SOHO Tri Bands Cellular Signal Booster R3U01 User Manual

Connect the world

Features

- Works on AT&T 2G/3G/4G, Verizon 3G, T-Mobile 2G/3G/4G, Sprint 3G/4G, US Cellular 3G/4G, Metro PCS 3G/4G, All other Canadian Carriers 2G/3G, Major carriers using 850 MHz and 1900 MHz
- Allows multiple mobile devices to be used simultaneously
- Greatly reduces dropped calls, extends signal range, and increases data rates
- High integration semiconductor circuits design, internal integration inside antenna easily install
- Reduces radiation and extends battery life up to 2 hours additional talk time in weak signal areas
- Oscillation (or interference) detection and automatic shutdown
- Overload protection circuit – protects cell towers from being overloaded
- Power control logic ensures that maximum gain is within cellular standards
- Amplifies signal both to and from the cell tower
- Maximum 1 watts(EIRP) output power

Package Contents

Booster Inside Unit

Outside Antenna &Booster Outside Unit

Inside Antenna

Cable 30feet

Cable 15feet

Connector F-F to F-F

Power Adapter

Technical Support: support@solidrf.ca

Installation

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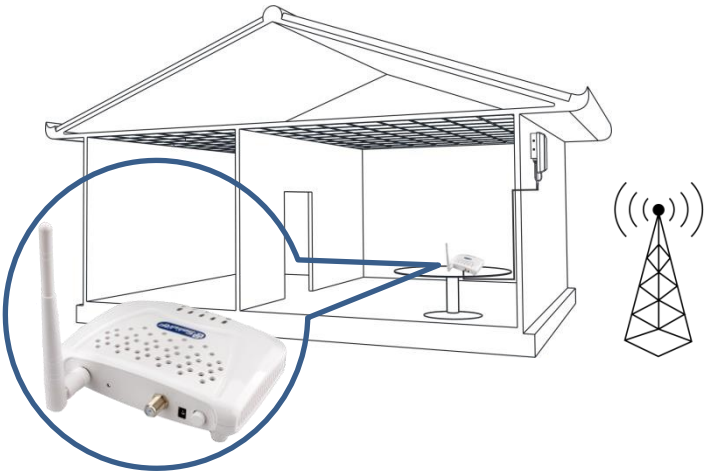
1.How it works



Step 1: The powerful outside antenna captures a voice and data signal, and transfer it to the booster;
Step 2: The booster receives the signal, amplifies it and rebroadcasts it by inside antenna.
Step 3: Your mobile devices get a better signal, never experience dropped calls or slow data speed.

Supported Carriers

- AT&T 2G/3G (HSPA+), 4G on 850, 1900 and 700 MHz(Band 12)
- Verizon 3G
- T-Mobile 2G/3G, 4G on 850, 1900 and 700 MHz(Band 12)
- Sprint 3G/4G
- US Cellular 3G
- Metro PCS 3G/4G
- Major Canadian Carriers 2G/3G
- All other carriers using 850 MHz,1900 MHz and 700 MHz

Coverage Area

Note: the ability of coverage depends on the output power of booster. Any boost has a limit of the amplification factor, so final output power is related to received signal power level at the location of the outdoor antenna..

Power level at the outdoor antenna location	Coverage Area (sq. ft.)
Strong (5 bars on the cellphone)	3000
Medium (3~4 bars on the cellphone)	1200
Weak (1~2 bars on the cellphone)	300

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2. Step by step installation

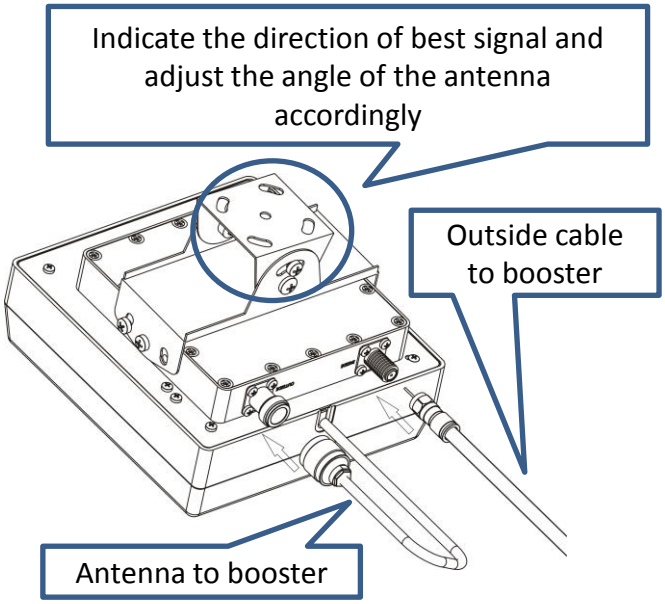
Step 1: mount the outside antenna& outside booster unit
Choose right position

