Mohave Amateur Radio Club
November 2010 Newsletter

K7MPR

Club Officers

President – Bill Smith – KD7MIA
Vice-President – Richard Wiglesworth – K7RLW
Treasurer – Tammy Smith – KD7MIB
Secretary – Austin McGowan – N2CAT
Parliamentarian – Bob Weed – NX7A

Club Repeater Net

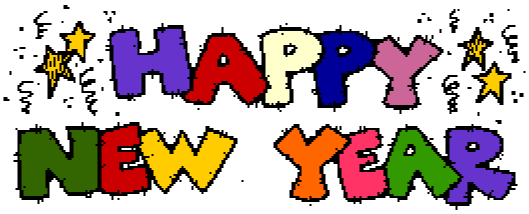
The club holds A weekly traffic and information net every Monday at 7:00 P.M. The frequency is 448.650 PL tone of 151.4
Support Your Club And Check In!

Club Meetings

The club meets on the first Tuesday of the month at the Hualapai Mountain Regional Hospital 3801 Santa Rosa Dr in Conference Room, Kingman, Az 86409.
All amateurs and visitors are welcome to attend.
For more information contact
Bill Smith - KD7MIA at 928-565-1136 or by email at bill1021@npgcable.com

Newsletter Articles Wanted

Working on a new kit or homebrew project?
Have you recently received a rare or interesting QSL card?
Send them in and I'll post them in the newsletter!



News From Around The World

10th Anniversary of ARISS

Posted: Dec 23, 2010

December 21, 2010 marked the winter solstice, a total lunar eclipse and the tenth anniversary of school contacts via ham radio in space through *ARISS*, Amateur Radio on the International Space Station. Since Astronaut William Shepherd's initial contact with the Burbank School in Burbank, Illinois, space station crew members and volunteer hams on the ground have conducted 565 successful contacts in 40 different countries, according to the AMSAT News Service.

One of the most active hams aboard the ISS has been Expedition 25 Commander Doug Wheelock, KF5BOC. Wheelock and the rest of his crew from Expeditions 24 and 25 returned to Earth on November 26 after more than five months in space. A new crew arrived on December 17, including two hams, US Astronaut Catherine Coleman, KC5ZTH, and the European Space Agency's Paolo Nespoli, IZ0JPA. The expedition commander is Cosmonaut Dmitry Kondratyev, who does not have an amateur callsign.

General Class Question Pool for 2011-2015 Released

Posted: Dec 23, 2010

The new pool of questions for the General Class (Element 3) license exam has been released by the Question Pool Committee of the National Conference of Volunteer Examiner Coordinators. The new question set will be used for exams administered on or after July 1, 2011, and will remain in use until June 30, 2015. According to the ARRL, the new question pool includes graphics and diagrams. The new question pool, as well as the graphics and diagrams, may be downloaded in various formats at http://www.ncvec.org/page.php?id=358.

Ham Congressman "Tweets" Message in Morse Code

Posted: Dec 16, 2010

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That's how Rep. Greg Walden (R-OR) -- who also happens to be W7EQI -- tweeted the news to his "followers" today that he had been named Chairman of the House Energy and Commerce Committee's Subcommittee on Communications and Technology. Among other things, the subcommittee's responsibilities include oversight of the FCC.

In a follow-up Twitter message, Walden explained that "The last tweet was Morse code! Just the ham radio operator in me having fun. It says I'll chair the communications and tech subcommittee." Walden is one of two ham radio operators in Congress. The other is Rep. Mike Ross, WD5DVR (D-AR).

The full text of Walden'sTwitter message, for those who are not Morse-conversant, is: "Will chair comm and tech sub 73s w7eqi"

Walden is also chairman of the House Republican Leadership Committee and the Republican Majority Transition Committee, which is overseeing the transfer of power in the House of Representatives from the Democratic Party to the Republican Party as a result of last month's elections.

