

FCC Part 24 Transmitter Certification

Test Report

FCC ID: SO4YX510-PCS

FCC Rule Part: CFR 47 Part 24 Subpart E

ACS Report Number: 06-0291-24E

Manufacturer: Wireless Extenders
Equipment Type: PCS Bi-Directional Signal Booster
Model: YX510-PCS

Manual

FCC Information

FCC ID: SO4YX500-CEL

: SO4YX500-PCS

:SO4YX510

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 the 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 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:

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

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Industry Canada Regulations

Canada IC :5544A-YX500CEL

:5544A-YX500PCS

:5544A-YX510

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.

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.

Read First Before Installing Your zBoost Product

Before unpacking this box, verify that your phone operates on the frequency band supported by this product.

- The YX500-CEL will enhance your in-building coverage for local provider networks operating at the 800MHz (Cellular) frequency.
- The YX500-PCS will enhance your in-building coverage for local provider networks operating at the 1900MHz (PCS) frequency.
- The YX510-PCS-CEL will work for **both** Cellular and PCS frequencies.

(NOTE) The YX500 Series is not compatible with iDEN, Nextel, SMR or ESMR frequency services.

To verify that your phone will work in conjunction with the model purchased, please follow these four simple steps:

- 1) Unpack the Base Unit, Base Unit Antenna and power supply only.
- 2) Connect the Base Unit Antenna and the power supply to Base Unit and plug it into an outlet. The green power light will illuminate.
- 3) Bring the unit to an area where there is enough signal to place a call (using an extension cord may be necessary). If the Signal light begins flashing green while placing a call, you can proceed with the installation of the system. If it flashes red, move your phone further away from the Base Unit (typical for GSM) and retry.
- 4) If the Signal light does not flash green, try to place another call with your cell phone directly touching the unit. If the Signal Light still does not flash green, your cell phone may be operating on frequency supported by a different model. Some carriers, such as Cingular and Verizon change frequency depending upon location. Go to www.wirelessadvisor.com or contact Wi-Ex technical support at 1-800-871-1612 for further assistance.

Safety and Product Warranty Information

Safety Guidelines

Please adhere to the following safety guidelines during the installation of your Product

- 1) 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 8 inches (20cm) is maintained between the radiating element and the user and/or general population.
- 2) If a ladder is required for install, make sure that the ladder feet are on a flat surface and the ladder is securely fixed. It is highly recommended that you have someone assist you while you are on a ladder
- 3) You should always wear proper eye protection when working with power tools.
- 4) Keep all plastic bags away from children to avoid suffocation hazard.
- 5) Before drilling make sure you know the location of existing electrical wiring to avoid contact with the wiring which could cause an electrical shock and severe the wiring.

Limited Liability

In no event shall Wireless Extenders 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 installation 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.

Customer Support

If you have any problems with the operation of your product please visit our website <http://www.Wi-Ex.com> or contact Wi-Ex customer support at 1-800-871-1612 for assistance.



Warning:	Changes or modifications not expressly approved by Wi-Ex could void the user's authority to operate this equipment and/or void the product warranty.
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Outdoor Installation of the Signal Antenna

Grounding the Signal Antenna

If you decide to install the Signal Antenna outdoors, it must be properly grounded. This will help protect your property against lightning strikes during a lightning storm.

The installation must be in accordance with Article 810 of the National Electric Code (NEC). A listed antenna discharge unit must be provided for the lead-in coaxial cable per NEC article 8.10.20 or the shield of the coaxial cable must be permanently and effectively grounded in accordance with NEC article 8.10.21. Please consult a professional installer or electrician for more information. Additional instructions and hardware are also available in the Wi-Ex Outdoor Installation and Grounding Kit (Part# YX012).

Securing Cable With a Drip Loop

If you install the Signal Antenna outdoors, create a drip loop with the coaxial cable at the point where the cable enters the building through an outside wall. This can be done by twisting and securing the cable into a loop (no less than 4" across) near the entry point. This will help prevent moisture from gathering at entry point and leaking into the building. Consult a professional installer if you need more information. Additional instructions are also available in the Wi-Ex Outdoor Installation and Grounding Kit (Part # YX012).

Pre-installation Guidelines

Outdoor installation is preferred when a home is in an area of weak outdoor signal area (generally 1 to 2 bars as indicated on the cell phone).

Avoid any drilling or nailing directly into the roof. This could allow water to leak into your home and cause damage.

Choosing to mount the antenna into fascia will not compromise your roof and places the antenna higher above ground level.

