

HVU-8

Owner's Manual

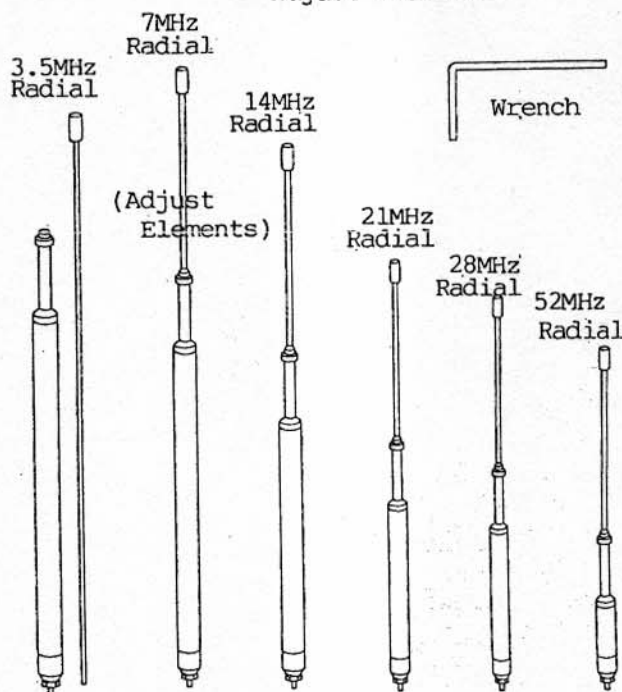
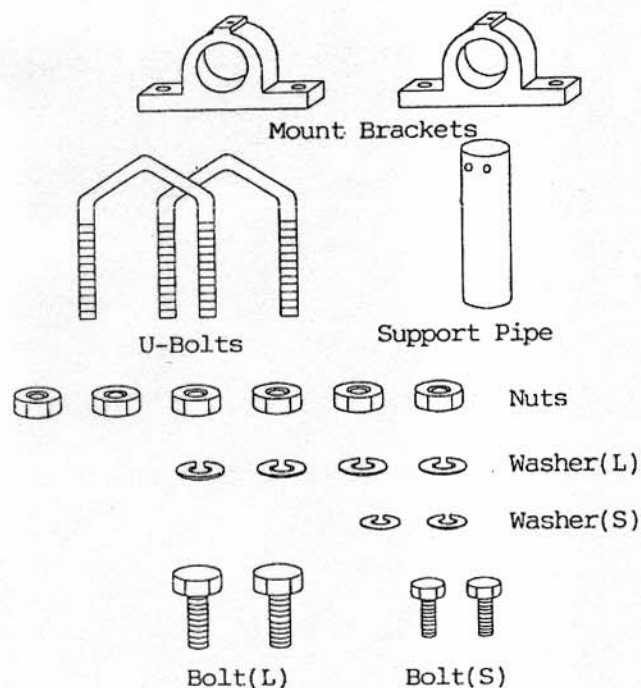
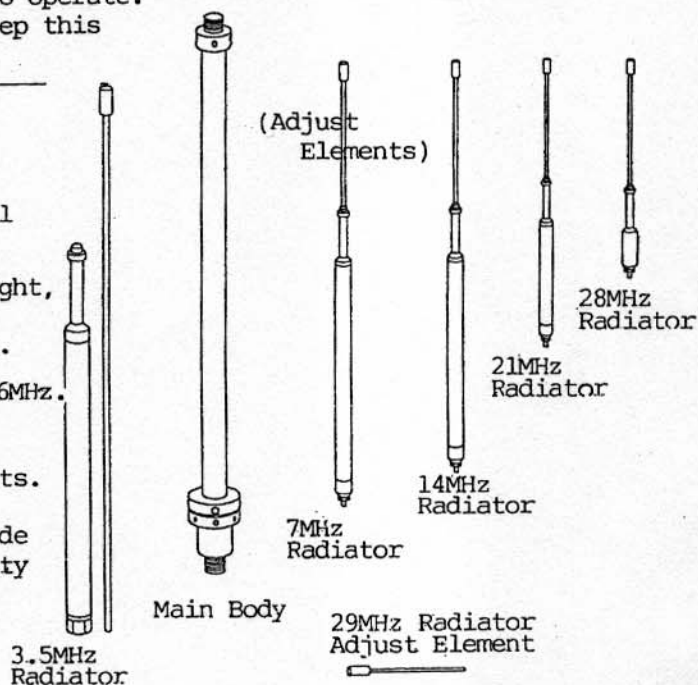
We thank you very much for using Maldol HVU-8 antenna- the high efficient, but compact 8-bands base station antenna. Please read through the manual, and follow how to assemble and how to operate. After through reading, please keep this manual for future use.

