zBoost METRO Workspace ZB540iP User Manual

zBoost products have a 30-day money back guarantee when purchased directly from zBoost. If product is purchased from a reseller or third party, the purchaser is subject to the policies of the third party.

1 year manufacturer warranty. Warranty registration at www.zBoost.com

v.0214

FCC Requirements

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. AT&T, Sprint, T-Mobile, Verizon and 90 additional carriers have already given consent for all consumers to use this device. Some providers 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 antennas and cables as specified by the manufacturer. Antennas MUST be installed at least 20 cm (8 inches) 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.

FCC contact information: **www.fcc.gov/signal-boosters/registration**

Warning

Any product modifications that use unauthorized antennas, cables, and/or coupling devices is no longer FCC compliant and will void the product warranty.

About zBoost

zBoost, the leader in cell phone signal boosters, manufactures the award-winning line of cell phone signal boosters that enhance the performance of your cell phone, smartphone and wireless data card.

Compatibility – Dual Band zBoosts are compatible with 800 MHz and 1900 MHz regardless of technology- including CDMA and GSM.

Patented technologies protect the carrier network.

1-year manufacturer warranty – register your product at **www.zBoost.com**.

FCC Information

FCC ID: SO4ZB570-PCS-CEL

Warning: Changes or modifications to this device not expressly approved by zBoost could void the user's authority to operate the equipment.

Note: 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 particular installation. If the 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 to 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

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. In accordance with FCC requirements of human exposure to radiofrequency fields, the radiating element (antenna) shall be installed such that a minimum separation distance of 20cm (8in) is maintained from all persons.

Industry Canada Regulations

IC ID: 5544A-ZB570PCSCEL

This Class B digital apparatus meets all requirements of the Canadian Interference Causing Equipment Regulations. 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.

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

RF Exposure: 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 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.

Cet appareillage numérique de la classe [B] répond à toutes les exigences de l'interférence canadienne causant des règlements d'équipement. L'opération est sujette aux deux conditions suivantes: (1) ce dispositif peut ne pas causer l'interférence nocive, et (2) ce dispositif doit accepter n'importe quelle interférence reçue, y compris l'interférence qui peut causer l'opération peu désirée.

Le fabricant nominale de la puissance de sortie de ce matériel est simple transporteur. Pour les situations lorsque plusieurs signaux porteurs sont présents, l'évaluation devrait être réduite de 3.5 dB, en particulier lorsque le signal de sortie est ré-émise et peut provoquer des interférences adjacentes à la bande utilisateurs. Ce pouvoir est de la réduction par le biais de la sortie d'alimentation ou la réduction de gain et non par un atténuateur à la sortie du dispositif.
Please note: This unit has been approved for use in Canada under RSS 131, however, consent for the use of this device to improve cellular or PCS coverage, must be obtained through your cellular or PCS provider, prior to placing the unit in operation. Please refer to the Industry Canada document CPC 2-1-05, Section 6.1 available or viewable at:
http://www.ic.gc.ca/epic/site/smt-gst.nsf/en/sf08942e.html

Safety and Product Warranty Information

Copyright Notice

This manual is copyrighted. All rights reserved. This manual, whole or in part, may not be copied, photocopied, reproduced, translated or reduced to any electronic medium or machine readable form for distribution. This manual whole or in part, may not be modified without prior consent, in writing, from zBoost.
Copyright © 2014 by zBoost.

Trademarks

zBoost, the zBoost logo, Wireless Extenders, Wi-Ex, the Wi-Ex logo, and Extending Cell Zones are registered trademarks of zBoost.

Safety Guidelines

In accordance with FCC requirements of human exposure to radiofrequency fields, the radiating element (antenna) shall be positioned such that a minimum separation distance of 8 inches (20cm) is maintained between the radiating element and the user and/or general population.

Limited Liability

In no event shall zBoost be liable for any direct, indirect, special, punitive, incidental, exemplary or consequential damages, or any damages, whether in an action under contract, negligence, or any other theory, arising out of or in connection with the set up of, use of, inability to use, or performance of the information, services, products, and materials available from this manual. These limitations shall apply notwithstanding any failure of essential purpose of any limited remedy. Because some jurisdictions do not allow limitations on how long an implied warranty last, or the exclusion or limitation of liability for consequential or incidental damages, the above limitations may not apply to you.
For full warranty guidelines, see page 10.

