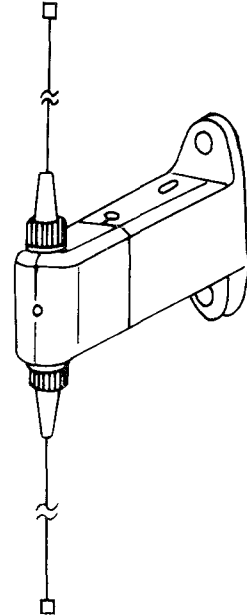


WIRELESS DIPOLE ANTENNA

YW-620

Please follow the instructions in this manual to obtain the optimum results from this unit.
We also recommend that you keep this manual handy for future reference.



■ GENERAL DESCRIPTION

The TOA YW-620 is a indoor-use dipole antenna for VHF band wireless systems. It incorporates a band-pass filter and a booster amplifier, and is equipped with an LED to check its operation.

■ INSTALLATION PRECAUTIONS

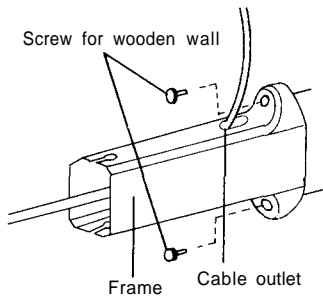
1. To avoid injuries due to drop of the antenna, be sure to securely mount it on the wall or ceiling that is robust enough to stand the antenna weight.
To avoid injuries caused when one hits his head or face against the antenna boom, install the antenna in a place where people do not easily hit it.
2. The YW-620 is a dipole antenna designed to be installed indoors. When installing outdoors, be sure to avoid locations where the unit is exposed to rain. Also, attach the optional YW-451 cover to the unit.
3. When installing the YW-620 in a room of a tall building, be sure to position it more than 1m (3 feet) from a window to minimize interference caused by broadcasting or commercial radio waves of external noise.
4. To avoid accidental operation of channels not in use or radio interference, there must be the distance greater than 3m (10 feet) between the YW-620 and the wireless microphone. Setting the antenna within 3m (10 feet) of the wireless microphone may cause an unselected channel to be operated or radio interference to be generated.
5. When using two or more antennas, they should be spaced out 6 to 18m (20 to 60 feet) apart from each other.
6. Take special care when stripping the end of coaxial cable, and when connecting the cable end to the antenna and BNC connector. Incomplete stripping and connection deteriorates receiving sensitivity, and increases interference caused by external noise.
7. Use the coaxial cable with 75 ohms impedance.

INSTALLATION PROCEDURES

1. Attach the frame to the wall.

A. If the coaxial cable is wired over the wall from the ceiling or floor.

- 1) Cut the cable outlet of the frame using a cutting prier, etc.
- 2) Secure the frame to the wall by means of two accessory screws (for wooden wall : L = 25mm, 1") with the frame outlet oriented toward the direction the cable comes from. Draw the cable through the outlet as shown below.

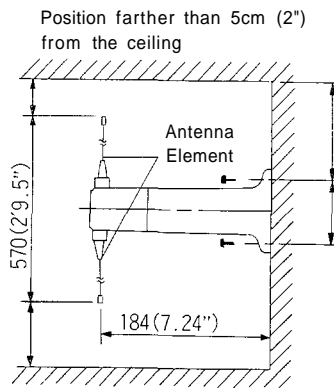
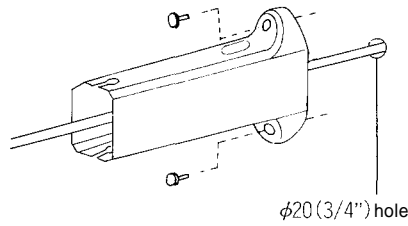


Note 1

- * When installing the YW-620, be sure the antenna element tip is more than 5cm (2") away from the ceiling, and more than 2.4m (8 feet) from the floor.
- * Do not install the YW-620 near metal or power cables (within 30cm (1 foot) from the antenna element), otherwise receiving sensitivity will deteriorate.

B. If the coaxial cable is to be drawn directly from the wall surface.

- 1) Drill a $\phi 20\text{mm}$ (3/4") hole.
- 2) Run the coaxial cable through the hole and the frame as well. Secure the frame with two screws (for wooden wall : L = 25mm, 1") and draw the coaxial cable out as shown below.

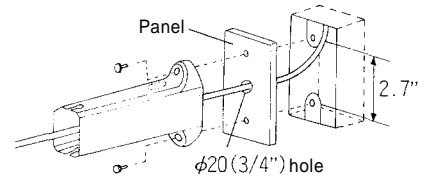


Position farther than 2.4m (8 feet) from the floor.

C. If the coaxial cable is installed using a recessed electrical wall box. (Panel screw pitch : 68.5 mm (2.7"), Machine screw : M3.5mm, 2 pcs)

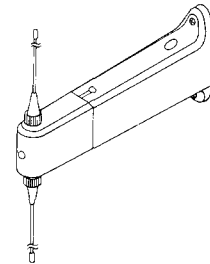
- 1) Drill a $\phi 20\text{mm}$ (3/4") hole in the panel.
- 2) Pass the coaxial cable from the box into the panel hole and then into the frame. Secure the frame and panel to the recessed wall box using two machine screws (M3.5 x 20mm), and draw the coaxial cable out as shown below.

* Be sure to use a pipe thick enough to allow the wired coaxial cable to be easily inserted.



