

DART

SENSORS

MW540

Dipole Antenna

SPECIFICATIONS & INSTRUCTIONS

APPLICATION

The MW540 Dipole Antenna replaces the standard whip antenna supplied with the Impact 300 Wireless Security System to increase system sensitivity by approximately 2dB.

FEATURES

- ❑ Four mounting options.
- ❑ Can be placed up to four feet from the panel.
- ❑ Provides approximately 2 dB higher gain than the standard BNC antenna.
- ❑ Easy assembly and mounting.

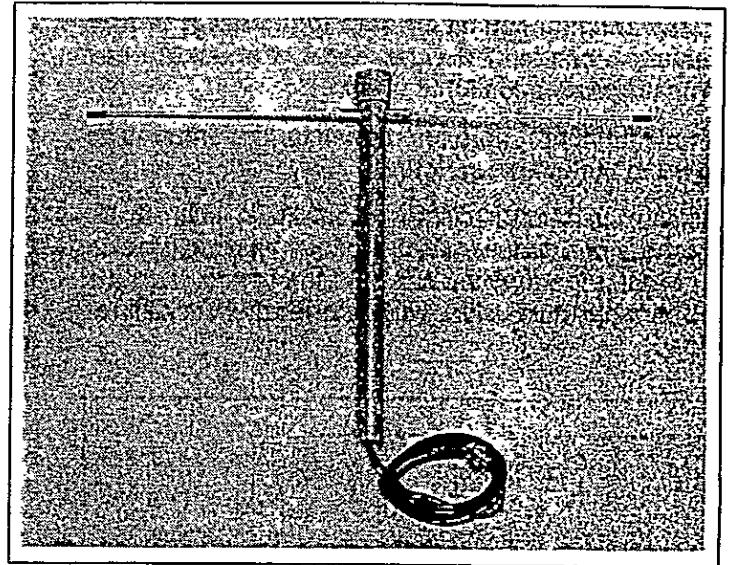
SPECIFICATIONS

- ❑ Dimensions: Height: 12.0"
Width: 17.5"
- ❑ Main body: 0.50" interior diameter
0.75" exterior diameter
- ❑ Supplied with 48" of RG 58 cable and BNC connector.
- ❑ Optimal frequency: 318.6 MHz.

INSTALLATION AND ASSEMBLY

Take the following precautions when installing the MW540 Dipole Antenna.

- Do not mount the antenna on a metal surface or on a surface coated with metallic paint. Avoid foil-backed wall papers, conduit, and metal ducts.
- Do not run wires parallel to antenna radiators (rods). Run input/output wires from the bottom of the control panel and ensure that these wires are at least two feet from the antenna system.
- Do not point the ends of the antenna toward transmitters as this would likely result in the reduction of received signal strength.
- Avoid installing the MW540 in the attic of a structure due to the likely presence of metals and wires. If unavoidable, do not install the MW540 near any metals or wires that may be present in the attic.
- Do not install the MW540 on the roof or outside the building.



Prior to installation of the MW540 Dipole Antenna, remove the BNC antenna supplied with Impact 300.

1. Loosen the two antenna screws on top of the Impact 300 housing.
2. Twist the antenna and cover plate assembly a quarter-turn counter-clockwise to dislodge the cover plate notches from beneath the screws (if the panel has a cover plate installed).
3. Reach inside the Impact housing to grasp the antenna connector and twist it a half turn counter-clockwise.
4. Grasp the base of the antenna/cover plate assembly above the Impact housing and gently pull it clear of the housing.

Assemble the MW540 Dipole Antenna.

1. Remove the protective red caps on the threaded portion of the antenna rod.
2. Insert the threaded ends of the rods into the standoffs on the main body of the antenna and turn clockwise until finger-tight.
3. Thread nut on rod clockwise until it is finger-tight against the standoffs.
4. Place the red endcaps onto the ends of the antenna rods.

Install the MW540 Dipole Antenna.

