



SHACKNEWS

HIGHVELD AMATEUR RADIO CLUB

FEBRUARY 2011

COMMUNICATION IS THE NAME OF THE GAME

Meeting A very good turnout at this months meeting. Ton gave a talk on the pros and cons of using LMR400 coax-most interesting. Another point of discussion is the upcoming Hobbitech which will take place on 14 & 15 May. It was decided that the club will participate again this year. The practical antenna day will now take place on Sunday 10 April at the QTH of Rex, ZS6REX. This could be a long session so braai fires will be made available. This day will be open to amateurs. More in the next issue of SN.

SSC Meeting The get together will be held at the home of Berridge and Sandra on the 19 March 2011.

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Antenna installation tips

From 73 Magazine July 1978 (Might be in a previous issue of SN)

1. Keep horizontal antennas as high as possible - at least 25 (7.62 M) or 30 feet (9.14 M) above the ground or buildings.
2. Bend the dipole into a vee if you like, but avoid bending the ends if at all possible. Don't be overly concerned with the antenna's orientation.
3. Feed horizontal flattops at the centre rather than at the ends; balun matching coils are nice, but are not absolutely necessary.
4. Use high-quality coax feedline; its advantages far outweigh its disadvantages. Small-diameter coax is okay up to about 500 Watts.
5. Vertical antennas are good, provided they are worked against a good ground system. But they tend to be noisy on receiving and may aggravate TVI and BCI.
6. Protect your antenna against lightning and ground it whenever you're not using it. You may be very sorry if you don't!
7. Use a SWR meter or what-ever to check out and adjust your antenna, but don't get hung up on SWR. It can't always work out to 1:1.
8. Install a good station ground using connections to cold-water pipes and/or ground rods driven into the earth. (This goes hand in hand with lightning protection.)
9. Use an antenna coupler or matching network in the coax line if for no other reason than getting added harmonic suppression. The ones with built-in SWR bridges and RF power meters are very handy and allow continuous monitoring.
10. Use a low-pass filter between the transmitter or transceiver and the antenna coupler - don't give harmonic-caused TV! a chance!

11. Multiband trap antennas are fine, but can be frustrating to adjust if you've never "pruned" an antenna before. Be prepared to do some tweaking to get consistent performance from band to band.

12. Beams, rhombics, and other advanced antennas will add punch to your signal, but cut your teeth on some basic types first.

13. If your antenna doesn't work properly, check for continuity and look for shorts in the line; also check the SWR carefully. Double check all solder joints and make sure all connections are mechanically sound. Above all, don't try to force power into an antenna that doesn't want to load up - find out what the problem is before ruining your equipment

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EFFECTIVE RADIATED POWER

ERP CHART

EXAMPLE: Your running 100 watts into a 6 db gain antenna.
Whats your ERP?
Refer to the chart below.

Antenna	Watts	100 Watts input
Gain in dB	Multiplier	ERP
1	1.2	120
2	1.6	160
3	2.1	210
4	2.5	250
5	3.2	320
6	4.0	400
7	5.1	510
8	6.3	630
9	8.0	800
10	10.2	1020
11	12.6	1260
12	15.9	1590
13	20.0	2000
14	25.1	2510
15	31.6	3160
16	39.9	3990
17	50.2	5020
18	63.3	6330
19	79.5	7950
20	100.0	10000

The chart uses 100 watts as an example.

Go down the left column and find the gain of your antenna.

This would be 6 db in our example.

Read across to get the watts multiplier....4.....in this example.

Read across to the right of the column and find your answer of 400 watts ERP!

These figures are assuming that you are getting 100 watts to the antenna from the end of your feedline and do not reflect any loses in it or the antenna and you know the gain figures for the antenna.

You should see that with every 3db increase, your effectively doubling the ERP.

You can calculate any power input to your antenna by just using the watts multiplier to get your answer.

