

# Commercial Band 5/8 Wave Three-element High Performance Gain Vertical Antenna

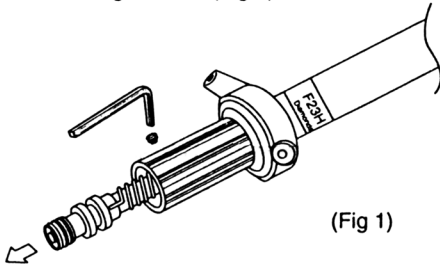


## F23H

### Operation Instructions

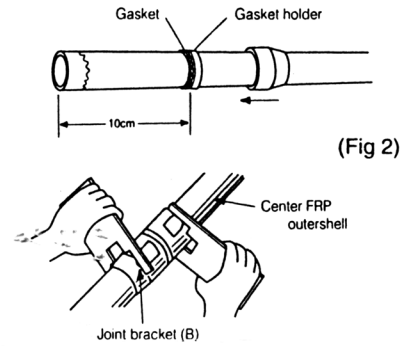
#### Assembly

1. Pull three inner elements out from each FRP outer shell. Be sure to pull the lower element slowly by loosening the screws since the lower element is built with Impedance matching section. (Fig 1)



Note: Pulling the element strongly may cause to break the matching section.

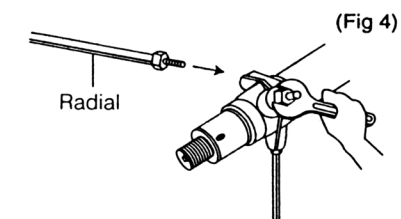
2. Connect each FRP outer shell at joint bracket sections and fasten them with wrenches included with the antenna. (Fig 2)



3. Cut each inner element to desired frequency by referring to the cutting chart and connect them firmly with the set screws. (Fig 3)

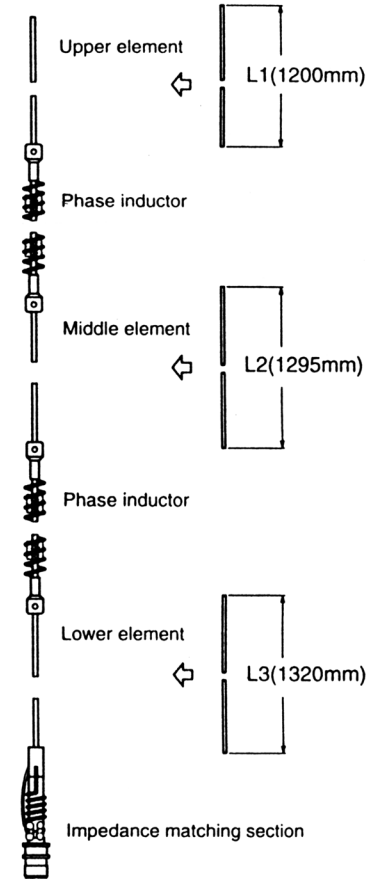
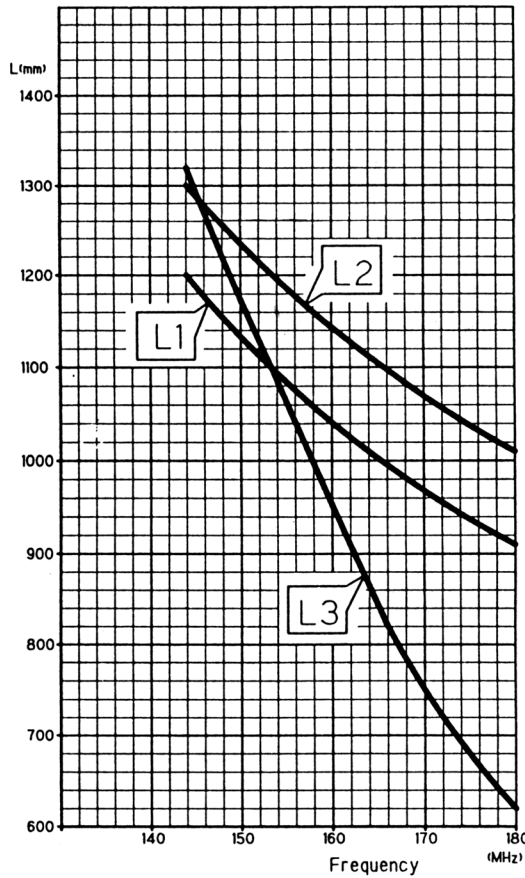
4. Put connected inner elements into the FRP outer shell and fasten the set screws firmly.

