Amplifier Installation Guide

SIGNALBOOST™
iBooster™

Dual-Band Wireless Cellular / PCS Amplifier with Built-in Antenna for the iPhone*

Part # 805201 Model # 271220 FCC ID: PWO271220SA** IC: 4726A-271220SA

Contents:

⚠ **Warning:** This manual contains important safety and operating information. Please read and follow the instructions in this manual. Failure to do so could be hazardous and result in damage to your amplifier.

* iPhone is a registered trademark of Apple, Inc.
** The term "IC" before the certification number only signifies that Industry Canada technical specifications were met.

A) The iBooster achieves the best performance while the iPhone* remains in the cradle and a Bluetooth® headset is used.

B) When the iBooster™ is dash mounted, the iPhone* can be removed and still maintain good amplification from a distance of up to 2 feet.

30-Day Money-Back Guarantee

All Wilson Electronics products are protected by Wilson's 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.

1-Year Warranty

Wilson Electronics amplifiers are warranted for one (1) year against defects in workmanship and / or materials. Warranty issues may be resolved by returning the product directly to the reseller with a dated proof of purchase.

Amplifiers 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 Wilson Electronics. Wilson shall, at its option, either repair or replace the product. Wilson Electronics will pay for delivery of the repaired or replaced product back to the original consumer within the continental United States.

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

RMA numbers may be obtained by phoning Technical Support at 866-294-1660.

Operation is subject to the following two conditions: (1) This device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of this device.

Disclaimer: The information provided by Wilson Electronics, Inc. is believed to be complete and accurate. However, no responsibility is assumed by Wilson Electronics, Inc. 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.

Wilson® Electronics, Inc.

Inside this Package

iBooster™ Wireless Amplifier/Cradle

iPhone* case adapter

Cigarette Lighter Power Supply

Mini Magnet-Mount antenna

Vehicle Dash Mounting Brackets

General

Your new Wilson amplifier has been carefully engineered to significantly improve the performance of your iPhone* in mobile applications. Together with an outside antenna, the amplifier's state-of-the-art circuitry is designed to increase your iPhone* signal to and from the cell site, up to 20 times greater than the iPhone* alone. The iBooster™ reduces disconnects and dropouts and increases data communication rates on 2G and 3G networks.

How it Works

The roof mounted outside antenna collects the cell tower signal and sends it through its cable to the amplifier located inside the cradle. The signal is then boosted and sent to the iPhone* via the built-in antenna inside the cradle/amplifier. When the iPhone* transmits, the signal is picked up by the antenna inside the cradle, boosted by the amplifier and broadcast back to the cell tower via the roof mounted outside antenna.

In addition to the convenient mini magnetic roof mount antenna included with your kit, Wilson Electronics offers a wide variety of outside antennas to help you customize your amplifier for a specific application. All models shown below double the power to the cell site compared to the mini magnet antenna. See your dealer or visit www.wilsonelectronics.com.

Vehicular Antenna Options

12" Magnet Mount Antenna

High Gain Magnet-Mount Antenna

Trucker Antenna

Ideal for mirror mounting on large trucks.

Mounts on 3/8" mirror mount.

NMO Mount Antenna

For permanent vehicle roof mount. For professional mounting on cars and pickup trucks.

