WILSON PRO
1000R

In-Building Signal Booster
With Extended Dynamic Range

User Manual
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Package Content

Kit 460231

WilsonPro 1000R
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 1000R

Easy Rack-Mounted Installation

Neat and clean installation while leaving the unit easily accessible.

Onboard Software For Better Control

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 1000R has a color LCD screen with four-way navigation, allowing integrators to have easy and effective control of the product.
The WilsonPro 1000R provides cellular coverage for all commercial spaces, including hospitals, hotels, warehouses, and offices. It 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 1000R features cell site protections that auto-detect and prevent any cell tower interference.

Unlike other boosters, the WilsonPro 1000R has a color LCD screen with four-way navigation, allowing integrators to have easy and effective control of the product.

The 1000R is intended to fit into an existing server rack. This design allows for a neat and clean installation while leaving the unit easily accessible.

XDR gives the 1000R the greatest tolerance of any competing booster for a strong incoming signal from the tower. 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.
Key Features

**Easy rack-mounted installation:** The 1000R 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:** Booster is automatically controlled with automatic onboard software, ensuring great connectivity throughout large spaces and multi-story buildings. The booster will adjust its gain level up or down as required by the conditions of the immediate signal environment.

**Extended Dynamic Range (XDR) for continuous connectivity:** Gives the 1000R much greater tolerance than any competing booster for a strong incoming signal from the tower. XDR lets the 1000R 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 1000R has a color LCD screen with four-way navigation, allowing integrators to optimize antenna position and maximize the performance of the booster.
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 1000R 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

A Wilson Lightning Surge Protector is recommended for all building installations. Make sure the protector is installed outside the building at point of entry connected to a suitable ground and in line between the Outside Antenna and the Signal Booster.

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

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

The WilsonPRO 1000R 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.
The 1000R 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.

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

A solid yellow light indicates band 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 1000R 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 is operational; however, performance is reduced.
A red light indicates a band 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 1000R to reactivate the band and maximize performance. When adequate separation is achieved, the red light(s) will return to green upon reboot.
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.

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 1000R 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 1000R 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 (Band 12), as shown, will display the following...

This screen indicates band gain has been reduced because of the oscillation condition detected at a nearby band.
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.

AWS Warning: The Outside Antenna must be installed no higher than 10 meters (31'9") above ground.

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:

- **Sprint**: http://www.sprint.com/legal/fcc_boosters.html
- **T-Mobile/MetroPCS**: https://support.t-mobile.com/docs/DOC-9827
- **AT&T**: https://securec45.securewebsession.com/attsignalbooster.com/
- **U.S. Cellular**: http://www.uscellular.com/uscellular/support/fcc-booster-registration.jsp

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This device complies with Part 15 of FCC rules. Operation is subject to two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Changes or modifications not expressly approved by weBoost could void the authority to operate this equipment.
The following accessories are certified by the FCC to be used with the Wilson PRO 1000R.

**Inside Antenna Expansion Kit**
- Kit 309900-50N40090
  - 2 - Wall Panel antennas
  - 1 - 3-Way 50 Ohm Splitter

- Kit 309905-50N17420
  - 3 - Wall Panel Antennas
  - 2 - 50' RG14

- Kit 309902-75F0650
  - 2 - Wall Panel Antennas
  - 1 - 100' Wilson 400

- Kit 309903-75F1180
  - 1 - 3-Way 75Ohm Splitter
  - 50' RG6

- Kit 309904-75F8330
  - 1 - Wall Panel Antenna
  - 1 - 2-Way 75 Ohm Splitter
  - 30' RG58 cable