Long-Delayed Echoes on 40 Meters

Posted: Dec 23, 2010

A ham in Germany has reported hearing echoes of his own signals on 40 meters, and even recorded them. The echoes returned some 46 seconds after each transmission by Peter Brogl, DK6NP, according to Newsline, which reported that Brogl first thought someone was recording his transmissions and retransmitting them, but he changed frequencies several times and still heard the echoes. Long-delayed echoes are not a new phenomenon – having been first reported in 1927 – but their cause is still a mystery. DK6NP's recordings are online at www.brogl.net/Audio/.

200 Meters and Up?

Posted: Dec 23, 2010

The Inter-American Telecommunication Commission (CITEL) has formally endorsed a proposal for the 2012 World Radiocommunication Conference (WRC-12) to grant a secondary allocation to amateurs in the medium-frequency (MF) band segment around 500 kHz. If approved, it would be the first worldwide amateur allocation on a wavelength higher than 200 meters since the beginning of radio regulation.

According to the *ARRL Letter*, the specific proposal calls for creating two small ham frequency segments, at 461-469 kHz and 471-478 kHz. Most experimental operations to date in this range have used very low speed Morse code, and signals have been received over distances of more than a thousand miles.

KG4IUM to Be Youngest Member of ARRL Board

Posted: Dec 23, 2010

A young woman who hopes to become an astronaut will become the youngest member of the ARRL Board of Directors in modern times, and perhaps ever, according to the *ARRL Letter*. Twenty-one year-old Andrea Hartlage, KG4IUM, was elected Southeastern Division Vice Director last fall and will take her seat on the board in January. Andrea is a junior at Georgia Tech, majoring in aerospace engineering, and hopes to become an astronaut in the future.

The 2004 Amateur Radio Newsline Young Ham of the Year, Andrea's interest in space was sparked by her visit to SpaceCamp, which is *CQ* magazine's major contribution each year as a co-sponsor of the Young Ham of the Year program

The Tower

Dear Ms. Jones
Patsy Insurance Co.
Wata'ohoh, HI 96999-0101

I am writing in response to your request for additional information for Block 3 of the Accident Report Form (ARF) I submitted to you on April 1, 1997. I put "poor planning" as the cause for the accident. You said in your letter that I should explain more fully. I trust the following detail will be sufficient.

I am an Amateur Radio operator and on the day of the accident, I was working alone on the top section of my new 80 foot tower. When I had completed my work, I discovered that I had, over the course of several trips up the tower, brought up about 300 pounds of tools and spare hardware. Rather than carry the now unneeded tools and material down by hand, I decided to lower the items down in a small barrel by using a pulley, which was fortunately attached to the gin pole at the top of the tower.

Securing the rope at ground level, I went back to the top of the tower and loaded the tools and material into the barrel. Then I went back to the ground and untied the rope, holding it tightly to ensure a slow decent of the 300 pounds of tools.

You will note in Block 11 of the Accident Report Form that I weigh only 155 pounds. Due to my suprise of being jerked off the ground so suddenly, I lost my presence of mind and forgot to let go of the rope.

Needless to say, I proceeded at a rather rapid rate of speed up the side of the tower. In the vicinity of the 40 foot level, I met the barrel coming down. This explains my fractured skull and broken collarbone. Slowed only slightly, I continued my rapid ascent, not stopping until the fingers of my right hand were two knuckles deep into the pulley. Fortunately, by this time I had regained my presence of mind and in spite of my pain, I was able to hold on to the rope. At approximately the same time, however, the barrel of tools hit the ground and the bottom fell out of the barrel. Devoid of the weight of the tools, the barrel now weighed approximately 20 pounds. I refer you again to my weight, shown in Block 11 of my submission.

