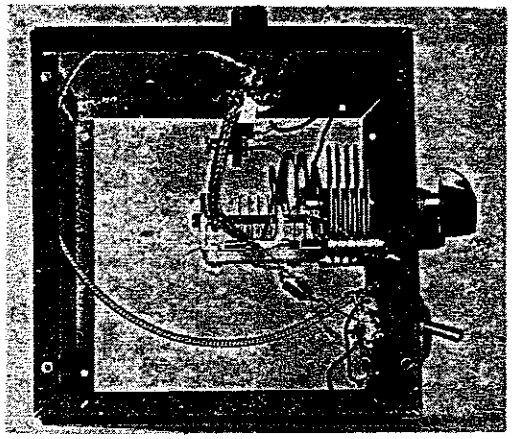
Parts Kit Available

Once upon a time there was a ham who could not get the SWR of his feedline low enough to suit him. Blaming his Monimatch, and other SWR-measuring equipment, he threw it all in the fireplace and stalked away. Hence, the expression "He burned his bridges behind him."

We hope that you will not want to throw this antenna coupler–SWR bridge into the fire. It was developed especially for the two-meter operator who does not like to use coaxial cable as an antenna feedline because of the high attenuation of coax at VHF and who hence prefers open-wire or TV-type balanced feedlines. The antenna coupler will match 52 or 72 ohm unbalanced lines to balanced lines of between 200 and 600 ohms. The SWR bridge is designed to be used with 72-ohm coaxial cable, but can be used with 52-ohm coax, with a simple modification, which will be described.

The manner in which the rf is obtained to operate both the reflected power and forward power bridges is rather unique. Coils are wrapped around the insulation of the center conductor of the coax, to provide both inductive and capacitive coupling. The standard arrangement for obtaining rf in reflected power meters is either by running a fine wire between the coax center conductor and the shield, or by running two conductors parallel to the center conductor, and using one of the conductors for the forward power pickup, and the other for reflected power. Both such arrangements are quite good up to about six meters, but at higher frequencies the picture changes. After much experimentation I concluded that the capacitive/inductive/coil coupling arrangement was the most satisfactory for two meters –at least in my own application. This system does not appear to cause an appreciable impedance "bump," and the measured power loss resulting from use of the two bridges is less than one-half watt.

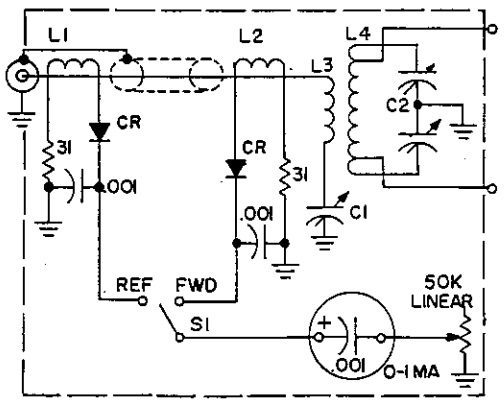
The accompanying photographs show the manner of front panel layout and actual construction of the coupler and bridges. The reflected power pickup coil is wound on the center conductor insulation close to the point



Interior of the two-meter antenna coupler—SWR bridge. The forward power pickup coil can be seen at the center of the unit. The two resistors shown make up the required 31 ohms. The forward power bridge is connected directly to the SPDT switch, while the reflected power bridge (top center, directly below the input connector) is connected to the switch through a length of shielded wire.

where the coax enters the cabinet; it consists of six turns of #26 enameled copper wire, wound clockwise. The shield braid of the coax does not cover the pickup coils. Rather, a heavy, low-inductance length of shield braid, approximately ⅝ in. long, connects the coax braid, leaving most of the pickup coil exposed. Completely shielding the pickup coil will decrease the rf pickup.

It should be pointed out that if the coils are not wound in the proper direction, and the resistors and diodes not connected to the proper ends of the coils, the bridges will not provide the desired indications—i.e., the reflected power bridge will read forward power, and vice-versa. The forward power pickup coil also consists of six turns of #26 enameled copper wire, but it is would counter-clockwise around the center conductor insulation. In the case of the reflected power bridge pickup coil, the resistor is connected to the starting end of the coil (with reference to the input end of the coax), and the diode is connected to the opposite end, while with the forward power bridge pickup coil the resistor is at the finish end and the diode at the starting end (again with reference to the input end of the coax).



Let me make it clear that the reflected power bridge will provide relative indications of standing wave ratio—but will not indicate specific levels of SWR. When the coaxial cable between the transmitter and the antenna coupler is properly matched, with the antenna coupler, to the antenna feedline, the SWR will be 1:1 and the meter reading will be zero. The forward power bridge reads, obviously, rf going into the antenna coupler link, and is a valuable aid in tuning the transmitter for maximum power output. It is not in direct relation to the reflected power, as in the conventional Monimatch. My chief concern was to develop a device which would provide a relative indication of SWR, indicate rf output for transmitter tuning purposes, and act as a matching device; this unit does all three nicely.