Note

Changes or modifications not expressly approved by zBoost could void the user's authority to operate this equipment and/or void the product warranty.

Package Contents

Before you begin, make sure all of the following parts came with your zBoost METRO Workspace:

Literature Contents:

① Set Up Overview

Product Contents:

② Indoor Antenna
③ zBoost Base Unit
④ Power Supply
⑤ RG-6 Coaxial Cable - 50 ft.
⑥ Signal Antenna
⑦ Short Suction Cup Attachments
⑧ Long Suction Cup Attachments

Accessories

The following accessories are authorized for this zBoost product. Please see our website for complete selection. **To order, call 1-800-871-1612 or visit, www.zBoost.com**

Broadcast Antennas - Indoor	
CANT-0032	Indoor Broadcast Antenna, Omni Whip Direct to Booster, Black, CEL-PCS (1 dBi)
CANT-0034	Indoor Broadcast Antenna, Omni Whip Direct to Booster, White, CEL-PCS (1 dBi)
CANT-0039	Indoor Broadcast Antenna, Omni Whip Direct to Booster, Black, Wide- Band, LTE-CEL-AWS-PCS (1 dBi)
YX027-F*	Indoor Broadcast Antenna, Directional Panel w/ F-Female Connector, CEL-PCS (6 / 8 dBi)
YX052	Indoor Broadcast Antenna, Wide-Band Ceiling-Mount Omni w/ F-Female Connector, LTE-CEL-AWS-PCS (1 / 2 dBi)
External Antennas - Outdoor	
CANT-0028	Outdoor External Antenna, Directional Low Profile Panel, CEL-AWS-PCS (6 / 8 dBi)
CANT-0031	Window-mount External Antenna for YX540 zBoost METRO Workspace, Directional Panel, CEL-PCS (6 / 8 dBi)
CANT-0033	Outdoor External Antenna, Small Omni, CEL-PCS (3 / 5 dBi)
CANT-0036	Outdoor External Antenna, Omni with Industrial Casing, CEL-PCS (3 / 5 dBi)
CANT-0040	Outdoor External Antenna, Wide-Band Omni Directional, LTE-CEL-AWS-PCS (3 / 5 dBi)
CANT-0042	Outdoor External Antenna, Wide-Band Directional Log Periodic, LTE-CEL-AWS-PCS (10 / 12 dBi)
YX021-CEL	Outdoor External Antenna, Directional Panel, CEL (8 dBi)
YX023-PCS	Outdoor External Antenna, Directional Panel, PCS (13 dBi)
YX026-CEL	Outdoor External Antenna, Directional 3 foot Yagi with 12 Elements, CEL (11 dBi)
YX039-PCS-CEL	Outdoor External Antenna Kit, Two Directional Panels with Combiner, CEL-PCS (8 / 13 dBi)
Coax Cable - To be used in addition to the cable included in your kit	
YX030-0W8	8 Inch Window Entry Cable with F-Female Connectors
YX030-15W	15 Foot RG-6 Coaxial Extension Cable with F-Male Connectors
YX030-35W	35 Foot RG-6 Coaxial Extension Cable with F-Male Connectors
YX030-50W	50 Foot RG-6 Coaxial Cable with F-Male Connectors
YX031-10W	10 Foot RG-8X Coaxial Cable with TNC-Male & Female Connectors (Booster to Distribution Antenna)
YX031-100W	100 Foot Low Loss RG-11 Coaxial Cable with F-Male Connectors
Accessories	
YX012	Outdoor External Antenna Grounding Kit

* The FCC requires that this panel antenna has a minimum horizontal separation of 6 feet (2 meters) from other CMRS (commercial mobile radio service) devices.

zBoost® METRO Workspace ZB540iP Manual

Table of Content

Overview

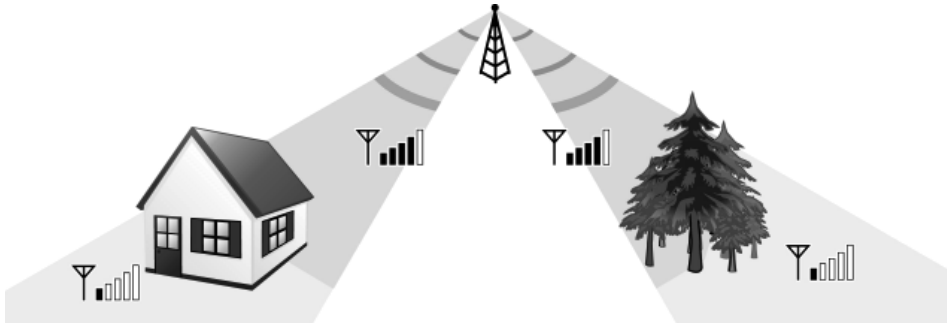
Thank you for choosing zBoost! You will now be able to use your cell phone INSIDE your home. Gone are the days when you had to go to the window upstairs or walk outside to use your cell phone. Like a skylight that brings sunlight into your home, zBoost transports and amplifies the outdoor signal into your home.