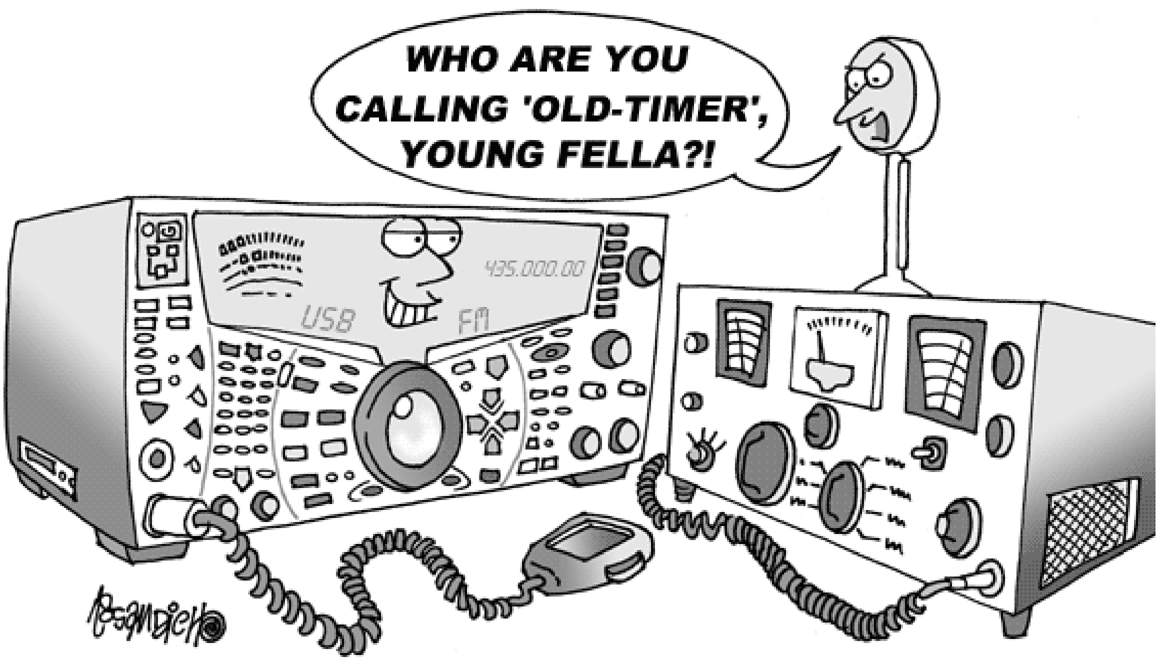
As you might imagine, I began a rapid descent down the side of the tower. In the vicinity of the 40 foot level, I met the barrel coming up. This accounts for the two fractured ankles, and the lacerations of my legs and lower body.

The encounter with the barrel slowed me enough to lessen my injuries when I fell onto the pile of tools and, fortunately, only 3 vertebrae were cracked. I am sorry to report, however, that as I lay there on the tools, in pain, unable to stand and watching the empty barrel 80 feet above me, I again lost my presence of mind and let go of the rope . . . . .

Sincerely,

Andy Clark, WA4PRF
TIARA (Tokyo International Radio Association)
Last modified 06/13/2007 10:16:44
By Joe Speroni

Copied from **http://www.speroni.com/Tower.html**



Radio – Rick
K7RLW

Tech Column

Ok, Ok, Ok. Here is the long awaited User Control Codes for the MARC Repeater system. When using these Auxillary Function codes, please be sure to identify prior to sending any DTMF (Touch Tone) digits.

Enjoy!

*1411 Announce Current Time and Date.
- #1 Key Radio and Identify.
- #2 While Radio is keyed, enter code.

45 + Digits – This allows you to test your DTMF keypad on your radio.
- #1 Key Radio and Identify.
- #2 While radio is keyed, enter 45 and the DTMF digits to test all without dekeying.

5*601 Transmit UHF Voice Identifier. (Sends out on UHF only).
- #1 Key Radio and Identify
- #2 While radio is keyed enter code.