**Inside Antenna Kits**
- Kit 311155-0670
  - 75 Ohm Wall mount Panel Antenna
  - 70' RG6 Cable

- Kit 311135-5840
  - 50 Ohm Wall mount Panel Antenna
  - 40' RG58 Cable

- Kit 311135-400150
  - 50 Ohm Wall mount Panel Antenna
  - 150' Wilson 400

- Kit 311155-11120
  - 75 Ohm Wall mount Panel Antenna
  - 10' RG11 cable

- Kit 304412-400100
  - 50 Ohm 4G Dome Antenna
  - 100' Wilson400 cable

- Kit 304412-5830
  - 50 Ohm 4G Dome Antenna
  - 30' RG58 cable

- Kit 304419-1175
  - 75 Ohm 4G Dome Antenna
  - 75' RG11 cable

- Kit 304419-17450
  - 75 Ohm 4G Dome Antenna
  - 50' RG174 cable

- Kit 304419-0650
  - 75 Ohm 4G Dome Antenna
  - 50' RG6 cable

**50 Ohm Outside Antenna Kits**
- Kit 314453-5825
  - 50 Ohm Pole Mount Panel Antenna
  - 25' RG58 Cable

- Kit 314411-5825
  - 50 Ohm Wide Band Directional
  - 25' RG58 Cable

- Kit 301111-5850
  - Yagi Directional Antenna
  - 50' RG58 Cable

- Kit 311203-5820
  - Omni-Directional antenna
  - 20' RG58 Cable

- Kit 314411-40075
  - 50 Ohm Wide Band Directional
  - 75' LMR400 Cable

- Kit 311203-40020
  - Omni-Directional antenna
  - 20' LMR400 Cable

- Kit 301111-400170
  - Yagi Directional w/ N-Female
  - 170' LMR400

- Kit 314453-40075
  - 50 Ohm Pole Mount Panel Antenna
  - 75' LMR400 Cable

- Kit 304422-40020
  - 50 Ohm 4G Omni Antenna
  - 20' Wilson400 cable

- Kit 304422-5810
  - 50 Ohm 4G Omni Antenna
  - 10' RG58 cable

- Kit 304422-1120
  - 50 Ohm 4G Omni Antenna
  - 20' RG11 cable

- Kit 311201-11140
  - Yagi Directional Antenna
  - 75' RG11 Cable

- Kit 311141-0620
  - 75 Ohm Grey Brick Antenna
  - 20' RG6 Cable

- Kit 301111-11440
  - Yagi Directional Antenna
  - 140' RG11 Cable
  - N-Male to F-Female adapter

- Kit 311201-1120
  - Omni Directional w/ F-Female
  - 20' RG11 Cable

- Kit 314473-1175
  - 75 Ohm Pole Mount Panel Antenna
  - 75' RG11 Cable

- Kit 314475-0630
  - 75 Ohm Wide Band Directional
  - 30' RG6 Cable

- Kit 314475-1175
  - 75 Ohm Wide Band Directional
  - 75' RG11 Cable

- Kit 311141-1120
  - 75 Ohm Grey Brick Antenna
  - 20' RG11 Cable

- Kit 304421-17410
  - 75 Ohm 4G Omni Antenna
  - 10' RG174 cable

- Kit 304421-0610
  - 75 Ohm 4G Omni Antenna
  - 10' RG58 cable

- Kit 304421-5810
  - 75 Ohm 4G Omni Antenna
  - 10' RG11 cable

- Kit 304421-1120
  - 75 Ohm 4G Omni Antenna
  - 20' RG11 cable

**75 Ohm Outside Antenna Kits**
- Kit 301111-0675
  - Yagi Directional Antenna
  - 75' RG6 Cable

- Kit 301111-1175
  - Yagi Directional Antenna
  - N-Male to F-Female adapter

- Kit 311201-0620
  - Omni Directional w/ F-Female
  - 20' RG6 Cable

- Kit 314473-0640
  - 75 Ohm Pole Mount Panel Antenna
  - 75' RG11 Cable

- Kit 314475-1175
  - 75 Ohm Wide Band Directional
  - 75' RG11 Cable

- Kit 311141-1120
  - 75 Ohm Grey Brick Antenna
  - 20' RG11 cable

- Kit 304421-17410
  - 75 Ohm 4G Omni Antenna
  - 10' RG174 cable

- Kit 304421-0610
  - 75 Ohm 4G Omni Antenna
  - 10' RG58 cable

- Kit 304421-5810
  - 75 Ohm 4G Omni Antenna
  - 10' RG11 cable

- Kit 304421-1120
  - 75 Ohm 4G Omni Antenna
  - 20' RG11 cable
## Specifications

<table>
<thead>
<tr>
<th>Product Number</th>
<th>460037</th>
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<tr>
<td>Model Number</td>
<td>460037</td>
</tr>
<tr>
<td>FCC ID</td>
<td>PWO460037</td>
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<tr>
<td>Connectors</td>
<td>N-F Female</td>
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<tr>
<td>Antenna Impedance</td>
<td>50 Ohms</td>
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<tr>
<td>Frequency</td>
<td>698-716 MHz, 729-746 MHz, 777-787 MHz, 824-844 MHz, 1850-1995 MHz, 1710-1755/2110-2155 MHz</td>
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</tbody>
</table>

