

INSTRUCTION MANUAL

Uniden® Ui15

Uniden® Ui25

Uniden® Ui35

Uniden®
cellular signal boosters

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NOTE: 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 cellular booster.

INSTALLATION INSTRUCTIONS FOR THE FOLLOWING CELLULAR BOOSTERS:

Uniden® UI15

Uniden® Ui25

Uniden® UI35



SAFETY AND WARNINGS

- Turn AC power OFF at the main circuit breaker before working on any electrical connections.
- All AC power wiring and coaxial cable wiring must conform to local or national codes.
- The AC rated input power must be within 10% of the voltage requirements of the device.
- When grounding the system, a solid copper conductor no smaller than 8 AWG should be used.
- DO NOT connect a ground wire to a gas supply line.
- DO NOT open the booster. Touching internal parts could cause injury or damage. This will void the warranty.

BOOSTER KIT COMPONENTS

BOOSTERS

Uniden® Ui15

Uniden® Ui25

Uniden® Ui35

OUTDOOR ANTENNAS (Donor)



YAGI



PANEL

INDOOR ANTENNAS (Server)



PANEL



DOME

CABLES (various lengths available)



U5D

TOOLS REQUIRED



Phillips Screwdriver



Drill



Cellular Phone
(to check signal strength)

OPTIONAL ACCESSORIES

(sold separately)



2 Way Expansion Kit



3 Way Expansion Kit



Lightning Surge Protector



Universal Antenna Mounting Pole

HOW IT WORKS

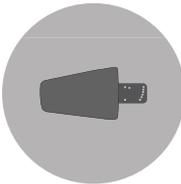
The Uniden smart cellular booster provides enhanced in building coverage by improving cellular signal strength in homes, buildings, offices, and other areas where coverage is weak or unreliable.

The system amplifies the incoming signal from the nearest cellular tower

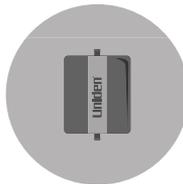
This manual provides simple installation instructions that will have your cellular booster kit up and running in record time.



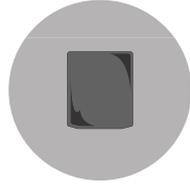
OUTDOOR ANTENNA



CELLULAR BOOSTER



INDOOR ANTENNA



OVERVIEW

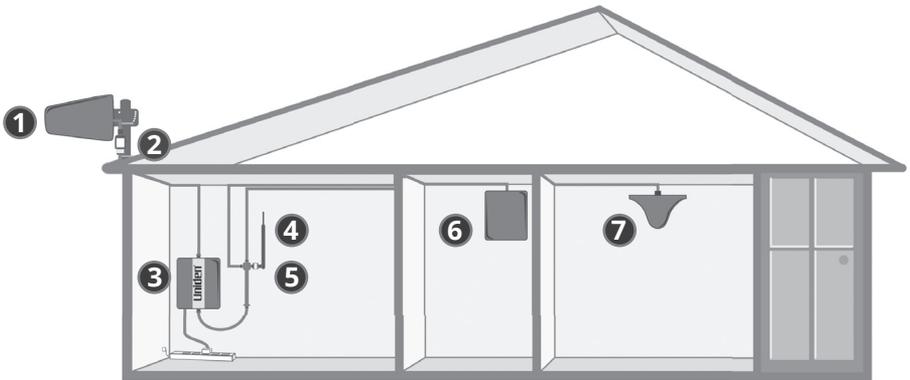
This guide will help you properly install your cellular booster kit. It is important to read through all of the installation steps before installing your equipment. Thoroughly read through the instructions, visualize where all the equipment will need to be installed and do a soft installation before mounting any equipment.

If you do not understand the instructions in full, please contact technical support at 1-800-215-7015.

GETTING STARTED

Plan the layout of your system

Before you get started you will need to plan the layout of your system. This involves checking signal strength for signals coming from the cellular tower, as well as antenna, booster and cable placement.



- 1 Donor Antenna (outdoor)
- 2 Surge Protector
- 3 Booster
- 4 Server Antenna (indoor)

- 5 Splitter
(if using multiple antenna)
- 6 & 7 Server Antennas
(optional antennas for additional coverage)

1 BOOSTER – select location
Install the booster in an area that is protected from the weather, properly ventilated and is away from excessive heat and moisture.

2 REGISTER BOOSTER TO SIYATA CONNECT
Download, Open, Create Account/Log In to the Siyata Connect App to assist with antenna installation as well as monitor and management of your cellular booster.

3 DONOR ANTENNA (outdoor) - select location
Mount the donor (outdoor) antenna in an elevated outdoor location so that it points towards the cellular tower and away from where the inside antenna will be located.

4 OUTDOOR COAXIAL CABLE - select location
The outdoor coaxial cable is used to connect the donor (outdoor) antenna to the booster.

5 INDOOR COAXIAL CABLE - (if used)
The indoor coaxial cable is used to connect the server (indoor) antenna to the booster.

6 SERVER ANTENNA (indoor)
The ideal location for the server antenna will be the area of your property where you need to improve the signal most.
NOTE: The signal strength will be strongest closest to the antenna.

7 COMMISSIONING THE SYSTEM

INSTALL THE SIYATA CONNECT APP

Using the Siyata Connect App will make the installation process easier because it allows you to monitor your booster as you install your outdoor antenna.

Checklist:

- Please have the booster, and power supply nearby.
- Make sure that the Bluetooth feature on your mobile device is enabled before you attempt to pair or "register" your booster to the app.