My two-meter transmitter has a power output of approximately 15 watts, and this device was designed for that power level. If the unit is to be used with higher-powered transmitters, the rf pickup, of both bridges, can easily be decreased by reducing the number of turns in the pickup coils.

The meter is a 0-1 ma. unit, which is made in Japan and stocked by Henry Radio Co. (Butler, Mo. and West Los Angeles, Calif.), selling for only $2.95. It is entirely adequate for this application. The cabinet is a 6 in. by 6 in. by 6 in. aluminum utility box, black-wrinkle finished.

Much tinkering lead to the conclusion that 31 ohms is the optimum value for the bridge resistors, for a 72-ohm line, in this particular unit. It is quite possible that you will find that a value of resistance somewhat different will be required in your own bridge for use with 72-ohm line. For 52-ohm line, cut-and-try will also be required to determine the value of resistance at which the best null is achieved when the coax is removed from the antenna coupler link (within the cabinet, of course) and attached to a 52-ohm dummy load—the same way I determined the optimum resistance for the 72-ohm coax, using a 72-ohm dummy load.

The resistors shown in the photograph are 39 and 150 ohm units (one each in both the

reflected power and forward power bridges) connected in parallel to achieve the 31 ohms. Naturally, if you happen to have a pair of 31 ohm ½-watt carbon resistors (for heaven's sake, don't use wire-wound resistors!) on hand, use them. I happen to have a large supply of 39 ohm and 150 ohm resistors, hence this combination to achieve 31 ohms.

The ratio of reflected power to forward power can best be adjusted by adding or subtracting turns on the pickup coils until a full-scale meter reading can be obtained in the forward position when the transmitter is tuned for maximum power output, and in the reflected power position when both the tuning and coupling controls of the antenna coupler are greatly detuned, with the antenna feedline connected to the antenna coupler output.

Maximum usefulness of the SWR bridge occurs when building or installing a new antenna. A dummy load of the same impedance as the antenna is connected to the output terminals of the antenna coupler, and then antenna coupler tuned for minimum SWR and the transmitter tuned for maximum power output, using the forward power bridge. The feedline from the new antenna is then connected to the coupler, and, without changing any antenna coupler or transmitter controls, the antenna is adjusted for the same minimum reflected power reading achieved with the dummy load.

If you are feeding your antenna with coax, the antenna coupler portion of the unit could be eliminated, with the bridges constructed as indicated. The coax shield braid would simply be stripped back for about ½ inch, in two locations, separated by three or four inches, and the pickup coils wound on the center conductor insulation. The broken shield braid would then be re-connected with a length of heavy braid or wire.

. . . W6TKA

C1—Hammarlund 50 mmf variable, MC-50
C2—E. F. Johnson Dual Section variable, 27 mmf. per section; 167-51
CR1, CR2—1N34A germanium diodes
L1, L2—6-turn pickup coil; #26 enameled; see text
L3—2 turns, #12 insulated, 1 in. dia. ⅛ in. spacing
L4—5 turns #12 tinned, ½ in. dia., ⅞ in. lg; tap 1½ turns from each end
S1—SPDT toggle switch

Message from the President

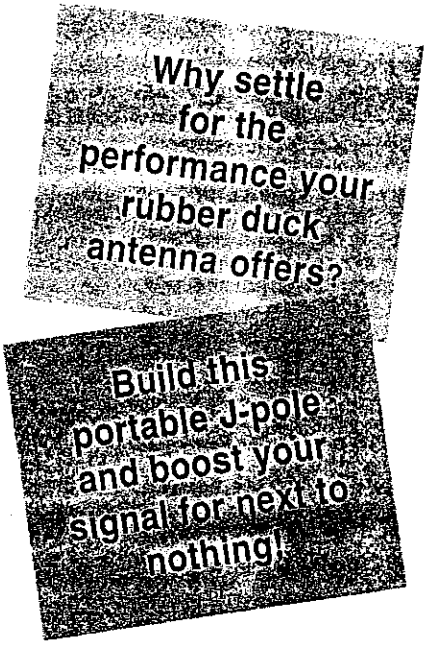
WELL HELLO AGAIN GANG ! ITS BEEN A COUPLE YEARS SINCE I WAS IN THE CLUB PRESIDENTS CHAIR. WELL FIRST OF ALL I WOULD LIKE TO THANK THE PAST CLUB EXEC. FOR THE FINE JOB OVER THE PAST YEAR. WE HAVE HAD SOME GOOD MEETINGS WITH SOME DIFFERENT GUESTS.. I AM HOPING WITH THIS YEARS EXEC. THAT WE WILL BE ABLE TO KEEP UP WITH THE GREAT JOB LAST YEARS EXEC. DID.