By following the easy instructions in this User Manual, you will be Extending Cell Zones™ into your home.

Why Indoor Signals Can Be Weak

There are several obstacles that can contribute to the poor reception you receive in your home:

1. **Location of the Cell Phone Tower in Relation to Your Home**
   While cell phone providers have tried to place cell phone towers to provide the best overall coverage, local ordinances and terrain features can impose restrictions on where these towers can be placed, thus, limiting the signal strength available at your location.
2. **Obstructions Caused by Buildings, Terrain and Trees**
   Cell phone signals can be completely blocked or reflected by buildings, walls, trees, hills and other terrain features resulting in low signal strength.
3. **Energy Efficient Windows**
   Energy efficient windows contain a metal film that can affect signal penetration into the house.



Preparing to Set Up Your zBoost Product

Tools Needed

The following tools are needed to set up zBoost:

- #2 Phillips screwdriver
- Cellular phone operating in the band supported by your zBoost unit
- Drill (may be required for outdoor or attic antenna placement)

Check for Signal Strength

Before placing a zBoost in your home, make sure that you can place calls on the outside of your home, in the attic, at roof level or wherever you plan to place the Signal Antenna. zBoost can only bring signal into your home when signal reaches the Signal Antenna. If there is no signal, the zBoost will not work for you.

Using your cell phone, place a call from an outdoor location to confirm that enough signal is present to complete the call. If a weak signal is available at ground level, check the signal strength in your attic or at roof level location where the signal will likely be stronger and where the Signal Antenna can be placed for best performance.

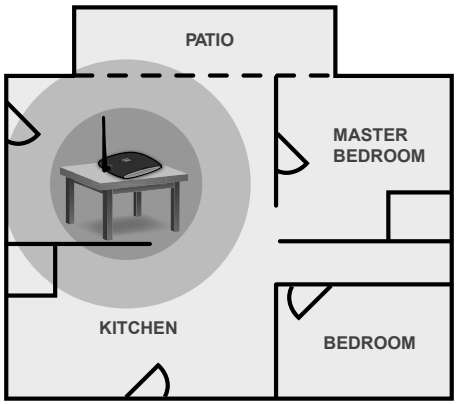
If you can reliably make and receive calls outside your home, then zBoost can bring the signal into your home.

If only one signal bar is displayed on your cell phone outside, indoor coverage will be limited to one small room. We recommend placing the Signal Antenna outside and/or purchasing a zBoost upgrade Signal Antenna for increased coverage (see page v).

Note

Cell phone signal bars are approximate and vary from phone to phone. The number of bars can fluctuate widely, depending on the location of the phone, the position or angle of the phone, weather, etc. Most cell phone signal meters update every 6 to 10 seconds. An increase of only one bar typically indicates a 4x to 10x signal increase.

Setting Up Your zBoost Signal Booster



The METRO Workspace boosts signal up to 1500 square feet, making it perfect for apartments, condos and lofts. No outside antenna placement is required.

Boost voice and data transmission and improve call clarity in 4 easy steps:

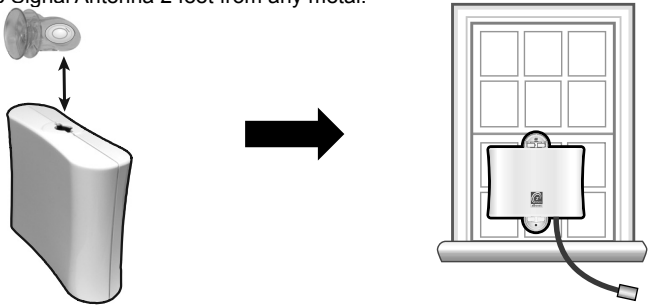
FIRST: Place the Signal Antenna on the interior of a window located in the area of best signal

Determine the location that provides the strongest signal using the signal strength indicator on your cell phone. Find the location on the window that provides the most bars of signal strength. Before proceeding, make sure that the intended surface is clean and clear of any dust. Then choose the suction cup attachments appropriate for your setting (short or long), fasten to the Signal Antenna, and secure to your window.