RV Antenna

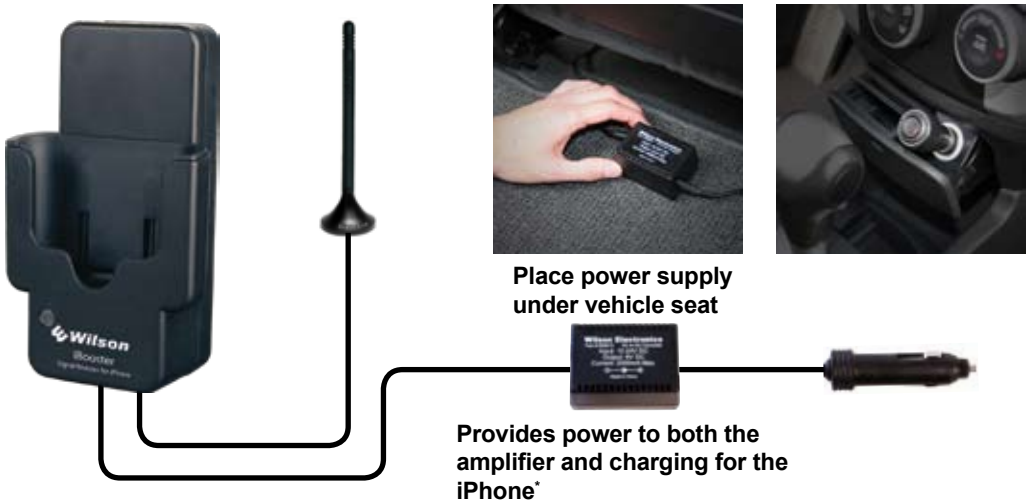
For vehicle roof mount.

*iPhone is a registered trademark of Apple, Inc.

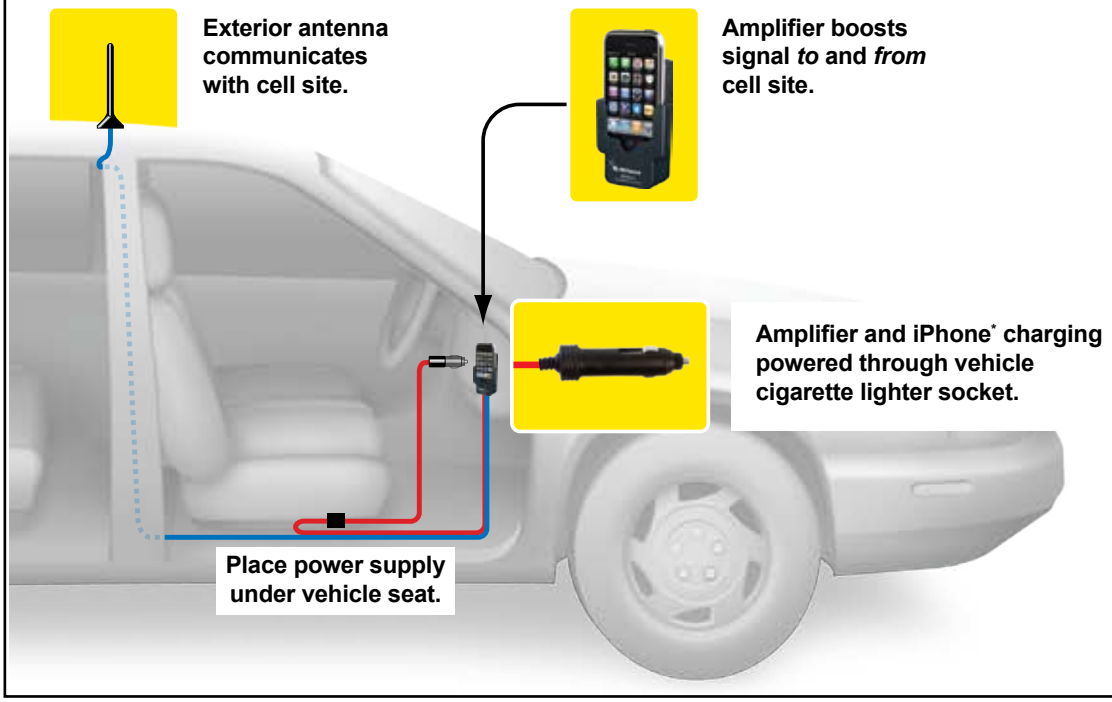
Before Getting Started

This guide will help you properly install Wilson's iBooster™ Dual-Band Wireless Cellular Amplifier. **It is important to read through all of the installation steps prior to actual installation.** If you do not understand the instructions in full, contact Wilson Technical Support at 866-294-1660.

