



## ***Installation Guide***



**AMPS  
DIRECT  
CONNECTION  
AMPLIFIER**

Part# 811101

FCC ID: PWO824D

IC: 4726A-824D

**iDEN  
DIRECT  
CONNECTION  
AMPLIFIER**

Part# 814001

FCC ID: PWO806D

IC: 4726A-806D

**DUAL BAND  
DIRECT  
CONNECTION  
AMPLIFIER**

Part# 811201

FCC ID: PWO819D

IC: 4726A-819D

### ***Wilson Electronics, Inc.***

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For additional technical support go to

[www.wilsonelectronics.com](http://www.wilsonelectronics.com)

Phone: 1-866-294-1660

Fax: 1-435-656-2432

The term "IC:" before the radio certification number only signifies that Industry of Canada technical specifications were met.

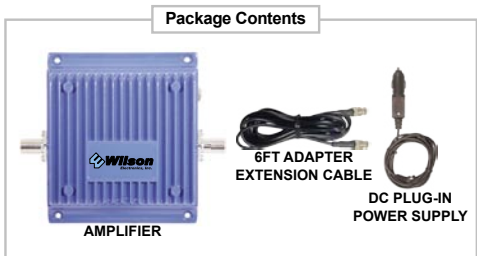
**DIRECT CONNECTION**  
Vehicle & Building

## 1. PURPOSE OF THE DIRECT CONNECTION AMPLIFIER

The Direct Connection Bi-directional Amplifier improves RF coverage in areas with no signal or low signal strength. Part# 811101 Amplifies the signal on 800MHz up to 3 watts and allows for the full benefit of the outside antenna on 1900MHz frequencies. Part# 814001 Amplifies the iDEN (Nextel) frequencies up to 3 watts.

## 2. PACKAGE CONTENTS

- 2.1 Bi-directional Direct Connection Amplifier.
- 2.2 DC plug-in power supply with ON/OFF switch.
- 2.3 6ft. Adapter Extension Cable.



## 3. HOW THE DIRECT CONNECTION AMPLIFIER FUNCTIONS

When using 800 MHz the signal is received by the outside antenna from the cell site. The signal is then AMPLIFIED and sent into your phone through the adapter (sold separately). When the phone transmits, the signal is sent to the amplifier through the adapter then AMPLIFIED and transmitted to the cell site through the outside antenna. When using 1900MHz (PCS) the signal bypasses the amplifier's circuitry while getting full benefit from the outside antenna.

**NOTE:** Amplifier #814001 does not have a 1900MHz (PCS) bypass as iDEN (Nextel) does not utilize this frequency.

#### 4. AMPLIFIER INSTALLATION (see illustration on pg.4)

##### 4.1 Installing the **Wilson Cellular** Antenna

4.1.1 See antenna packaging for model specific instructions.

**WARNING:** Verify that both the outside antenna and adapter extension cable are connected before powering up the AMPLIFIER.

**RF SAFETY WARNING: (MOBILE ONLY)** The outside antenna must be mounted with a separation distance of at least 15.5 inches from any of the vehicle occupants or nearby persons and must not be co-located or operating in conjunction with any other antenna or amplifier. Use of a cellular amplifier with antenna gains higher than 5.12dBi is in violation of FCC regulations for which the offender is fully liable. All Wilson Mobile Antennas are 5.12dBi or less.

**WARNING: (IN-BUILDING ONLY)** Lightning protection is recommended for all in-building installations.

**RF SAFETY WARNING: (IN-BUILDING ONLY)** When using in-building, the outside antenna must be fixed-mounted on an outdoor permanent structure with a separation of at least 20 feet from all persons during normal operation.

##### 4.2 Installing The Amplifier

4.2.1 Select a suitable location to mount the AMPLIFIER.

- In vehicle installation - under the dash or vehicle seat
- In building installation - on a wall or ceiling

**NOTE:** Mount the AMPLIFIER away from direct sunlight, excessive heat and/or moisture. The amplifier needs proper ventilation. DO NOT place the amplifier in an air-tight enclosure. Use #6 screws to mount the amplifier.