Please note: Energy-efficient windows will likely block signal from reaching the Signal Antenna. In this case, it is necessary to move the Signal Antenna away from this window to another location. You may also upgrade to an outdoor rated antenna (part # cant-0042) if mounting an antenna outside is possible.

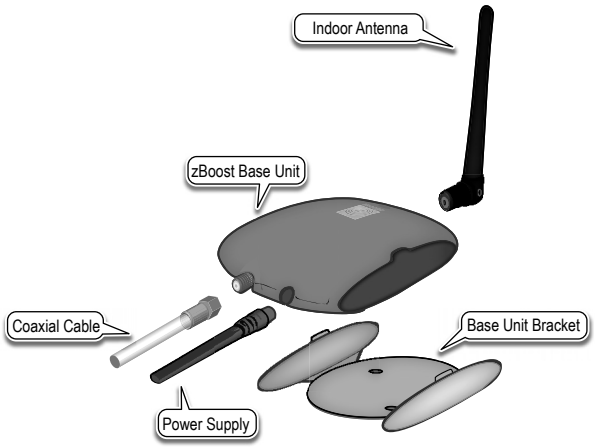
In order to capture the strongest signal, you may do one or all of the following:

1. Move the antenna around the window – higher is usually better.
2. Use the long suction cup attachments provided, in order to create a greater angle in which to capture the signal. The suctions cups must be vertical on the window (as pictured, with cable at the bottom – not on the side). Avoid draping the coax near the antenna.
3. Keep the Signal Antenna 2 feet from any metal.



SECOND: Place the zBoost Base Unit where you want to create a Cell Zone™

Connect the Indoor Antenna and coax to the Base Unit and place it where you need signal. For the widest possible signal area, it is recommended that you position the Base Unit near the middle of a room or mount it on an interior wall. This Base Unit uses an omni-directional antenna that delivers signal in a circular pattern around the antenna. The zBoost METRO Workspace does not require vertical separation; however, **the Signal Antenna and Indoor Antenna should have at least 15 feet of horizontal separation.** Increasing separation of the 2 antennas will optimize zBoost performance.



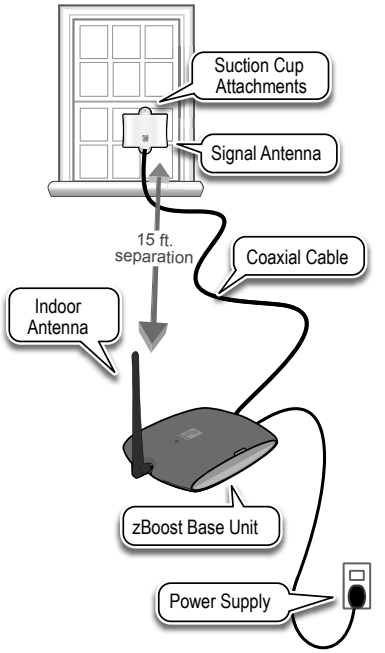
For best results, keep the Base Unit off the floor and at least 2 feet away from other cords, metal objects or other wireless devices such as wireless routers or wireless access points. The zBoost METRO Workspace performs best when there are no obstructions between the zBoost Base Unit and your mobile device.

THIRD: Run the provided coaxial cable between the Base Unit and Signal Antenna

Use the provided RG-6 coaxial cable to connect the Signal Antenna and the Base Unit. Coaxial connections can loosen when the cable is moved. Be sure the connections stay hand-tight.

Should you need additional cable length, 15 foot extensions (Part #: **YX030-15w**) are available at www.zBoost.com.

The total cable length should not exceed 65 feet. A longer cable is helpful only if it allows you to place the Signal Antenna in a location where you measure stronger signal.



FOURTH: Connect the zBoost Base Unit to the provided power supply and plug into a power outlet

Upon initial power up, the LED will cycle RED, GREEN and ORANGE for 30 seconds. After 30 seconds, a series of GREEN flashes will indicate the quality of your setup. Following this, a solid GREEN light indicates normal conditions. If it is not solid GREEN, follow the instructions in the Base Unit LED Indicators section. Adjustments may be needed to optimize performance. If you find the increased signal coverage is acceptable, however, no additional adjustments are needed. See “zBoost Base Unit Light Indicators” on page 7) for more information.