Installation Diagram



Vehicle Installation



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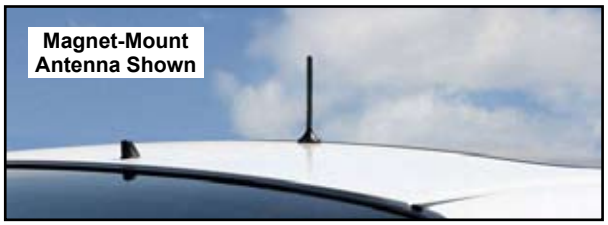
Installation

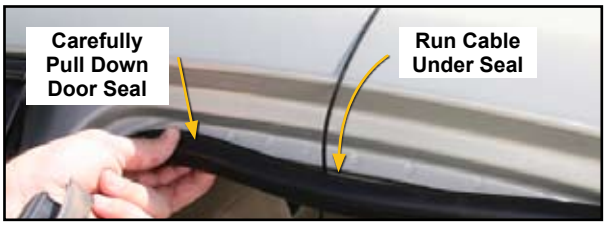
1. Place Magnetic Roof Top Antenna

To receive the best cell signal, select a location for the outside antenna that is preferably in the center of the vehicle's roof, 12 inches away from any other antennas and free of obstructions, at least 8-12 inches from the rear or side windows or sunroof.



The outside antenna must be installed vertically. Signal performance will be degraded if the antenna is not vertical.

The antenna cable is small yet strong enough that it may be shut in most vehicle doors without damaging the cable.



For a more professional-looking installation, the antenna cable may be run under the door seal. Carefully pull down the door seal. Run the cable under the seal and push the seal back into place. This prevents constant wear and tear on the cable as the door opens and closes. The antenna cable is small enough to easily tuck under the door seal or plastic molding.

2 Attach the Mounting Bracket

Three different mounting brackets are provided for attaching the iBooster™ to your vehicle's dash. Choose the appropriate one for your application. See bracket specific mounting options below.

OPTION 1

AIR VENT BRACKET

1. Insert the two vent clips into the circular hole in the bracket and slide them to each end of the slot. The flat surface of the clips should face upward.
2. Slide the bracket clips into the chosen vent location until they snap into place. If necessary, use a thin-bladed screwdriver to gently pry the clips apart as they slide into the vent.
3. Position the moveable arm at the base of the bracket to achieve the desired angle and to provide additional stability for the iBooster™.

OPTION 2

ADHESIVE BRACKET

1. Clean the area where the bracket is to be mounted with rubbing alcohol and a soft cloth. Allow to dry.
2. Peel the backing to expose the adhesive and press the bracket onto the desired location in the vehicle. Note: be sure the tab is positioned **vertically**, not horizontally.
3. Allow the adhesive to cure for 24 hours before you attach the iBooster™.
4. Once the cradle is attached, you can adjust the angle of the adhesive bracket by applying gentle pressure to the top or bottom of the iBooster™. Lock bracket into position with a Phillips head screwdriver once desired angle is established.

OPTION 3

ADHESIVE/SCREW SWIVEL BRACKET

This mount allows for adhesive mounting as well as more permanent screw mounting. This option is designed to swivel when the knurled nut is loosened, for greater adjustability of the iBooster™ viewing angle. For adhesive mounting, follow steps 1, 2 and 3 of option 2.

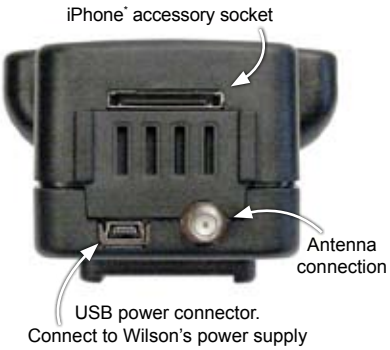
For screw mounting, use an ice pick or an awl to punch through the adhesive and expose the four screw holes in the bracket. You must provide the screws of an appropriate size for your particular application. Using the bracket as a template, mark the locations for the screws as shown, drill pilot holes, attach the bracket with adhesive, and tighten all screws.