5. Attach three radial elements as shown in Fig 4. (Fig 4)



(Fig 3)

F-23H CUTTING CHART



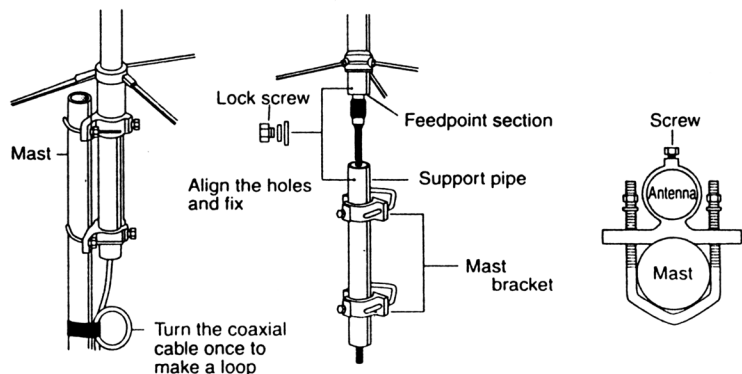
6. Attach mast brackets to the support pipe by fastening the set screws. Connect a coaxial cable to the feedpoint section through the support pipe. (Fig 5)

7. Attach support pipe to the bottom of the antenna with the set screw by aligning the hole at the bottom of the feedpoint section

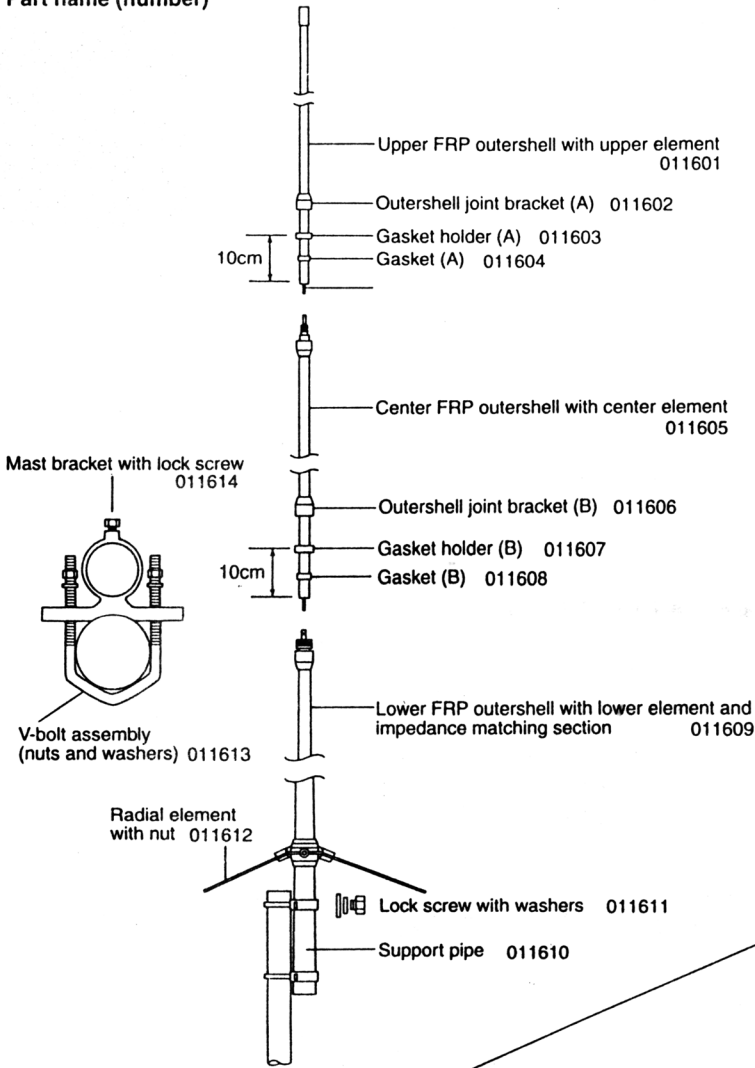
and the upper part of the support pipe.