Step 1: Download the Siyata Connect App

- The application is available for download through Apple's App Store or Google Play.
- After installing the Siyata Connect app, power up the booster to pair with the app

Step 2: Create a New Account and Log-In

- Launch the app on your mobile device.
- The app will ask if you would like to receive notifications.
- On the lower left-hand corner of the screen, select New Here? Sign Up!
- Complete the Create your account set up
- Activate your account by email or phone.

NOTE: Enter the code within one minute or you will need to request a new code.

Step 3: Connect the booster to the App via Bluetooth and WiFi

- Once logged into the app, on the bottom of the screen, select Tools > Register Device > Via Bluetooth. You will be prompted with a list of detected blue tooth devices. Please scroll through the list and find your bluetooth device. Please find your device by referencing the serial number that can be found on the label of the booster or on packaging box.
- Selecting your device from the "Device Connect" screen will take you to the "Network Settings" screen. At the top, select Wi-Fi before selecting your network from the list below. Enter your Wi-Fi password when prompted, then select Join.
- Selecting "Join" will take you to the "Device Settings" screen. Once you have entered a "Device Name", "Device Location" and "Device Region", the Register button at the bottom of the screen will change from gray to red.
- Select Register. When the device registration is complete the screen will display "Register Success".
- Selecting Done will take you to the "Tools" screen/ tab. You should now register, click your device and your booster can be monitored through your Wi-Fi network.
- Additionally, if you do not have WiFi, you can directly Select Local Monitoring > Via Bluetooth to local control. (Bluetooth capabilities will have a limitation of 30ft.)

IDENTIFY THE BEST LOCATION TO INSTALL THE DONOR (OUTDOOR) ANTENNA.

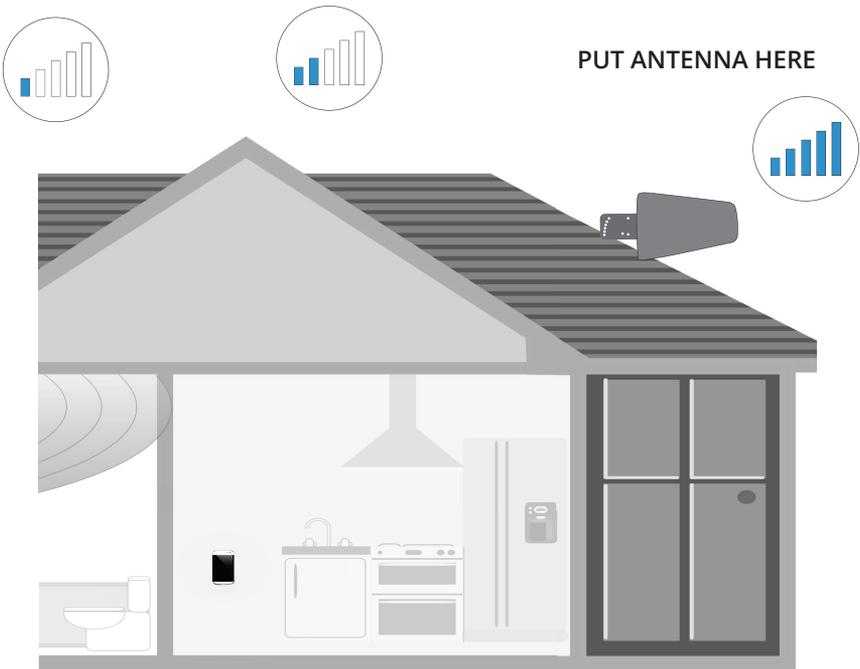
Check for signal strength

Select a location on the roof of the building to install the donor antenna, by monitoring your cellular phone's signal strength (signal bars) to find the strongest signal from your carrier's cellular tower.

Mark the area

Mark that area as the installation location for the donor (outdoor).

Find the Area of the roof with the Best Cell Signal



THE IDEAL OUTDOOR ANTENNA DIRECTION & LOCATION

Step 1: Connect the outdoor antenna to the booster's outdoor antenna port.

Step 2: Temporarily Fix the outdoor antenna on the roof of the building and point it to the nearest cell tower.

Step 3: Slowly rotate the direction of the antenna until you find maximum power output of the booster. Once this is achieved, the location and aim of the outdoor antenna is optimal.

Step 4: Look at the gain and output power value displayed in the Siyata Connect APP or directly on the booster's LCD display.

Using the Siyata Connect App

The Siyata Connect App will help you locate the best location to install the outdoor antenna. Turn on your application once on your roof.

Go to your App and find the Device Tab > Your Device> Device Detail> RF Control Parameters. This should take you to a screen that shows the Output Power and Gain for the respective cellular bands.

Using the LCD Display

This is a backup method that can be used when the Wi-Fi and Bluetooth is unavailable. Before you use this method to install your booster, please take a moment to familiarize yourself with the LCD Display, LED Status Indicators and Control Buttons on the unit

To do this efficiently, you will need someone to assist you.

Follow the same steps as above but check the Output Power and Gain directly on the booster's LCD Display instead of in the APP.

Note: The outdoor antenna will be in the optimum location when the booster's downlink output power reaches its highest level in each band.

Note: If the LCD display shows maximum gain and power, and there are not any alarms (no ISO, ALC, OFF legend flashing and no quick flashing green or red in LEDs), it means the present location is the best for ensuring that the booster has maximized performance.

Note: These values may vary dynamically at times between 1-3 dB which is normal due to outdoor signal conditions.

Note: Please see the troubleshooting section of this manual for more information on making manual adjustments to your booster's performance.