HOPE TO SEE YOU AT THE NEXT MEETING AT THE END OF THE MONTH AND DONT FORGET THE JUNE 22-23 FIELD DAY OUT AT JOHN'S (VA3JRF) PLACE THIS YEAR..FROM WHAT I UNDER STAND , TALKING TO BILL (VE3WLR) OF MILDAY THAT HE IS GOING TO TRY AND GET UP THIS YEAR AND BRING SOME NIGHT VISION, RADAR, LASER RANGE FINDERS AND SOME THERMAL IMIGING EQUIPMENT FOR ALL TO SEE AND PLAY WITH...

BEST TO ALL OVER THE NEXT YEAR AND HOPE TO SEE MANY HELPING HANDS 73 FOR NOW

BOB VE3XOX

An Easy Dual-Band VHF/UHF Antenna



By Jim Reynante, KD6GLF
PO Box 27856
San Diego, CA 92198

You've just opened the box that contains your new H-T and you're eager to get on the air. But the *rubber duck* antenna that came with your radio is not working well. Sometimes you can't reach the local repeater. And even when you can, your buddies tell you that your signal is noisy.

If you have 20 minutes to spare, why not build a low-cost *J-pole* antenna that's guaranteed to outperform your rubber duck? My design is a dual-band J-pole. If you own a 2-meter/70-cm H-T, this antenna will improve your signal on *both* bands.

Hams throughout the world have built and used J-pole antennas for years. My design is simple, lends itself to experimentation and alternative construction techniques, and has the following features:

- ❑ A 1.7:1 SWR or better throughout most of the 2-meter band and less than 2:1 across the 70-cm band.
- ❑ Easy set up. You can put it on the air in a matter of seconds, or store it in a space no larger than a small paperback book.
- ❑ Simple construction. The entire antenna system can be built in less than 30 minutes using TV twin lead and coaxial cable.

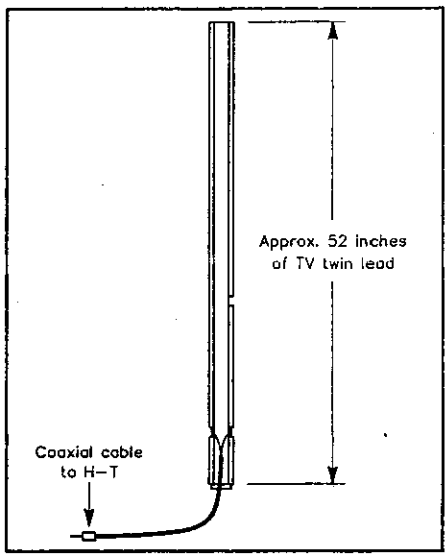


Figure 1—The J-pole antenna is approximately 52 inches long and may be hung from just about anywhere.

All of the SWR data in this article was measured at the transmitter end of the feed line. The reference impedance is 50 Ω, since most equipment is designed for this impedance.

J-Pole Antenna Theory

The J-pole is a vertically polarized antenna with two elements: the radiator and the matching stub. Although the antenna's radiator and stub are 3/4 wavelength and 1/4 wavelength, respectively, it operates as an end-fed half-wave antenna. Here's how you determine the lengths of the J-pole's two elements:

$$L_{3/4} = \frac{8856 \times V}{f}$$

$$L_{1/4} = \frac{2952 \times V}{f}$$

where:

$L_{3/4}$ = the length of the 3/4-wavelength radiator in inches
$L_{1/4}$ = the length of the 1/4-wavelength stub in inches
V = the velocity factor of the TV twin lead
f = the design frequency in MHz

These equations are more straightforward than they look. Just plug in the numbers and go. My design assumes that 146 MHz is the center frequency on the 2-meter band. You may, of course, substitute a center frequency of your choice. Even though the antenna is designed using a 2-meter center frequency, it also works well on 70 cm—as you'll see later.