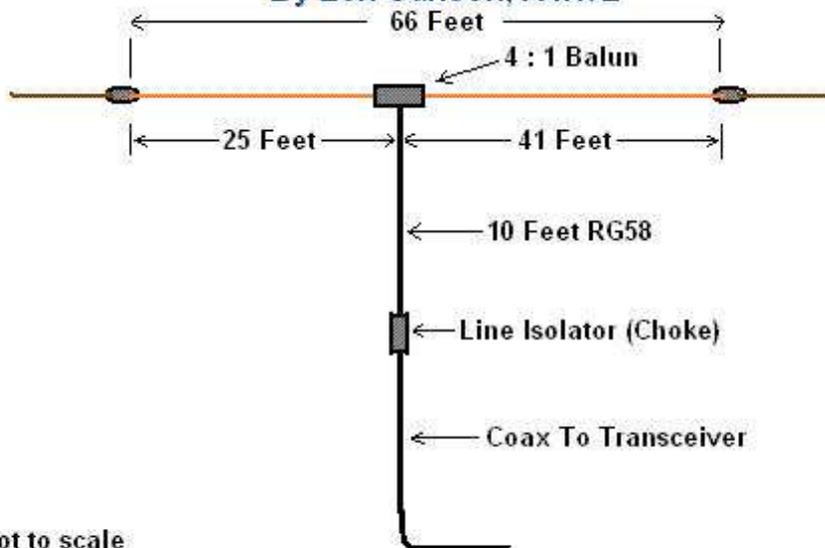
An assortment of useful antennas found at this website.