The outdoor antenna will perform best when it is installed above the highest point on your roof. Cellular signal is strongest when the outdoor antenna is in “line of sight” and pointed directly at the closest cell tower.

Test several locations on your roof to determine the best location and aim your outdoor antenna in the best position. The Siyata Connect app will assist you in reading signal strength during your tests. It **is suggested** that you repeat each test at each location, to ensure that the results are accurate. In some cases, your closest tower may not be ideal if it is in an area that receives a high volume of traffic.

Key Concepts:

- Test several locations on your roof to determine the best location
- Repeat your testing to confirm your results
- Install antenna above the highest point on your roof for best performance
- Proper installation of the outdoor antenna is key to the performance of the booster
- An improperly installed outdoor antenna will degrade coverage inside your office or home

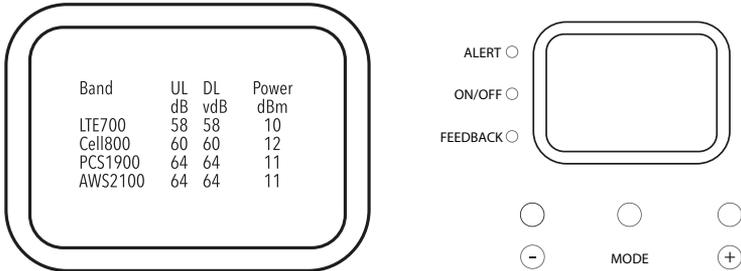
Outdoor Antenna

Frequency Range(MHz)	Antenna Gain(dBi)		Cable Loss(dB)
	Yagi antenna	Panel antenna	
698-716	8	7	4.97
776-787 (for FCC)	8	7	4.97
777-787 (for IC)	8	7	4.97
824-849	8	7	5.17
1710-1755	9	7	7.51
1850-1915	9	7	7.51

Indoor Antenna

Frequency Range(MHz)	Panel	Omni	Cable Loss(dB)
	antenna(dBi)	antenna(dBi)	
728-746	5	3	4.97
746-757 (for FCC)	5	3	4.97
746-756 (for IC)	5	3	4.97
869-894	5	3	5.17
1930-1955	7	3	7.51
2110-2155	7	3	7.51

LCD FEATURES



After the booster is powered on, uplink(UL) and downlink(DL) gain and DL output power are displayed. **"Band"**–Shows the working frequency. Below is a list of the frequencies displayed corresponding to the Band display shown on the screen.

Frequency	Band display
Lower 700MHz	LTE 700
Upper 700MHz	
Cellular	Cell 800
PCS	PCS 1900
AWS	AWS 2100

"UL (dB)" "DL (dB)"– Gain Indication.

The displayed value shows real-time uplink and downlink gain. These values will change slightly as the ALC or ISO makes changes to the gain to optimize coverage.

"Power dBm"– Power Indication.

The displayed value shows real-time downlink power that the amplifier is delivering to the indoor antenna port. When the amplifier DL output power is lower than -10dBm, the value will display "----".

“ISO”– Isolation Alarm Indication.

When the system does not have enough isolation between the outdoor and indoor antennas, the “ISO” indicators will be flashing showing that the ISO is lowering the gain in some bands to keep the system from oscillating. Press the “SET” key and the LCD screen will display “ISO” showing the current band or bands affected.

ISO flash		
Band	UL	DL
LTE700	ISO	ISO
Cell800	ISO	ISO
PCS1900	---	---
AWS2100	---	---

Band	UL dB	DL dB	Power dBm
LTE700	40	40	10
Cell800	40	40	12
PCS1900	64	64	11
AWS2100	64	64	11
ISO	ALC	OFF	

“ALC” Flashing.

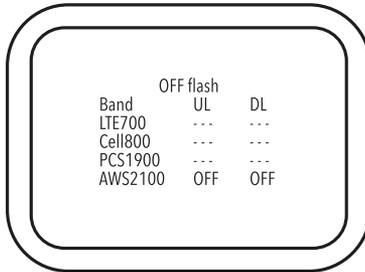
When the amplifier is receiving too much DL power from the tower and the DL amplifier output is close to saturating, the “ALC” indicators will flash showing that the ALC has lowered the gain to prevent this overload condition. Press the “SET” button and the screen will show the band or bands affected.

ALC flash		
Band	UL	DL
LTE700	---	ALC
Cell800	ALC	ALC
PCS1900	ALC	ALC
AWS2100	---	---

Band	UL dB	DL dB	Power dBm
LTE700	58	40	10
Cell800	40	40	12
PCS1900	40	64	11
AWS2100	64	64	11
ISO	ALC	OFF	

“OFF”–Booster shut-off alarm indication.

In some rare situations the ALC or ISO will not be able to compensate for an oscillation condition or a downlink overload. When this happens the amplifier will shut off in the affected band and the LCD “OFF” indicator will flash. Pressing the “SET” button will display which band or bands are affected.



Band	OFF flash	
	UL	DL
LTE700	---	---
Cell800	---	---
PCS1900	---	---
AWS2100	OFF	OFF

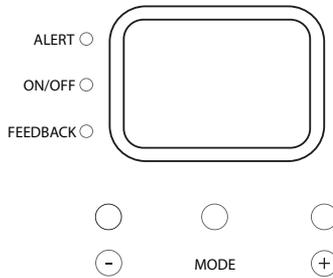
MANUAL GAIN CONTROL OPERATION

There are 4 operation modes relative to the control buttons: a long press for more than 3 seconds on the “MODE” button, short press on the “MODE” button, short press on “-” button and short press on “+” button.