Don't let the *velocity factor* throw you. The concept is easy to understand. Put simply, the time required for a signal to travel down a length of wire is *longer* than the time required for the same signal to travel the same distance in free space. This delay—the velocity factor—is expressed in

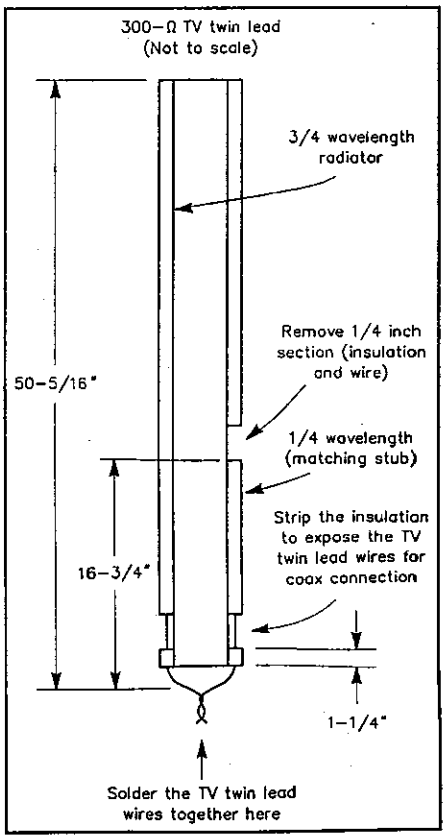


Figure 2—The basic J-pole layout. Note the areas where insulation and/or wire must be trimmed.

terms of the speed of light, either as a percentage or a decimal fraction. Knowing the velocity factor is important when you're building antennas and working with transmission lines. Because of the delay, 360° of a given signal wave exists in a physically *shorter* distance on a wire than in free space. This shorter distance is the *electrical* length, and that's the length we need to be concerned about.

Copper wire has a velocity factor of about 0.93, whereas TV twin lead has a velocity factor of 0.81 to 0.85 depending on who made it. If you're unsure about the twin lead you're using, just use 0.85 as its velocity factor. It's okay if it turns out to be too high. You'll be able to compensate by trimming the antenna. (It's better for the antenna to be too long than too short!) The TV twin lead I used had a velocity factor of 0.83. So, using the formulas, at 146 MHz the lengths would be approximately 50 5/16 inches for the 3/4-wavelength radiator and 16 3/4 inches for the 1/4-wavelength stub.

Construction

Because of the few materials needed to construct this antenna, you'll find it surprisingly easy to build. Start with approximately five feet of 300-Ω TV twin lead and about six feet of 50-Ω coaxial cable (see Figure 1) with a suitable connector (most H-Ts use a BNC connector). Use only flat 300-Ω TV twin lead, not foam core. RF can potentially short through the foam core.

Start by stripping off 1/2 inch of insulation at one end of the TV twin lead (see Figure 2). Solder the two exposed wires together. This is the bottom of the antenna. Next, measure up 1 1/4 inches from the soldered wires and remove the insulation from the twin lead to expose 1/8 to 1/4 inch of wire on both sides. Be careful not to nick or break these wires. They are your connection points for the coaxial feed line.

Now you're ready to measure and cut the elements of the antenna. On one side of the twin lead, measure up 50 5/16 inches from the center of the exposed wire and trim off the twin lead entirely (both conductors). This side of the twin lead is the radiator of the J-pole antenna. On the opposite side of the twin lead, measure up 16 3/4 inches from the center of the exposed wire and carefully remove a 1/4-inch section of insulation *and* wire. This is the 1/4-wavelength matching stub.

Turn your attention to the coaxial cable and strip the end without the connector. Separate and expose the center conductor from the braided shield. Attach the coax to the twin lead by soldering the center conductor of the coax to the longer element of the J-pole and the shield to the shorter of the two elements. Do this at the point where you removed the twin lead insulation and exposed the wire on both sides (see Figure 3).

Apply a generous amount of weatherproof silicon sealant to the exposed coax to prevent moisture from seeping into the line. Now tape the coax to the twin lead to relieve strain on the soldered connection points. Heat shrink tubing also works well for this application.

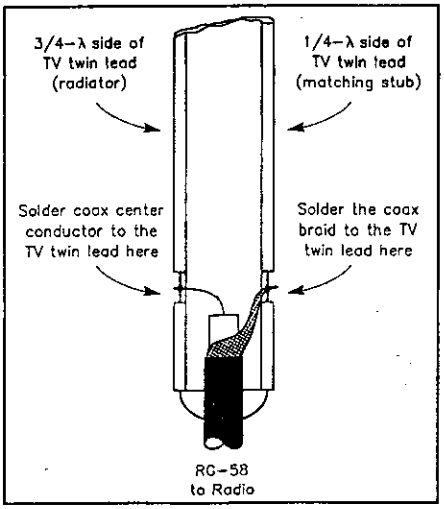


Figure 3—The coaxial feed line is connected directly at the antenna. Be careful to observe that the center conductor is soldered to the side of the TV twin lead with the longer conductor. The braid is connected to the side with the shorter conductor.