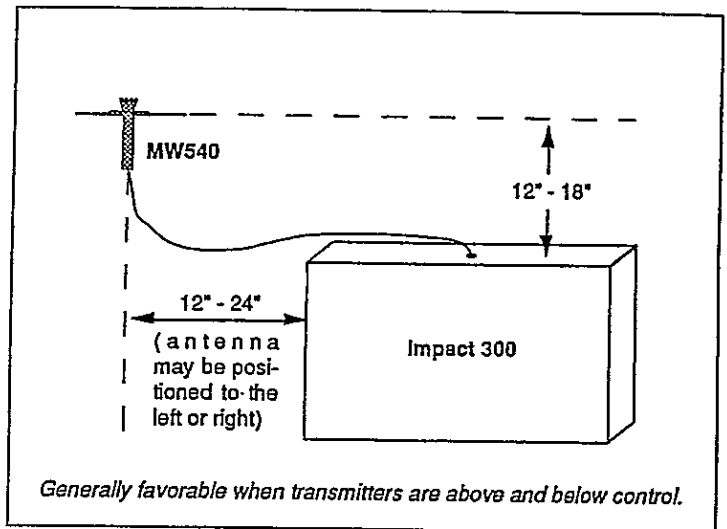
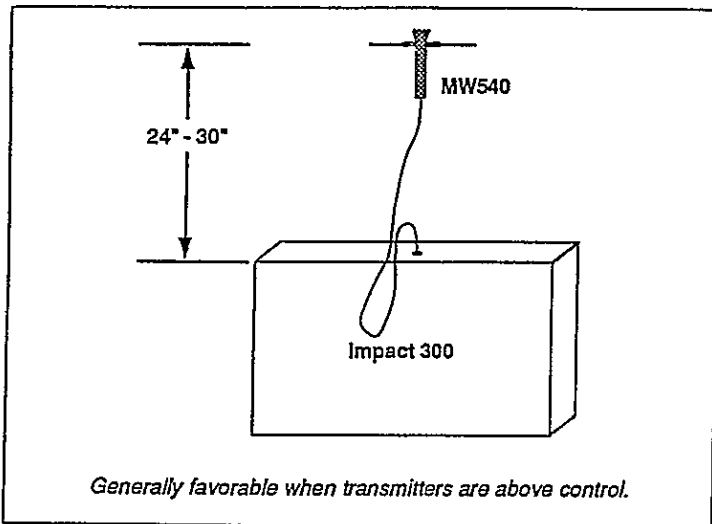
1. Tighten the two antenna bracket screws on top of the Impact 300 housing.
2. Thread the dipole antenna connector through the antenna hole in the housing.
3. Reach inside the Impact housing to slide the dipole coaxial antenna connector onto the housing female coaxial connector. Twist the dipole connector a half turn clockwise to lock it in place.
4. Choose an appropriate orientation for the antenna as shown in the following figures.

The minimum separation distances shown in each figure should provide optimum sensitivity for the mounting position shown. Moving the antenna closer to the control than the specified minimum nullifies any gain obtained by installation of the MW540.

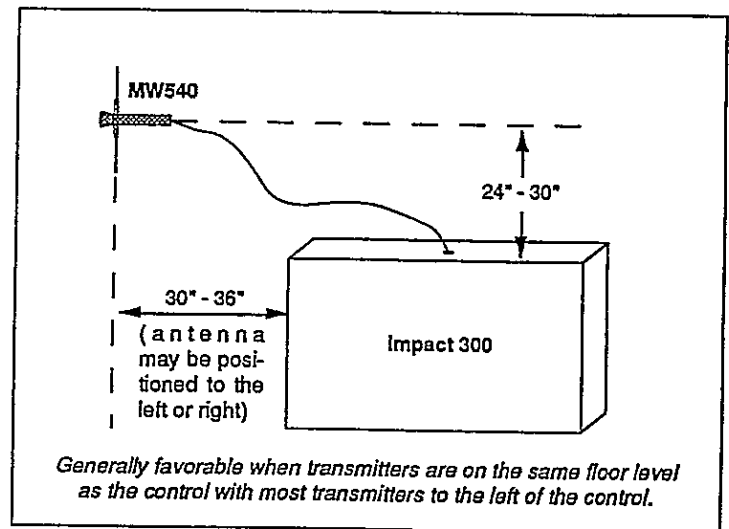
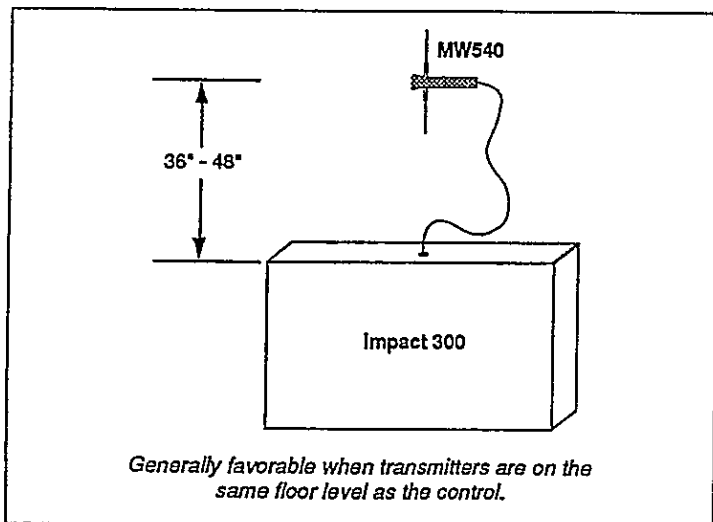
Note: Always check the signal strength of the transmitters using the MW550. The recommended positions should be used as guidelines for installation. In any environment, it is difficult to predict the resultant signal strength from all devices due to wave propagation and reflections.

Start by mounting the dipole antenna in the horizontal position. Next, connect the antenna to the MW550 Signal Strength Tester (SST) to check the received signal strength from each transmitter in the system. If the results are unsatisfactory, change the antenna orientation to vertical and retest the system.

When the MW540 is installed within the specified parameters, the variation in received signal level should be less than 1.0 dB. Separations greater than the maximums shown in the figures below could reduce received signal strength by as much as 3.0 dB. This amounts to a 25% reduction in obtainable distance from transmitter to receiver.



RECOMMENDED HORIZONTAL POSITIONS



RECOMMENDED VERTICAL POSITIONS