CHOKING BALUN FOR HF BANDS

Choking balun for HF and upper MF bands. (1.5MHz - 30MHz).

Requiring a choking balun to isolate the potential feed-line common mode RF on the coax cable for HF/MF bands 1.5MHz - 30MHz. A simple coax cable wound on to a ferrite toroidal core was chosen.

- Prevents unwanted RFI by eliminating feedline common mode currents and radiation
- All power goes to the antenna, improving efficiency
- Reduces noise or EMI picked-up by your coax shield
- Power is balanced between driven elements of antenna

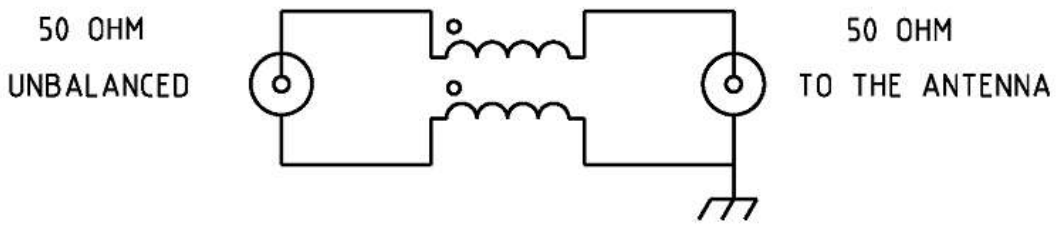

Figure 1 Schematic of the 1:1 choking balun

Type	Choking Balun
Ratio	1:1
Frequency Range	1.0 ~ 30MHz
Choking Impedance	1k Ohms (-21dB) minimum. *Ref: Figure 3*
Core Used	FT240-43 Ferrite Toroid Core
Number of turns	14 (7 + 7). *Ref: Figure 2*
SWR	1:1 *Ref: Figure 5*

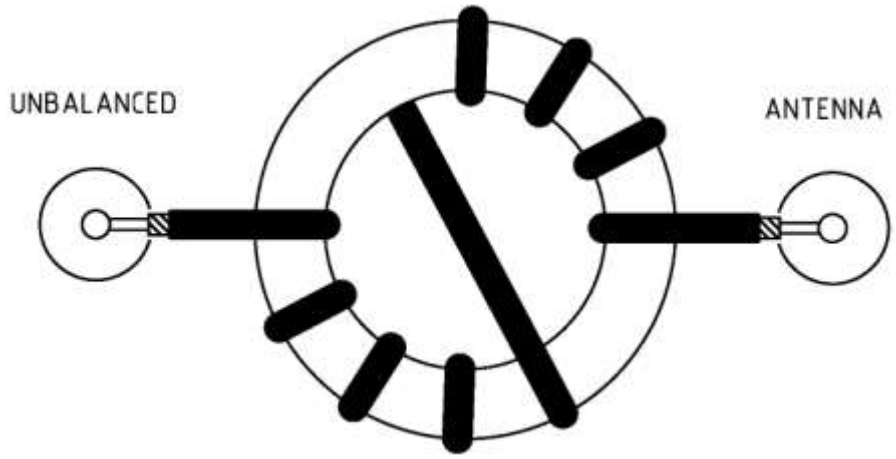

Figure 2 Winding details of the 1:1 choking balun

Construction

The construction was simply to wind 14 turns of RG58 coax onto a FT240-43 Ferrite Toroid Core. The result of 14 turns achieved an average of 40uH lumped value inductive reactance to common mode RF currents from approximately 1.0MHz to 30MHz.

Parts list.

- FT240-43 Ferrite Toroid Core
- About 1.0mtr of RG58 coax.

Photo 1 Choking balun assembled.