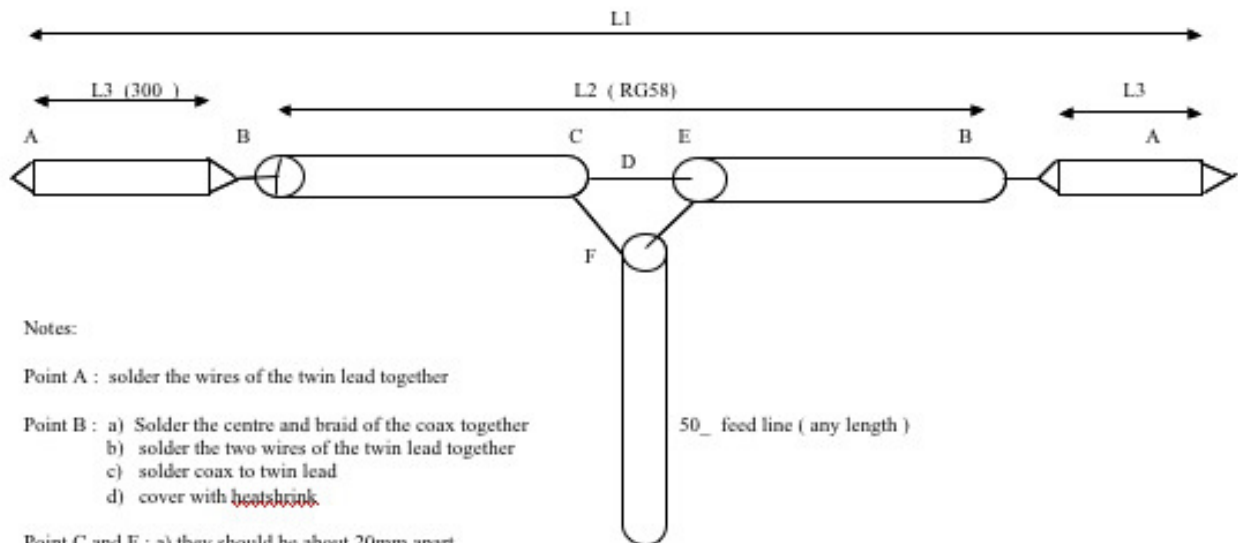


Coaxial Dipole (Double Bazooka)

The coaxial dipole antenna consists of a half-wavelength section of coax line with the shield opened at the center and feed line attached to the open ends of the shield. The outside conductor of the coax acts as a half-wave dipole in combination with the open wire end sections of the antenna. The inside sections do not radiate, but act as quarter-wave shorted stubs which present high resistive impedance to the feed point at resonance and tends to cancel reactance as frequency off resonant frequencies, thus increasing band width.

The antenna can be cut for any operating frequency, from 160-meters down. The RG-58U is capable of handling a full kilowatt. This design is broad-banded will provide low SWR over the entire 80 and 40 meter bands. Construction techniques are not critical. It can be put together with insulators and relief strains or thrown together in an emergency with just twisting and taping. How well it's built will determine how long it stays up of course.

The coaxial dipole antenna is perfect for stealth work. As it is insulated it can be placed in trees, under eaves or next to house trim even in attics. It can be put up as a dipole, inverted V, vertical dipole and sloper. Its ends can be bent to accommodate unusual spaces. The 40 meter antenna can be used for 15 meters.



Notes:

Point A : solder the wires of the twin lead together

Point B : a) Solder the centre and braid of the coax together
b) solder the two wires of the twin lead together
c) solder coax to twin lead
d) cover with ~~heatshrink~~ ~~heatshrink~~

Point C and E : a) they should be about 20mm apart
b) strip off outer cover
c) cut braid and connect Braid at C to Braid at F, and braid at E to centre conductor at F

Point D : Centre conductor is continuous through this joint

Support points (by clamping etc) C, E and F to reduce strain

Dimensions guide

Freq	L1	L2	L3
3.7Mhz	37.90m	26.77m	5.56m
7.15Mhz	19.61m	13.84m	2.87m
14.175Mhz	9.88m	6.99m	1.45m
21.225Mhz	6.6m	4.67m	0.97m
28.85Mhz	4.85m	3.43m	0.71m

Notes

$$L1 = \text{total length of antenna} = \frac{140}{f(\text{Mhz})} \text{ m}$$

$$L2 = \text{centre coax section} = \frac{99}{f(\text{Mhz})} \text{ m}$$

$$L3 = \text{Stub : 300_twin lead} = \frac{L1 - L2}{2} \text{ at each end}$$