When the LCD is in the fixed display mode, press the “MODE” key for 3 seconds and it will start up in the Gain Setting Mode.

- Press the “MODE” key shortly and the LCD will switch to the next value (uplink or downlink gain for a different band).
- Press the “+” (or “-”) key, and the value of the current gain item will change to a higher (or lower) one.
- Press the “MODE” key for 3 seconds, and the LCD will return to the fixed display mode. (For more details refer to **Manual Gain Control (MGC)** below).

When the LCD is in the alarm display mode, press the “MODE” key and the LCD screen will display the alarm indication showing the affected band. Pressing the “+” (or “-”) key and the LCD will switch to help tips. If none of keys are depressed within 30 seconds, the display will return to the fixed display mode. If none of the control keys are depressed within 5 minutes, the LCD screen will turn off. Pressing any key will return the display to the fixed mode.



Use LCD Display Method to find the location with the strongest received signal

Connect the outdoor antenna to the booster's outdoor port. Fix the outdoor antenna on the roof of the building and point it to the nearest cell tower. Then have a look at gain and output power value displayed on the amplifier's LCD.

The outdoor antenna receives the strongest signal when the booster's downlink output power reaches its highest level in each band.

The booster's LCD display shows the gain and output power. The output power can be checked below "**Power (dBm)**" on the LCD display.

NOTE: When the ALC legend is flashing, it means the received signal power is stronger than the system needs it to be. It is recommended to adjust the outdoor antenna orientation until the ALC alarm disappears. Or you can leave it as it is to let the booster self-adjust automatically. However, when the ALC flashes, and the displayed gain is 30dB less than the amplifier's rated max gain value, try to adjust the outdoor antenna to decrease the received signal power from the local tower. Otherwise it may be necessary to install an attenuator on the outdoor antenna port to decrease the input signal level from the local tower.

- **ISO LED** flashing means that ISO function is working well and self-oscillation has been eliminated. ISO LED will remain "Green" or will be "Slow Flashing Green".

Note: This improvement won't increase the coverage, but is mandatory to avoid causing interference to carrier's local cell site towers.

LED	Status	Meaning	Solution methods
ISO LED	Green @ ISO≤0	No loop back or no self-oscillation	NO action is needed
	Slow Flashing Green@ ISO = 1~14dB	Slight loop back or self-oscillation	NO action is needed
	Quick Flashing Green@ ISO = 15~21dB	Deep loop back or self-oscillation	Not working properly. Check coverage. Leave it as is if it's good. Actions must be taken if coverage is not good.
	Quick Flashing Red @ ISO≥22dB	Severe loop back or self-oscillation	Not working properly, actions must be taken.

Measures: One of the actions below are recommended to eliminate ISO problems, please note that these actions are the same for “Quick flashing green” , “Quick Flashing red” and “OFF”.

1. Adjust the antennas’ pointing directions or locations or increase the distance between them.
2. Increase the vertical or horizontal distance between the outdoor antenna and indoor antenna.
3. Use barriers like walls to increase the isolation.
4. Change the indoor antenna type to an antenna with a more directional antenna pattern. Orient the indoor antenna and outdoor antenna so they point in opposite directions.
5. Reduce the booster’s downlink gain using the manual gain controls. Keep the uplink gain value and downlink gain value the same then restart the booster. **Note:** Uplink gain must be equal to or not less than 5dB below the downlink gain, to avoid interference with the local carrier’s cell site network.

Target: The ISO issues are solved when the ISO LED is “Green” or “Slow Flashing Green”.

Alarm LED: Indicates the strength of received signal from the tower. Flashing Alarm means that the booster is receiving a strong signal in one or more of the bands. Alarm LED shall remain "Green" or "Slow Flashing Green". Slow flashing green indicates that everything is working well and the booster is working at nearly the optimum output power to achieve the best possible coverage.

LED	Status	Meaning	Solution methods
Alarm LED	Green @ $ALC \leq 0$	Output power is not maximum.	Check coverage, leave as is if it's good; if coverage is not good, increase downlink signal Level.
	Slow Flashing Green @ $ALC = 1 \sim 14dB$	Full output power	Working properly.
	Quick Flashing Green @ $ALC = 15 \sim 21dB$	Output power is too high.	Not working properly. Check coverage. Leave it as is if it's good. Actions must be taken if coverage is not good.
	Quick Flashing Red @ $ALC \geq 22dB$	The booster automatically shuts off for protection from excessive downlink signal from tower.	Not working properly, actions must be taken.

Measures: The below actions are recommended to eliminate "Quick Flashing Green" and "Quick Flashing Red".

1. Adjust the antennas' directions or locations to lower downlink received signal level.
2. Slowly reduce the downlink gain using the Manual Gain Controls.
3. If the above methods don't work, reduce the booster's gain with an external attenuator in line with the outdoor antenna or replace with lower gain antenna.

Target: The overload issues are fixed when the Alarm LED is "Green" or "Slow Flashing Green". Please note that a "Green" LED indication may result in smaller coverage area. This can be improved by adjusting the outdoor antenna to receive a stronger signal.

After all the LEDs are indicating properly check whether the coverage is good. If it is good, the booster installation is complete. If the coverage is not good take the following actions:

1. If the signals in most areas have not been improved, please check below:
 - The weak downlink signal leads to the low output signal level. Change the direction of outdoor antenna or its installation position or replace the outdoor antenna with a higher gain antenna to increase the received signal level.
 - Check whether it is necessary to add more indoor antennas since barriers such as walls block signal penetration. Also, check whether the booster's power is maximized. Install more indoor antennas or replace amplifier with a booster of higher power level.
2. If the signals in a small part of the building have not been improved, please check the following
 - Check whether the indoor antenna is installed correctly or not. Try to move the antenna location to improve coverage.
 - Check if it is necessary to adjust the pointing direction of the indoor antenna.
 - Check whether it is necessary to add one or more antennas to enhance the coverage of special areas.

