

**INSTRUCTION
MANUAL****ORDER NO. S-3937****5/8-Wave,
Ground Plane Antenna**

PN 800132-1

**General
Description**

The S-3937 is a medium gain $\frac{5}{8}$ -wavelength ground plane antenna. It exhibits 3 dB gain over a dipole from 150-176 MHz. The radiating element is a telescoping type to provide rapid tuning to the frequency of operation. The entire antenna can be assembled or disassembled very quickly without the use of tools. It can be mounted on any vertical mast or other object such as a tree limb that has a diameter from $\frac{1}{2}$ " (13 mm) to $2\frac{1}{2}$ " (63 mm).

Specifications

VSWR less than 1.8:1 @ 50 ohms
 Bandwidth 7.6 MHz at 150 MHz, 4.3 MHz at 170 MHz
 Power Capability 100 Watts average, 200 Watts P.E.P.
 Feedpoint SO-239 connector
 Frequency Range 150-176 MHz
 Gain 3 dBd
 Polarization vertical

**Assembly and
Operation**

Screw the lower antenna assembly onto the ground plane base. Screw three of the element assemblies into the base and one into the lower antenna assembly. See Figure 1.

Set the antenna to the frequency of operation by loosening the compression nut (Item No. 19) and setting the frequency mark on the antenna rod even with the top of the nut. Tighten the nut to secure the rod. See Figure 2.

Mount the antenna as high as possible. The antenna should be clear of other objects especially items containing metal.

