

## LOCATION OF FM ANTENNA

Any good FM antenna cannot exhibit its designed performance if it is erected incorrectly - - - too low or hindered by surroundings. The FM antenna must be at least 4 meters (14 feet) high from the ground level and clear of surrounding obstacles for 3 meters (10 feet) or more. To prevent possible pick-up of car ignition noise, or any other high frequency noises, the antenna must be set up as far as possible from such noise generating sources.

## ANTENNA CABLE

### [Selection of Cable and Connection]

Selection of cable and its connection is important as well. There are two types of FM antenna cables, one is the ribbon feeder antenna having 300-ohm impedance and other is the coaxial cable having 75-ohm im-

pedance.

The 300-ohm ribbonfeeder cable is identical to what is used for the standard di-pole antenna provided, and it can be used for extension of the di-pole antenna for connection to the 300-ohm FM antenna terminals.

In case 75-ohm coaxial cable is used, use the exclusive terminals for coaxial cable of the FM antenna.

The 75-ohm coaxial cable is more stable than the 300-ohm ribbon feeder against environmental (weather) conditions. Also, it is less influenced by external electrical noise, and the impedance is quite stable even if it is located in the vicinity of metallic obstacles. Therefore, we recommend that you use this coaxial cable in case you think the ribbon feeder type is inadequate.

Coaxial cable is normally supplied in two different impedance types: 75-ohm and 50-ohm. For use with a 50-ohm cable, a special matching

transformer is necessary. Impedance matching between the antenna, cable and antenna terminals is very important. When mismatched, it will cause generation of standing waves which presents similar problems as that of multipath, resulting in deterioration of sound.

### [ Cable Wiring ]

The antenna cable must be placed carefully. Avoid placing it near or in parallel to conductive substance as this causes the cable impedance to vary. Coaxial cable has more stable characteristics against various environmental conditions inclusive of weather and it is less influenced by external noise sources. The insertion loss of the ribbon feeder is 0.45dB per 10 meters (33 feet) for the FM band, while the coaxial cable, type 3C2V which is most commonly used, is 1.35dB. Therefore, the shorter the cable length, the better the result.