- Find the strongest signal position in the possible install l ocations by reading your cell phone signal bar;
- 30cm away from any other metallic objects;
- 100cm away from any windows;

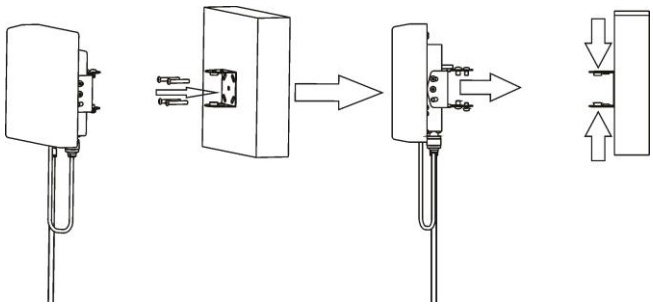
Caution: Don't face the outside antenna to the direction of where the booster you plan arrange;

1.1 Connect the cables as required.

- Outside booster unit is designed integrated with outside antenna to improve system performance;
- Make sure connectors are screwed well;



1.2 Mount the antenna;



Installation

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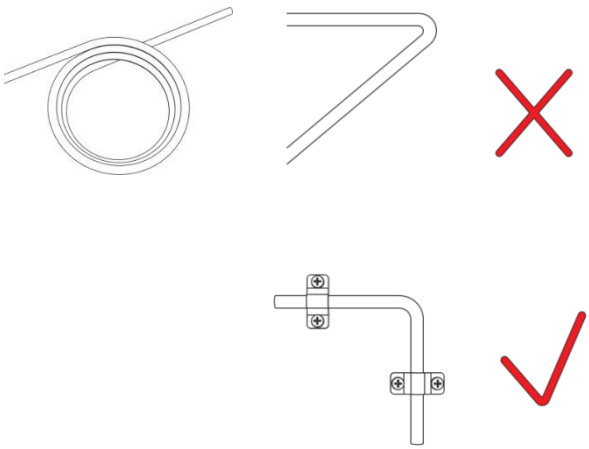
1.3 Set the outside antenna cable into the building

- Carefully arrange the cable along the building outside and make sure don't fold it or roll up;
- Fix the cable at each corner;



Step 2: arrange the inside unit

2.1 Choose right position

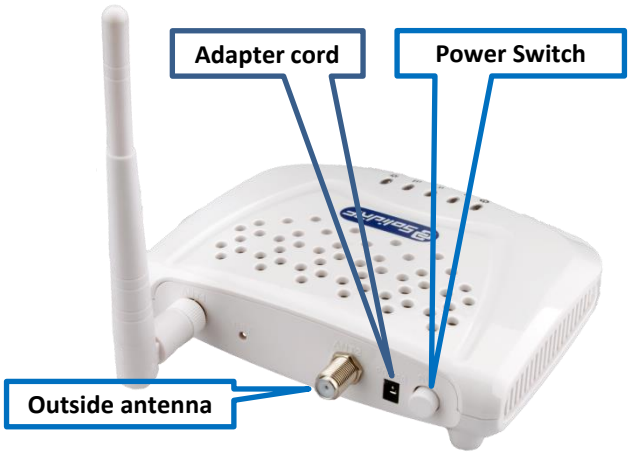
- 20cm away from any other metallic objects;

2.2 50cm away from any windows;

- Be sure away from heat source;
- In ventilate dry place, temperature range should 0~+50degree;

