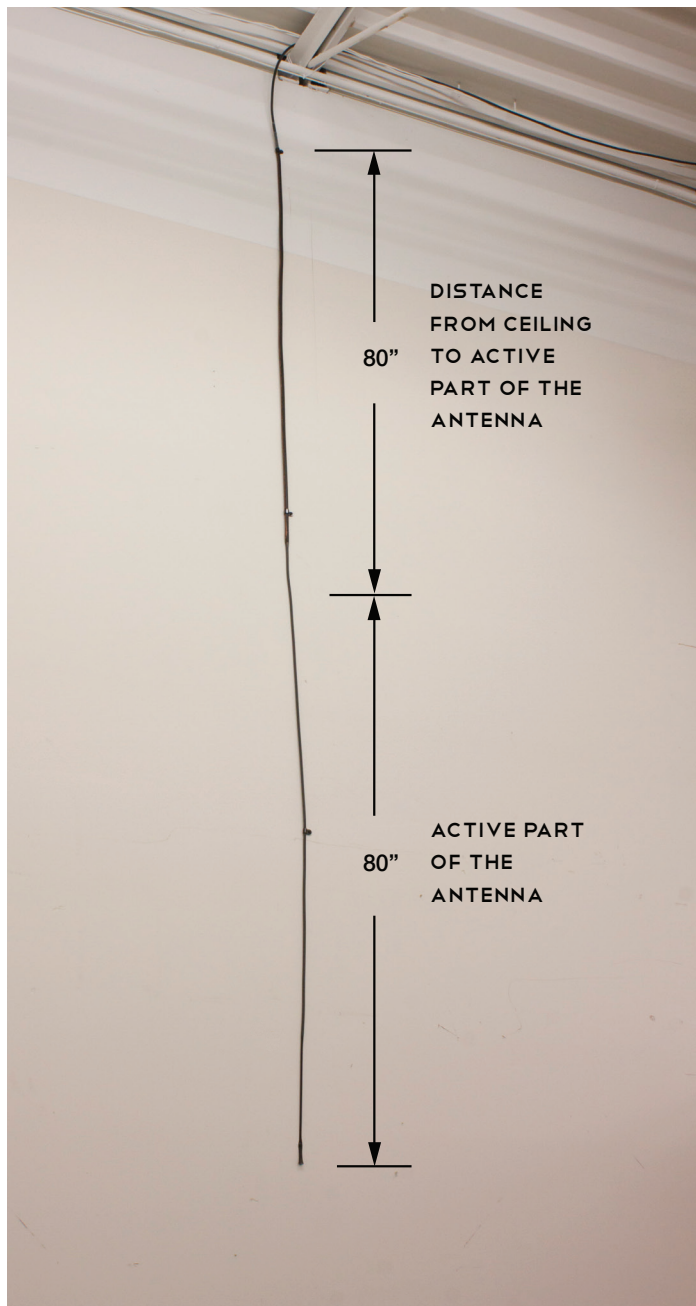


# 72 MHz Antenna Selection Install Guide

## BEST PRACTICES FOR ANTENNA SELECTION AND MOUNTING

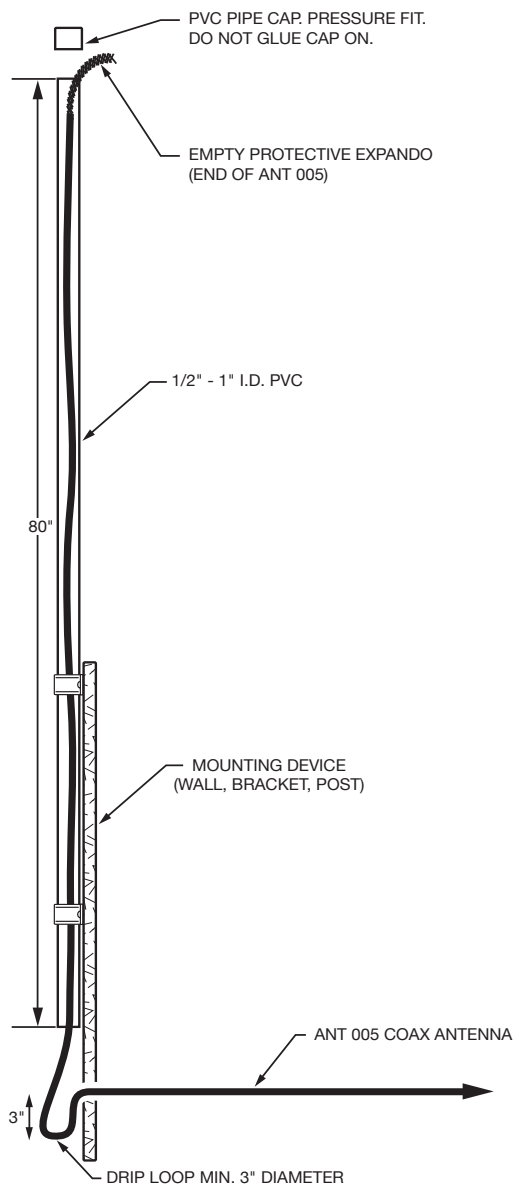
**Note: The FCC requires antennas in this guide to be professionally installed.**