### Passband Gain (nominal)

<table>
<thead>
<tr>
<th>Band</th>
<th>700/1900 MHz</th>
<th>700/1900 MHz</th>
<th>800/1900 MHz</th>
<th>1700/2100 MHz</th>
<th>1900 MHz</th>
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<tbody>
<tr>
<td>Typical</td>
<td>57.6</td>
<td>58.0</td>
<td>59.2</td>
<td>65.7</td>
<td>65.2</td>
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<tr>
<td>Maximum</td>
<td>29.6</td>
<td>30.3</td>
<td>36.8</td>
<td>77.5</td>
<td>74.5</td>
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</table>

### 20 dB Bandwidth (MHz)

<table>
<thead>
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<th>Band</th>
<th>700/1900 MHz</th>
<th>700/1900 MHz</th>
<th>800/1900 MHz</th>
<th>1700/2100 MHz</th>
<th>1900 MHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical</td>
<td>700/1900 MHz</td>
<td>700/1900 MHz</td>
<td>800/1900 MHz</td>
<td>1700/2100 MHz</td>
<td>1900 MHz</td>
</tr>
<tr>
<td>Maximum</td>
<td>29.6</td>
<td>30.3</td>
<td>36.8</td>
<td>77.5</td>
<td>74.5</td>
</tr>
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### Power output for single cell phone (Uplink) dBm

<table>
<thead>
<tr>
<th>No. Tones</th>
<th>700/1900 MHz</th>
<th>700/1900 MHz</th>
<th>800/1900 MHz</th>
<th>1700/2100 MHz</th>
<th>1900 MHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>23.0</td>
<td>23.9</td>
<td>20.4</td>
<td>22.4</td>
<td>22.1</td>
</tr>
<tr>
<td>3</td>
<td>19.5</td>
<td>20.4</td>
<td>16.9</td>
<td>18.9</td>
<td>18.6</td>
</tr>
<tr>
<td>4</td>
<td>17.0</td>
<td>17.9</td>
<td>14.4</td>
<td>16.4</td>
<td>16.1</td>
</tr>
<tr>
<td>5</td>
<td>15.0</td>
<td>15.9</td>
<td>12.4</td>
<td>14.4</td>
<td>14.1</td>
</tr>
<tr>
<td>6</td>
<td>13.5</td>
<td>14.4</td>
<td>10.9</td>
<td>12.9</td>
<td>12.6</td>
</tr>
</tbody>
</table>

### Power output for multiple received channels (Uplink) dBm

<table>
<thead>
<tr>
<th>No. Tones</th>
<th>700/1900 MHz</th>
<th>700/1900 MHz</th>
<th>800/1900 MHz</th>
<th>1700/2100 MHz</th>
<th>1900 MHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>16.1</td>
<td>15.2</td>
<td>15.3</td>
<td>12.0</td>
<td>15.3</td>
</tr>
<tr>
<td>3</td>
<td>12.6</td>
<td>11.7</td>
<td>11.8</td>
<td>8.5</td>
<td>11.8</td>
</tr>
<tr>
<td>4</td>
<td>10.1</td>
<td>9.2</td>
<td>9.3</td>
<td>6.0</td>
<td>9.3</td>
</tr>
<tr>
<td>5</td>
<td>8.1</td>
<td>7.2</td>
<td>7.3</td>
<td>4.0</td>
<td>7.3</td>
</tr>
<tr>
<td>6</td>
<td>6.6</td>
<td>5.7</td>
<td>5.8</td>
<td>2.5</td>
<td>5.8</td>
</tr>
</tbody>
</table>

### Noise Figure

<table>
<thead>
<tr>
<th>5 dB nominal</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 dB nominal</td>
</tr>
<tr>
<td>&gt; 90 dB</td>
</tr>
</tbody>
</table>

### Power Requirements

| 12V 3A |

The term “IC” before the radio certification number only signifies that Industry Canada technical specifications were met.

Each Signal Booster is individually tested and factory set to ensure FCC compliance. The Signal Booster cannot be adjusted without factory reprogramming or disabling the hardware. The Signal Booster will amplify, but not alter incoming and outgoing signals in order to increase coverage of authorized frequency bands only. If the Signal Booster is not in use for five minutes, it will reduce gain until a signal is detected. If a detected signal is too high in a frequency band, or if the Signal Booster detects an oscillation, the Signal Booster will automatically turn the power off on that band. For a detected oscillation the Signal Booster will automatically resume normal operation after a minimum of 1 minute. After 5 (five) such automatic restarts, any problematic bands are permanently shut off until the Signal Booster has been manually restarted by momentarily removing power from the Signal Booster. Noise power, gain, and linearity are maintained by the Signal Booster’s microprocessor.

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.
Notes
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.

NEED HELP? support.wilsonpro.com  866.294.1660