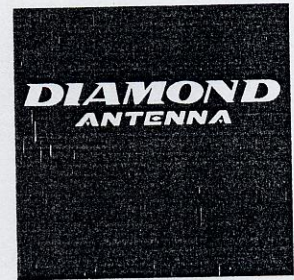




Super Discone Antenna D-190

For Reception 100-1500MHz Wide-Range Non-Directional Antenna
(Available for transmitting for the range 144/430/904/1200MHz band)



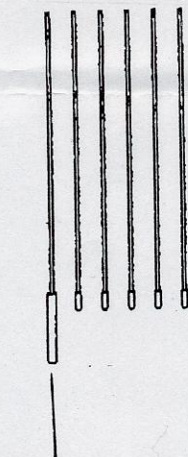
● Check for the parts:

Cone element
(78401)

disk element
(78403)

cone base & disk base
(78404)

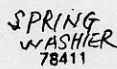
top element
(78410)



cone element
w/coil(78402)



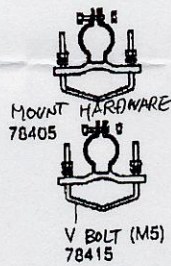
PVC CAP
(3x15) 78414



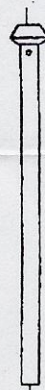
SPRING
WASHER
78411



NUT 78412



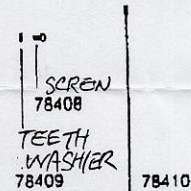
MOUNT HARDWARE
78405
V BOLT (M5)
78415



pipe bracket
(78407)



Coaxial Cable
(78405)

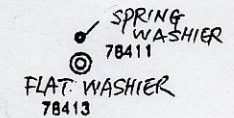


SCREEN
78408
TEETH
WASHER
78409



78417

SCREEN
(M4x5)
78416



SPRING
WASHER
78411
FLAT WASHER
78413

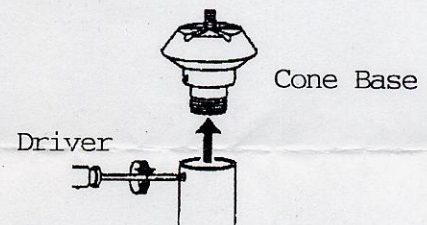
loading coil
(78417)

● How to Assemble

For assembling, plus driver, 7mm spanner, 8mm spanner will be necessary.

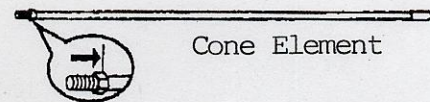
Assemble the cone element

- ① remove the upper position screw of pipe bracket by plus screw driver and remove the cone base from pipe bracket.
- ② Attach the nut to the cone element. The nut should be fastened to the end of screw tap.
- ③ Attach the cone element and spring washer to the cone base. After setting by hand then fasten firmly by 7mm spanner.
- ④ All 6 pieces of cone elements should be mounted.
(Note) The element with coil, only one piece, is available for mounting at any position.

