



# ONE-WAY SIGNAL BOOSTER

## Frequently Asked Questions (FAQ):

### WHAT IS INCLUDED WITH PURCHASE OF THE ONE-WAY SIGNAL BOOSTER?

The One-Way Signal Booster includes a power supply & wall adapter, mounting hardware, and a 2-Year Consumer Limited Warranty.

### WHAT OTHER ACCESSORIES ARE REQUIRED FOR OPERATION?

The One-Way Signal Booster requires the accessories below for operation:

- Donor Antenna (Outdoor Antenna to install on building exterior aimed at signal source)
- Indoor Antenna (Indoor antenna, most commonly a panel antenna or dome antenna)
- RF Coaxial Cable (Connects each antenna to the Booster)

### WHAT TYPES OF SYSTEMS DOES THE BOOSTER SUPPORT?

The One-Way Signal Booster will support multiple system protocols, including Analog 2-Tone, P25 Conventional, and P25 Trunking Phase I and Phase II.

### WHAT FREQUENCY BANDS CAN IT BOOST?

The One-Way Signal Booster can be configured via a simple switch setting to boost ALL Public Safety bands, including VHF, UHF, 700MHz and 800MHz.

#### Switch setting available for:

- VHF/UHF
- 700MHz
- 800MHz
- 700/800MHz

### HELPFUL SIGNAL BOOSTER TERMINOLOGY

- Coaxial cable – Coaxial cable is a special type of cable designed to carry radio frequency (RF) signal. It typically has a copper center conductor, some sort of shielding, and an outer conductor.
- Donor antenna – The donor antenna in a signal booster system is the antenna typically placed outside the building that receives signal from the distant radio tower or base station.
- Indoor antenna – The indoor antenna in a signal booster system is the antenna that is installed inside the building that communicates with your radio/pager.
- Omni-directional antenna – An omni-directional antenna is an antenna with low antenna gain that receives and transmits signal in almost all directions equally.
- Directional antenna – A directional antenna is an antenna with more gain, and that focuses receiving and receiving antenna in a particular direction. The three main types of directional antenna are “panel,” “yagi,” and “log periodic” antennas.
- Dome antenna – A dome antenna is a type of indoor antenna that is typically installed in the ceiling of a building, and transmit signals downwards.
- Panel antenna – A panel antenna is a type of antenna that can be installed as a donor antenna outdoors or indoors on a wall and transmits signal outwards in the direction it is facing.
- Lightning surge protector – A device that protects your home and signal boosting equipment in case lightning hits the donor antenna.
- Downlink signal – the signal sent from the radio tower to a user's radio or voice pager (Receive Signal).
- Gain (dB) – Gain is the measure of amplification. The higher the gain, the more the signal is amplified. Gain is typically a positive dB number, and it's measured on a logarithmic scale. 0 dB gain means no gain. 10 dB gain equates to 10 times the signal strength, but 20 dB gain is 100 times more signal, and 30 dB gain is 1,000 times more signal.
- Antenna gain (dBi) – Antennas also have gain, but they don't “amplify” signal. Instead, they focus on sending and receiving signal in a particular direction. dBi is also a logarithmic scale. An antenna with 0 dBi signal doesn't focus the signal at all, whereas an antenna with 10 dBi signal receives and transmits 10 times more signal from a particular direction than other directions.
- Attenuation (dB) – Attenuation is the weakening of signal over distance, or as it passes through building material. Attenuation is measured in dB, and is typically a negative value (signal gets weaker). -10 dB attenuation is 10 times weaker signal. -20 dB attenuation is 100 times weaker signal.
- Signal strength (dBm) – A wireless signal's strength is measured in dBm. Like gain, the signal is logarithmic. 0 dBm is 1 milliwatt, or 0.001 Watts; 30 dBm is 1 Watt; -10dBm is 0.0001 W, or 0.1 milliwatt.