5*611 Transmit UHF CW Identifier. (Sends out on UHF Only)
- #1 Key Radio and Identify
- #2 While radio is keyed enter code.

5*603 Transmit VHF Voice Identifier. (Sends out on VHF Only)
- #1 Key Radio and Identify
- #2 While radio is keyed enter code.

5*612 Transmit VHF CW Identifier. (Sends out on VHF Only)
- #1 Key Radio and Identify
- #2 While radio is keyed enter code.

65 Great Things About Ham Radio

(continued from last month)

Five years ago, on CQ's 60th anniversary, we ran a feature throughout the year titled "60 Great Things About Ham Radio," in which we listed five "great things" each month. The series was quite popular and we have continued to receive requests to reprint it. So now, in honor of our 65th anniversary, we're repeating the list—with a few updates as well as five more "Great Things About Ham Radio." "

46. Award-chasing
47. Double-hop sporadic-E
48. Worldwide DX on 6 meters (once or twice every 11 years)
[The current extended sunspot minimum has shown that mechanisms other than F2 propagation can offer intercontinental DX on the "magic band" at any point in the solar cycle.]
49. Tropospheric ducting
50. Gray-line propagation
51. TEP, chordal hops, etc.
52. Getting through on CW when nothing else will
53. Unexpected band openings
54. Building your own gear
55. Using gear you've built yourself
56. Operating QRP from some remote location
57. Experimenting with antennas
58. Working DX while mobile or while hiking
59. Experimenting with new modes and new technology
60. The opportunity to help build an internet that doesn't rely on the internet
61. DXing on your HT via IRLP and Echolink
62. Contributing to scientific knowledge about propagation
63. Keeping track of other people's GPS units via APRS
64. Ham radio balloon launches to the edge of space, and as always...
65. Reading CQ!

This is a **"REAL"** HAM!!!

We love you Bill! :-)

Special Events

I found this website that has a lot of contests listed. You can look at them for a week, the year or many other ways. I hope this will be of interest to someone in our group.
http://www.dxzone.com/cgi-bin/dir/jump2.cgi?ID=238

Happy New Year

Find and circle all of the words that are hidden in the grid.
The remaining letters spell the name of a popular location for celebrating New Years Eve.

S	E	I	B	A	B	N	E	W	Y	E	A	R	S	E	V	E	Y
G	C	H	A	M	P	A	G	N	E	T	Y	I	M	N	S	T	T
E	N	S	S	U	E	T	H	C	D	A	N	C	E	D	R	H	R
S	Q	I	N	F	E	T	O	O	D	M	U	A	Y	O	E	I	A
E	F	C	G	F	I	N	A	S	L	S	U	E	R	F	K	R	P
D	H	E	F	N	F	R	R	R	R	I	A	S	E	D	A	T	S
A	I	U	S	E	I	A	S	E	B	R	D	N	I	E	M	Y	K
R	B	B	T	T	E	S	M	T	I	E	S	A	F	C	E	F	R
A	M	T	A	Y	I	A	N	N	O	R	L	A	Y	E	S	I	O
P	I	S	W	L	E	V	R	O	E	F	T	E	E	M	I	R	W
N	D	E	A	R	L	E	I	N	I	H	J	V	C	B	O	S	E
D	N	E	T	R	V	O	N	T	E	T	E	A	S	E	N	T	R
A	I	S	W	I	A	A	O	R	I	N	A	S	N	R	O	H	I
Y	G	Y	E	O	B	I	T	N	T	E	I	R	R	U	K	C	F
O	H	W	I	N	E	I	T	S	S	K	S	I	O	H	A	T	S
N	T	Y	L	I	M	A	F	N	O	I	S	A	C	C	O	R	T
E	T	S	A	E	F	S	N	O	I	T	U	L	O	S	E	R	Y
S	R	E	Z	I	T	E	P	P	A	Y	F	R	I	E	N	D	S