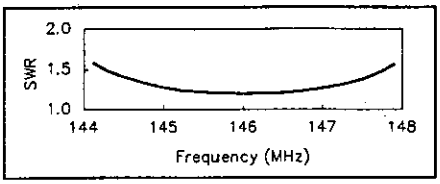


Figure 4—The SWR of the J-pole over the 2-meter band.

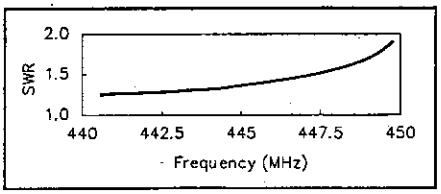


Figure 5—On the 70-cm band, the J-pole still presents a useable SWR.

Tuning

Hang your J-pole vertically by making a small hole at the top of the antenna and tying a length of twine or fishing line. Take care to keep the antenna away from metal objects that could detune it.

Tuning the J-pole is easy. Using a high-accuracy VHF/UHF SWR meter (borrow one if necessary), simply trim the length of the elements until you read a 1:1 SWR—or as close as you can get. Trim in *very* small increments; don't chop off an inch at a time! Remember to trim in a 3:1 ratio to maintain the 3/4- to 1/4-wavelength proportions. For example, if you cut 1/8 inch from the 1/4-wavelength stub, you must cut 3/8 inches from the 3/4-wavelength radiator (1/8 × 3 = 3/8).

NEW HAM COMPANION

I should mention that this design can cause RF coupling to the feed line. To avoid this, you can place ferrite beads on the coax at the feedpoint. An alternative is to use 3 to 5 turns of coax (1 to 2 inches in diameter) to create an RF choke at the feedpoint.

Results

Figure 4 shows my SWR measurements on 2 meters. As you can see, the antenna displayed a fairly flat SWR over most of the 2-meter band. At no point did it exceed 1.7:1. I achieved slightly higher, but useable, results on 70 cm (see Figure 5).

After hanging my J-pole from a tree limb and connecting my H-T, I switched to the frequency of a nearby repeater and gave it a try. I was able to talk with several local hams and they all said my signal sounded strong and clear. So far so good, but now came the true test. I switched to a repeater located about 17 miles north of my home, one that I couldn't use with my rubber duck antenna. I keyed the transceiver, announced my call sign, and was almost immediately greeted by a friendly voice. It worked! And not only that, it worked pretty well. The other ham said I was full-quieting into the repeater. Not bad for less than 30 minutes of work. Reception performance was also improved.

Summary

A J-pole antenna will never replace a beam or a full-size vertical mounted at 30 feet, but it offers relatively good performance for a minimum of materials, time and effort.

The applications of this antenna go beyond emergency or portable use. A permanent weatherproof enclosure can be built by mounting the J-pole inside a length of PVC tubing capped at the top. The PVC tube may then be placed at the top of a mast or similar structure. You can drill a small hole in the side of the PVC tube for the coax. Just make sure to seal it against the weather. The PVC will protect the antenna and can be painted to match the color of your house or apartment. If you live in an area where you can't put up outside antennas, hang the J-pole in your attic! If the antenna is located more than 10 feet from your radio, use a low-loss coaxial feed line such as RG-213 or equivalent.

Because of the low cost, simple construction, compact size and improved performance, there's no reason not to build several of these antennas. Keep one rolled up in your backpack when hiking, or in the glove compartment of your car! QST