NOTE: The Base Unit can be plugged into a standard 2 or 3 prong 110 VAC receptacle using the Included power supply. The power supply consumes less than 10W (less than 0.2A AC).

Confirm That Your zBoost is Working Properly

With everything connected and the Base Unit plugged in, you should walk throughout the room and see that you are able to reliably place calls.

Remember, coverage varies based on outdoor signal level, home construction, and general installation care. Coverage in adjoining rooms will be reduced due to the walls or the ceiling/floor.

Improving Your Coverage Area

Should you desire to improve coverage, you may:

- Move the Base Unit and/or adjust the angle of the Indoor Antenna.
- Move the antenna around the window – higher is usually better.
- Move the Base Unit farther from the Signal Antenna or around a wall.

Note

Cell phone signal bars are approximate and vary from phone to phone. The number of bars can fluctuate widely, depending on the location of the phone, the position or angle of the phone, weather, etc. Most cell phone signal meters update every 6 to 10 seconds. An increase of only one bar typically indicates a 4x to 10x signal increase.

zBoost Base Unit Light Indicators

During Initial Power Up

Light Mode	Status	Solution	
Cycle RED, GREEN, ORANGE	System is powering up. Please allow up to 30 seconds.	N/A	
Flashing GREEN	BASE UNIT will flash GREEN once for every 2 dB less than optimal system gain. Three flashes or less indicates the system will still operate properly.	1. Unplug the BASE UNIT power supply. 2. Relocate the SIGNAL ANTENNA to pick up the strongest signal from your wireless carrier. 3. Move the SIGNAL ANTENNA as far away from the INDOOR ANTENNA as possible, with at least 15 ft. of horizontal separation. 4. Plug the BASE UNIT power supply back in. 5. Wait 30 secs. for the BASE UNIT to power cycle on.	Solution #1

After Initial Power Up

Light Mode	Status	Solution	
SOLID GREEN	zBoost is ready.	N/A	
Flashing GREEN	zBoost is in use.	N/A	
SOLID ORANGE	SIGNAL ANTENNA and INDOOR ANTENNA are too close together.	1. Unplug the BASE UNIT power supply. 2. Move the SIGNAL ANTENNA as far away from the INDOOR ANTENNA as possible, with at least 15 ft. of horizontal separation. 3. Plug the BASE UNIT power supply back in. 4. Wait 30 secs. for the BASE UNIT to power cycle on.	Solution #2
SOLID RED	Signal from the carrier's cell tower is too strong for the BASE UNIT to operate properly.	1. Unplug the BASE UNIT power supply. 2. Relocate the SIGNAL ANTENNA to another spot. 3. If you have a directional antenna re-aim it to reduce carrier signal strength. 4. Plug the BASE UNIT power supply back in. 5. Wait 30 secs. for the BASE UNIT to power cycle on.	Solution #3
Flashing RED	Excessive electronic noise in the system – the BASE UNIT will not operate.	^ Refer to Solution #2	

Technical Specifications

Product Specifications for zBoost METRO Workspace ZB540iP

PCS band	
Frequency	Uplink: 1850 to 1910 MHz Downlink: 1930 to 1990 MHz
System Gain	64 dB
PCS band supported	A, D, B, E, F, C
Networks	CDMA, GSM, GPRS, EDGE, EVDO, 1xRTT, UMTS, HSPA, 3G
Output power	Uplink: 22 dBm; Downlink: 4 dBm

Cellular band	
Frequency	Uplink: 824 to 849 MHz Downlink: 869 to 894 MHz
System Gain	58 dB
CEL band supported	A, B, A', B'
Networks	CDMA, GSM, GPRS, EDGE, EVDO, 1xRTT, UMTS, HSPA, 3G
Output power	Uplink: 24 dBm; Downlink: 4 dBm

General	
Power Consumption	3W standby; 7W max signal - 5.0VDC, 2.0A Max
Wall Supply Input ; Voltage	100-240VAC, 50-60 Hz
Input and Output Impedance	TNC Connector: 50 Ohm; F Connector: 75 Ohm
System Certifications	FCC Parts 15 & 20, Industry Canada
Base Unit Size and Weight	5" x 7" x 1.25" – 9 oz.
Operating Conditions	Indoor Use Only (40° - 105° F)
Coverage area	Desk area - up to 1,500 sq. ft.