2.3 Connect the outside antenna's connector to the "ANT2" port of the booster;

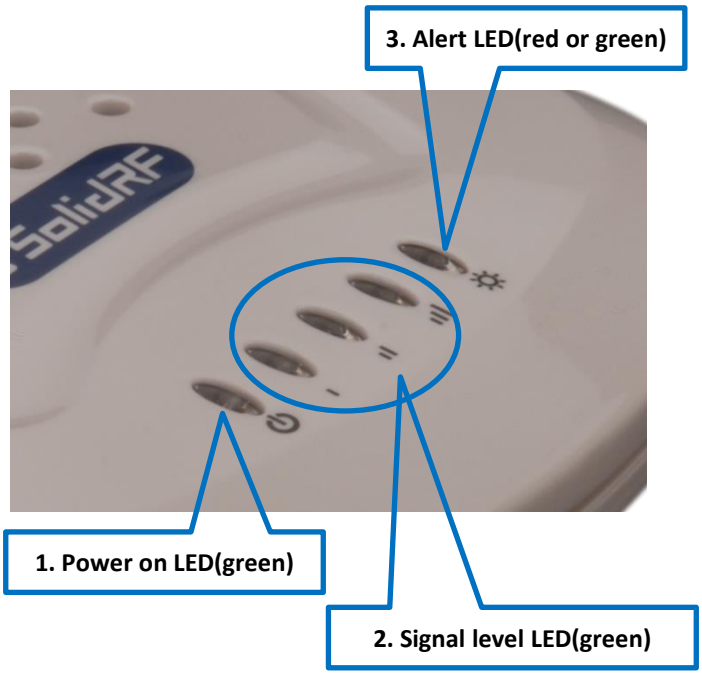
2.4 Connect the inside antenna to the "ANT1" port;



Step 3: power on the booster

a. Plug the power adapter to the AC power;
b. Attach the cord of the adapter to the booster and switc h on;

3. Panel information



1. **Power on LED:** whenever the booster is powered on, this LED will be lighting on in green color;
2. **Signal level LED:** indicated how strong the signal have been received from the outside antenna.

a. If none of these LED is lighting: no signal received from the base station tower. Here you can get no service;
b. One LED on: outside signal is weak and you can get 300 square feet up coverage;
c. Two LED on: outside signal is middle and you can get 1200 square feet up coverage;
d. Three LED on: outside signal is strong and you can get 3000 square feet up coverage;

3. **Alert LED:** indicate booster condition;

a. Every time the booster is power on it will light on for a second in red color and then switch off;
b. Stable red color on: the installation of the outside antenna and the inside booster's location is no suitable**(face to each other or too close)** and need to be relocated;
c. Stable green color on: the cable from the inside unite to outside unite isn't connected correctly;
d. Stable off: the booster is working well;

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Installation

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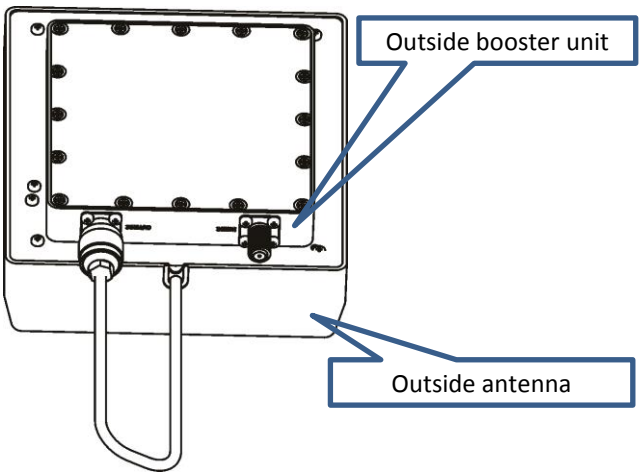
Note1: about the outside antenna and outside booster unit

The outside antenna and outside booster unit are integrated design, both them are waterproofed design. No matter rain or frog, they will work properly. But extreme temperature maybe causes problem to the booster unit, it will work perfectly from -20℃ to +55 ℃ temperature range. Too high or low temperature beyond that range will cause self-protection, the booster will lower down output power to avoid damage.



Note2: Use only the power supply provided by SolidRF, any other products non-approved by SolidRF or self-made power cable may damage the booster.

Note3: Don't cover the booster body with anything, in case the power dissipation make the booster too high temperature. The booster will shut down when the temperature is too high itself.