GEORGIAN BAY AMATEUR RADIO CLUB 1996 MEMBERSHIP LIST

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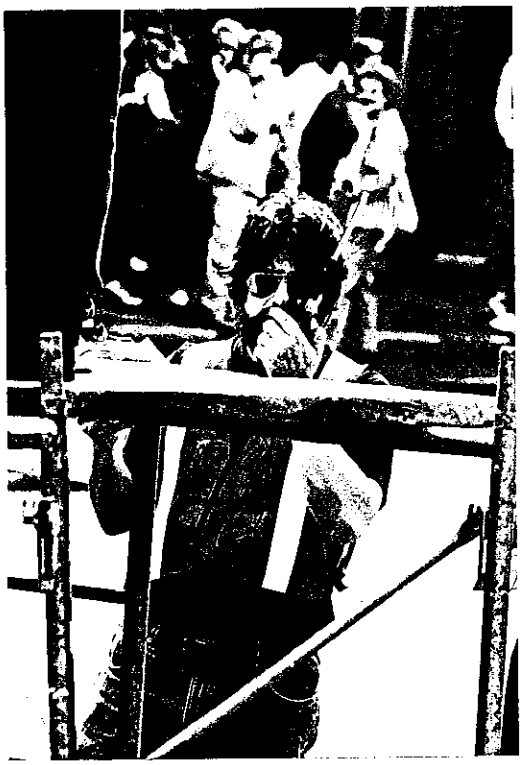
VA3ADX	ANDREW SVENSSON	29 GUEST ST, BRAMPTON	L6W1T7	*453-2228
VE3BFV	JIM HARRON	RR#2 KEMBLE	NOH1SO	371-1209
VA3CJM	JIM MCLAREN	BOX 1011 OWEN SOUND	N4K6H6	376-2835
VE3CUV	ROSS SNIDER	BOX 31 THORNBURY	NOH2PO	599-3870
VE3DIQ	BILL DOWKES	764 3RD AVE W. OWEN SOUND	N4K4P3	376-1921
VE3DKF	JIM FOOTE	49 EMERSON AVE,SAUBLE BEACH	NOH2GO	422-1769
VE3DLH	JERRY HUGHES	GENERAL DELIVERY PRICEVILLE	NOC1KO	924-2287
VA3DRB	BOB MACDAIRMID	RR#1 THORNBURY	NOH2PO	599-2710
VE3DTS	JACK AVIS	RR#6 WIARTON	NOH2TO	534-0151
VE3DQC	DAN HANINGTON	BOX 281 OWEN SOUND	N4K5P5	372-1491
VE3FFN	WALTER STOYKO	RR#1 PROTON STATION	NOC1LO	923-3544
VE3FOY	MIKE HESLIN	RR#2 KEMBLE	NOH1SO	376-9415
VA3GBR	GAIL ROBINSON	1534CARRINGTON RD,MISSISSAUGA	L5M2K1	858-8505
VE3HGL	HAROLD ROLFE	BOX 93 SOUTHAMPTON	NOH2LO	797-5389
VE3HMZ	BILL CLIFFORD	509-850 6TH ST E. OWEN SOUND	N4K6T7	376-3548
VA3HUD	ADEN SEAMAN	RR#1 OWEN SOUND	N4K5N3	371-3439
VE3HXX	IAN SUTHERLAND	1775 9TH AVE E. OWEN SOUND	N4K3G6	371-7739
VE3IBI	MORRIS WILKINS	RR#5 WIARTON	NOH2TO	534-2329
VE3IXG	DOUG HAMES	RR#1 PROTON STATION	NOC1LO	923-2387
VE3JJR	JOHN ROBINSON	1534CARRINGTON RD,MISSISSAUGA	L5M2K1	858-8505
VA3JRF	JOHN FOX	RR#2 TARA	NOH2NO	934-2389
VA3KMS	KEN SLACK	645 4TH ST "A" E. OWEN SOUND	N4K1C2	371-1456
VE3LKD	BOB DROINE	242 7TH ST E. OWEN SOUND	N4K1H9	371-2257
VA3LMO	LYNNE O'SHEA	RR#2 TARA	NOH2NO	934-2314
VE3LPD	LAVERNE WYVILLE	244 COLLINGWOOD ST W MEAFORD	N4L1M5	986-3731
VE3MTV	NORM BIGGAR	RR#2 OWEN SOUND	N4K5N4	376-0247
KA1QU	JACK KISSINGER	RR#2 KEMBLE	NOHISO	372-9359
N1QCM	HEATHER KISSINGER	RR#2 KEMBLE	NOHISO	372-9359
VA3RP	ROD PEARS	6062 8TH LINE, HILLSBURGH	NOB1ZO	855-6192
VA3RHJ	WENDY RODRIGUEZ	RR#7 MARKDALE	NOC1HO	986-4266
VA3SEA	JACK SEAMAN	RR#1 OWEN SOUND	N4K5N3	371-3439
VE3TDF	PAT O'SHEA	RR#2 TARA	NOH2NO	934-2314
VE3TFQ	JIM ROWE	BOX 707 DURHAM	NOG1RO	369-6596
VE3TTV	HENRY VANDERHEIDE	209-450 28th ST W. OWEN SOUND	N4K5X9	371-0467
VE3TUP	KLAAS VANDERHEIDE	BOX 707 DURHAM	NOG1RO	369-2309
VE3TUQ	AUBREY ALDERDICE	RR#4 MEAFORD	NOH1YO	538-3839
VE3TWK	JACK DOHERTY	2805 3RD AVE W. OWEN SOUND	N4K4T1	376-3440
VE3TWI	OKKE BOS	769 6TH ST "A" E. OWEN SOUND	N4K1H4	376-5473
VE3TYL	JIM LYTTLE	RR#2 SHALLOW LAKE	NOH2KO	371-1796
VE3UIC	JASON MCDONALD	RR#4 TARA	NOH2NO	934-2380
VE3UWD	HENRY OLSEN	373 12 AVE. APT 4 HANOVER	N4N2T4	364-1544
VE3VTO	DON SLOANE	RR#1 MAR	NOX1XO	793-3523
VE3WUD	RICHARD WELSH	RR#2 ALLENFORD	NOH1AO	934-0320
SWL	STAN GUZONAS	BOX 11 FLESHERTON	NOC1LO	924-2473
	BOB HENDERSON	584 4TH ST "A" WEST	N4K6A4	376-3278

