

EXTERNAL ANTENNA INSTALLATION

The standard external antenna is approximately - 93 mm diameter x 140 mm tall (3.7" x 5.5") and weighs 6.7 oz (190g). It has a threaded base for mounting on a threaded pipe. It is designed for marine applications, is ruggedly built and water resistant against normal atmospheric moisture, rain and ice.

External GPS Antenna

Mount and Brackets



The standard antenna has a built-in preamplifier (32 DB gain) and requires DC voltage which is automatically supplied by the GPS-receiver unit. The antenna connector is a SMA receptacle.

The process for determining if a given antenna location will work is not difficult but since each installation is unique it can best be determined empirically. Depending on the type of building where the GPS receiver is located and obstructions that may block reception of signals from the GPS satellites, the antenna may have to be located where it has an unobstructed view of the sky. In some cases this can be accomplished by placing the antenna adjacent to a window. It may, however, require mounting outside of the building. If possible the antenna should be mounted on the roof of a building. The antenna does not require height - only a clear unobstructed view of a 120 degree portion of the sky.

The antenna should be protected from lightning and falling ice/objects. Mounting close to a high power transmitting antenna could damage the preamplifier and/or prevent proper reception of the GPS signal. Surge arrestors can be installed and are available from Masterclock.

SA-90 Surge Arrestor([link](#))



The antenna is normally supplied with 50 ft (15m) of low loss 50 ohm coaxial cable. If a longer cable is required, cables of various lengths (up to 500' 150m) are available from Masterclock.

The coaxial cable that is supplied by Masterclock has a very low loss at the operating frequency of the GPS system (1500 MHz) . **Regular RG-58, RG-6 or RG-8 coax will not work and should not be substituted unless you are familiar with the technical variables that are involved.**