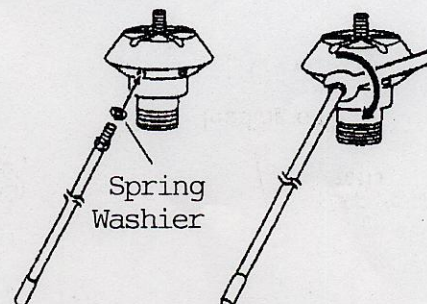


Driver

Cone Base



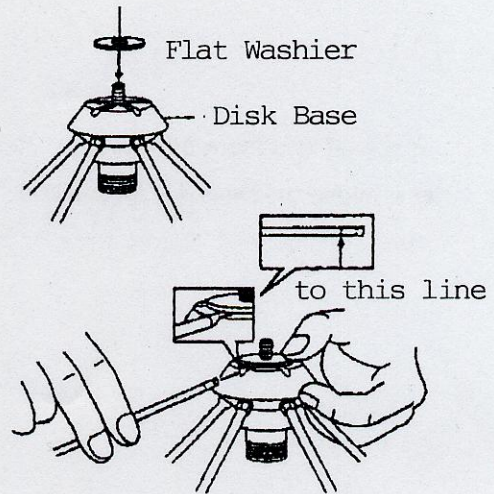
Cone Element



Spring
Washer

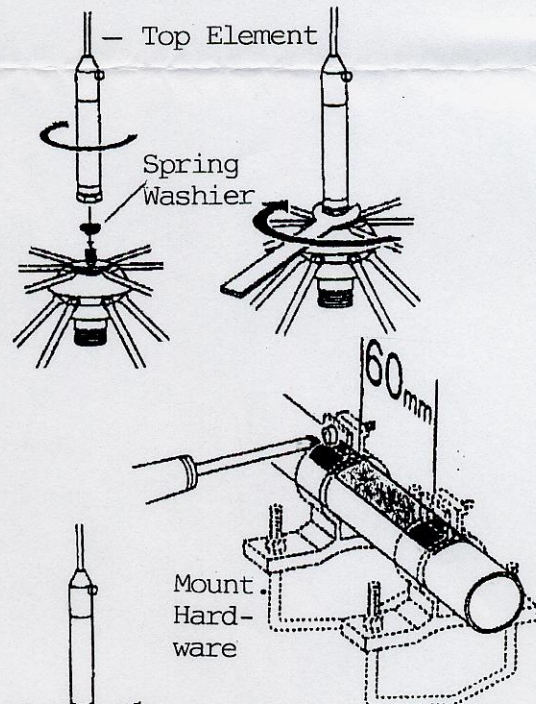
Mounting of disk element

- ① Put the plane washer onto the screw at the top of disk base.
- ② Hold the plane washer with finger insert the disk element to the end of slit of disk base. The disk element is provided with marker point to stop the insertion.
- ③ After setting the 6 pieces of disk elements, put the spring washer into the screw at top of disk base.
- ④ Mount the top element to the screw at top of disk base and fasten with 8mm spanner. Check the mounting condition of disk elements.



Mounting bracket assembly

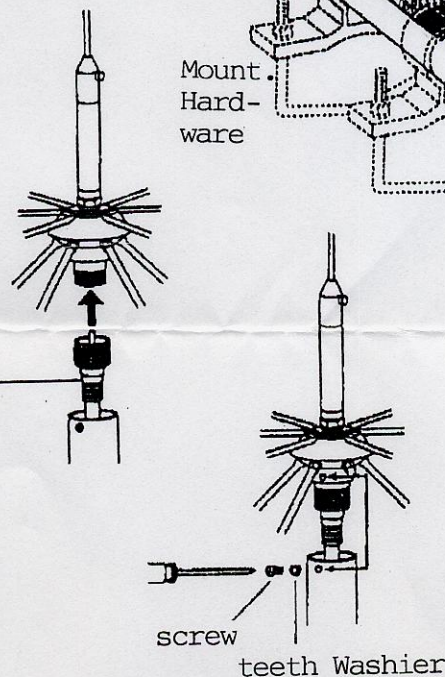
- ① Thread the pipe bracket through mounting bracket and fix the bracket at the position of sticker seal by plus driver.
- ② Fix the other mounting bracket onto the specified position with seal keeping 60mm space from above mounting bracket



Mounting the antenna and pipe bracket

- ① Thread the coaxial cable through pipe bracket from lower side.
- ② Connect the coaxial cable connector to the feeding part, lower part, of cone base firmly.
- ③ Insert the cone base into the pipe bracket.

Coaxial Cable



- ④ Adjust the position of the holes of both cone base and pipe bracket and fasten the set screw removed from pipe bracket first together with teeth washer by plus driver.



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- **How to Mount the Antenna**

D-190 can be mounted to the mast with diameter 25-50mm. Select the mast and length to get the optimum condition and mount the antenna by "V" bolt firmly. Regarding cable, it is better to make 1 turn of cable under the antenna and fix it by vinyl tape. The antenna must be set up keeping the vertical angle. (The mast and poles are optionally available.)

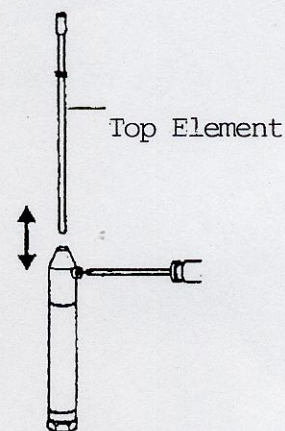
- **Operation Check**

D190 is not necessary to adjust before use. But after setting up the antenna, check the operation. In case the transceiver is connected, check the VSWR in the range of transmitting frequency. When connecting the receiver, receive the actual signal wave and check the receiving sensitivity. When the VSWR is high or receiving sensitivity is lower, check the antenna assembly again and connections. In the meantime, the 144MHz band should adjusted according to the following adjusting method.

- **How to adjust the 144MHz band**

For using the antenna 144MHz transmission, you must adjust the top element.

The top element is factory-adjusted at lower frequency position around 144MHz (144-146MHz). When using at the higher frequency range, slide the top element up or down while checking the VSWR with SWR Power meter. By changing the length of top element, the frequency can be adjusted. If necessary, cut the top element.



- **Others**

When changing the coaxial cable, check the impedance of 50 ohm and diameter maximum 10DFB.

- **Specifications**

Frequency: 100-1500MHz Reception (Transmission 144/430/1200MHz and 904MHz band)

Impedance: 50 ohms

VSWR: less than 1.5 (144MHz less than 1.7)

Input power: 50W (144MHz 30W)

Withstand Wind: 40m/sec.

Applicable mast: 25 - 50 mm diameter

Overall Length: 0.84m

Maximum Diameter: approx. 36cm

Weight: 0.52kgs. Connector: M type



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