

MODEL **CHA-250HD** HF Broadband  
Ground Plane Antenna

Instruction  
Manual

Thank you for purchasing our products.

**For your safety**

Read this manual carefully for proper handling and operation before using.  
Keep this manual in a safe place for future reference.

Check if all parts included in the box, according to the below Parts List.

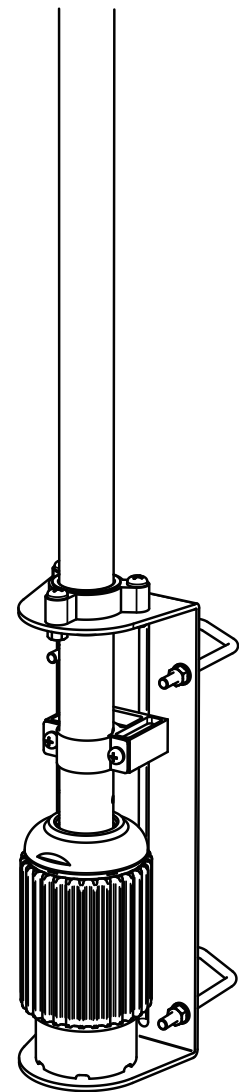
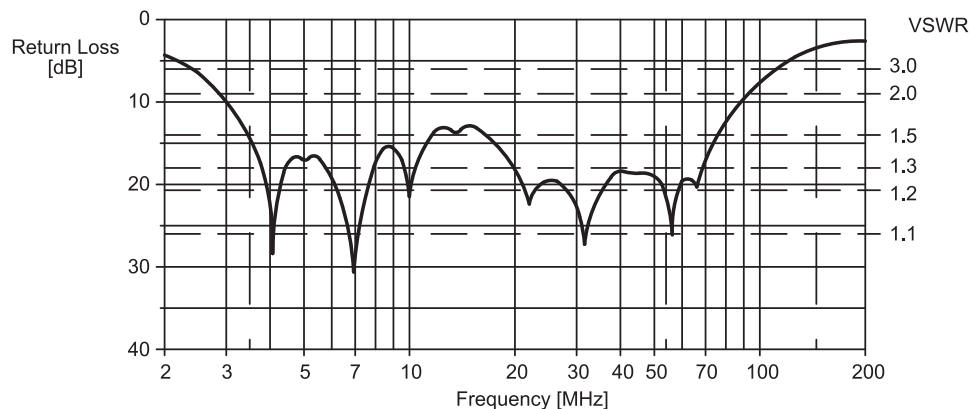
**Features**

- Non-radial and Ultra Wide-Band GP Antenna, and easy assembly.
- Thick wall lower element and stainless bolts/nuts for heavy-duty operation, and weather-resistance.

**Specifications**

- Freq. Band : Tx / 3.5~57MHz, Rx / 2.0~90MHz
- Antenna Type : Force matching type Ground Plane
- Max Power : 250 W (SSB mode) , 75 W (Digital mode)
- VSWR : 1.5 or less (refer the below graph)
- Impedance : 50Ω
- Connector : SO-239 type
- Mounting Mast Diameter : Φ30~72mm (1.25-2.75")
- Max Wind Survival : 30m/sec (nominal 67MPH)
- Length : approx. 7.13m (23.4 ft)
- Weight : approx. 3.2kg (7 lb)

**Return Loss and VSWR Data**



**CHA-250HD Parts List**

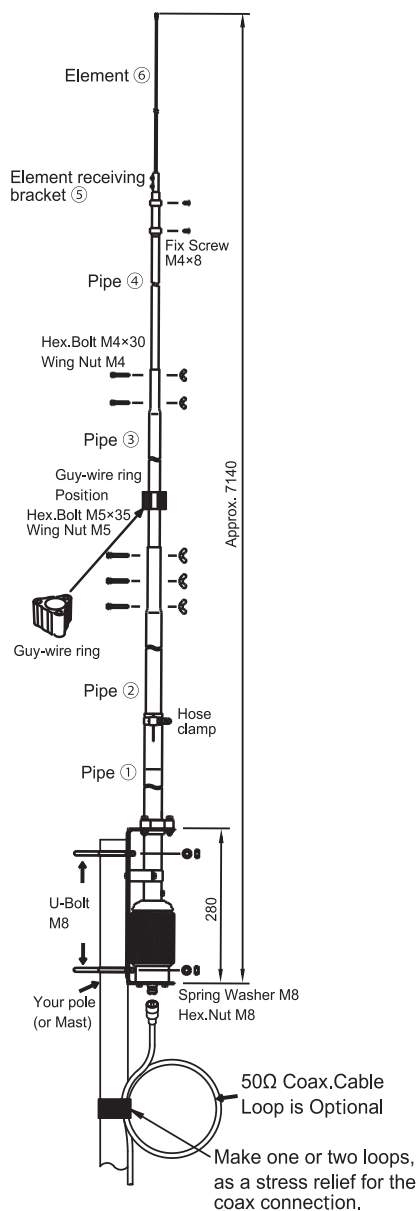
	Parts List	Qty.
1	Feeding Section (Brackets and Pipe① included)	1set
2	Hose band (for mounting pipe①)	1
3	Radial Bracket w/t power feeding section	1
4	Pipe ② for inserting pipe ①	1
5	Pipe ③ for inserting pipe ②	1
6	Pipe ④ for inserting pipe ③	1
7	Element receiving bracket ⑤ for inserting pipe ④	1
8	Element ⑥ for inserting Element receiving bracket ⑤	1
9	U-Bolt with washer and hex nut M8	2sets
10	Hex Bolt M5x35(with metallic washer), wing nut	3sets
11	Hex Bolt M4x30(with metallic washer), wing nut	2sets
12	Self-fusing tape (20cm)	1
13	Guy wire ring (Plastic)	1