APPETIZERS
BABIES
BALLOONS
BANNERS
BUFFET
CELEBRATE
CHAMPAGNE
CONFETTI
DANCE
DAY ONE

DECORATIONS
END OF DECEMBER
EVENTS
FAMILY
FATHER TIME
FEAST
FESTIVITIES
FIREWORKS
FIRST OF JANUARY
FRIENDS

HATS
HOLIDAY
HORNS
KISS
MIDNIGHT
MUSIC
NEW YEARS DAY
NEW YEARS EVE
NOISEMAKERS
OCCASION

PARADES
PARTY
PUNCH
RESOLUTIONS
SINGING
STREAMERS
THIRTY FIRST
TIARAS
WINE
YEAR IN REVIEW

Home Brew Corner

A TAPE-MEASURE BEAM FOR RDFING

Joe Leggio, WB2HOL, designed this antenna while searching for a beam with a really great front-to-back ratio to use in hidden transmitter hunts. It exhibits a very clean pattern and is perfect for RDF use. You can construct this beam using only simple hand tools, and it has been duplicated many times.

WB2HOL's first design requirement was to be able to get in and out of his car easily when hunting for a hidden transmitter. He accomplished this by using steel "tape measure" elements, which fold easily when putting the antenna into a car and yet are self supporting. They also hold up well while crashing through the underbrush on a fox hunt.

WB2HOL decided to use three elements to keep the boom from getting too long. He used inexpensive Schedule-40 PVC pipe, crosses and tees that can be found at any hardware store for the boom and element supports. He used a simple hairpin match, consisting of a 5-inch length of #14 solid wire bent into the shape of a U, with the two legs about 3/4 inch apart. This gave in a very good match across the 2-meter band after he tweaked the distance (1-inch on his prototype) between the halves of the driven element for minimum SWR.

You can cut the 1-inch wide tape-measure elements with a pair of shears, chamfering the ends of the elements. Be very careful—the edges are very sharp and will inflict a nasty cut if you are careless. Use some sandpaper to remove the sharp edges and burrs and put some vinyl electrical tape on the ends of the elements to protect yourself from getting cut. Wear safety glasses while cutting the elements. See **Fig 44** for dimensions.

