WILSON PRO 4000

In-Building Multi-Antenna Signal Booster
With Extended Dynamic Range

User Manual

NEED HELP?  wilsonpro.com  866.294.1660
Package Content

Kit 460223

- WilsonPro 4000
- Wide Band Directional Antenna + 75' Wilson 400 Cable
- 4 Qty. Dome Antenna + 4 Qty. 100' Wilson 400 Cable
- Pair of 2-Way Radios
- 2' Wilson 400
- Lightning Surge Protector
WilsonPro 4000

Easy Installation
Neat and clean installation while leaving the unit easily accessible.

Onboard Software For Better Control
Each indoor antenna path is independently and automatically controlled with onboard software, ensuring great connectivity throughout large spaces and multi-story buildings.

Extended Dynamic Range For Continuous Connectivity
XDR allows the booster to never shutdown due to too strong of a signal. No matter how strong, the booster will never overpower and shutdown.

Color LCD For Easier Access
Unlike other boosters, the WilsonPro 4000 has a color LCD screen with four-way navigation, allowing integrators to have easy and effective control of the product.
The WilsonPro 4000 is the first rack mounted, cell booster to incorporate four separate signal amplifiers feeding multiple indoor antennas. The 4000 literally delivers the power of four boosters in a single rack mount unit, and provides cell coverage for up to 100,000 square feet of indoor space, or even more depending on the strength of the incoming signal from the tower.

Designed to provide enhanced in-building cellular coverage for commercial and large residential spaces, the WilsonPro 4000 amplifies weak cell signals to provide reliable voice and data coverage – including 4G – to inside spaces where signals may not penetrate.

Like all WilsonPro cellular signal boosters, the WilsonPro 4000 features cell site protections that auto-detect and prevent any cell tower interference. Wilson Electronics quality and an industry-leading three-year warranty make the 4000 a clear choice for the professional technology integrator.
Key Features

**Easy installation:** The 4000 is intended to fit into an existing server rack. This design allows for a neat and clean installation while leaving the unit easily accessible.

**Onboard Software for Better Control:** Each indoor antenna path is independently and automatically controlled with onboard software, ensuring great connectivity throughout large spaces and multi-story buildings. Since all ports are independently controlled, each can adjust its gain level up or down as required by the conditions of the immediate signal environment without disrupting coverage from any other antenna.

**Extended Dynamic Range (XDR) for continuous connectivity:** Gives the 4000 much greater tolerance than any competing booster for a strong incoming signal from the tower. XDR lets the 4000 system work with an incoming signal stronger than any competing booster and never shuts down.

**Color LCD for Easier Access:** Unlike other boosters, the Wilson 4000 has a color LCD screen with four-way navigation, allowing integrators to have easy and effective control of the product.
Competitive Advantages

**Highest Downlink Power:** Up to +12dB more downlink power than the competition allows for stronger signal in environments where the incoming signal is weak. The benefit is a stronger signal sent to the inside antennas, providing larger coverage area from a single booster.

**Highest Uplink Power:** This allows for a stronger signal transmitted to the tower, up to +3dB more than the competition, providing greater user capacity and increased range from the cell site.

**Lower Overload and Shutdown Threshold:** No matter how strong the outside signal, the WilsonPro 4000 never shuts down. This is a huge benefit in strong signal environments like cities and locations close to a carrier tower.

**Intelligent Control:** WilsonPro cellular boosters automatically adjust signal gain while still providing even signal coverage throughout the building.

**Sophisticated Software:** Cellular signals are constantly fluctuating. The software is always monitoring signal levels and making immediate adjustments as needed, allowing the booster to operate at maximum gain consistently.
Installation Diagram

The direction of the outside antenna should be adjusted until the “DL” bar is maximized.

2-way radios are included to help with the installation process.
Post Install Setup

The WilsonPRO 4000 is designed with advanced internal programming, which allows it to automatically adjust for a variety of conditions, while still boosting weak signals.

Once the AC power cable and antenna cables are connected, turn the unit on by toggling the power switch located near the AC power receptacle, located at the rear of the unit.
Status Screen

The 4000 takes about 20 seconds to boot up. Once boot up is complete, the status screen will appear, showing the amplification and status of each port and band.

Lights Description

A solid green light indicates that a band/port is operating correctly with maximum allowable gain.

A solid yellow light indicates band/port gain reduction because of an oscillation condition. Reposition antennas (more separation between indoor and outdoor antennas, and pointed in opposite directions) and reboot (power cycle) the 4000 for maximum performance. When adequate separation is achieved, the yellow lights will return to green upon reboot. Note that when the light is yellow, the band/port is operational; however, performance is reduced.
A red light indicates a band/port which has been completely shut down because of a severe oscillation condition or repeated oscillation events. Reposition antennas (more separation between indoor and outdoor antennas, and pointed in opposite directions) and then reboot (power cycle) the 4000 to reactivate the band/port and maximize performance. When adequate separation is achieved, the red light(s) will return to green upon reboot.
Port/Band Status Screens

Green Light

By pressing enter on a highlighted light, as shown, a more detailed status screen will be displayed for the highlighted band/port.