Features:

- 1) HVU-8, one antenna, covers all of 8 bands from HF to 450MHz.
- 2) Because compact and light weight, HVU-8 can be used for a temporary base station antenna.
- 3) No frequency tuning on 146/446MHz. Easy tuning on other 6-bands (3.5/7/14/21/28/52MHz), by sliding the each Adjust Elements.

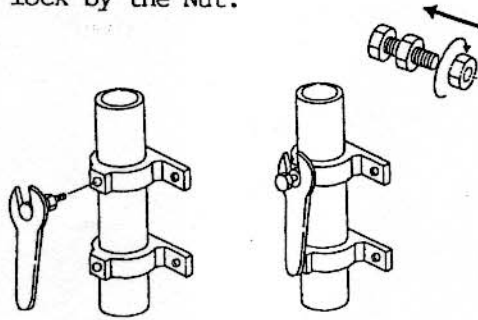
For Assembling: Please find wide enough place, and prepare safety belt in case of need.

Parts Guidance:

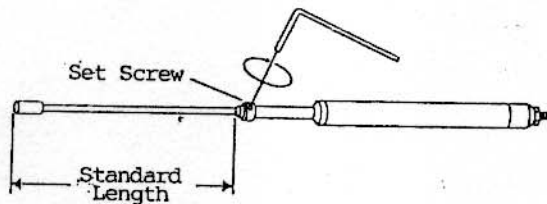
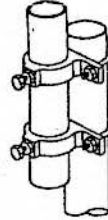


Assembling & Mounting Works:

- 1) Please make 2 sets assemblies of Bolt(L) and Nut.
- 2) Assemble Mount Brackets to the Support Pipe. Fasten the Bolt(L) and lock by the Nut.



- 3) Then, mount above assemblies firmly to your mast ($\phi 25$ to $\phi 60$ mm), with U-Bolt, Washer(L), Nut(L).
- 4) Please confirm Standard Length of each Adjust Elements, and fix each Screws firmly by the Wrench.



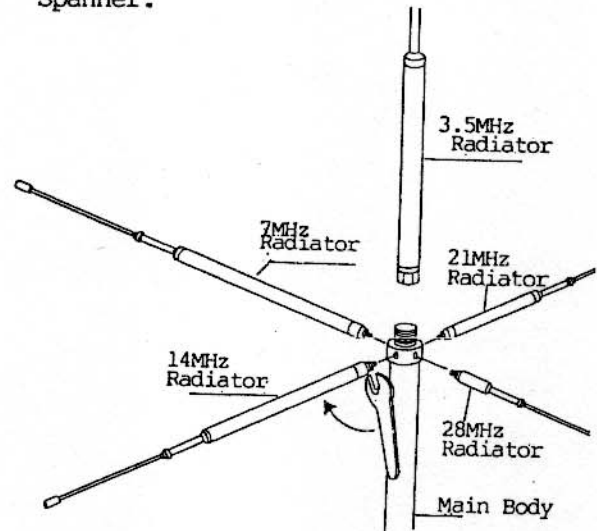
Frequency is indicated on each parts. Radiators and Radials look similar, but Screws of Radials are larger than the Radiators.

- * Adjust Elements of 3.5MHz Radiator and Radials were partially packed together with each coils. Right after taking them out from the bags, assemble them immediately for the prevention of mixing use.
- * When operating 29MHz/FM, please change to use short Adjust Elements. Radiator Element is 175mm, and Radial Element is 610mm.

3.5MHz	Radiator	714 mm
	Radial	680 mm
7MHz	Radiator	275 mm
	Radial	296 mm
14MHz	Radiator	167 mm
	Radial	236 mm
21MHz	Radiator	302 mm
	Radial	720 mm
28MHz	Radiator	148 mm
	Radial	653 mm
50MHz	Radiator	357 mm
	Radial	357 mm
29MHz (FM)	Radiator	160mm
	Radial	595mm

- 5) Then, assemble each Radiators to the Main Body.

* When assembling, firstly fasten the screws by hands, then lock the Nuts tightly by the Spanner.