3. Attach the iBooster™

Once you have installed your selected mount in the desired location, attach the cradle by aligning the rectangular hole on its back with the tab on the mount. Grasping the sides of the cradle, slide it downward approximately ¼ inch into place.

*iPhone is a registered trademark of Apple, Inc.

4. Powering up the Wilson iBooster™ Amplifier



Make sure the outside antenna cable is connected before powering up the amplifier.

Connect the mini-USB plug on the power cable to the amplifier's mini USB port on the iBooster™. Insert the adapter into the cigarette lighter outlet of your vehicle.

The amplifier may remain on all the time. However, leaving the amplifier on in a vehicle when it is not running can discharge the battery in a day or two.

A good option is to power the amplifier through the ignition switch so that the amplifier is turned on and off with the vehicle. The 12 volt ACC socket on many vehicles is shut off with the ignition key.

Note: The iBooster™ 12V power supply provides charging current to the iPhone*.

IMPORTANT: Do not power up the amplifier unless the outside antenna cable is attached to amplifier.

WARNING: Use only the supplied Wilson power supply/connector to power your iBooster™.

5. Place iPhone* into the Cradle

Note: If you use an external protective case on your iPhone*, the factory installed "case adapter" will need to be popped out from the cradle by gently prying up with a screwdriver as shown. If you do not use a protective case with your iPhone*, the factory installed adapter is required for a proper fit. When placing the iPhone* into the cradle, ensure that proper mating occurs between the iPhone's* bottom interface connector and the mating connector inside (bottom) of the iBooster™ cradle.

Understanding the Amplifier Lights

Separation of inside and outside antennas is very important. In a vehicle, the metal roof acts as a barrier and helps shield the two antennas from each other, preventing oscillation.

Oscillation can occur when the roof mounted antenna is too close to the antenna inside the vehicle (internal to the iBooster™). An oscillation (or feedback) in an amplifier is similar to when a microphone is too close to a speaker in a sound system, resulting in a loud whistle. An oscillation in a cellular amplifier, if allowed to occur, can affect nearby cell sites' ability to handle calls.

If the light turns red, oscillation is occurring and the amplifier has powered down. The outside roof mounted antenna needs to be moved farther from the amplifier. In a vehicle installation, move the outside antenna on the roof of the car farther to the rear of the car, but at least 8-12 inches from the rear or side windows or sunroof. Remove power from the amplifier and reconnect power - this resets the amplifier.

If the light is now green, the oscillation has stopped and the amplifier is working. If the red light is still on, move the antenna farther away and repeat the process.

In a vehicle, always use a magnet-mount or roof-mount antenna. Do not use a glass-mount antenna, as oscillation may cause continuous shut-down of the amplifier.

Troubleshooting

SYMPTOM: Green Light always OFF

1) Make sure that the 12 volt power source is supplying power to the iBooster by checking that the switch on the 12 volt power plug is on and the plug's red light is on.
2) If the cigarette lighter plug is properly inserted with the switch on, but the plug's light doesn't come on, then check the 12 volts from the car socket, and check the fuse in the PS1 plug.

SYMPTOM: Red Light always ON

1) Make sure that the antenna connector is on tightly.
2) Place the Outside Antenna on its side (see picture). Reset iBooster™ power (off and back on) again. The light should now be green (antenna was too close). Turn iBooster™ off and proceed to step 3.
3) Return the outside antenna to its upright position, and move it further towards the rear of the vehicle, (away from the iBooster™) but no closer than 8 inches from a sunroof, rear or side windows. Power iBooster™ back on and recheck for a green light. If light is still red, continue moving the antenna further back and resetting the power until the light changes to green and stays green. Remember to stay more than 8 inches away from a sunroof, rear or side windows.
4) If none of the above corrects the problem, call Wilson Technical Support at 1-866-294-1660.

