



QUICK INSTALL GUIDE

This quick install guide is intended for professional installers that are generally familiar with the installation of cellular signal booster systems that include bi-directional amplifiers, indoor and outdoor antennas, signal splitters and coaxial cable. Additional details can be found in the user guide

This amplifier has a very intelligent Automatic Gain Control System (ALC and ISO) to adjust its uplink and downlink gain in each band to prevent self-oscillations, optimize gain to prevent overload from nearby high-power towers and to make installation virtually 'plug and play'.

Online Video

Please view the instructional video at

<https://www.hiboostusa.com/en/resource-center> .

It provides an overview of the amplifier, its features and information about the controls and displays.

Main Elements and Typical Installation

Figure 1. shows the main elements of the amplifier that includes the LCD panel, manual gain controls, indicator LEDs and the OUTDOOR and INDOOR antenna ports which are type-N female connectors. Figure 3 shows a typical system setup. Please use this diagram as a general guide

LCD Display

When the amplifier is first powered on the LCD panel display will turn on for 5 minutes. It is shown in Figure 2. If it is not ON press the SET button momentarily.

General Specifications

| | | |
|-----------------------|---|------------------|
| Maximum Gain: | Uplink (80dB) | Downlink (83dB) |
| Maximum Output Power: | Uplink (20dBm) | Downlink (27dBm) |
| Bands Covered: | LTE 700, Cell 800, PCS 1900, AWS 2100 | |
| Power: | Input AC (100-240 VAC), Output DC (12Vdc, 7 amps) | |



Installation Overview

1. Select a location with the strongest signal on the roof of the building to install the Outdoor Antenna. Make sure the antenna is pointed directly at the desired cellular tower and there are no obstructions that could block the signal. You should also consider attaching a grounded lightning protector between the outdoor antenna and the Signal booster.
2. Select a location to install the Signal Booster that is in a secure indoor location near a grounded AC power source and well ventilated away from excessive heat, moisture, and direct sunlight.
3. Select a location(s) for the Indoor Antenna(s), being sure to take isolation distance requirements into account. In general, long narrow spaces will benefit most from directional panel antennas while more square spaces will benefit more from omnidirectional dome antennas.
4. Proper antenna distance is essential to prevent signal oscillation (feedback) that can interfere with the cellular tower and as a precaution the amplifier will shut off in the affected band. Distance is measured in a straight line from the outdoor antenna to the closest indoor antenna. The closest allowable distance depends on several factors such as booster gain level, cable and splitter loss and building wall materials. Typical minimum distances are shown below:

| Amplifier Gain | Min. Distance |
|----------------|---------------|
| 50dB | 50' |
| 55dB | 60' |
| 60dB | 70' |
| 65dB | 80' |
| 70dB | 100' |
| 75dB | 100'~120' |
| 80dB | 120'~180' |



NOTE: Vertical distance is more important than horizontal distance. If you are unable to obtain the required distance horizontally, try raising the outdoor antenna to a higher level.

5. Route the coax cable from the Outside Antenna to the Signal Booster and attach it to the connector labeled “Outdoor.” Connect another coax cable to the connector labeled “Indoor” and route it to the Indoor Antenna.

NOTE: Be careful not to bend the center pins on the connectors when securing connections.

6. Once you have ensured all connections are tight, plug the power supply into the Signal Booster input marked “POWER” and then into an AC surge protector power strip with a minimum 1000 Joule rating.
7. If the booster is working and adjusted correctly, the LEDs on the front panel will be green and the LCD panel will show the downlink power level (in dBm units). The Automatic Level Control (ALC) will try to adjust the downlink output power to the maximum level consistent with the constraints of your installation and the signal level that is received from the local tower.

If you have made the most appropriate installation per the above procedures, but the Signal Booster’s ISO or ALC icons are flashing on the LCD panel (especially if the installation location is close to the cellular tower) you may also try reducing the booster gain as described in **Manual Gain Control Operation** Chapter of User’s manual.

- A. Press the “SET” button for more than 3 seconds. It will go into the “Manual Gain Setting Mode” (MGC) and make one of the gain values start to blink.



- B. Press the "SET" button shortly, and the LCD will switch to the next gain value and it will start to blink. (uplink or downlink gain for a different band).
- C. Press "INC+" button once shortly and the gain will increase by 1dB, Press "DEC-" button once shortly and the gain value will be reduced by 1dB.
- D. Press the "SET" button for 3 seconds, and the LCD will return to the fixed display mode and store the gain values

Note: Reduce the downlink gain first to achieve the desired downlink power level (until the ISO and ALC icons on the LCD display are not flashing) then reduce the uplink gain 5~8dB more than downlink gain. For example, when the Downlink gain is 70dB you may reduce the UL gain to 62dB.