Remark:

- When increasing the downlink gain make sure the isolation is adequate to prevent system oscillation
- Recommended ways to increase output power: Adjust the outdoor antenna direction / location, or replace with higher gain antenna to increase received signal strength from the tower.

Note: The slow flashing ISO and Alarm status indicates that ISO and ALC functions are working properly and the problems of self-oscillation and strong downlink signals are fixed. In most cases, there is no need to take any additional measures except for deep self-oscillation or excessively strong signals from the tower. The self-adaptive ALC and isolation gain processing system automatically solve most problems.

RUN COAXIAL CABLE

Loosely run the coaxial cable from your outdoor antenna to your booster. (after you have tested the system you can permanently secure the coaxial cable).

As you route and pull cabling, follow these general guidelines:

- Bend cables and route them smoothly, and protect the outer skin against any damage.
- Keep horizontal cables straight and fasten them with a tie every three to five feet.
- Bind and fasten vertical cables every six to eight feet.
- Waterproof all outdoor connections with silicone caulking
- Be careful when plugging the connector in so as not to damage the center pins on the connectors.

INSTALL THE DONOR (OUTDOOR) ANTENNA.

Mount the donor (outdoor) antenna

The donor antenna should be located as high as possible in order to capture the best quality signal from the cellular tower.

Use the mounting hardware in the kit to attach the server (outdoor) antenna to the building.

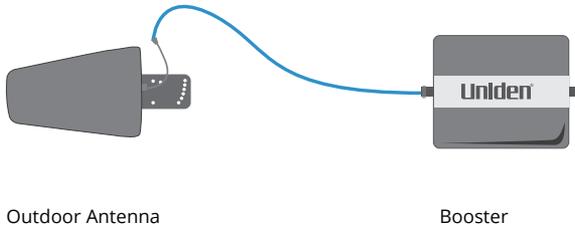
Connect the donor (outdoor) antenna:

Connect the supplied coaxial cable to the antenna. We recommend applying silicone caulking to fully waterproof the connection.

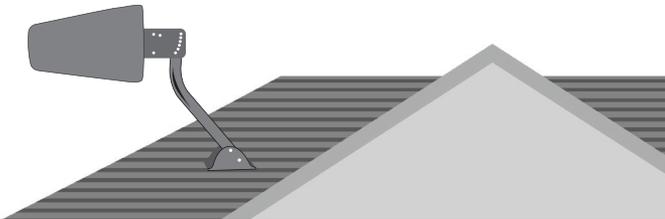
Attach the cable in such a way that a drip loop is formed. (see image on page 14). Once mounted, connect one end of the coaxial cable to the donor (outdoor) antenna and the other end to the cellular booster where it is marked "outdoor".

HOW TO INSTALL THE COAXIAL CABLE FROM YOUR DONOR ANTENNA TO YOUR BOOSTER.

Step 1: Loosely run the coaxial cable from your outdoor antenna to your booster (this way you can test the system before you permanently secure the coaxial cable).



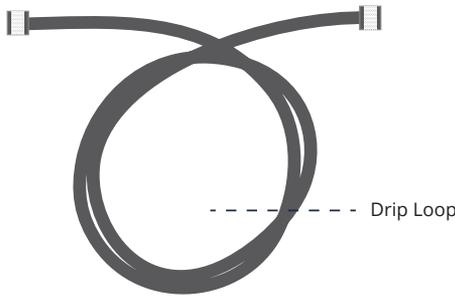
Step 2: Mount the donor (the outdoor antenna).



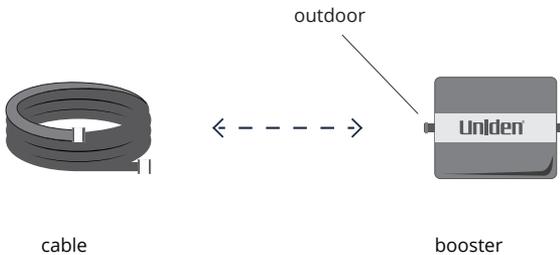
Step 3: After the outdoor antenna is mounted connect the supplied coaxial cable to antenna.



Step 4: Attach the cable so that a drip loop is formed.



Step 5: Connect the cable to the cellular booster where it is marked "outdoor".



CAUTION: please ensure neither you nor the antenna come in contact with electrical power lines.

UNDERSTAND THE DIFFERENT DONOR (OUTDOOR) ANTENNA

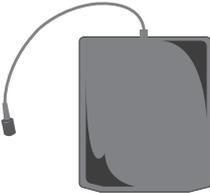
Donor (outdoor) antennas, are needed to capture the signal emanating from your carrier's cellular tower. There are different types of donor (outdoor) antennas each designed to meet your specific needs. The yagi lpda antenna, the panel antenna.



The Yagi LPDA Antenna

The yagi is a very precise directional antenna with a powerful reach. This antenna should be installed in an elevated position and must be pointed towards your carrier's cellular tower.

Note: This antenna is not meant to capture signal from multiple carriers.



The Panel Antenna

The panel is a directional antenna with a 120 degree reach and is designed to capture the signal from multiple carrier towers. This antenna should be installed in an elevated position and must be pointed towards your carrier's cellular towers.