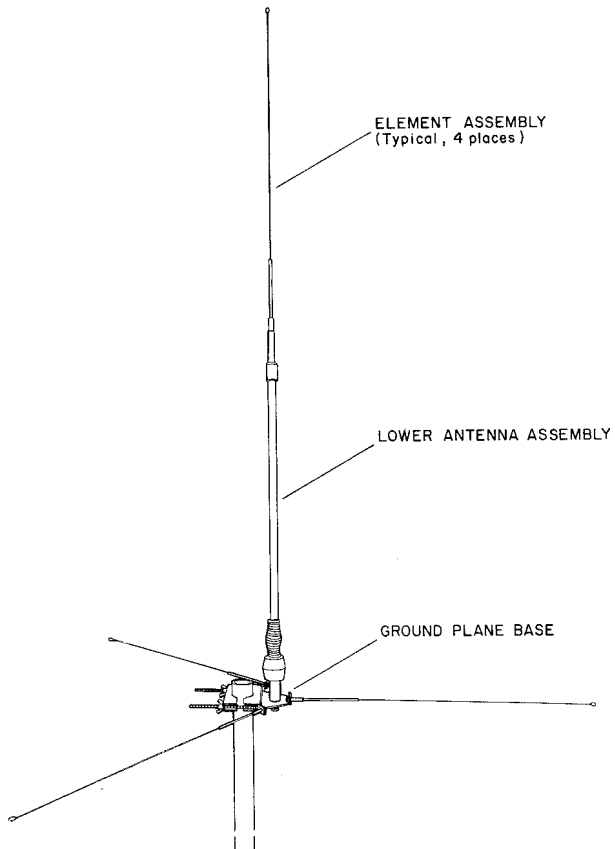


Figure 1
Overall View of Antenna

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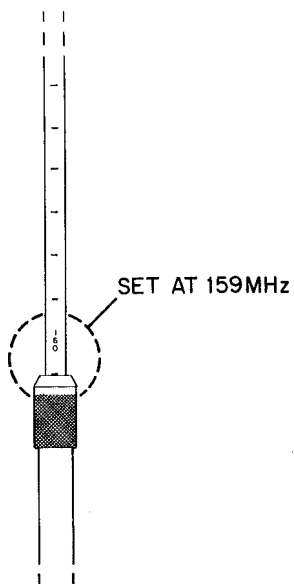
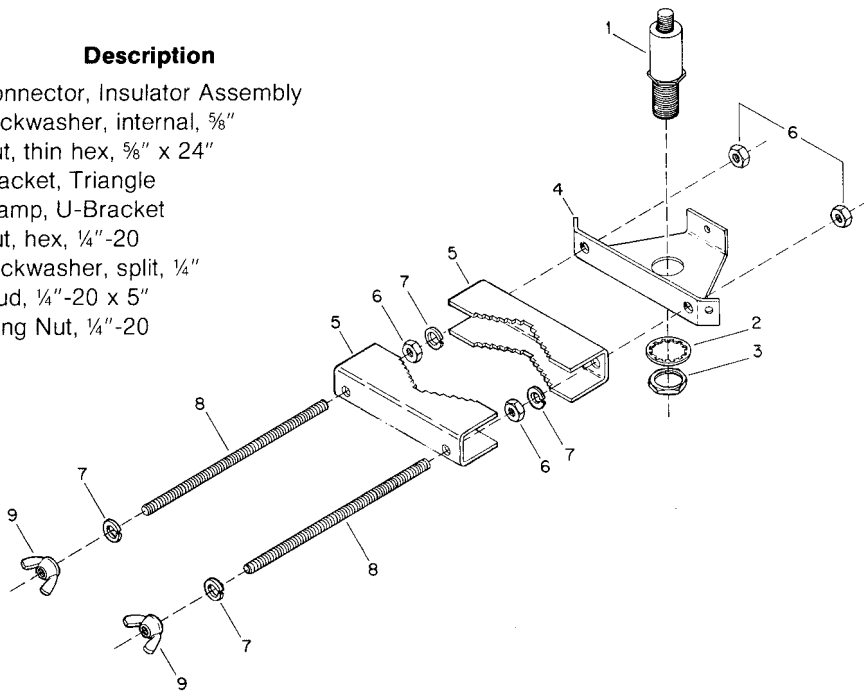


Figure 2
Antenna Frequency Marks

PARTS LIST

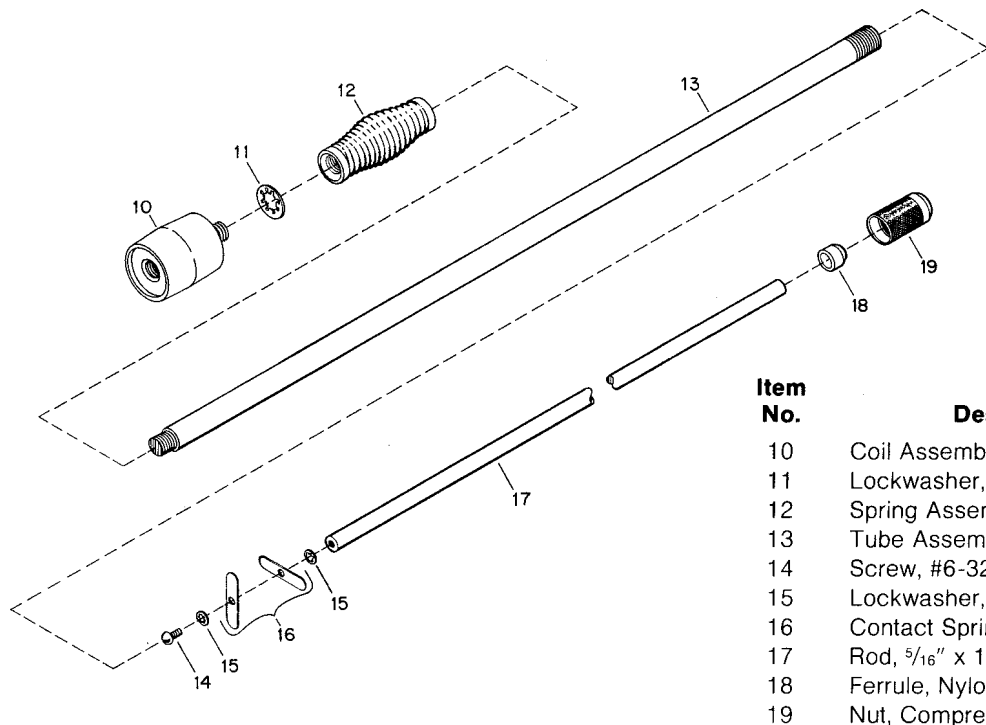
Item No.	Part No.	Description	Qty
	872808	Ground Plane Base Assembly	1
1	871661	Connector, Insulator Assembly	1
2	560033	Lockwasher, internal, $\frac{5}{8}$ "	1
3	555449	Nut, thin hex, $\frac{5}{8}$ " x 24"	1
4	182044	Bracket, Triangle	1
5	182045	Clamp, U-Bracket	2
6	580001	Nut, hex, $\frac{1}{4}$ "-20	4
7	580003	Lockwasher, split, $\frac{1}{4}$ "	4
8	182108	Stud, $\frac{1}{4}$ "-20 x 5"	2
9	580005	Wing Nut, $\frac{1}{4}$ "-20	2
	873635	Lower Antenna Assembly	1
10	863010	Coil Assembly	1
11	580002	Lockwasher, internal, $\frac{3}{8}$ "	1
12	873011	Spring Assembly	1
13	883249	Tube Assembly, $\frac{1}{2}$ "	1
14	506665	Screw, round head, #6-32 x $\frac{1}{4}$ "	1
15	567155	Lockwasher, internal, #6	2
16	281336	Spring Contact	2
17	182926	Rod, $\frac{5}{16}$ " x 16"	1
18	471419	Ferrule, Nylon	1
19	182927	Nut, Compression	1
20	883095	Element Assembly	4