Note4: Troubleshooting

- **Properly**: when the "power on LED" and "signal level LED" are lighted, the "Alert LED" is off (no phone calling and pads communicating) or flashing (someone on the phone call). The booster is in good condition;
- **Wrong condition**: any time the "Alert LED" in stable **red** color or **green** color, please check the installation by following this manual again.

Technical specification

Frequency (MHz)		Cellular (band 5)	PCS (band 2)	Band 12/ Band 17
	Uplink	824-849	1850-1910	698-716
	Downlink	869-894	1930-1990	728-746
Gain	Uplink	60±2	65±2	60±2
	Downlink	61±2	68±2	61±2
Output power	23±2dBm(Uplink)/0±2dBm(Downlink)			
Noise figure	<3dB			
In-band Flatness	<5dB			
Weight	0.7Kg			
EIRP	1W			
Gain adjustment	20dB			
Impedance	50 ohm			
Operating temperature	-20° ~50°			
Current	≦1.5A(12V DC)			
Dimension(mm)	155*125*25			

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Warnings and Recommendations

- ⚠ Warning: This consumer booster is for Consumer use only.
- ⚠ Warning: Unauthorized antennas, cables, and/or coupling devices are prohibited by FCC regulations. Please contact FCC for details: 1-888-CALL-FCC.
- ⚠ Warning: Outside antenna orientation must be back side of inside antenna is to prevent the indoor antenna receiving the signal emitted by outside antenna. Otherwise it will cause self-oscillation of booster.
- ⚠ Warning: RF safety, any antenna used with this device must be located at 20 cm (8 inches) away from persons or by bystanders.
- ⚠ Warning: It will damage the mobile device and the booster if connect them with a cable directly.
- ⚠ Warning: Use the power supply provided by SolidRF only. Other power supplies may cause damage of the booster.
- ⚠ Warning: Antenna installation is restricted to 10 meters or less height above ground, even if the antenna is installed inside when used with a mobile device that operates in the 1710-1755 MHz band. Violation of this requirement may subject the owner of the booster to potential FCC enforcement actions.
- ⚠ Warning: Never point the front of a directional antenna toward the inside antenna. Verify that both the outside antenna and the inside antenna are connected to the booster before powering up the booster.

Description of network protection features:

This booster including safeguards to protect the cellular network from interference. Each Signal Booster is individually tested and factory set to ensure FCC compliance.

1. The Signal Booster cannot be adjusted without factory reprogramming or disabling the hardware.
2. The Signal Booster will amplify, but **ONLY** incoming and outgoing signals in order to increase coverage of authorized frequency bands.
3. If the Signal Booster is not in use for five minutes, it will reduce gain until a signal is detected.
4. 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.
5. For a detected oscillation the Signal Booster will automatically resume normal operation after a minimum of 1 minute. After 5 times consecutive such automatic restarts, if the detected oscillation still remains, any problematic bands are permanently shut off until the Signal Booster has been manually restarted by reconnecting power supply to the Signal Booster.
6. Noise power, gain, and linearity are maintained by the Signal Booster's microprocessor.

This is a CONSUMER device
BEFURE USE ,you MUST REGISTER THIS DEVICE with your wireless provider and have your provider's consent .Most wireless provider consent to the use of signal boosters .Some provider 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 antenna and cables as specified by the manufacturer .Antennas MUST be installed at least 20cm (8inches) 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.

This device complies with Part 15 of FCC Rules. Operation is subject to the following 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.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.
-- Increase the separation between the equipment and receiver.
-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-- Consult the dealer or an experienced radio/TV technician for help

Contact information for providers

A subscriber must have the consent of a wireless provider to operate a consumer signal booster. Please register your booster with your wireless service provider, refer to contact information for providers:

Sprint:
signalbooster@sprint.com
T-Mobile:
www.T-Mobile.com/BoosterRegistration
https://support.t-mobile.com/docs/DOC-9827
Verizon:
http://www.verizonwireless.com/wcms/consumer/register-signal-booster.html
AT&T:
https://securec45.securewebsession.com/attsignalbooster.com/
U.S. Cellular:
http://www.uscellular.com/uscellular/support/fcc-booster-registration.jsp
Metro PCS
https://www.metropcs.com/support/signal-booster