



GPG-2B

5/8 Wave Ground Plane for 142 -185 MHz

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INSTRUCTION MANUAL

GENERAL DESCRIPTION

The Model GPG-2B is a 5/8 wave gain ground plane which covers the frequency range of 142-185 MHz. The design is optimized for maximum performance in the 2-meter Amateur band (144-148 MHz), and provides 3.4 dB gain over a 1/4 wave ground plane antenna.

The GPG-2B, when tuned for a specific frequency within 142-185 MHz will have a VSWR at resonance of less than 1.4:1. Typical VSWR at resonance within the 2-meter Amateur band is less than 1.2:1. The 2:1 VSWR bandwidth is greater than 4 MHz.

This antenna is designed to be fed with any standard 50 ohm coaxial cable, but for runs over 50 feet, RG-213/U is recommended because of its lower losses and higher power

The mechanical strength of the GPG-2B has been greatly improved over previous models. Also, stainless steel hardware is used in most places on this antenna.

The GPG-2B will mount on mast sizes up to 1 5/8 inches in diameter.

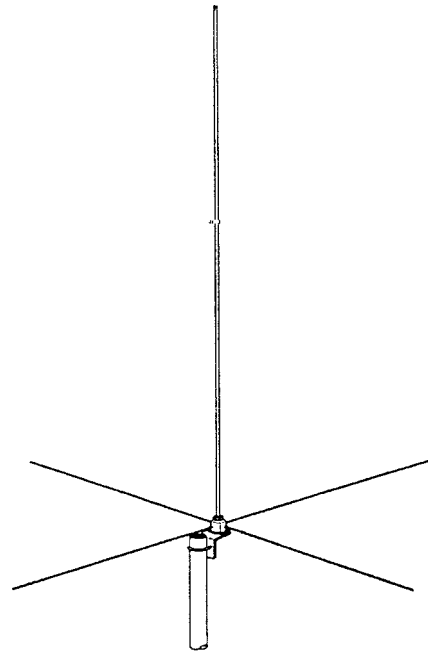


Figure 1
Overall View - GPG-2B

SPECIFICATIONS

VSWR at Resonance.....	less than 1.4:1
Power Gain	3.4 dB over quarter wave
Power Input.....	100 watts'
Lightning Protection	DC ground
Height(nominal).....	50 inches
Wind Area.....	0.30 sq. ft. (.03 sq m.)
Maiximum Mast OD	1 5/8 inches
(41.3 mm) Hardware.....	18-8 stainless steel

ASSEMBLY

Unpack the antenna and check the parts against the Parts List and drawings.

Remove the two (2) screws that are placed through the base insulator assembly to hold it to the bracket and install the four radials as shown in Figure 2.

CAUTION"

Do not rotate the base insulator when orienting' radials. Breakage of wire can occur. It is best to always leave one screw in place while installing the radials.

Insert the 3/8" diameter upper radiator into the top of the lower radiator.