LIGHTNING SURGE PROTECTOR

(sold separately)

The lightning surge protector can be installed indoors or outdoors. When connecting outdoors, install the lightning surge protector inline between the donor antenna (outdoor) and the coaxial cable. When connecting indoors, install the lightning surge protector inline between the outdoor coaxial cable and the booster.



IMPORTANT: Lightning surge protector must be grounded. Connect a ground wire to the appropriate place on the lightning surge protector and connect the other end to a verified ground source.

INSTALL THE SERVER (INDOOR) ANTENNA

Select the installation location of your supplied server (indoor) antenna based on the following:

Dome omni directional antenna

Place in the center of the area where the signal needs to be amplified.

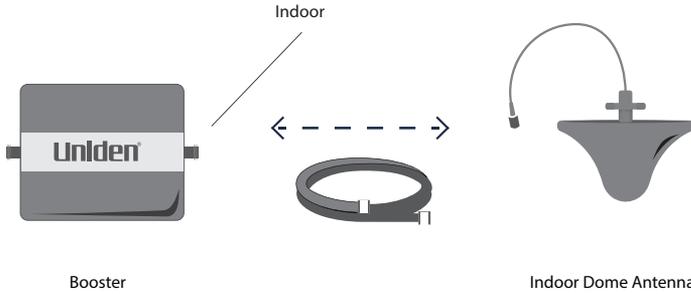
Panel directional antenna

Place in the outer perimeter of the area the signal needs to be amplified.

CONNECTING THE SERVER (INDOOR) ANTENNA

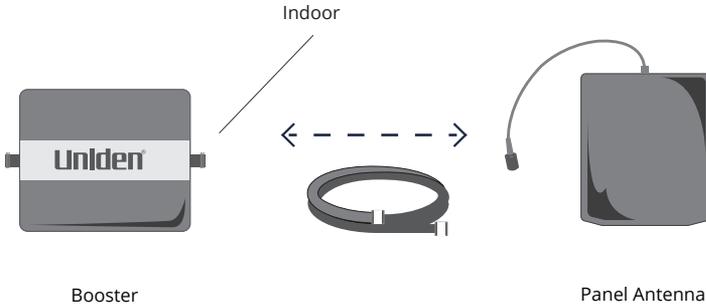
Dome omni directional antenna

Connect one end of the coaxial cable to the dome antenna and the other end to the cellular booster where it is marked "indoor".



Panel directional antenna

Connect one end of the coaxial cable to the panel antenna and the other end to the connector on the cellular booster where it is marked "indoor".



UNDERSTAND THE DIFFERENT SERVER ANTENNA

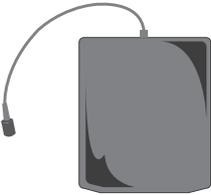
There are several types of server (indoor) antennas: the dome antenna & the panel antenna.

INDOOR ANTENNAS



THE DOME ANTENNA

The dome antenna is an omni-directional antenna with a 360 degree reach. It is designed to distribute the signal from the center of the affected area. Typically it is installed in a false or dropped ceiling.



THE PANEL ANTENNA

The panel is a directional antenna with a 120 degree reach and is designed to distribute the signal from a perimeter wall or ceiling.

NOTE: installing additional server (indoor) antennas may be necessary when the area that needs coverage is very large or has barriers that block cellular signals such as multi level homes and buildings.

The following diagrams show the reach of each antenna based on the layout of the space they are mounted in:

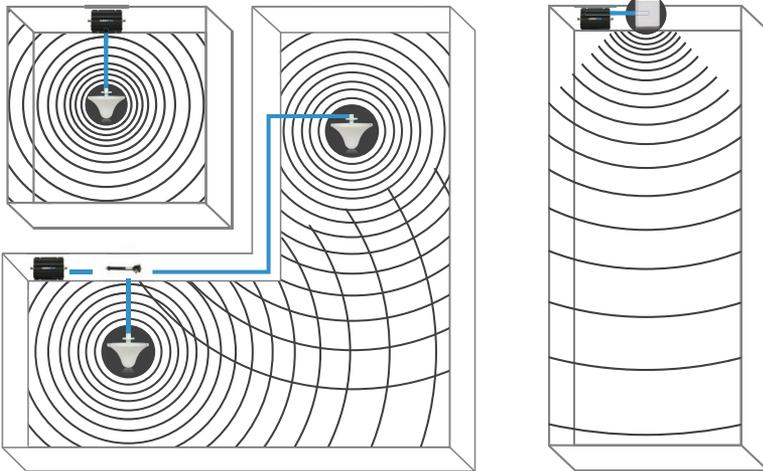
Image 1&2: Omni directional antennas will provide better coverage for square rooms.

Image 3: Directional antennas will provide better coverage in rectangular rooms.