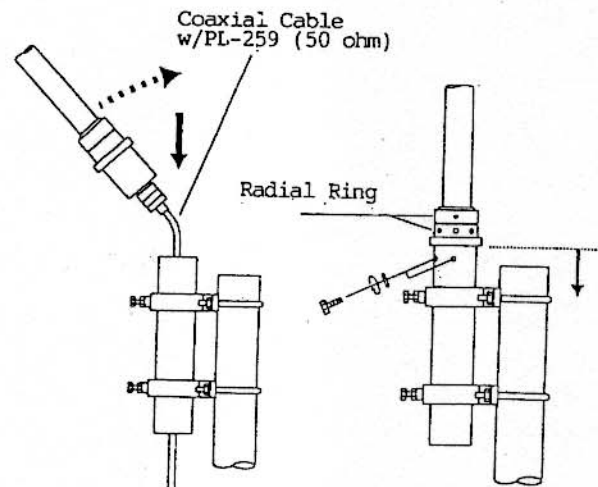


- 6) Pass your coax. cable through the Support Pipe and assemble to the Power Feeding Section.

* Please use Self Melting Tape etc. for complete water-proof.

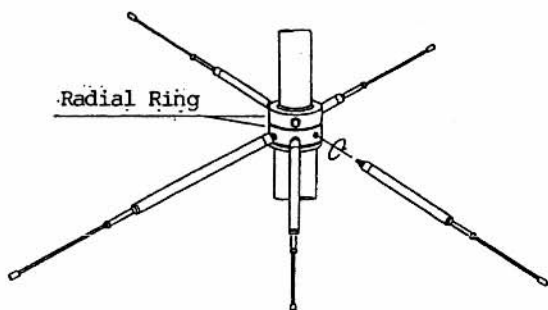
- 7) Please insert the end of antenna Main Body to the Support Pipe. Then, fix it to the Pipe with Bolt(S) and Washer (S).

* The top end of the Mast is to be lower than the Radial Ring of the antenna Main Body.



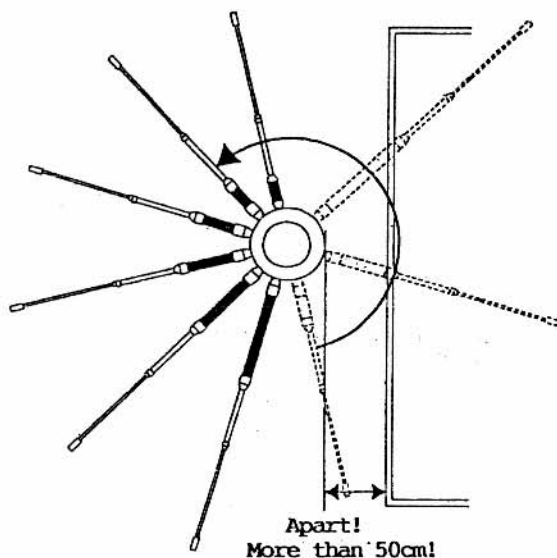
- 8) Then, assemble all radials- 3-radials on each Radial Rings.

Turn the Radial Rings and adjust radial location to keep uniform angles.



* When using the antenna at veranda etc., you can adjust direction of radials to one-side, by turning the Rings. In this case, please locate 52MHz radial apart from 14MHz.

It may be, some occasion, difficult to tune good SWR on 52MHz.



Frequency Adjustment:

Please proceed adjustment at lower power than 10W.

* When using antenna tuner, please adjust under 'Through' condition.

- 1) Please confirm SWR of 146/446MHz.
- 2) Slide Radial Element of 52MHz, and fix at the desired frequency.

- 3) Then, start adjustment from 28MHz, then 21, 14, 7 and 3.5MHz finally. Extend the Adjust Element of Radiator for lowering frequency, and shorten for higher frequency. When it is difficult to adjust less than 1.5, please fix the element at the lowest point.