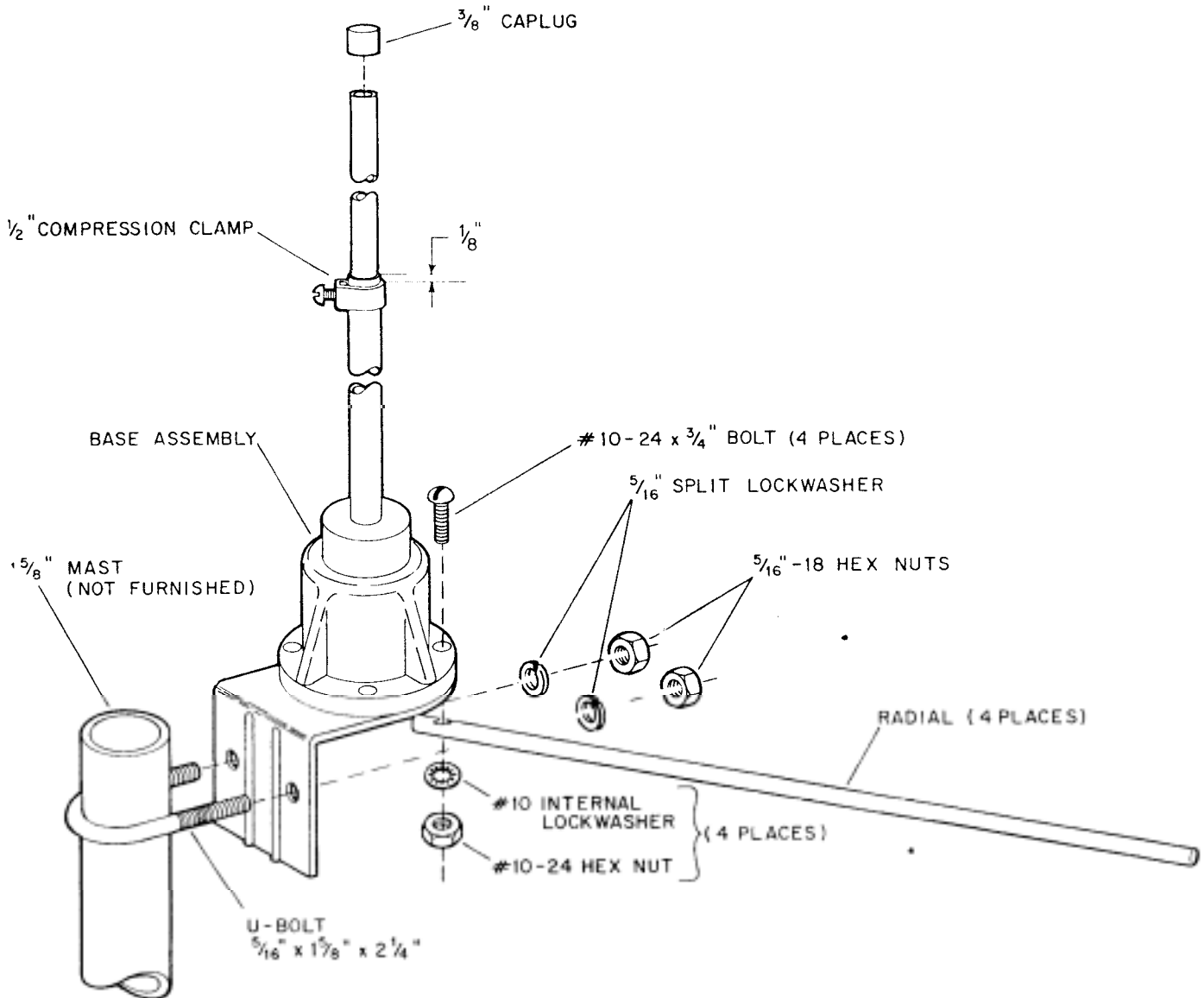


Figure 2
Assembly Detail I

Assemble the 1/2" compression clamp and slide it into position on the 7/16" tube. See Figures 2 and 3.

Adjust the total length of the radiator to the dimension shown in Figure 4 for the frequency you wish to use. Tighten the compression clamp securely.

Place the 3/8" caplug on the top of the 3/8" radiator.

Make sure the radials are positioned as shown in Figure 1 and tighten securely.

Attach the antenna to a 1 5/8" mast (not supplied) using the U-bolt supplied.

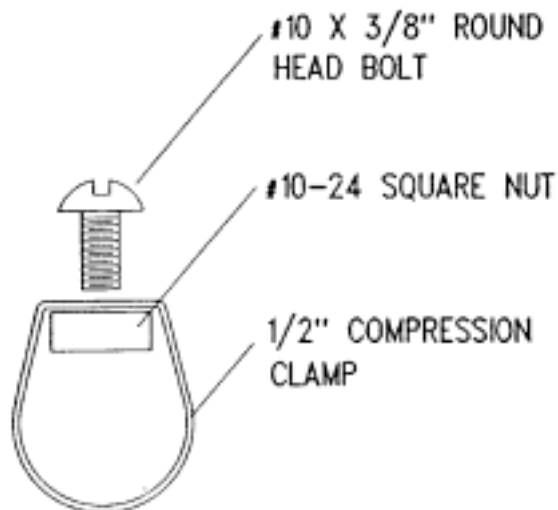


Figure 3

One-Half Inch Compression Clamp Detail

NOTE: If the input terminals are checked with an ohmmeter, they will show a direct short. THIS IS NORMAL! The matching device in the antenna base puts the entire structure at DC ground but presents 50 ohm impedance to rf energy.

For proper lightning protection and to insure noise-free operation, the antenna supporting structure must be grounded.

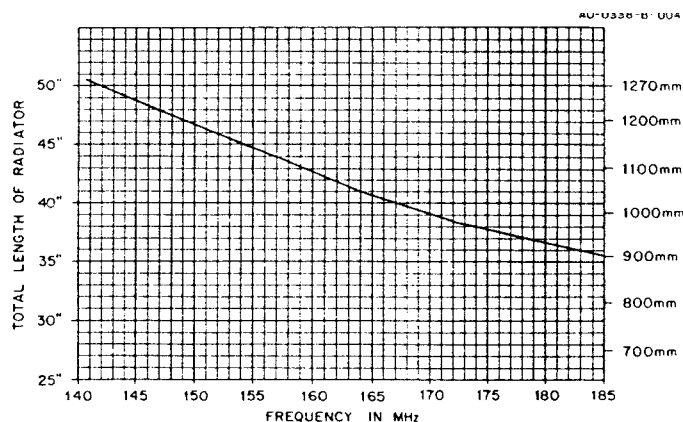


Figure 4

Frequency Adjustment Chart

Note: The radiator should be set for a length of 48 inches to cover the entire 2 meter Amateur band. If operating frequency above Amateur band is desired, it may be necessary to trim the upper radiator shorter. This will allow the entire GPG-2 radiator to be set to the correct length for the desired operation frequency.

Parts List

Part No.	Description	Qty
871674	Base Assembly, GPG-2B w/lower assembly	1
179690	Radials, GPG-2B	4
175030	Radiator, 3/8" diameter upper radiator	1
871675-1	Parts Pack, GPG-2B	1
455655	Caplug, 3/8"	1
543792	U-bolt, 5/16" x 15/8" x 2 1/4"	1
555747	Nut, 5/16" - 18 hex	2
554071	Nut, #10-24, hex	5
567080	Lockwasher, 5/16", split	2
565697	Lockwasher, #10, internal	5
165123	Compression Clamp, 1/2"	1
555693	Nut, #10-24, square	1
505692	Screw, # 10 x 3/8", round head	2
505751	Screw, # 10 x 3/4", round head	2

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.