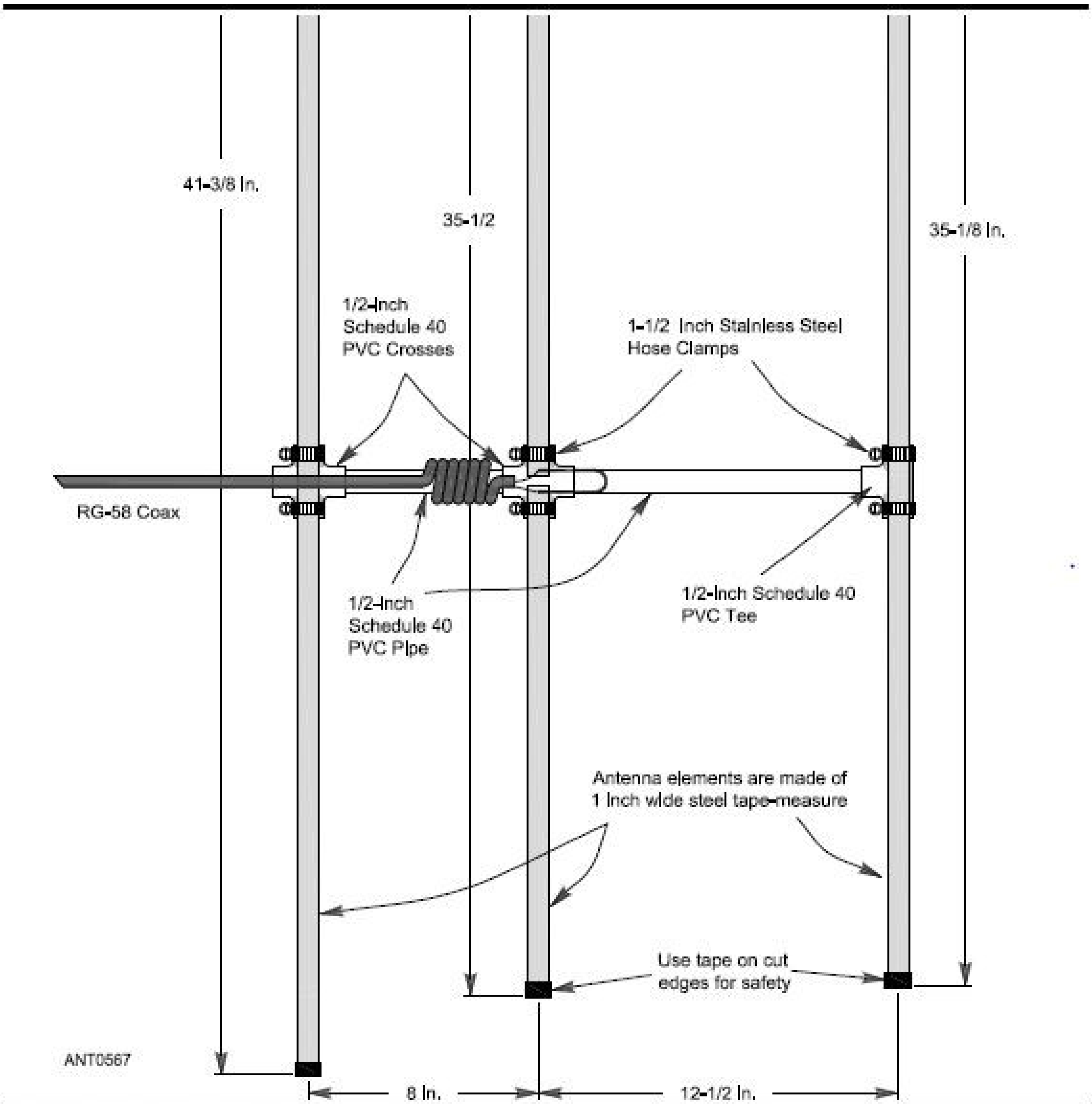


Fig 44—Tape-measure beam dimensions.

The RG-58 coax feed line is wound into a 8-turn coil along the boom to form a choke balun. The coil is covered with vinyl black tape to secure it to the boom. Make sure you scrape or sand the paint off the tape-measure elements where the feed line is attached. Most tape measures have a very durable paint finish designed to stand up to heavy use. You do not want the paint to insulate your feed-line connection! If you are careful, you can solder the feed line to the element halves, but take care since the steel tape measure does not solder easily and the PVC supports can be easily melted. Tin the tape-measure elements before mounting them to the PVC cross if you decide to connect the feed line in this fashion.

If you decide not to solder to the tape-measure elements, you can use two other methods to attach the feed line. One method employs ring terminals on the end of the coax. The ring terminals are then secured under self-tapping screws or with 6-32 bolts and nuts into holes drilled in the driven-element halves. However, with this method you cannot fine-tune the antenna by moving the halves of the driven element in and out.

The simplest method is simply to slide the ends of the feed line under the driven element hose clamps and tighten the clamps to hold the ends of the coax. This is low-tech but it works just fine.

WB2HOL used 11/2-inch stainless-steel hose clamps to attach each driven-element half to the PVC cross that acts as its support. This allowed him to fine-tune his antenna for lowest SWR simply by loosening the hose clamps and sliding the halves of the driven element in or out to lengthen or shorten the element. He achieved a 1:1 SWR at 146.565 MHz (the local fox-hunt frequency) when the two elements were spaced about 1 inch apart.