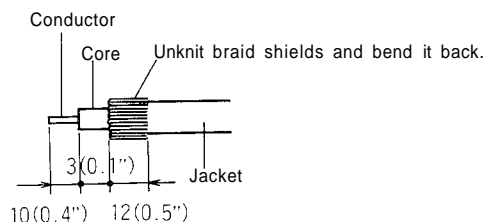
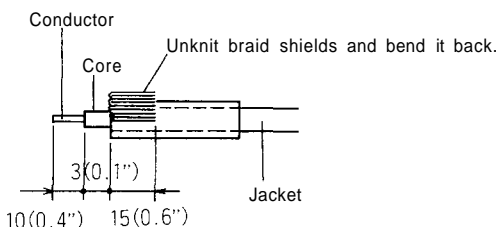
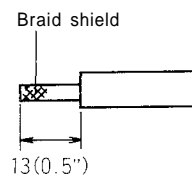
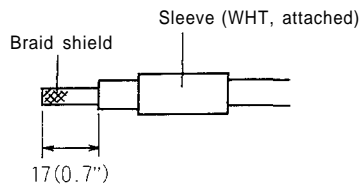
Note 2

- * Set the antenna vertical to the ceiling floor. The receiving sensitivity of the antenna when installed horizontally is about 6 dB lower than when installed vertically. The receiving sensitivity greatly depends on the installation condition.



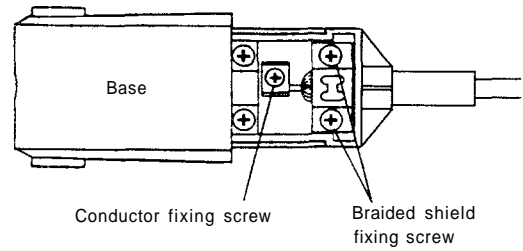
2. Strip coaxial cable end.

[RG-59/U]

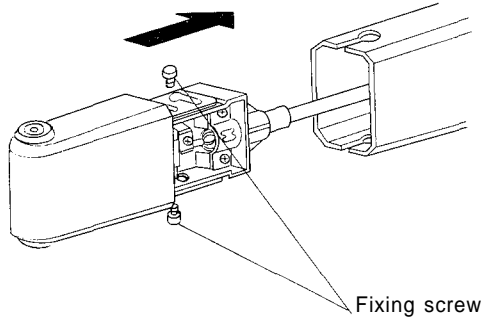


3. Insert the coaxial cable into the antenna supporting base.

- 1) Sufficiently loosen the three coaxial cable fixing screws on the supporting base.
- 2) Insert the stripped coaxial cable end into the base and fix it with the three fixing screws.

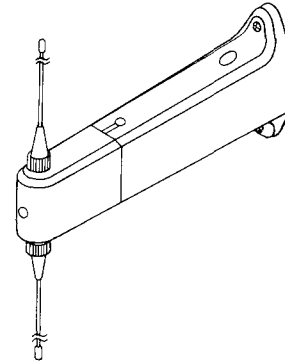


4. Insert the base into the frame.



Insert the base into the frame with the two base fixing screws loosened and tighten the screws to fix the base.

5. Attach the antenna elements to the base.



SPECIFICATION OF THE COAXIAL CABLE

Cable Type	External Diameter	Max.Length
RG-59/U	6.1 mm (0.24")	48m(160ft.)
RG-6/U	7.4 mm (0.29")	48~70m(160~230 ft.)

Note : Use optional YA-641 (one piece) or CC-4901 (10 pieces) BNC connector for RG-59/U and RG-6/U coaxial cables.

SPECIFICATIONS

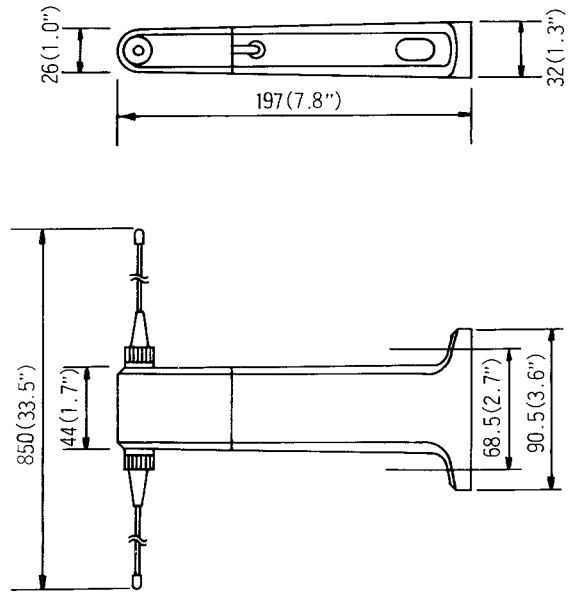
- Power supply :** 8 to 10 VDC
- Current consumption :** less than 24 mA
- Receiving frequency :** 168 MHz to 216 MHz
- Antenna gain :** 6 dB
- Output impedance :** 75 ohms
- Recommended cable :** RG-59/U and RG-6/U
- Temperature range :** -10°C to +50°C(14°F to 122° F)
- Weight :** 200 g (0.44 lb.)
- Color :** Off white
- Standard accessories**
 - RG-59/U sleeve : 1
 - Wood screw : 2
 - Machine screw : 2 (for electrical wall box)
 - Instruction manual : 1

Note

1. Specifications are subject to change without notice.
2. Power for the YW-620 is supplied on a coaxial cable from the antenna input connector of the WT-770 or WT-870.
3. When power is supplied to the YW-620, the red LED on the antenna base comes on.

■ APPEARANCE

Unit : mm (in.)



TOA Corporation
KOBE, JAPAN