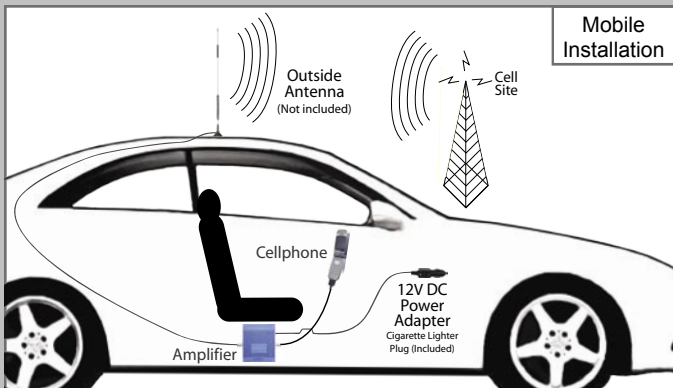
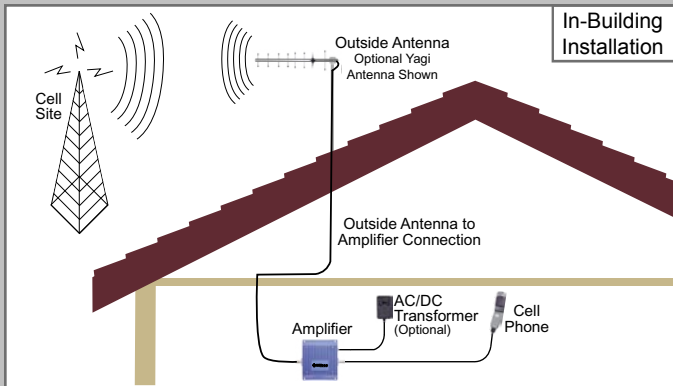
4.2.2 Connect the outside antenna to the AMPLIFIER side labeled “OUTSIDE ANTENNA”.

4.2.3 Connect the ADAPTER EXTENSION CABLE to the AMPLIFIER side labeled “CELLULAR PHONE”.

4.2.4 An external antenna adapter is required (sold separately) to connect the AMPLIFIER to the cellphone. External antenna adapters connect directly to the antenna extension cable.

4.2.5 Connect the DC power supply to the AMPLIFIER. Verify that both the OUTSIDE ANTENNA and the ADAPTER EXTENSION CABLE are connected before powering up the AMPLIFIER.

**NOTE:** Visit our website at [www.wilsonelectronics.com](http://www.wilsonelectronics.com) for the latest adapter cross



reference chart. If your phone's adapter is not available from your retailer contact us at 1-866-294-6996 and we will help you locate one in your area. For further assistance contact our technical support Toll-Free at 1-866-294-1660.

**NOTE:** **iDEN Antennas** are recommended for **iDEN Amplifier 814001**.

## 5. AMPLIFIER SPECIFICATIONS

Connectors	FME-Male 50 Ohms
Dimensions	5.5x4.3x1.4 (inch) or 14.0x10.8x3.5 (cm)
Weight	1.32 Pounds or 600G

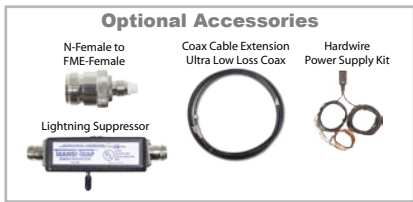
	<b>iDEN #814001</b>	<b>AMPS #81101</b>
<b>Frequency</b>	<b>806-821MHz Uplink 851-866MHz Downlink</b>	<b>824-849MHz Uplink 869-894MHz Downlink</b>
<b>Gain (up/down)</b>	<b>Cell Site Controlled-Max 10/10db</b>	<b>Cell Site Controlled-Max 10/10db</b>
<b>Flatness (up/down)</b>	<b>(+/-2dB / +/-3dB)</b>	<b>(+/-2dB / +/-3dB)</b>
<b>Max RF (up/down)</b>	<b>(+35dBm / +15dBm)</b>	<b>(+35dBm / +15dBm)</b>
<b>Noise Figure (down)</b>	<b>(3.5dB nominal)</b>	<b>(3.5dB nominal)</b>
<b>Isolation</b>	<b>Uplink/Downlink 90dB</b>	<b>Uplink/Downlink 90dB</b>
<b>Power Consumption</b>	<b>1.5A@12V</b>	<b>1.5A@12V</b>

	<b>Dual Band #811201 PCS 1900 Specifications</b>	<b>Dual Band #811201 AMPS Specifications</b>
<b>Frequency</b>	<b>1850-1910MHz Uplink 1930-1990MHz Downlink</b>	<b>824-849MHz Uplink 869-894MHz Downlink</b>
<b>Gain (up/down)</b>	<b>Cell Site Controlled-Max 11db/11db</b>	<b>Cell Site Controlled-Max 10db/10db</b>
<b>Flatness (up/down)</b>	<b>(+/-2dB / +/-2dB)</b>	<b>(+/-2dB / +/-3dB)</b>
<b>Max RF (up/down)</b>	<b>(+33dBm / +15dBm)</b>	<b>(+35dBm / +15dBm)</b>
<b>Noise Figure (down)</b>	<b>(3.5dB nominal)</b>	<b>(3.5dB nominal)</b>
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## 6. OPTIONAL ACCESSORIES/ANTENNA OPTIONS