8. Attach the antenna to the mast as shown in Fig 5 by taking the balance into account. Finally, loop the coaxial cable once and tape the looping section to the mast with an adhesive plastic tape to release the tension to the feedpoint section.

(Fig 5)

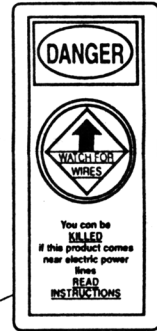


**Part name (number)**

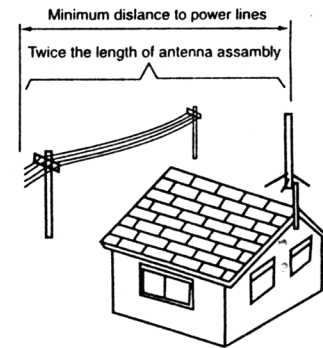


**Specifications:**

- Frequency : 144 - 174MHz ( With cutting chart )
- Gain : 7.8dB
- Impedance : 50ohms
- VSWR : Less than 1.5:1
- Max power rating : 350W Max.
- Wind resistance : 40m/sec ( 90Mph )
- Mast diameter accepted: 30 to 62mm
- Length : 5.2m
- Weight : 2kg
- Connector : UHF female
- Type : 5/8 wave three-element



Next is specific installation location. As to whether specific location is adequate in terms of antenna support and surrounding safety.



**FOR YOUR SAFETY**

Read the following safety precautions before starting assembling the antenna.

- Assemble the antenna on the ground or wide and flat place such as on balcony before installation.
- Do not assemble or install the antenna on a place where you can not have enough distance from any electric power lines.
- Do not attempt to install the antenna only by yourself. Installing the antenna alone on the roof may lead you dangerous accident. Always ask your friends for help installing the antenna.
- Do not use iron or aluminum ladder at a reachable distance from any electric power lines.
- Do not install the antenna on a mast which is not grounded properly.
- Do not have your family members or friends touch or come close to the antenna, unless they have realized its potential danger.

**TO AVOID FATAL ACCIDENT**

- Do not attempt to sustain the antenna, or any part of support structure if it begins to fall down. Let it fall by itself.
- Do not attempt to remove or restore the antenna or any part of support structure if it touches a electric power line by chance. Let it be as it is, do not touch it, and call your local electric power company immediately.

**IN CASE OF AN ACCIDENT**

- Do not touch a person or an animal who is or seems to be in contact with the antenna or any support structure which is fallen on a live electric power line. Touching one may lead you to be electrocuted.
- Do not attempt to separate a person or an animal who is or seems to be in contact with the antenna or any support structure which is fallen on a live electric power line by yourself. Call or have someone call a police officer, ambulance, doctor immediately.

**ANTENNA INSTALLATION PRECAUTIONS**

To determine antenna installation location, there are several factors to be taken into account. First thing is antenna propagation direction to specific target stations. As to whether there is any obstacles such as tall buildings on the line of sight.

- Do not attempt to install the antenna by yourself if you do not have any experience in installing base station antenna. Ask your experienced friends or professional for help.
- Do not attempt to install the antenna at a location where does not have enough distance from nearby electric power lines. It is advised to install the antenna at least twice of total antenna height from nearby electric power lines.
- Do not install the antenna on any type of tower pole or telescopic mast which exceeds 30 feet high, if you do not have enough experience in installing the antenna on that kind of location. Ask your experienced friends or professional for help.
- Do not use more than 1/10 section if you install the antenna on iron plumber's pipe. Attach guy wire if multiple pipes are used to install the antenna.