**⚠ PRECAUTIONS for Installation**

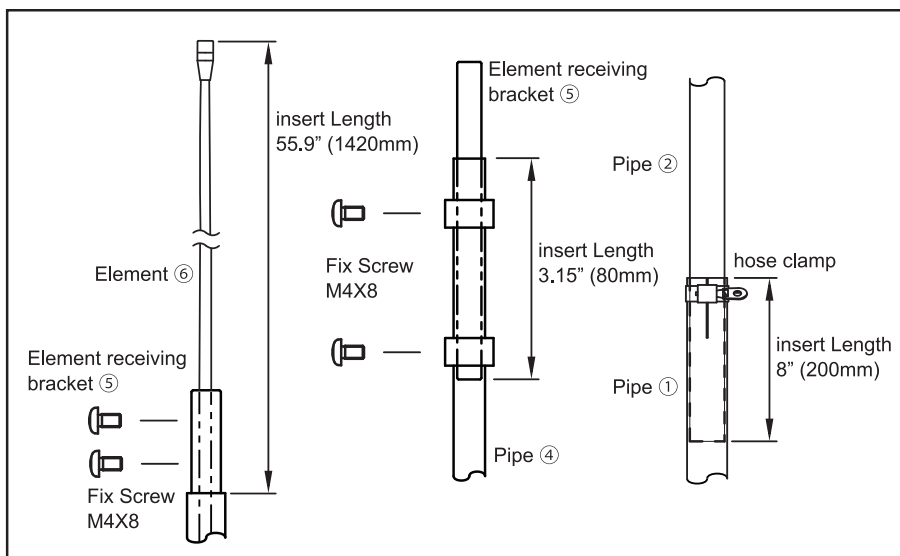
- Wearing a safety hat and a life line during installing on a roof top or any high places is highly recommended.
- Erect this antenna in a safe place  
Check if the Cable Connector fits into the Antenna Connector.
- Make sure all nuts, bolts and screws are securely tightened.  
Failure to follow this would cause a serious accident or performance degradation.
- Check if waterproofing at each connection is appropriately done. If not, it would cause short-circuit and/or corrosion.
- Do not erect this antenna near any electrical power lines, steel towers and/or buildings. Such objects would cause performance degradation.

## How to install & Use

1. Pull the Pipe ② from Pipe ①, as shown in the left fig. At 200mm (8 inches) inserted position, tighten the hose clamp.
2. Fix the lower part of Pipe ③ with the hex bolt and the wing nut.
3. The optional ring for the guy-wire is installed on element pipe③, use non-metal guy-wire. Check the strength of the guy-lines regularly for deterioration.
4. Insert the Pipe ④ into the Pipe ③, and fix it with the hex bolt and the wing nut.
5. Insert the Element receiving bracket ⑤ into the Pipe ④. At 80mm (3.15 inches) inserted position, fix it with the lock fitting screw.
6. Pull the Element ⑥ at the top of the antenna. At 1420mm (55.9 inches) inserted position, fix it with the lock fitting screw.
7. Attach the antenna to your pole with the U Bolt, Spring Washer, and Hex Bolt.
8. Connect your 50Ω Coax Cable (w/PL-259 Connector) to Feeding Section SO-239, and waterproof it with the self-fusing tape etc.
9. Check if Antenna Resonance Point is SWR 1.5 or less.



### Assembly drawing



Stretch the self-fusing tape to twice its original length and wrap it around the coax connection joint for waterproofing.

The SWR may differ depending on the installation environment, so please adjust by changing the insertion dimension of the element ⑥.

### ⚠ Precautions for operation

- Do not touch the antenna while transmitting, otherwise you would get burned.
- Do not touch the antenna or coax cables while lightning. Checking SWR after lightning is highly recommended.
- Do not use this antenna outside its specification. Failure to follow this would damage the antenna.
- Make sure to adjust the antenna in a right way. Higher SWR could cause the performance degradation.
- Never attempt to fix or modify this antenna by yourself.

### Maintenance

If any unusual situation happens, stop using immediately and ask the local shop you purchased this product. Confirm if the product works normally before operating. Be sure to change the parts if they have become bent or weakened after normal use.

### After-Sales Service

We provide the replacement parts for the damages by unintentional accidents or for deterioration with long-term use. Please ask the local shop you purchased this product.

This product is made under the stringent quality control. Should there be any breakage in transit, please do not hesitate to contact the shop you purchased this product.



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