



## TZ-1840 Balun Instruction Manual

The TZ-1840 can be used as a balun for your tri-band beam, wire dipole, inverted Vee or other HF antenna that has a balanced input.

### 1. Guidance for all installation types

To assist with corrosion protection for the RF connectors and balanced output screws, a layer of plastic insulation tape followed by a layer of self-amalgamating tape (bhutal rubber) tape may be used. The electrical tape assists in making removal of the tape easier when maintenance is required. Use drip loops to form a single coil of cable that assists with

corrosion protection and provides stress relief for the RF coaxial feeder. Do not over tighten the balanced output connection terminal nuts. Use only enough torque to cause the spring washers to “flatten”. Further torque may crack the internal lock tight adhesive making later removal of the balun difficult. Simply “nip up” the nuts just past finger tight.

### 2. Using the Balun with a beam antenna.

The bottom face of the TZ-1840 incorporates a small notched section to permit the balun to be centered on the boom of the antenna. Locate the balun approximately 5 – 10 cm from the driven element so that the coaxial connector faces towards the mast. Use the two (2) supplied cable ties to fix the balun to the boom.

Attach two (2) fly leads to the output terminals, in accordance with the beam manufacturers specification. In most instances 15cm (6 inch) long fly leads of 2.5mm<sup>2</sup> PVC covered copper wire are

appropriate. Heat shrink tubing, covering the joint, may be used for added mechanical joint strength. Eyelets with a 6 – 8mm diameter hole should be attached to the balun end of the fly leads. *Fly leads are available from RippleTech separately.*

Attach your 50 ohm coaxial feed line to the SO-259 coaxial socket. It is advisable to use a cable tie to secure the feed line to the boom with a stress relief loop within 15 cm of the balun. Follow the instructions for all installation types (section 1.) and the balun installation is complete.

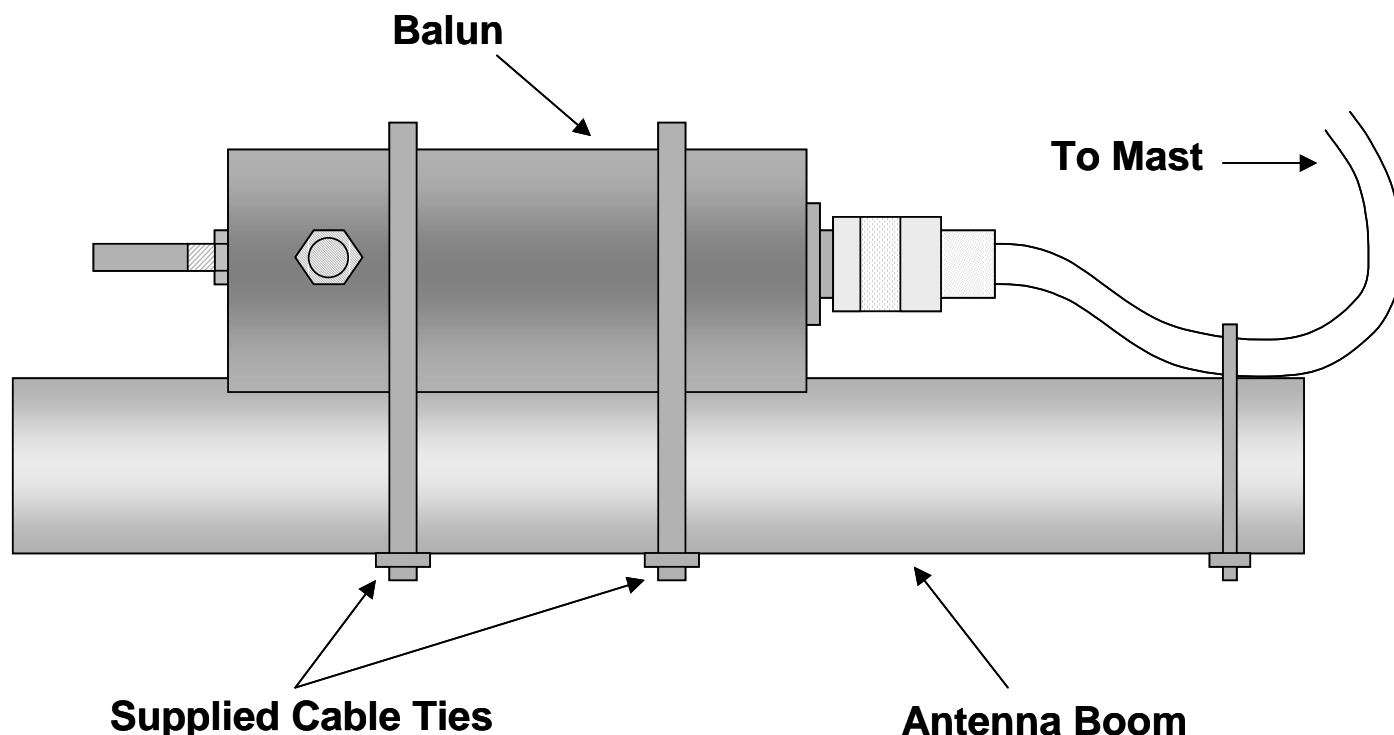


Figure 1 - Typical Beam Antenna Installation

### 3. Using the Balun with a wire antenna.

The top face of the TZ-1840 incorporates a galvanized steel support eye-bolt. This eye-bolt should be used to support the weight of the balun and attached coaxial cable. Do not use the balanced output connections to support the weight of the balun and feeder cable, as this is likely to overload the eyelets of a wire antenna. Make a loop or use egg insulators to provide strain relief for the leads that connect to the stainless steel output connections. Alternatively, if your wire antenna is constructed of PVC covered copper, cable ties may be used to secure nylon rope to the antenna wires