**Note:**

The zBoost YX500/510 Series is fully automatic. The Install, Signal, and Power lights on the Base Unit are not buttons. There are no buttons to press on the Base Unit.

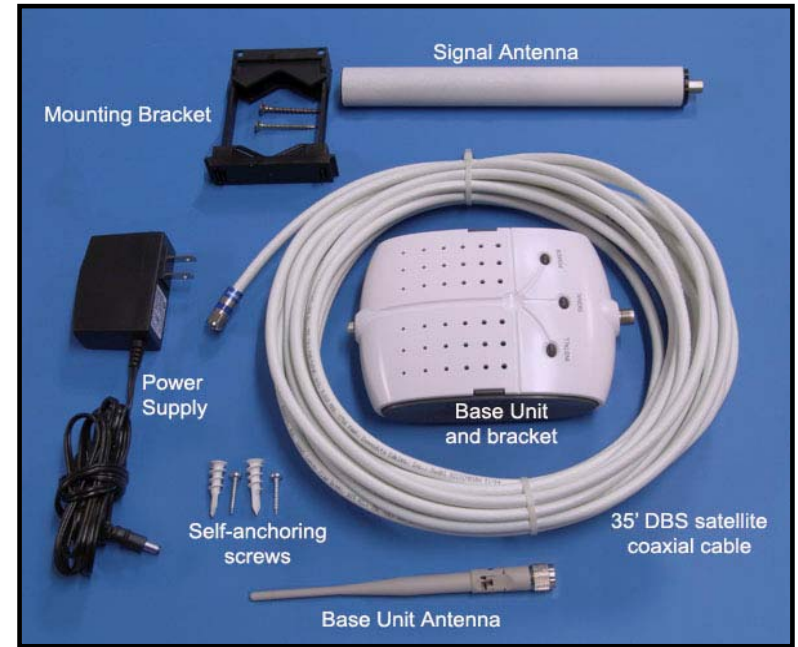
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Package Contents

Before you begin, make sure all of the following parts came with your kit:

	Quantity	Part #	Description
1	1	DMAN-0003 DMAN-0009	Before Unpacking Sheet (PCS only) Installation Tips (CEL only)
2	1	DMAN-0013	Installation Tips (CEL and Dual Band only)
3	1	DMAN-0016	Installation Overview Poster
4	1	DMAN-0015	YX500/510 Series Installation Guide
5	1	APRD-0003 APRD-0009 APRD-0001 APRD-0008 APRD-0007	YX500-CEL Base Unit (800Mhz) YX510-CEL Base Unit (800Mhz) YX500-PCS Base Unit (1900MHz) YX510-PCS Base Unit (1900MHz) YX510-PCS-CEL Base Unit (Dual Band.)
6	1	CPSP-0003 CPSP-0004	Base Unit Power Supply YX500 Base Unit Power Supply YX510
7	4	CHDW-0007	Base Unit rubber feet
8	1	FHSG-0004	Base Unit Bracket
9	1	CANT-0010 CANT-0002 CANT-0016	2dBi YX500-CEL Base Antenna 2dBi YX500-PCS Base Antenna 0dBi YX510- PCS-CEL Base Antenna (CANT-0016 maybe included for all models listed above)
10	1	CANT-0016 CANT-0001 CANT-0015	3dBi YX500-CEL Signal Antenna 3dBi YX500-PCS Signal Antenna 3dBi YX510-PCS-CEL Signal Antenna (CANT-0015 maybe included for all models listed above)
11	1	CHDW-0008	Signal Antenna mounting bracket
12	1	CCBL-0003 CCBL-0001	50' white, DBS coaxial cable (CEL or Dual Band) 35' white, DBS coaxial cable (PCS)
13	2	CHDW-0001	Self-tapping #6 x 7/8" Philips Screw
14	2	CHDW-0002	Self-tapping #6 Sheet Rock Anchor
15	2	CHDW-0005	Wood Screw #6 x 1" Philips

Figure 1 – Package Contents



*Note: The satellite coaxial cable provided for YX500-PCS is 50'

Accessories to Improve Your Coverage

The following accessories are also available to improve signal reception and provide increased coverage in your home or office or to improve installation. Please see our website for more accessories.

To order, call 1-800-871-1612 or visit, www.Wi-Ex.com.