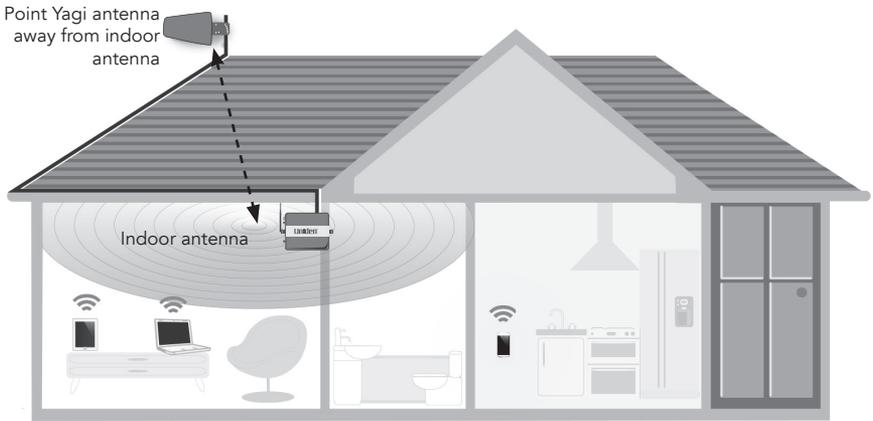
Image 1

Image 2

Image 3



ANTENNA SEPARATION



Oscillation is caused when the indoor (server) antenna sends a signal back into the outdoor (donor) antenna. Similar to a PA system, when the microphone gets too close to the speaker it causes feedback. This will occur if your antennas are too close together, or the indoor antenna is pointed at the outdoor antenna. Make sure you have adequate separation and some types of shielding between the antennas (usually your roof or a cement wall is good enough).

EXAMPLES OF OSCILLATION

The indoor antenna is pointed at the outdoor antenna. The antennas are too close together

INSTALL YOUR CELLULAR BOOSTER

Install the cellular booster in a location that is properly ventilated and not exposed to excessive heat, moisture and/or direct sunlight. The optimal area would be on a wall located near a power outlet.

It should be mounted in an easily accessible area so it's easy to perform general maintenance with the coaxial cable connections, dip switch settings and power adaptor.

Make sure all cables and antennas are securely connected before commissioning the system.

POWER UP YOUR CELLULAR BOOSTER

Once you have placed your outdoor and indoor antennas and connected all the cables between the antennas and the booster, you are now ready to plug your booster into its power source.

IMPORTANT

You can now make some final adjustments to the antennas and cable placements to fine tune your system in order to give you maximum coverage.

Note: Be sure to check the LED alarm lights on the booster to be sure your system is working properly. Please refer to the table below for an explanation of the LED readings.



IMPORTANT: Do not connect your cellular device to the cellular booster, as it may damage your cellular device.

IMPORTANT:

1

Never point the front of the yagi donor (donor) antenna towards the inside of the server (indoor) antenna.

2

Verify that the supplied coaxial cables from both the donor (outdoor) antenna and the server (indoor) antenna are properly connected to the cellular booster before powering it up.

3

Carefully plug in the supplied 110-volt power adaptor into the back of the cellular booster where it is marked 'power' and connect the other end to a power outlet.



WARNING! Using a power supply that is not included in your kit could damage your equipment and void your warranty.

TROUBLESHOOTING

The LED alarm lights represent the status of the booster on each frequency. When the lights are green the device is operating normally meaning that it is not experiencing any oscillation (feedback) and it is boosting the signal at maximum power. When the LED lights begin to change color from green to orange to red, it means that particular frequency is experiencing some oscillation (feedback).

If the oscillation is excessive the booster will shut down for that particular frequency. The booster will still work for the other frequency on a multi-band booster.

Oscillation is caused when the indoor (server) antenna sends a signal back into the outdoor (donor) antenna. Similar to a PA system, when the microphone gets too close to the speaker it causes feedback. This will occur if your antennas are too close together, or the indoor antenna is pointed at the outdoor antenna. Make sure you have adequate separation and some type of shielding between the antennas (usually your roof or a cement wall is good enough).

IMPORTANT NOTES

The 2 most important things to look for when setting up your system is:

1

A good input signal (the best you can find)

2

Isolating the outdoor (donor) antenna from the indoor (server) antennas so they do not feedback into each other.

By capturing the best input signal you will be able to enjoy the maximum coverage and best quality signal inside where your server antennas are located. The better the input signal, the better the output signal. In order to find the best input signal, you want to place your outdoor (donor) antenna as high as possible with the least amount of obstruction between the antenna and the cellular base tower. A clear line of site is ideal.

Isolating the signal from the antennas is done by ensuring that the antennas are not pointing to each other and by having enough distance or barrier shielding in between them. The signals travel like rays of sunlight, a directional antenna will send the signal in the direction that it is pointing. An omni directional antenna will send the signal in every direction around it. So depending on your equipment its important to be sure that your server antenna (indoor) is not sending the signal back into the outdoor (donor) antenna.

THINGS TO CHECK WHEN EXPERIENCING WEAK CELLULAR SIGNAL

1 Ensure the donor antenna (outdoor) is pointing in the correct direction and is capturing adequate signal for the booster.

2 Check all connections on the cable, antennas, and booster.

3 Check cable for bends and or cuts.

4 All LED lights on the booster should be green.

5 Donor antenna (outdoor) and the Server antennas (indoor) have adequate separation and are not causing feedback.

FREQUENTLY ASKED QUESTIONS



WHY ARE THE LED LIGHTS TURNING ORANGE, RED OR SHUTTING OFF?

There are certain cases where your system could be experiencing oscillation. This can be attributed to either the quality of your input signal or having your donor (outdoor) antenna and server (indoor) antenna too close together. Please review the following guidelines to help resolve this issue:

1. Adjust the direction of the donor (outdoor) antenna. If the system is receiving a very high input signal, you can point your donor (outdoor) antenna away from the cellular tower to reduce the strength of the input signal and therefore, reduce the oscillation. Alternatively if your system is receiving a very poor quality signal (weak and unusable signal), you can point your donor (outdoor) antenna more directly towards the cellular tower to increase the strength of the input signal. Sometimes this may require completely repositioning the antenna to a location where you can achieve a line of site to the tower.
2. Increase the separation between the donor (outdoor) antenna and the server (indoor) antenna. This can be achieved by increasing the distance between the two antennas or by placing barriers between them, such as moving the server (indoor) antenna to an adjacent room where there would be an additional wall separating them from the donor (outdoor) antenna.
3. Manual Gain Control. Adjust the gain with the manual gain control function using the dip switches on the side of the booster.