Item No.	Description
1	Connector, Insulator Assembly
2	Lockwasher, internal, $\frac{5}{8}$ "
3	Nut, thin hex, $\frac{5}{8}$ " x 24"
4	Bracket, Triangle
5	Clamp, U-Bracket
6	Nut, hex, $\frac{1}{4}$ "-20
7	Lockwasher, split, $\frac{1}{4}$ "
8	Stud, $\frac{1}{4}$ "-20 x 5"
9	Wing Nut, $\frac{1}{4}$ "-20



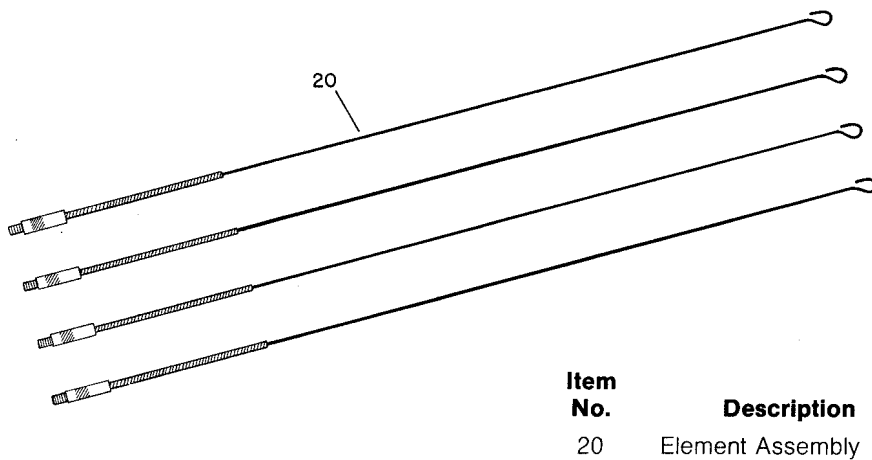
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Figure 3
Ground Plane Base Assembly — 872808



Item No.	Description
10	Coil Assembly
11	Lockwasher, internal, 3/8"
12	Spring Assembly
13	Tube Assembly, 1/2"
14	Screw, #6-32 x 1/4"
15	Lockwasher, internal, #6
16	Contact Spring
17	Rod, 5/16" x 16"
18	Ferrule, Nylon
19	Nut, Compression

Figure 4
Lower Antenna Assembly — 873635



Item No.	Description
20	Element Assembly

Figure 5
Element Assembly — 883095