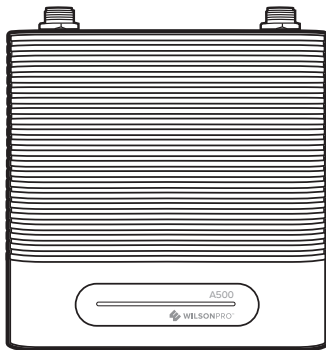




Installation Guide



WilsonPro A500 Cellular Signal Booster

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Package Contents



A500 Booster
& Bracket



Inside Antenna
Wall Mount Bracket



Outside Antenna
& Pole Mount brackets



Power Supply
(859116)



3 Coax Cables
(1m, 10m, 15m)



Lightning Surge
Protector

Preparation

You Will Need (tools not included)

Make sure the following materials are prepared and ready for your installation.



3 to 4 hours



2 people
(a person to help with
antenna calibration)

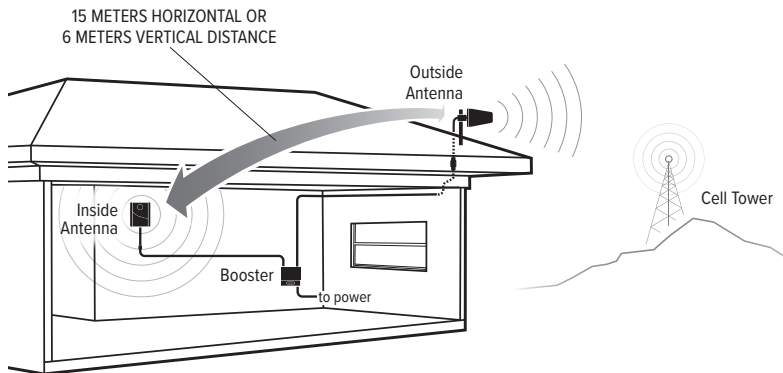


- Ladder
- Phillips-head screwdriver
- 10mm open-end wrench or adjustable wrench
- Drill (*if routing cable through wall*)
- Mounting Option**
25cm pole (#BT512631) or an existing pole
- Recommended:** Power Strip

Important

The signal booster unit is designed for use in an indoor, temperature controlled environment (< 38 degrees Celsius.)

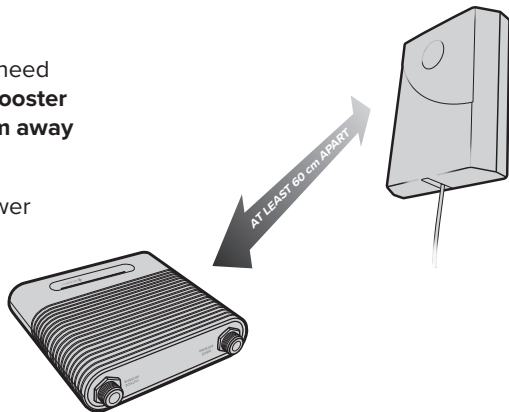
Installation Diagram



STEP 1 Inside Antenna & Booster Placement

Place the **inside antenna** where you need the greatest signal boost and place **booster** in your desired location at least **60 cm away** from inside antenna.

NOTE: Do not connect booster to power until the system is fully installed.



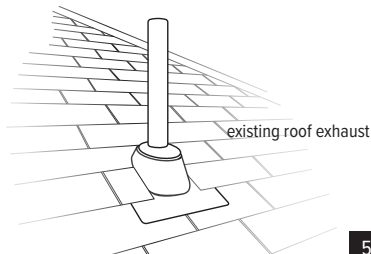
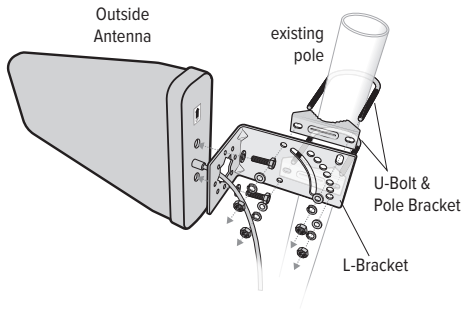
STEP 2 Mount Outside Antenna Toward Nearest Cell Tower

Pole mounting and wall mounting options are included.

The pole mounting option is preferred because it will be easier to adjust to the direction of the cell tower.

Attach the **L-bracket** to the outside antenna and use the **U-bolt and pole bracket** to attach the antenna to a pole or exhaust pipe.