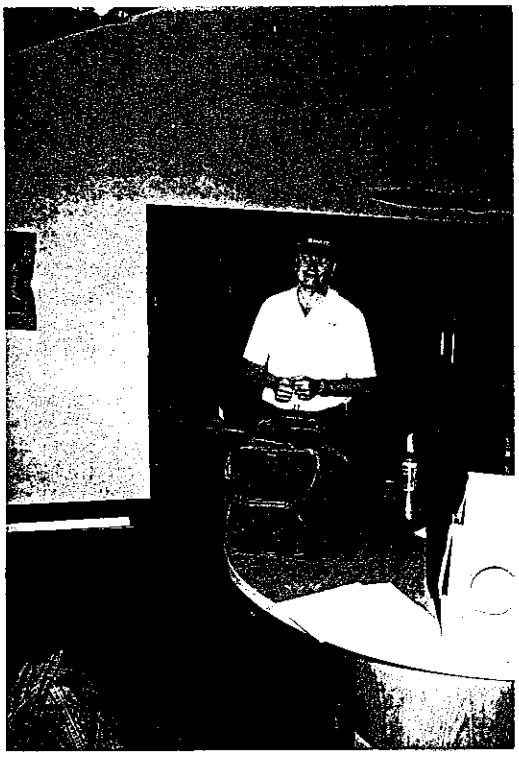
* = AREA CODE 905

This list is sorted by callsign suffix

MEMBERSHIP LIST CURRENT AS OF 11 June 1996 - 59 MEMBERS

OSCVI Parade





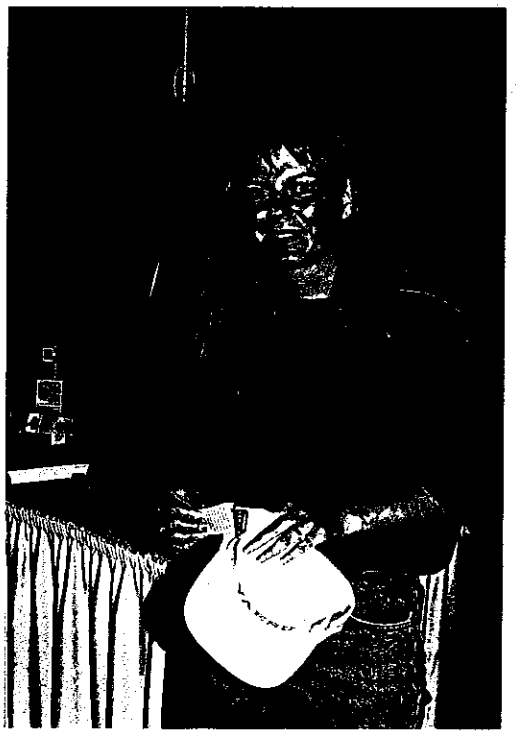
HobbyMarket results ... from VE3TSA

Well, I guess the HobbyMarket is old news by now but I had a few figures to pass on. Bear in mind that these are not official as at the time of writing this article, there were a few minor changes to make. Tom NEM will have the actual figures, when he gets finished with it. Anyway, I am happy to report we came out of this about $400 to the good. And that is after we paid back the Bruce ARC (Kincardine) the $250 they put in plus another $50 extra as a portion of the profits.

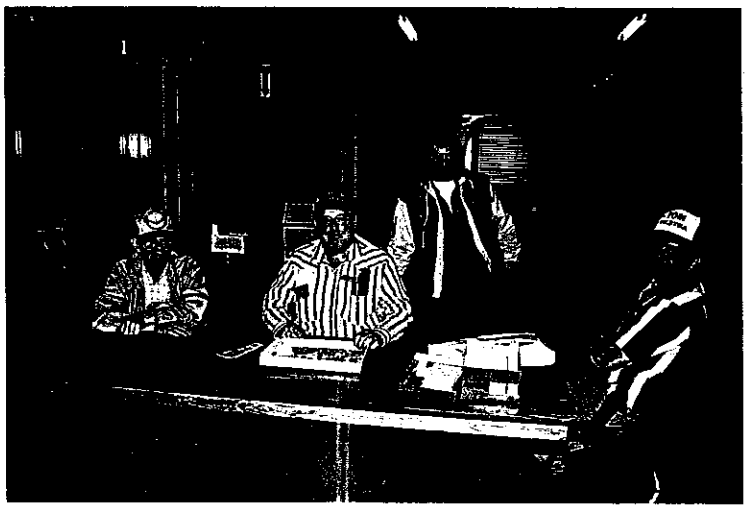
Our thanks to all our neighbour ARC's in the area for their help during and after the hobbymarket. I think the bayshore looked reasonably full. It's such a big area, I was afraid the event would look "unattended", but I was wrong. The 260 or so people that were there made a respectable gathering and the pictures from John TXB seem to prove it.