Part #	Description
YX012	Outdoor Installation and Grounding Kit
YX013	Wall mounting bracket for the YX023
YX022-CEL	6 dBi Outdoor Omni Signal Antenna upgrade for zBoost YX500/510 Series CEL
YX023-PCS	13 dBi Outdoor Directional Signal Antenna upgrade for zBoost YX500/510 Series PCS
YX024-PCS	7 dBi Indoor Directional Base Unit Antenna upgrade for zBoost YX500/510 Series PCS
YX025-CEL	7 dBi Outdoor Directional Signal Antenna upgrade for zBoost YX500/510 Series CEL
YX026-CEL	11 dBi Outdoor Directional Signal Antenna upgrade for zBoost YX500/510 Series CEL
YX027-PCS-CEL	Indoor Dual Band Directional Base Unit Antenna upgrade (works with all models) 6 dBi gain for CEL, 9 dBi gain for PCS
YX028-PCS-CEL	Indoor Dual Band Directional Signal Antenna upgrade - for indoor window installations where outdoor mounting of signal antenna is not possible
YX030-15W	15 ft. Outdoor coax extension cable, white, low-loss RG-6
YX030-35W	35 ft. Outdoor coax extension cable, white, low-loss RG-6
YX031-10W YX030-08W	10 ft. Base Unit antenna extension cable, white, low-loss 8" white window entry flat cable
YX050-PCS-CEL	Indoor Dual Band Omni Ceiling Antenna

zBoost Product Overview

Overview

Thank you for selecting a Wi-Ex zBoost YX500/510 Series Product. You will now be able to use your cell phone INSIDE your home or office. Gone are the days when you have to go to the window upstairs or walk outside to get enough signal. Like a skylight that brings sunlight into your home, zBoost transports and amplifies the outdoor cellular (800 MHz, or 1900 MHz) signals into your home or office.

By following the easy instructions in this installation guide, you will be Extending Cell Zones™ into your home or office.

Why Indoor Signals Can Be Weak

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

1) Location of the Cell Phone Tower to Your Home/Office

While cell phone providers have tried to locate cell phone towers to provide the best overall coverage, local ordinances and terrain features can impose restrictions on where these towers can be placed, limiting the signal strength available at your location.

2) Obstructions Caused by Buildings and Terrain

Cell phone signals can be completely blocked or reflected by buildings, the walls of a building, trees, hills and other terrain features



Figure 2

Preparing to Install zBoost

Check for Signal Strength

Before installing zBoost in your home, make sure that you can place calls on the outside of your home or in the attic or at roof level where you will install the signal antenna. The zBoost Series can only bring cell phone signals into your home if cell phone signals are reaching the outside of your home, your attic or at roof level.

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 an attic or roof level location where the signal antenna could be installed 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, indoor coverage will be limited to one small room. We recommend installing the Signal Antenna outside and/or purchasing a Wi-Ex upgrade Signal Antenna (see Optional Accessories on page 4).



Important Note on Using Signal Bars to Determine Coverage Area

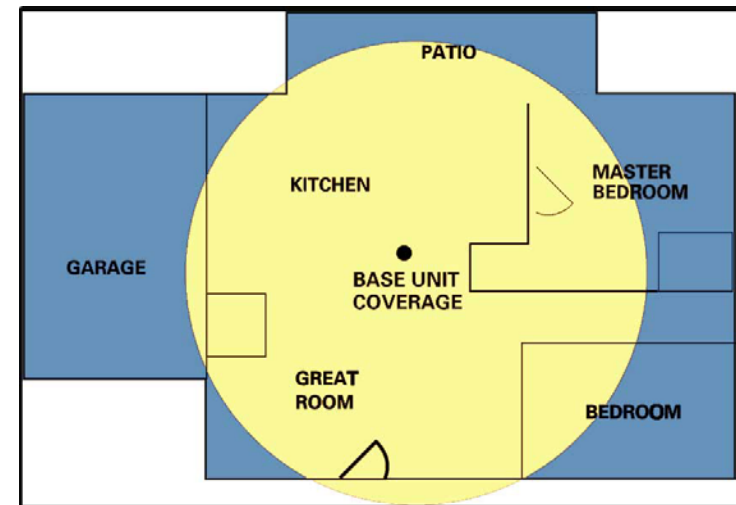
Cell phone signal bars are approximate and vary for each model of phone. The number of bars can fluctuate widely, depending on the exact location of the phone, position or angle of the phone, weather, etc. Most cell phone signal meters update every 6 to 10 seconds. An increase of only one bar typically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

THE BEST INDICATOR OF COVERAGE AREA IS YOUR ABILITY TO RELIABLY PLACE AND RECEIVE CALLS.