Figure 1. Amplifier Controls, Displays and Connector Locations

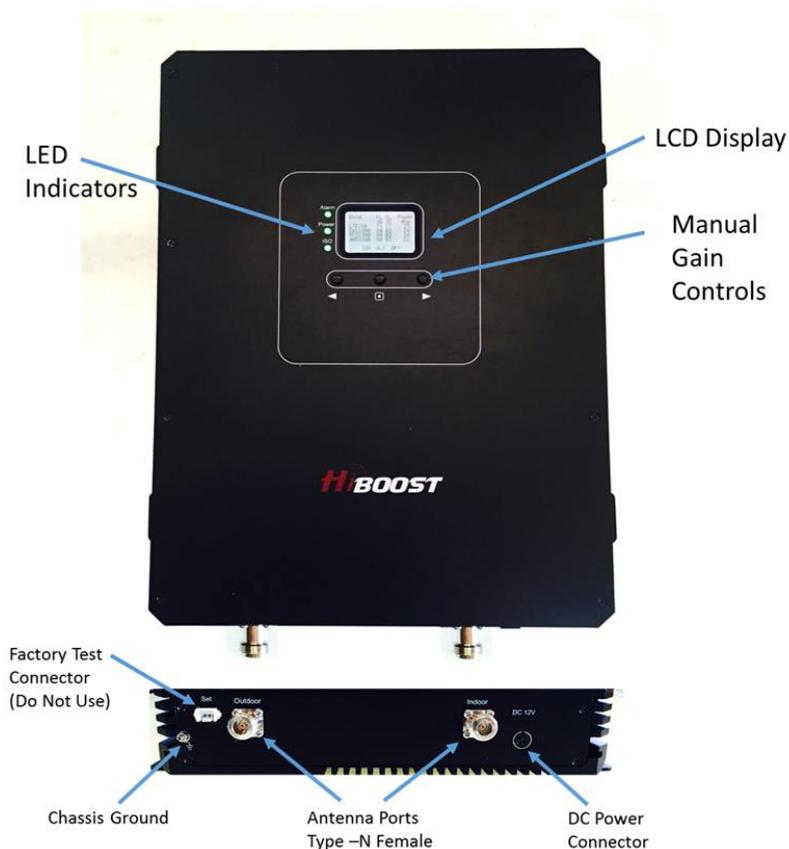
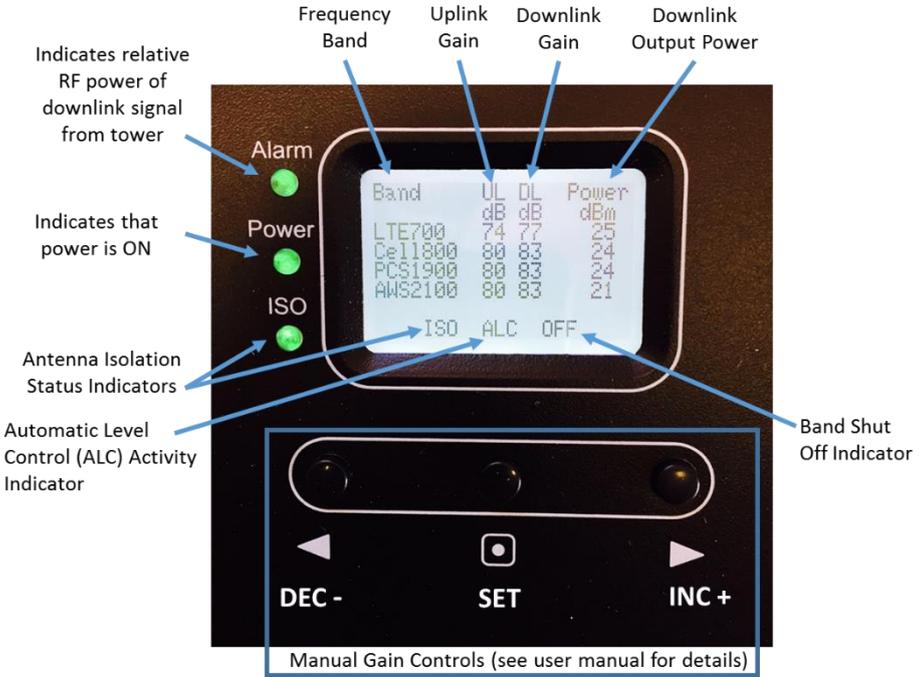


Figure 2. LCD and Manual Gain Controls



LCD Indications

NOTE: LCD panel will shut off after 5 minutes if the SET button or manual gain controls are not used. Pressing the SET button or recycling power will reenergize the display.

Band: Displays the frequency bands where the amplifier is operating.

UL: Shows the real-time gain (dB) of the uplink amplifier in each band

DL: Shows the real-time gain (dB) of the downlink amplifier in each band

Power: Shows the real-time composite downlink output power (dBm) in each band

ISO: Indicates activity of the gain control functions to eliminate self-oscillation

ALC: Indicates activity of the Automatic Level Control system to optimize uplink and downlink power and gain.

OFF: When flashing indicates that the amplifier has shut down a band

LED Modes

Alarm: Shows relative power of downlink signal received from tower. Four states: (green, flashing green at less than 1 second / flash, flashing green at more than 1 second / flash and flashing red.

ISO: Shows status of self-oscillation monitor that detects possible feedback between the indoor and outdoor antennas. Five states: (green, slow flashing green at less than 1 second / flash, fast flashing green at more than 1 second / flash, flashing red and off.

Manual Gain Controls: In some rare situations it may be necessary to override the Automatic Level Control system. These buttons permit independent adjustment of the uplink and downlink gain in each band. (see user manual section entitled 'Manual gain control (MGC)' for details.

Figure 3. Typical Installation

