



308 Industrial Park Road
 Starkville, MS 39759
 USA Pit: (662) 323-9538 FAX: (662)

Model BN-4000D
High Power Balun for Dipoles
with Type SO-239 Connector

INSTRUCTION MANUAL

General Description

The BN-4000D is a current-type balun whose primary function is to provide the proper current paths between unbalanced coaxial cable and a balanced antenna feedpoint. The BN-4000D uses ferrite beads over a short length of coax cable to choke-off the flow of RF on the outside of the coax shield.

Construction

The BN-4000D uses type 77 ferrite beads on a length of RG-303 Teflon dielectric cable. The 200°C rating of both the beads and the cable along with a very high thermally conductive potting compound contribute to the conservatively rated continuous duty cycle power rating of 2000 watts.

SPECIFICATIONS

Electrical

Impedance 50 ohms
 Frequency Range..... 1.6 to 30 MHz
 Insertion Loss negligible (less than 1 dB)
 SSB/CW Power Handling Capabilities4000 W PEP, 2000 W Ave.
 RTTY Power Handling Capabilities..... 2000 W continuous duty cycle
 Maximum Operating Voltage 1900 Volts RMS

Mechanical

Net Weight1.3 lb (0.59 kg)
 Dimensions 3 1/4" x 6 1/4" (8.3 cm x 15.9 cm)
 Input Receptacle.....Teflon SO-239
 Output Receptacle standard terminal lugs
 Weather Protection weatherproof housing with thermally conductive potting

NOTE: This balun may also be used in beam installations from 3 to 30 MHz.

Mounting on a Dipole System

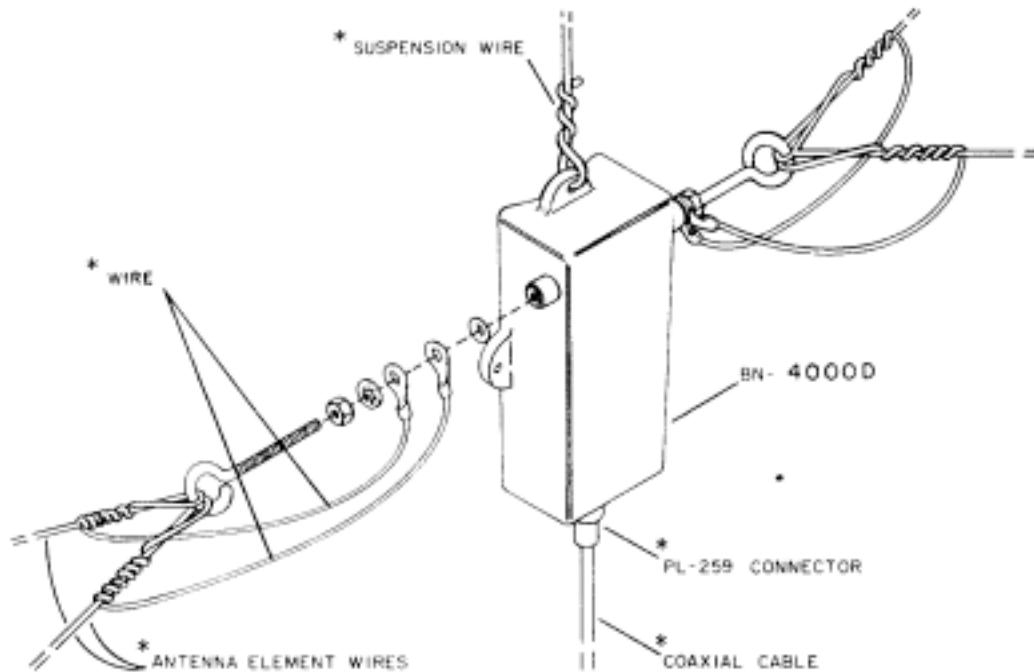
Refer to Figure 1

Solder dipole wires to lugs.

Hook dipole wires to eyebolts (the balun replaces the insulator completely).

Insert the two eyebolts into the fittings at top of balun, and tighten all hardware.

Connect coax to input receptacle on bottom of balun and tighten.



* ITEMS NOT SUPPLIED AS PART OF THIS PRODUCT

Figure 1
Dipole, Doublet or inverted "V" Antenna Arrangement

NOTE: An ohmeter check of the balun at the input will show a DC open. This is normal!

CAUTION:

Although the BN-4000D is conservatively rated at 2000 watts average power, do not exceed the maximum power rating for your transmission line. For example, RG-8 and RG-213/u coax is rated at 2000 watts at 30 MHz and 3700 watts at 10 MHz

CAUTION:

This substance permanently seals the coaxial connection and is very difficult to remove from the connector.

Customer Service

All requests, inquires, warranty claims, or for ordering replacement parts, contact:

Hy-Gain
308 Industrial Park Road
Starkville, Mississippi 39759 USA
Phone: 662-323-9538
FAX: 662-323-6551

Weatherproofing

The coaxial connection may be weatherproofed with hand-moldable plastic Coax-Seal®. This substance should be applied liberally to the connection and pushed into tight areas for complete sealing.

PARTS LIST

Part No.	Description	Qty
879958	Balun Assembly.....	1
879957	Parts Pack, 244S.....	1
540066	Eyebolt 1/4" x 1 1/2"	2
554099	Nut, Hex 1/4" x 20.....	4
677555	Lug, 1/4.....	4
562961	Lockwasher, internal, 1/4"	4
850050	Coax-Seal®.....	1

hy-gain® LIMITED WARRANTY

Hy-Gain Warrants to the original owner of this product, if manufactured by **Hy-Gain** and purchased from an authorized dealer or directly from **Hy-Gain** to be free from defects in material and workmanship for a period of 12 months for rotator products and 24 months for antenna products from date of purchase provided the following terms of this warranty are satisfied.

1. The purchaser must retain the dated proof-of-purchase (bill of sale, canceled check, credit card or money order receipt, etc.) describing the product to establish the validity of the warranty claim and submit the original or machine reproduction of such proof of-purchase to **Hy-Gain** at the time of warranty service. **Hy-Gain** shall have the discretion to deny warranty without dated proof-of-purchase. Any evidence of alteration, erasure, or forgery shall be cause to void any and all warranty terms immediately.
2. **Hy-Gain** agrees to repair or replace at **Hy-Gain's** option without charge to the original owner any defective product under warranty, provided the product is returned postage prepaid to **Hy-Gain** with a personal check, cashiers check, or money order for \$8.00 covering postage and handling.
3. Under no circumstances is **Hy-Gain** liable for consequential damages to person or property by the use of any **Hy-Gain** products.
4. Out-of-warranty Service: **Hy-Gain** will repair any out-of-warranty product provided the unit is shipped prepaid. All repaired units will be shipped COD to the owner. Repair charges will be added to the COD fee unless other arrangements are made.
5. This warranty is given in lieu of any other warranty expressed or implied.
6. **Hy-Gain** reserves the right to make changes or improvements in design or manufacture without incurring any obligation to install such changes upon any of the products previously manufactured.
7. All **Hy-Gain** products to be serviced in-warranty or out-of-warranty should be addressed to **hy-gain, 308 Industrial Park Road, Mississippi 39759, USA** and must be accompanied by a letter describing the problem in detail along with a copy of your dated proof-of-purchase.
8. This warranty gives you specific rights, and you may also have other rights which vary from state to state.