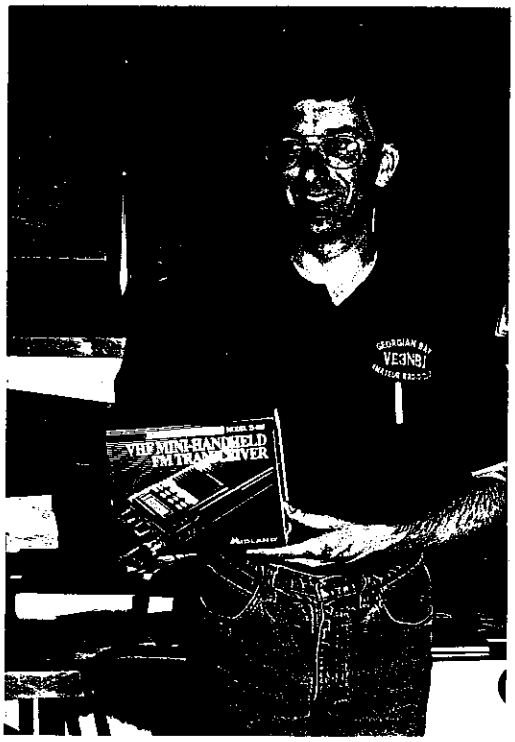
The Charity Auction netted almost $820 for three charities, the CNIB, the Canadian Mental Health Assoc and the Salvation Army.

Thanks to all involved in any way towards the success of our first HobbyMarket. Without your help we simply couldn't have done it. ..... 73 Tom

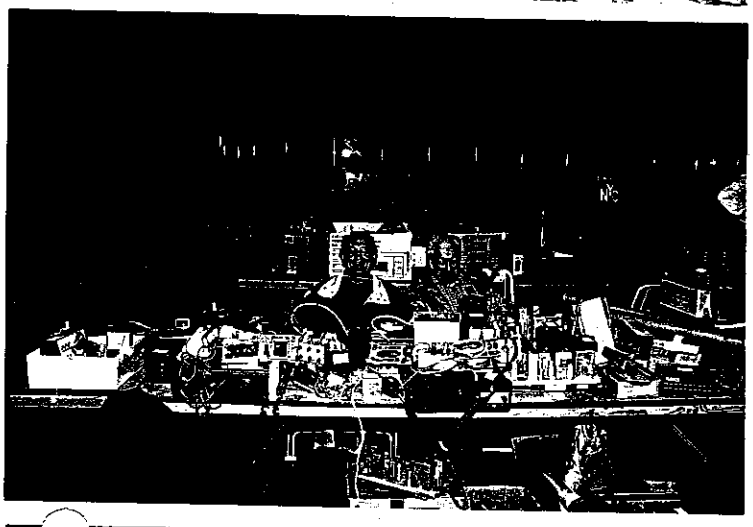


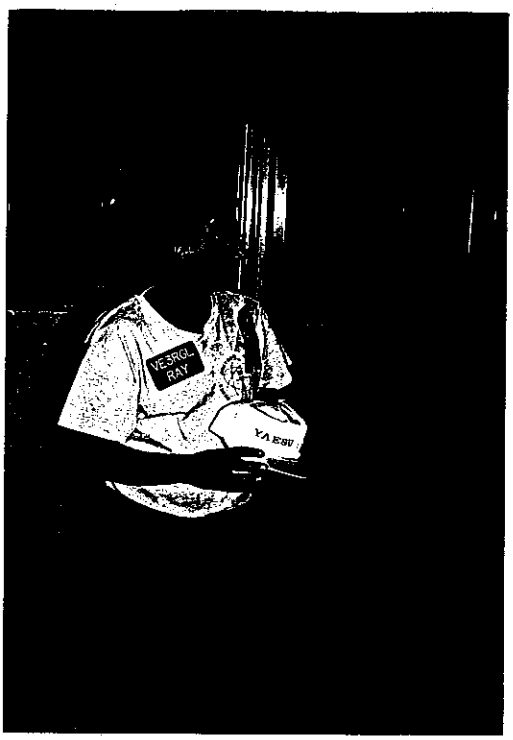
HobbyMarket 1996





HobbyMarket 1996





HobbyMarket 1996