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.

This product is covered by patent US 7,706,744.

Frequently Asked Questions

What can I expect my cell phone signal range and strength to be inside my home?

The closer you are to the base, the stronger the signal. This will vary with different conditions. Some of the conditions that will affect the improved coverage area are signal strength outdoors, the type of building materials in the home, the placement of the unit and the antenna's proximity to cellular towers.

You can expect that your indoor coverage will be improved. You will be able to make calls where you couldn't before. The degree of improvement will depend upon many factors. The intent of zBoost products are to bring outside coverage inside. Just as the signal bars move up and down when outside, the boosted signal will fluctuate in a similar fashion.

Is a cellular phone signal booster the same as a wireless router; will it help my WiFi signal?

The zBoost unit will not help your WiFi service. This unit is designed to work with wireless PCS and Cellular phones and devices. The WIFI in your home operates on a different frequency.

Why isn't my cell phone indicating more signal with more bars?

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

The increase in signal you will see depends upon:

- The level of signal at the Signal antenna (outdoor)
- The care of the antenna placement (two feet away from metal, adequate antenna separation [15 feet recommended])
- The signal already present inside (related to building losses)
- The distance of your phone/device from the Base Unit (signal spreads or diminishes rapidly with distance.)

There are usually several cell phones in use at one time in my home, will your product boost all of our signals simultaneously?

The zBoost METRO Workspace is designed to cover multiple signals simultaneously and will allow multiple users to operate at the same time.

Warranty Information

Limited 1 Year Warranty

Warranty Registration at www.zBoost.com

zBoost warrants every zBoost product to be free from defects in material and workmanship under normal use for the warranty period of one year.

Who Is Covered?

You must have proof of purchase to receive warranty service. A sales receipt or other documentation showing the product purchased and the purchase date is considered proof of purchase. This limited warranty extends only to the original consumer purchaser or any person receiving the product as a gift from the original consumer purchaser and to no other purchaser or transferee.

What is Covered?

Warranty coverage begins the day you purchase the product. For one year from the original date, the zBoost Cell Phone Signal Booster will be repaired or replaced with a new, repaired, refurbished or comparable product (whichever is deemed necessary by zBoost) if it becomes defective or inoperative. The exchange will be made without charge to you for parts and labor. You will be responsible for the cost of shipping to the location designated by zBoost.

All products, including replacement products, are covered only for the original warranty period. When the warranty on the original product expires, the warranty on the replacement product also expires.

What is Excluded?

Your warranty does NOT cover:

- Labor charges for set up of the unit.
- Product replacement because of misuse, accident, lightning damage, unauthorized repair or other cause not within the control of zBoost.
- Incidental or consequential damages resulting from the product. Some states do not allow the exclusion of incidental or consequential damages, so the above exclusion may not apply to you.
- Any modifications or other changes to the product, including but not limited to software or hardware modifications in any way other than as expressly authorized by zBoost will void this limited warranty.
- Product that has been modified or adapted to enable it to operate in any country other than the country for which it was designed, manufactured, approved and/or authorized, or repair of products damaged by these modifications.

Make sure you keep…

Please keep your sales receipt or other document showing proof of purchase. Attach it to this User Manual and keep both nearby. Also, keep the original box and packing material in case you need to return your product.

Before requesting repair service…

If red light is on, system is receiving signals from either the mobile device or the base station transceiver which are too strong for proper operation. Please unplug your system. Re-orient your Signal Antenna and/or Base Unit to reduce the excessive signal source. Plug your system back in. If still solid red, call customer support 1-800-871-1612.

To get warranty service…

Warranty service will be provided by zBoost. If you believe you need service for your unit, contact zBoost at 1-800-871-1612 or support@zBoost.com. A representative will go through a diagnostic checklist with you. If it is determined that the product needs to be returned for service or exchanged, you will receive a return merchandise authorization (RMA) number. The representative will give you complete shipping details. Do not return products to zBoost without a Return Authorization Number (RMA).

To get out of warranty service…

To obtain out of warranty service, contact zBoost at 1-800-871-1612 or support@zBoost.com for information on the possibility of any costs for repair or replacement of out-of-warranty products.

Reminder

Record the model and serial number found on the product below:

Model #:_____

Serial #: _____

Purchase Date: _____