I INSTALLED THE BOOSTER AND MY SIGNAL STRENGTH IS STILL WEAK

In order to correct a weak signal; essentially you have the options of:

- Adjust the aim of the donor (outdoor) antenna or replace it with a higher gain antenna.
- Move the server (indoor) antenna.
- Increase the number of server (indoor) antennas.
- Reducing the attenuation values you chose when setting the manual gain control.



I CANNOT MAINTAIN CALLS, MY SIGNAL STRENGTH FLUCTUATES

If you find the booster is working but drops calls or delivers fluctuating signal levels, the most likely cause is oscillation between the donor and server antenna(s).

Determine the status of the cellular booster led alarms. If so there is insufficient isolation between antennas. You can either increase the distance between antennas or place barriers between them to attenuate the signals or adjust the manual gain control settings.

A second cause for this symptom is poor cable connections. Confirm that all cable connections are tight and secure.

A third cause may be interference from other cellular service providers operating in the same frequency bands. If their signals are stronger than the cellular signals you want to receive from the cell tower. In this case the unwanted signal needs to be attenuated either by repositioning or re-aligning the donor (outdoor) antenna, or by using barriers (buildings, trees, etc) to block the signal.



MY LED'S ARE ALL GREEN BUT MY SIGNAL IS STILL WEAK - MY COVERAGE IS POOR

If you receive a signal where you did not previously... or, if the radius of the service area covered is small...and your LED's are all green... the booster is working properly but for some reason the signal is not very strong. This can be due to weak input signal.

- Adjust your donor (outdoor) antenna to point more accurately at the cellular tower in order to increase the input signal.
- Check the coaxial cable to ensure there are not any creases or cuts in it. Perhaps the cable was damaged during installation.



WHY ISN'T MY CELL PHONE INDICATING MORE SIGNAL WITH MORE BARS?

You may not always observe more bars on your signal meter because of the signal spreading out from the antenna. If your phone has a db meter, 3db is a significant increase of 2 times, 6db is 4 times, and 10db is 10 times. on a four bar phone, one "bar" equals about 10db.

The increase in signal you will see depends upon:

- The level of signal at the donor (outdoor) antenna
- The care of the antenna placement (2 feet away from metal, adequate antenna separation [30 feet recommended]).
- The distance of your phone/device from the server (indoor) antenna (signal spreads or diminishes rapidly with distance.)

FCC and ISEDC Statements

FCC RF EXPOSURE STATEMENT

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instruction for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This equipment should be installed and operated with minimum distance 20cm between the radiator& your body.

ISEDC RF EXPOSURE STATEMENT

The device is compliance with RF exposure limits. The minimum distance from body to use the device is 20 CM.

Le présent appareil est conforme aux conformité ou aux limites d'intensité de champ RF. La distance minimale du corps à utiliser le dispositif est de 20 CM.

This device complies with part 15 of the 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, uses 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 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:

- Re-orient 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

Changes or modifications not expressly approved by HiBoost could void the user's authority to operate the equipment. For a complete list of antennas and cables approved for use with these boosters see Authorized Kitting Options

FCC 27.50(d)(4) Statement: Fixed, mobile, and portable (handheld) stations operating in the 1710-1755 MHz band are limited to 1-watt EIRP. Fixed stations operating in the 1710-1755 MHz band are limited to a maximum antenna height of 10 meters above ground.

FURTHER INFORMATION ON SIGNAL BOOSTER END-USE REGISTRATION

The following links are the currently active contacts for booster registration with U.S. wireless providers:

<https://www.uscellular.com/uscellular/support/fcc-booster-registration.jsp>

https://www.sprint.com/legal/fcc_boosters.html

<https://www.verizonwireless.com/solutions-and-services/accessories/register->

signal-booster/ <https://support.t-mobile.com/docs/DOC-9827>
<https://securec45.secureweb session.com/attsignalbooster.com/>

ISED Statement: This device complies with innovation, science, and Economic Development Canada licence **RSS** standard(s). 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 the device.

Le présent appareil est conforme aux CNR d'innovation, sciences et Développement économique Canada applicables aux appareils radio de licence. L'exploitation est autorisée aux deux conditions suivantes :

- (1) l'appareil nedoit pas produire de brouillage, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This device complies with Innovation, Science and Economic Development Canada ICES-003 Compliance Label: CAN ICES-3 (B)/ NMB-3(B). Le présent appareil est conforme Innovation, science et développement économique Canada ICES-003 Étiquette de conformité: CAN ICES-3 (B) / NMB-3 (B).

Please follow the link to access the CPC-2-1-05:
<http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf08942.html>

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.

In Canada, **BEFORE USE**, you must meet all requirements set out in ISED CPC-2-1-05.

You **MUST** operate this device with approved antennas and cables as specified by the manufacturer. Antennas **MUST** be installed least 20 cm (8 inches) from (i.e., **MUST NOT** be installed within 20 cm of) any person.

You **MUST** cease operating this device immediately if requested by the FCC (or ISED in Canada) 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 (i.e., may operate in a fixed location only) for in-building use.

Uniden[®]
cellular signal boosters

INSTRUCTION MANUAL

Phone: 1-800-215-7015
Email: support@unidencellular.com
www.unidencellular.com