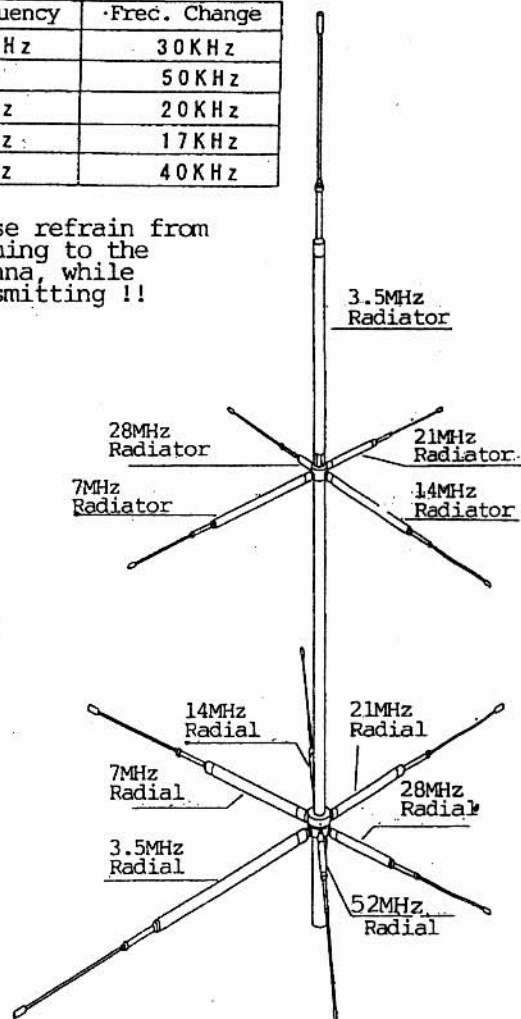
- 4) Sliding the Radial Element, please continue adjustment, then fix the element at the lower point than 1.5.

- 5) After above adjustment, please thoroughly check and confirm all VSWR, and proceed finer tuning.

Frequency change of Radiator Adjust Elements, per each 1cm

Frequency	Fre. Change
3.5MHz	30KHz
7MHz	50KHz
14MHz	20KHz
21MHz	17KHz
28MHz	40KHz

*Please refrain from touching to the antenna, while transmitting !!



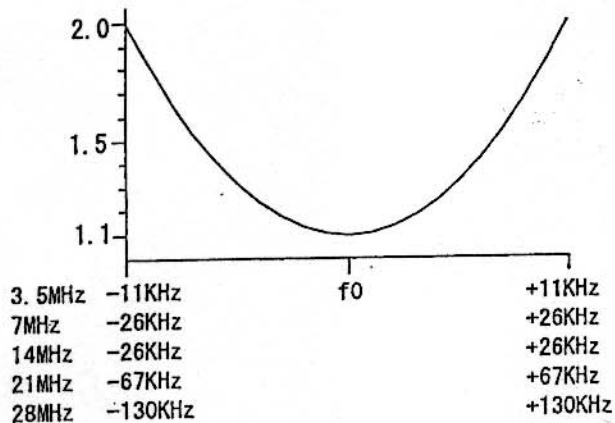
* Operation at SWR 1.5 or less is considered as idealistic.

However, depending on the locations or conditions, it may be difficult to adjust SWR lower than 1.5

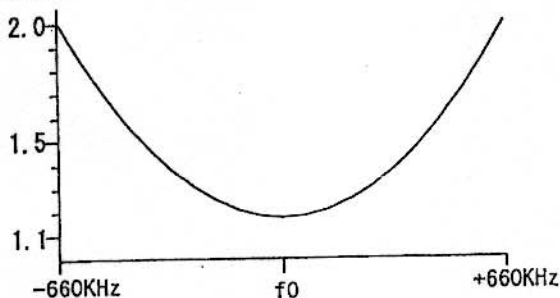
Normally, SWR 2.0 is considered as acceptable level.

V. SWR Characters:

HF - Bands



52 MHz



Specifications:

Frequencies (MHz) : 3.500- 3.575
 7.00 - 7.10
 14.00 - 14.35
 21.00 - 21.45
 28.00 - 29.70
 50.00 - 54.00
 144.00 - 148.00-
 430.00 - 450.00

Type & Gain : 1/4wave HF-52MHz
 2.15dBi 1/2 " 146MHz
 5.5dBi 5/8x2 446MHz

V. SWR : Less than 1.5 at
 f0 frequency

Impedance : 50 ohm

Max in-put Power : 200W/SSB-HF bands
 150W/FM-52/146/446MHz

Connector : PL-259 (M) type

Length : 2,620mm approx.

Wind Proof : 40m/sec.

Mast dia. : ϕ 25 - ϕ 60mm

Weight : 2,400g approx.

Remarks:

- 1) Please refrain from operating at over power than the specified.
- 2) When the mount location is changed, please check and adjust V.SWR of each frequencies newly.
- 3) Kindly check tight fastening of each Mounts, Set Screws etc. regularly, to prevent any accident.