NOTE: Mounting on existing roof exhaust pipe would be a good time-saver option. Watch out for power lines.

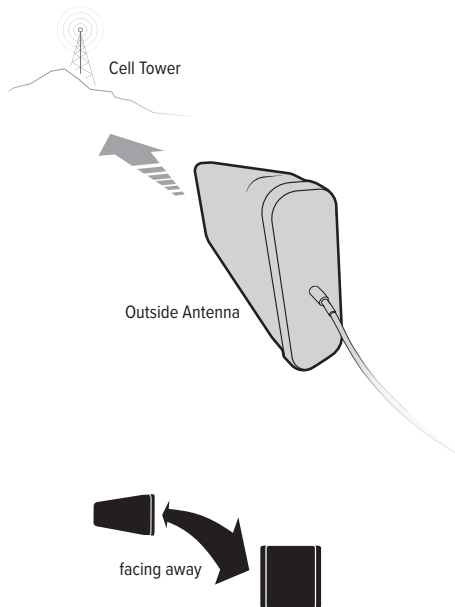


(STEP 2 cont.)

Point the **outside antenna** toward the nearest cell phone tower. **This is the most critical step of the installation process because it will determine the overall performance of the booster system.**

The greater the separation between the inside and outside antennas, the better performance you will get from the booster.

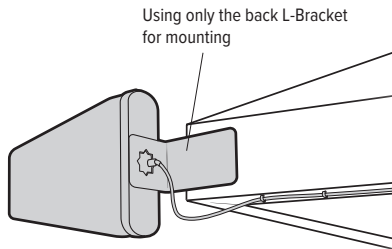
NOTE: The outside antenna must be at least **15 meters horizontal or 6 meters vertical** from the Inside antenna for best performance. Make sure the inside antenna and outside antennas are setup so they are **facing away** from each other.



(STEP 2 cont.)

If there's not a pole to easily mount the outside antenna, this may be mounted on the fascia by fastening the bracket as shown.

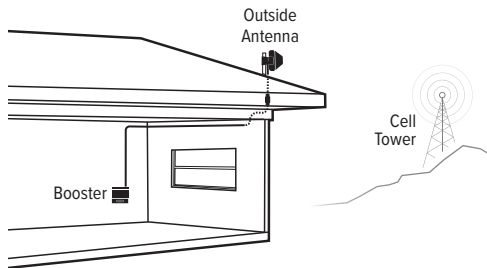
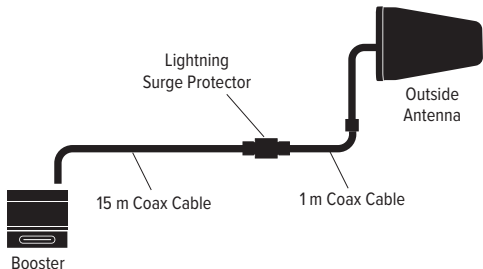
TIP: Make sure to do the optimization test on Step 4 to find the best side of your house before you mount this on the fascia.



STEP 3 Route & Connect Outside Antenna To Booster

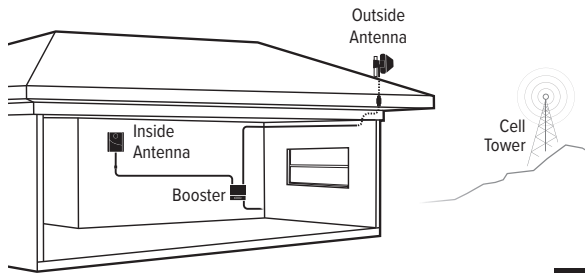
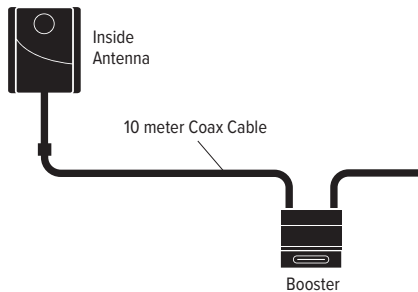
Connect **1 meter coax cable** to **outside antenna**, attach the **lightning surge protector**, then connect the black **15 meter coax cable** and route into building. All connections should be finger tightened only.

Route cable to the **booster** and connect to the port labeled 'OUTSIDE ANTENNA'. inger tightened only.