http://www.mds975.co.uk/Content/amateur_radio_antennas_04.html

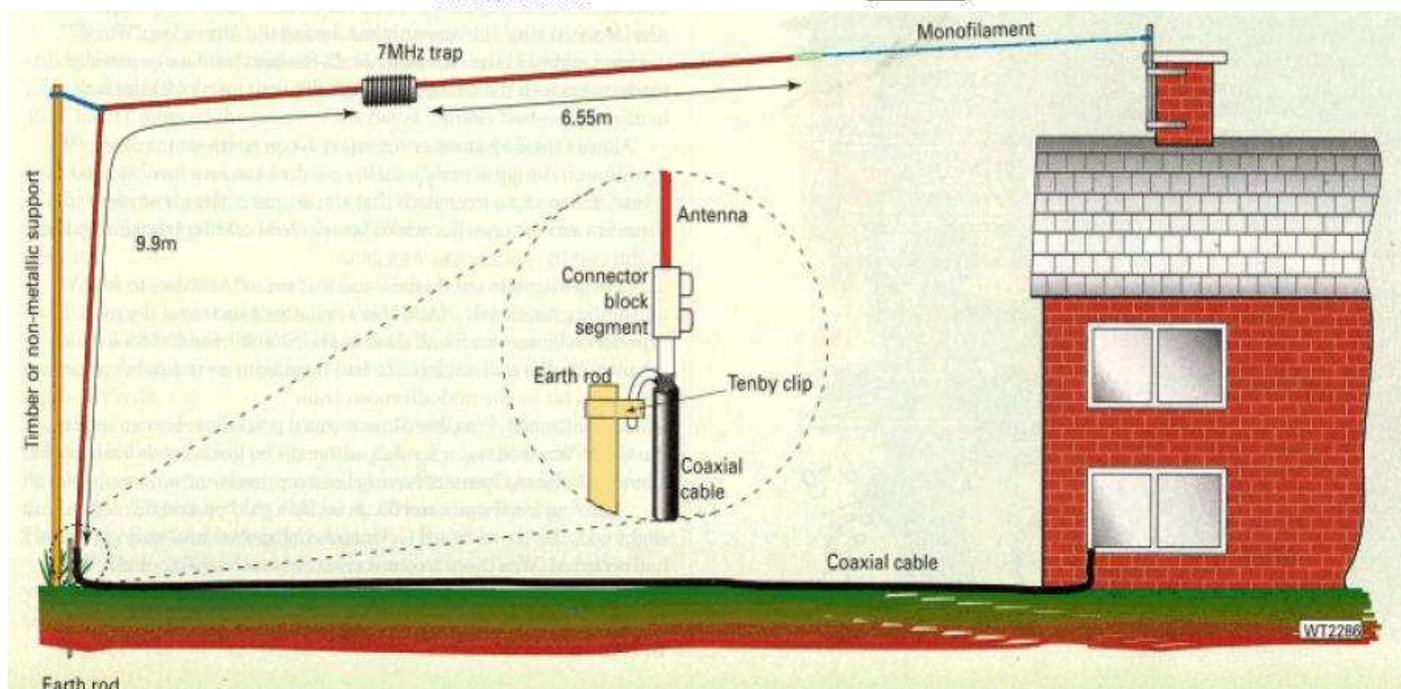
Have a look for more info

Tnx to ZS6KED for the info

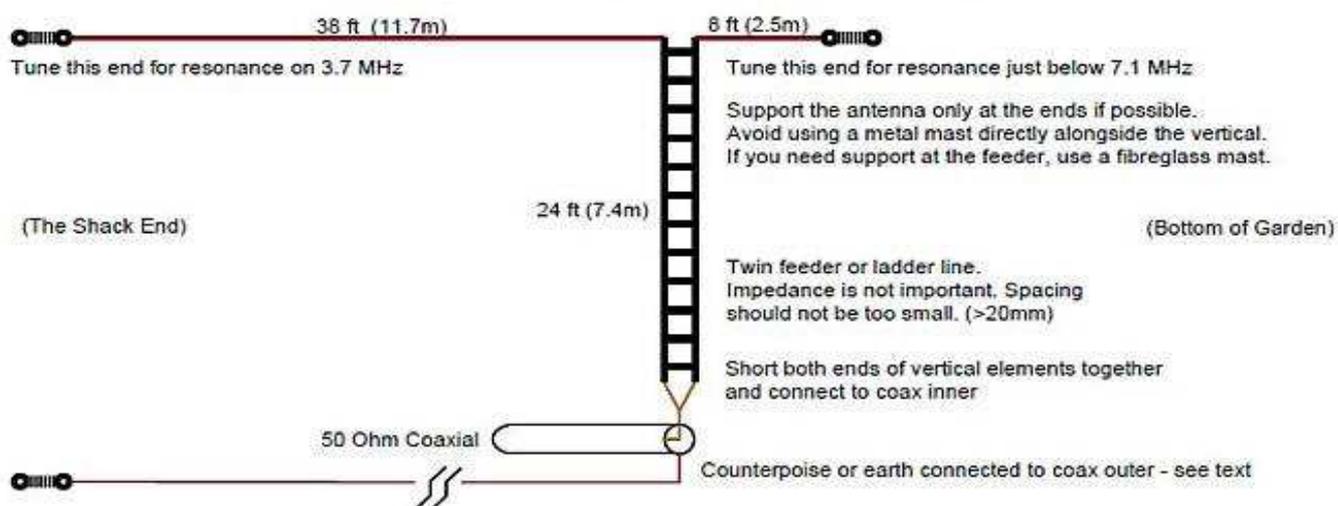
NEW CAROLINA WINDOM By Len Carlson, K4IWL



Not to scale



A 46 ft multi band antenna for small gardens that works well on 80 meters
Main bands (@~50 ohm) are 80m / 40m / 30m / 17m / 15m / 12m
Other bands (see text): 20m / 10m



INSTANT LADDER LINE

CLIP-ON WIRE SPREADERS



- * Inexpensive
- * Light & strong
- * UV resistant
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- * Lowest possible RF loss
- * Re-usable: clip on, clip off
- * Build a ladder line in minutes!
- * Also makes great folded dipoles



Details, prices, antenna tips and much more:
www.instantladderline.co.za

To order: info@instantladderline.co.za
 (Resellers welcome!)

INTERESTING STUFF

The first couple to be shown in bed together on prime time TV was Fred and Wilma Flintstone.

The first novel to be written on a typewriter was "Tom Sawyer."

Each king in a deck of playing cards represents a great king from history:

- Spades - King David
- Hearts - King Charlemagne
- Clubs - Alexander the Great
- Diamonds - Julius Caesar

Intelligent people have more zinc and copper in their hair.

Many years ago in Scotland, a game was invented. It was ruled "Gentleman Only ... Ladies Forbidden." and so the word GOLF entered the language.

CLUB INFORMATION

Postal address PO Box 19937 Sunward Park 1470

Website <http://www.zs6hvb.za.net>

Back issues of Shacknews available on the club website

e-mail zs6hvb@zs6hvb.za.net

Repeater 145.1875 MHz input - 145.7875 MHz output

Linked to 70 cm - 438.850 Mhz (Sunday bulletins)

Bulletins Sunday morning - 145.7875 MHz & 7062 KHz @ 08h45.
 Relay - 80M - 3662KHz

Monthly meeting venue

Germiston Methodist Church
 Room at back of the offices
 Lady Duncan Rd
 Germiston

3rd Saturday of the month at 14:30

Committee

Chairman	Ton van Dijk	ZS6ANA	011-432-5494
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Club bank details

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