### ANT 005

Dipole RG-59 coaxial cable antenna. 80 inch active antenna with a total cable length of 22 ft. Used in venues where the antenna is to be installed away from the Transmitter; i.e. Transmitter is in a rack and the antenna needs to be mounted in another room. The ANT 005 can be used outdoors where we recommend the antenna section be sealed in PVC piping, (see ANT 005 Outdoor Mounting, next page). Our most efficient FM antenna for optimal range. Designed for use with 72MHz – 76MHz transmitters.

*Use with T55, T55C, T45, or T27 transmitters.*



When the ANT 005 coax cable is mounted outdoors, the following steps need to be taken to avoid damage to system electrical equipment.

1. Insert Coax cable INSIDE the PVC tube.
2. The last 8 – 10" is empty netting called "Expando". All remaining "Expando" should hang outside the PVC tube as shown in the diagram.
3. Place cap on the top of the PVC tube with the "Expando" on the outside of the tube. This will secure the coax cable and suspend it inside the tube.
4. The coax cable outside of the PVC tube should have a "Drip Loop" that is 3" in diameter (minimum) and 1" below (minimum) entrance point through wall.
5. If the antenna is the highest point of the facility, there should be an "Arrestor" installed at the bottom of the Drip Loop.

## ANT 021

Rubber ducky antenna supplied PPA T27 (shown). Best suited for short range applications or where space is an issue. The ANT 021 can be mounted with optional mounting kits when you need to locate the antenna far from the transmitter. (72MHz – 76MHz). Designed for use with 72MHz – 76MHz transmitters.

*Use with T55, T55C, T45, or T27 transmitters.*





### ANT 024

Remote dipole antenna kit with mounting hardware. Used in venues where the antenna is installed remotely from the transmitter. Wall mounting kit with 20 ft coax cable included. Total length with both whips extended is 38 inches. Designed for use with 72MHz – 76MHz transmitters.

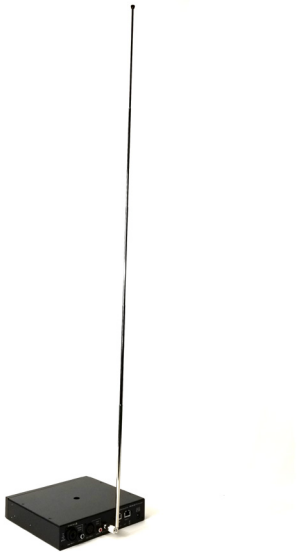
*Use with T55, T55C, T45, or T27 transmitters.*



### ANT 025

39 inch telescopic whip. More efficient than the ANT 021. Designed for use with 72MHz – 76MHz transmitters.

*Use with T55, T55C, T45, or T27 transmitters.*



## ANT 028

39 inch telescopic whip with adjustable angle F-connector. Designed for use in the 72MHz – 76MHz transmitters.

*Use with T55, T55C, T45, or T27 transmitters.*



## ANT 029

Remote antenna kit includes ANT 021 rubber ducky antenna with adjustable angle F-connector, mounting plate and 3 ft coax cable. Designed for 1RU installation and can be used on a cart, wall or other remote antenna applications. Designed for use with 72MHz – 76MHz transmitters.

*Use with T55, T55C, T45, or T27 transmitters.*



## ANT 034

Remote antenna kit for mounting on the front of a rack with the RPK 005. Includes ANT 021 rubber ducky antenna, adjustable angle F-connector, F-connector mount and 3 ft coax cable. Designed for use with the RPK 005 rack panel kit in a 1RU rack space. Designed for use with 72MHz – 76MHz transmitters.

*Use with T55, T55C, T45, or T27 transmitters.*

## General Antenna Recommendations

1. Antennas should be vertically oriented. Williams Sound antennas are specifically engineered to be mounted vertically, and do not work as well if mounted horizontally.
2. Avoid mounting on or near metal, such as I-beams, sheet metal walls, etc. Metal will tend to ground-out the signal.
3. Remote Antennas - use 75 $\Omega$  cable such as RG-59, RG-6 QS, RG-11 or equivalent cable. As an example, when calculating distance note that RG-59 has a signal loss of 3 dB per 100 ft.
4. Do not over-tighten antenna connectors or use a wrench. Finger-tight is sufficient.