STEP 4 Route & Connect Inside Antenna To Booster

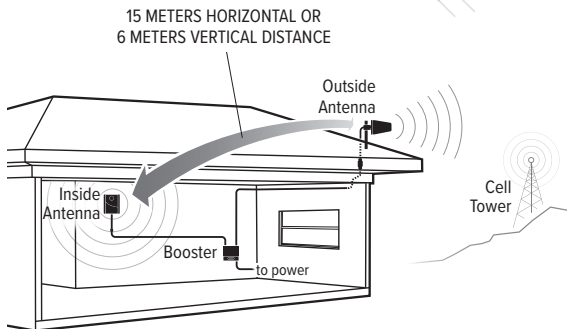
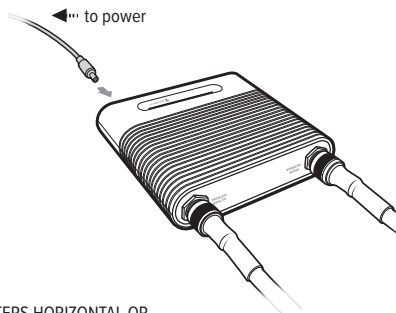
Connect the black **10 meter coax cable** to inside antenna and route to the **booster** and connect to the port labeled 'INSIDE ANTENNA'.



STEP 5 Power Up The Booster & Optimize The System

Plug the **power supply** to the booster labeled “” and then to the wall outlet and enjoy your boosted signal.

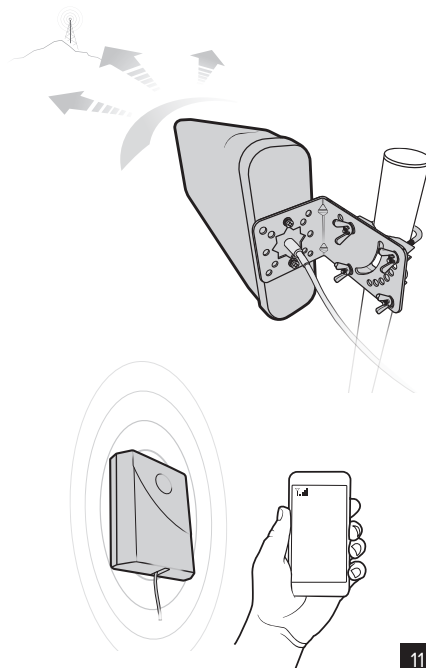
NOTE: We strongly recommend using a power strip with surge protection.



(STEP 5 cont.)

OPTIONAL: After powering up your system, you can optimize your system to see if more performance is possible. Rotate the outside antenna in 1/4 turn increments, **after each turn, unplug and reconnect the booster to power while observing the signal level on your cell phone from the inside antenna's projected area.** Secure the outside antenna in place, pointing in the direction that gives you the strongest signal.

After each rotation, observe signal level on your cell phone from the inside antenna's projected area. This is done best by having someone near the inside antenna taking signal measurements after the person outside makes each rotation.



Measuring Performance Booster

HOW TO GET SIGNAL STRENGTH AS A NUMBER

iPhone®

Using the signal bars and performing data speed tests on your cell phone can assist you in finding the strongest signal direction as well as placing calls in different locations.

Android™

Settings > About Phone > Status or Network > Signal Strength or Network Type and Strength (exact options/wording depends on phone model).

iPhone is a registered trademark of Apple Inc. Android is a trademark of Google Inc.

(Measuring Performance Booster cont.)

Signal Strength without Booster






Note here: _____

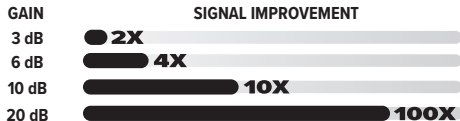
Signal Strength with Booster

Note here: _____

COMPARE RESULTS

Having an accurate measurement of signal strength in decibel-milliwatts (dBm) is crucial when installing your system. Decibel-milliwatts accurately measure the signal strength you are receiving.

SIGNAL STRENGTH	EXCELLENT	GOOD	FAIR	POOR	DEAD ZONE
					
3G/1x	-70dBm	-71 to -85dBm	-86 to -100dBm	-101 to -109dBm	-110dBm
4G/LTE	-90dBm	-91 to -105dBm	-106 to -110dBm	-111 to -119dBm	-120dBm



DID YOU KNOW a signal increase of just 3dB is 2 times the power and signal amplification!

Light Patterns

SOLID GREEN

This indicates that your booster is functioning properly and there are no issues with installation.