Fig 45 shows the hose-clamp method for attaching the driven element to the PVC cross, along with the hairpin wire and feed-line coax. Some builders have used rubber faucet washers between the tape-measure elements and the PVC-cross fittings on the director and reflector. These allow for the tape to fit the contour of the PVC fitting better and will make the antenna look nicer. It is normal for the reflector and director elements to buckle a bit as they are tightened to the PVC tee and cross if you don't use faucet washers. You can also eliminate the buckling if you use self-tapping screws to attach these elements instead of hose clamps. The beam will not be as rugged, however, as when you use hose clamps.

Fig 45—Photo of driven-element mounted to PVC tee using hose clamps. The hairpin match wires is shown here soldered to the tape measure elements, along with the RG-58 feed line.

This beam has been used on fox hunts, on mountain tops, at local public-service events, outdoors, indoors in attics—just about everywhere. The SWR is typically very close to 1:1 once adjusted. Front-to-back performance is exactly as predicted. The null in the rear of the pattern is perfect for transmitter hunts.

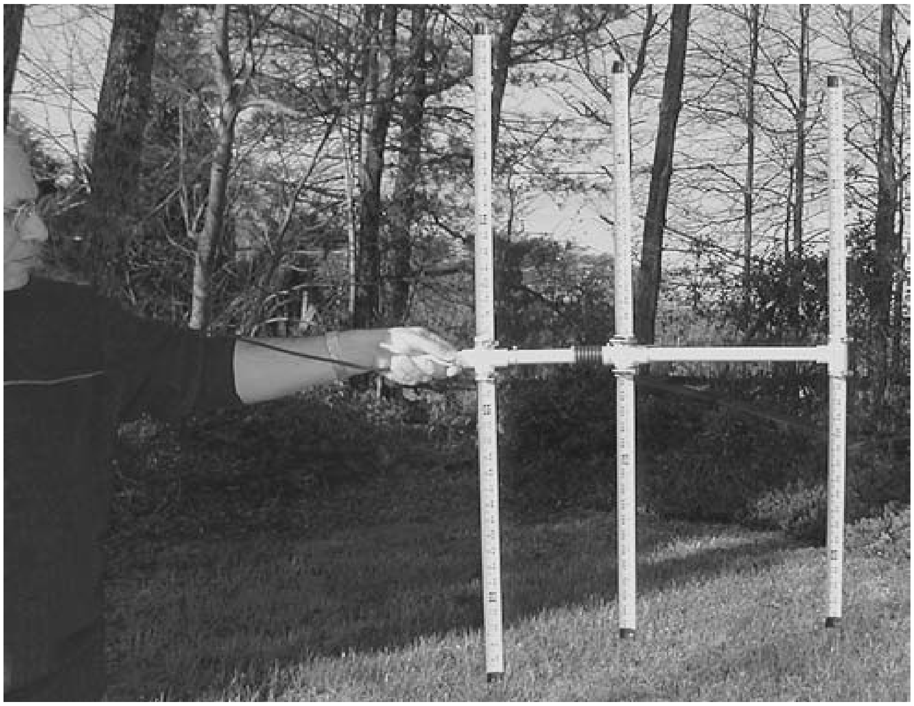


Fig 46—Photo of complete tape-measure beam, ready to hunt foxes!
Thank-you to John Wiman for the submission!

Items for Sale or Trade

If you have an item for sale or trade that you would like to list here
please email me at ke7bkp@k7mpr.net
Be sure to include description, picture, price and contact info!
Do you know of a club member that needs some get well wishes?
How about someone with a birthday coming up and
you'd like to announce it in the newsletter?
How about a special announcement?

Do you have a cool photo (ham radio related) or some soap box comments to share with other club members? Why not consider submitting an article for the Newsletter. We're always looking for material for the Newsletter and feedback from club members goes a long way towards keeping the Newsletter interesting as well as stamping the club "personality" on our monthly publication. Email me at ke7bkp@k7mpr.net