This screen provides specific band and port information. Including the strength of the received uplink and downlink signal, status details, and the amplifier gain.
In the presence of a strong outdoor cell tower signal, the 4000 will reduce its “boost” (Gain) using internal Automatic Gain Control (AGC). This gain reduction is necessary to stay within FCC requirements. When this occurs, the 4000 has reached the ‘speed limit’ so this is good! The outside antenna should always be adjusted until the “DL” bar is maximized and “AGC” is indicated, if possible with a weak outside signal, this may not be possible.

Yellow Light

Pressing enter on a highlighted light with a yellow light (Antenna 1, Band 12), as shown, will display the following...

This screen indicates band/port gain has been reduced because of the oscillation condition detected at a nearby band/port.
Enable/Disable Ports

To return to the Status Screen press the any arrow button on the D-Pad.

Unused indoor antenna ports should be enabled/disabled by pressing enter on the applicable port, from the status screen.

‘Disabled’ will be displayed on the applicable port, as shown.
Safety Guidelines

⚠️ Warnings

To uphold compliance with network protection standards, all active cellular devices must maintain at least 6 feet of separation distance from Panel and Dome antennas.

Use only the power supply provided in this package. Use of a non-Wilson Electronics product may damage your equipment.

The Signal Booster unit is designed for use in an indoor, temperature-controlled environment (less than 100 degrees Fahrenheit). It is not intended for use in attics or similar locations subject to temperatures in excess of that range.

RF Safety Warning: Any antenna used with this device must be located at least 8 inches from all persons.

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This is a CONSUMER device.

BEFORE USE, you MUST REGISTER THIS DEVICE with your wireless provider and have your provider’s consent. Most wireless providers consent to the use of signal boosters. Some providers may not consent to the use of this device on their network. If you are unsure, contact your provider.

You MUST operate this device with approved antennas and cables as specified by the manufacturer. Antennas MUST be installed at least 20 cm (8 inches) from any person.

You MUST cease operating this device immediately if requested by the FCC or a licensed wireless service provider.

WARNING. E911 location information may not be provided or may be inaccurate for calls served by using this device.

This device may be operated ONLY in a fixed location for in-building use.

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FOR MORE INFORMATION ON REGISTERING YOUR SIGNAL BOOSTER WITH YOUR WIRELESS PROVIDER, PLEASE SEE BELOW:

T-Mobile/MetroPCS: https://support.t-mobile.com/docs/DOC-9827
AT&T: https://securec45.securewebsession.com/attsignalbooster.com/
The following accessories are certified by the FCC to be used with the Wilson PRO 4000.
### Specifications

<table>
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<tr>
<th>Product Number</th>
<th>U460023</th>
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<td>Model Number</td>
<td>460023</td>
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<tr>
<td>FCC ID</td>
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<td>IC ID</td>
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<tr>
<td>Connectors</td>
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<td>Antenna Impedance</td>
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<td>Frequency</td>
<td>698-716 MHz, 746-787 MHz, 824-894 MHz, 1850-1990 MHz, 1710-1755/2110-2155 MHz</td>
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<tr>
<th>Passband Gain (nominal)</th>
<th>700MHz Band12/17</th>
<th>700MHz Band13</th>
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<th>1700/2100MHz</th>
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<td>20 dB Bandwidth (MHz)</td>
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<tr>
<th>Power output for single cell phone (Uplink) dBm</th>
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<th>700MHz Band13</th>
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<thead>
<tr>
<th>Power output for multiple received channels (Uplink) dBm No. Tones</th>
<th>700MHz Band12/17</th>
<th>700MHz Band13</th>
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<table>
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<tr>
<th>Noise Figure</th>
<th>5 dB nominal</th>
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<td>Isolation</td>
<td>&gt; 90 dB</td>
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<tr>
<td>Power Requirements</td>
<td>12V 3A</td>
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The Manufacturer’s rated output power of this equipment is for single carrier operation. For situations when multiple carrier signals are present, the rating would have to be reduced by 3.5 dB, especially where the output signal is re-radiated and can cause interference to adjacent band users. This power reduction is to be by means of input power or gain reduction and not by an attenuator at the output of the device.
Warranty

30 DAY MONEY-BACK GUARANTEE

All WilsonPro products are protected by WilsonPro 30-day money-back guarantee. If for any reason the performance of any product is not acceptable, simply return the product directly to the reseller with a dated proof of purchase.

3 YEAR WARRANTY

WilsonPro Boosters are warranted for three (3) years against defects in workmanship and/or materials. Warranty cases may be resolved by returning the product directly to the reseller with a dated proof of purchase.

Signal Boosters may also be returned directly to the manufacturer at the consumer’s expense, with a dated proof of purchase and a Returned Material Authorization (RMA) number supplied by WilsonPro. WilsonPro shall, at its option, either repair or replace the product.

This warranty does not apply to any Signal Boosters determined by WilsonPro to have been subjected to misuse, abuse, neglect, or mishandling that alters or damages physical or electronic properties.

RMA numbers may be obtained by contacting Customer Support.

DISCLAIMER: The information provided by WilsonPro is believed to be complete and accurate. However, no responsibility is assumed by WilsonPro for any business or personal losses arising from its use, or for any infringements of patents or other rights of third parties that may result from its use.

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