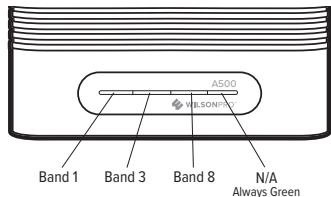
BLINKING GREEN & RED

Band has reduced gain. This indicates that one or more of the booster bands has reduced gain due to a feedback loop condition called oscillation. This is a built in safety feature to prevent harmful interference with a nearby cell tower. If you are already experiencing the desired signal boost, then no further adjustments are necessary. If you are not experiencing the desired boost in coverage then refer to the Troubleshooting section.

SOLID RED

Band has shutoff. This is due to a feedback loop condition called oscillation. This is a built in safety feature that causes a band to shut off to prevent harmful interference with a nearby cell tower. Refer to Troubleshooting.

Booster Lights



(Light Patterns cont.)

BLINKING GREEN & YELLOW

Band has reduced gain. This indicates that one or more of the Booster bands has reduced power due to overload from nearby cell tower. This is a built-in safety feature to prevent harmful interference with a nearby cell tower. If you are already experiencing the desired signal boost, then no further adjustments are necessary. If you are not experiencing the desired boost in coverage then refer to the Troubleshooting section.

SOLID YELLOW

Band has shutoff. This is due to overload from nearby cell tower. Outside antenna must be adjusted. Refer to Troubleshooting section.

Light Off

If the signal booster's light is off, verify your power supply has power.

Troubleshooting

If you are happy with the coverage, these light issues don't have to be resolved. your carrier's band has not been affected.

FIXING ANY RED LIGHT ISSUES

This involves Solid Red & Blinking Green/Red lights.

- Verify the inside antenna is at least 60 cm from the booster and pointed away from the outside antenna. Unplug and replug in power supply.
- Tighten all cable connections (be sure to hand tighten only, do NOT use tools). You may want to undo and redo the connection completely. Unplug and replug in power supply.
- Increase the distance (horizontally or vertically) between the outside and inside antenna. Unplug and replug in power supply.

FIXING ANY YELLOW LIGHT ISSUES

This involves Solid Yellow & Blinking Green/Yellow lights.

- **Outside antenna must be adjusted.** Wait 10 seconds between adjustments and unplug and replug for the lights to reset.

(Troubleshooting cont.)

Pole Mount Option: Rotate the outside antenna away from the strongest cellular signal in small increments (1/8 turn) until the light turns green. Unplug and replug in power supply.

Mounting on Side of Roof Option: Change mount location. Move the outside antenna to a new location of the home/building to see if the lights turn green. Unplug and replug in power supply. Then secure in place.

NEED HELP?

 boltontechnical.co.za

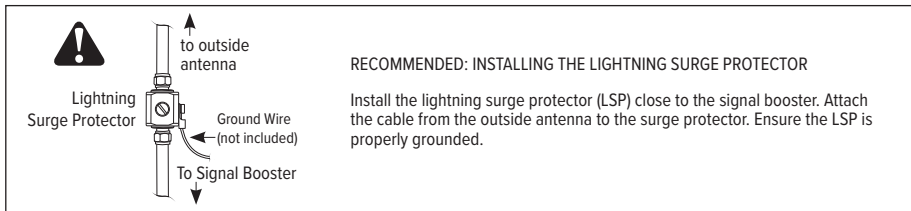
 011 749 3085

Safety Guidelines

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

The signal booster unit is designed for use in an indoor, temperature-controlled environment (less than 38 degrees Celsius). 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 20 cm from all persons.



Specifications

WilsonPro A500			
Model	WilsonPro A500		
Connectors	N-Female		
Antenna Impedance	50 Ohms		
Frequency	1920-1980 / 2110-2170	1710-1785 / 1805-1880	880-915 / 925-960
Bands	B1	B3	B8
Max gain (uplink / downlink dB)	68 / 69	65 / 65	64 / 66
Max power output (uplink / downlink dBm)	29 / 16	30 / 17	31 / 18
Power Requirements	5V, 4A		

✔ 1 YEAR WARRANTY

WilsonPro Signal Boosters are warranted for one (1) years against defects in workmanship and/or materials. Warranty cases may be resolved by returning the product directly to the reseller, Bolton Technical, with a dated proof of purchase.

Signal Boosters may also be returned with a dated proof of purchase and a Returned Material Authorization (RMA) number supplied by Bolton Technical. Bolton Technical shall, at its option, either repair or replace the product.

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

Replacement products may include refurbished WilsonPro products that have been re-certified to conform with product specifications.

RMA numbers may be obtained by contacting Customer Support

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Sole Distributors in South Africa

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