- 6.1 Coax Cable Extensions 50Ω (see chart on pg.7)
- 6.2 Antenna Options (see chart on last page)
- 6.3 N-Female To FME-Female Adapter - Adapts 9913 Coax to the **814001** Bi-directional Amplifier.
- 6.4 Lightning Suppressor (In-Building application)  
**WARNING:** Lightning protection is recommended for all In-Building installations.
- 6.5 Hardwire Power Supply Kit.



## 7. WARNINGS

**WARNING:** Verify that both the outside antenna and adapter extension cable are connected before powering up the AMPLIFIER.

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## 8. TECH SUPPORT

If you need further assistance with your installation:

- 1) Call us Toll-Free at 866-294-1660
- 2) E-mail tech support at [tech@wilsonelectronics.com](mailto:tech@wilsonelectronics.com)
- 3) Go to [www.wilsonelectronics.com](http://www.wilsonelectronics.com)

Our Hours of Operation are: 8:00 AM – 4:30 PM (Mountain Time)

### EXTENSION CABLE CHART (RG 58 - FME connectors / 9913 - N connectors)

951101	5' Extension Cable RG 58 Low Loss Coax	(0.6 db loss)
951102	10' Extension Cable RG 58 Low Loss Coax	(1.2 db loss)
951103	15' Extension Cable RG 58 Low Loss Coax	(1.8 db loss)
951104	20' Extension Cable RG 58 Low Loss Coax	(2.4 db loss) Used with the Yagi Antenna - (N-Male to FME Female)
951108	20' Extension Cable 9913 Ultra Low Loss Coax	Only use 9913 Low Loss Coax for extensions 20' or longer (0.8 db loss)
951105	30' Extension Cable 9913 Ultra Low Loss Coax	(1.2 db loss)
951106	50' Extension Cable 9913 Ultra Low Loss Coax	(2.0 db loss)
951107	100' Extension 9913 Low Loss Coax	(4.0 db loss)

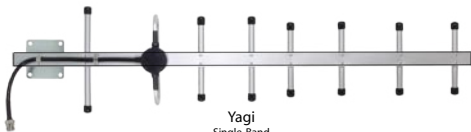
The Manufacturer's rated output power of this equipment is for single carrier operation. For situations when multiple carrier signals are present, the rating would have to be reduced by 3.5 dB, especially where the output signal is re-radiated and can cause interference to adjacent band users. This power reduction is to be by means of input power or gain reduction and not by an attenuator at the output of the device.

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.

Leaving the amplifier on in an unused vehicle for days may drain your battery. This can be avoided by plugging into an ignition switched outlet or by using the small white switch located on the power supply.

# Outside Antenna Options

For more options visit  
[www.wilsonelectronics.com](http://www.wilsonelectronics.com)



Yagi  
Single-Band  
(Recommended for Buildings Only)



Trucker  
Mirror Mount  
Dual-Band

Pictures Are Not To Scale  
Not All Outside Antenna  
Options Are Shown

Questions?  
1-866-294-1660

[www.wilsonelectronics.com](http://www.wilsonelectronics.com)



Mini Magnet  
Dual-Band



Mini Glass  
Dual-Band



Magnet  
Mount  
Dual-Band



NMO  
Mount  
Dual-Band



Glass  
Mount  
Dual-Band

## 15 DAY MONEY BACK GUARANTEE

All Wilson products  
have a 15 day  
money back  
guarantee with  
Proof of Purchase

## 1 YEAR WARRANTY

The Wilson amplifier is warranted for one year against defects in workmanship and/or materials and will be repaired or replaced, at the discretion of the manufacturer, to the original purchaser with dated proof of purchase or sales receipt.

If you have questions about your amplifier please call technical support call 1-866-294-1660 or E-mail [tech@wilsonelectronics.com](mailto:tech@wilsonelectronics.com)

Most warranty cases can be handled by taking the amplifier and the receipt to the store where it was purchased. If inconvenient, the amplifier and a copy of the receipt, may be sent to the factory, at purchasers expense, where it may be repaired or replaced and returned shipping paid. Warranty does not cover damages caused by abuse, misuse, and negligence.