approximately 15 cm from the feed points. Secure the rope so that “virtual” fly leads are created providing some slack to the balun terminals. Attach your 50 ohm coaxial feed line to the SO-239 coaxial socket. If possible, also make a loop with the feeder cable and use a cable tie to secure the cable to the top eye bolt. This will reduce the stress on the input connector and also provide a drip point for rain and condensation away from the RF connectors. Follow the instructions for all installation types (section 1.) and the balun installation is complete.

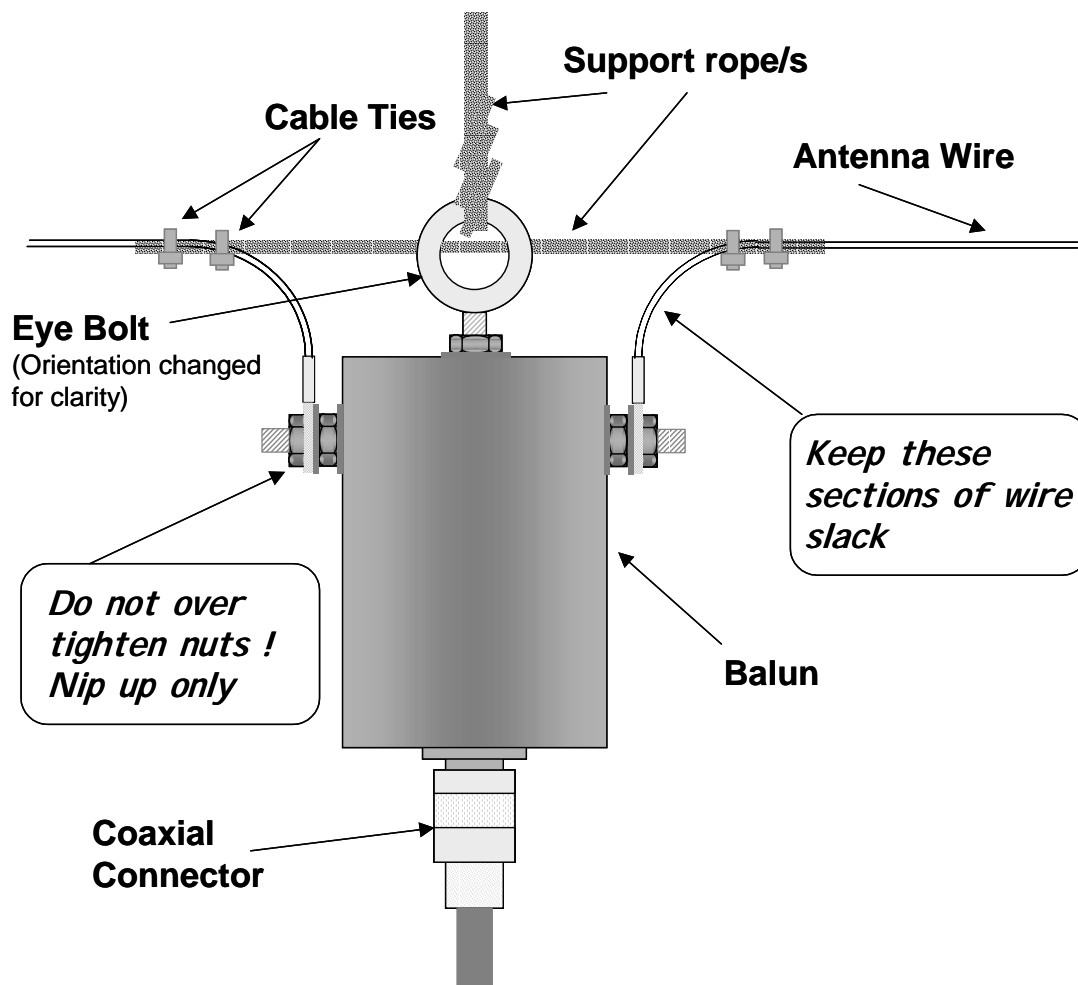


Figure 2 - Typical Wire Antenna Installation

### 4. Specifications

Type	Linear Ferrite Core
Coil Diameter	28 mm
Frequency Range	1.8 – 40 MHz, useable to 45 MHz
Input Loss	1.8 – 40 MHz < 0.25 dB
VSWR	Better than 1.25 : 1 (50 ohm load at input)
Power Handling	1000 Watts PEP