*iPhone is a registered trademark of Apple, Inc.

WARNINGS AND RECOMMENDATIONS

⚠ Warning: Do not plug in the DC power supply until the outside antenna cable is attached to the amplifier.

⚠ Warning: **RF Safety:** The iBooster™ cradle/amplifier must be installed with a separation of at least 8 inches from all persons and must not be located in conjunction with any other antenna or amplifier.

⚠ Warning: **RF Safety:** The outside antenna must be installed with a separation of at least 8 inches from any of the vehicle's occupants or nearby persons and must not be located or operating in conjunction with any other antenna or amplifier.

Separation of inside and outside antennas is very important. In a vehicle, the metal roof acts as a barrier and helps shield the two antennas from each other, preventing oscillation.

If the vehicle has a sunroof, it is important to keep the outside antenna at least 8 inches from the edge of the sunroof. This prevents the amplifier from oscillating.

ABOUT WILSON ELECTRONICS

Wilson Electronics, Inc. has been a leader in the wireless communications industry for nearly 40 years. The company designs and manufactures amplifiers, antennas and related components that significantly improve cellular telephone signal reception and transmission in a wide variety of applications, both mobile and in-building.

With extensive experience in antenna and amplifier research and design, the company's engineering team uses a state-of-the-art testing laboratory, including an anechoic chamber and network analyzers, to fine-tune antenna designs and performance. For its amplifiers, Wilson uses a double-shielded RF enclosure and cell site simulators for compliance testing.

All products are engineered and assembled in the company's 50,000-square-foot headquarters in St. George, Utah. Wilson has product dealers in all 50 states as well as in countries all over the world.

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AMPLIFIER CANADIAN SPECIFICATIONS

		Dual Band 800/1900 MHz Specifications	
Impedance (input/output)		50 ohms	
Frequency		824-894 MHz / 1850-1990 MHz	
[1]Passband Gain (nominal)	800 MHz uplink	40 dB (typical) / 46 dB (maximum)	
	800 MHz downlink	40 dB (typical) / 49 dB (maximum)	
	1900 MHz uplink	41 dB (typical) / 50 dB (maximum)	
	1900 MHz downlink	41 dB (typical) / 50 dB (maximum)	
[2]20 dB Bandwidth (nominal)	800 MHz (uplink/downlink)	35 MHz / 45 MHz (maximum)	
	1900 MHz (uplink/downlink)	70 MHz / 87 MHz (maximum)	
Power output for single cell phone (uplink)		800 MHz	1900 MHz
	CDMA	31.4 dBm	30.1 dBm
	GSM	26.9 dBm	26.3 dBm
	EDGE	26.0 dBm	25.1 dBm
Power output for single received channel (downlink)		800 MHz	1900 MHz
	CDMA	5.6 dBm	1.8 dBm
	GSM	0.7 dBm	-2.7 dBm
	EDGE	-2.5 dBm	-6.4 dBm
[4]Power output for multiple received channels (downlink). The maximum power is reduced by the number of channels:		Maximum Power[3]	
	Number of channels	800 MHz	1900 MHz
	2	6.7 dBm	0.2 dBm
	3	3.2 dBm	-3.4 dBm
	4	0.7 dBm	-5.9 dBm
	5	-1.3 dBm	-7.8 dBm
Power Requirements		12 V DC (Nominal), 1.2 A	

NOTES

1. Nominal gain is the maximum gain at any frequency in the passband.
2. Nominal bandwidth is the difference between two frequencies that are adjacent to the passband where the amplification is 20 dB lower than the passband amplification. One of the frequencies is lower than the passband and the other is higher.
3. 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.
4. Data is in accordance with IC spec RSS-131. The maximum power for 2 or more simultaneous signals will be reduced by 6 dB for each doubling of the number of signals.

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