Determine the Needed Coverage Area

Identify the location in your home/office where you need signal coverage the most. The YX500/510 Series can cover approximately 2500 square feet (coverage varies based on outdoor signal level, building construction, and general installation care). Walls, ceilings or floors will reduce the coverage area.

Figure 3 – zBoost Base Unit Coverage



Location of Signal Antenna and Base Unit Antenna

It is recommended that the Signal Antenna and Base Unit Antenna have approximately 15 feet of vertical separation. If the antennas are too close together, the Install light on the Base Unit will be lit or flash red indicating a problem (See Troubleshooting section). Place the Signal Antenna as high as possible to capture the best signal.

Additional Cable Requirements

If the distance between the Signal Antenna and the Base Unit exceeds 35 feet (YX500-PCS) or 50 feet (YX500-CEL or YX510-PCS-CEL), you will need to purchase additional coaxial cable. You must use RG-6 coaxial cable and F connectors which are rated for outdoor satellite TV use and can be found at many home improvement and electronic stores.

For the best performance, purchase Wi-Ex RG-6 low-loss extension cables from our website or your retailer (see page 4). The total cable length should not exceed 70 ft unless you also purchase an upgraded signal antenna (page 4). A longer cable is helpful only if it allows you to place the signal antenna in a location where you measure stronger signal.

Power Requirements

The Base Unit can be plugged into a standard 2-prong 110 VAC receptacle using the included power supply. The power supply consumes less than 10W (less than 0.2A).



Warning:	The zBoost YX500/510 Series base unit MUST only be used with the provided power adaptor. Use of other power adaptors will void the warranty and may damage the unit. Use of other equipment is not FCC approved.
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Installation Tools Needed

The following tools are needed to install zBoost:

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

Installing Your zBoost

Installing the Signal Antenna

Choosing the best location for installation of the Signal Antenna provides the best performance and the largest area of improved signal. Determine the location which provides the strongest signal using the signal strength indicator on your cell phone. Find the location which provides the most bars of signal strength and locate the Signal Antenna at that location.

Choose one of the following 3 options for installing the Signal Antenna:

Easiest Installation: Inside of a window

Locate a window where you get signal.

1. Mount the Signal Antenna above the window
2. Place the Base Unit across the room (15 feet away) where you want to create a Cell Zone™.
3. Attach the coaxial cable to the signal antenna.
4. Attach the coaxial cable, which should already be attached to the Signal Antenna, to the Base Unit.
5. Attach the Antenna to the Base Unit and position the antenna vertically.
6. Set the Base Unit on a furniture piece.
7. Attach the Power Supply to the Base Unit and plug the power supply into an outlet. See the Troubleshooting section if a Red light lights up.

Better Performance: Outside of a window

Locate a window where you get signal.

1. Mount the Signal Antenna outside of the window
2. Place the Base Unit across the room (15 feet away) where you want to create a Cell Zone™.
3. Attach the coax cable to the Signal Antenna.
4. Run the coax cable from the Signal Antenna through the window to the Base Unit using a window entry kit (optional).
5. Attach the Antenna to the Base Unit and position the antenna vertically.
6. Set the Base Unit on a furniture piece.
7. Attach the Power Supply to the Base Unit and plug the power supply into an outlet. See the Troubleshooting section if a Red light lights up.

Best Performance: Attic/Outdoor Installation

The following instructions are recommended for the best reception.



Warning:	Avoid placing antenna near metal such as wiring, A/C ducts, truss plates, etc. When attaching the cable to the antenna, run the cable straight down from the antenna. Avoid draping the coax near the antenna.
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Attic Installation

Once you have confirmed that you have a cell phone signal either outside your home or inside you're attic, you are ready to install the Signal Antenna using the supplied mounting brackets, Signal Antenna, and coaxial cable.

1. Identify the best location around your home with the strongest signal for attachment of the antenna mounting bracket (the strongest signal is typically found on the roof). Install the Signal Antenna at the highest possible point in your area. Avoid placing the antenna within 3 feet (1 meter) of metal objects (pipes, metal siding, A/C unit, etc.)
2. Attach the mounting bracket so that when the Signal Antenna is attached, it will be positioned vertically.
3. Mount the Signal Antenna to the mounting bracket, making sure that the antenna is positioned vertically.

4. Unroll the RG6 coaxial cable supplied with your zBoost Series kit removing any loops or kinks and attach to the base of the Signal Antenna.

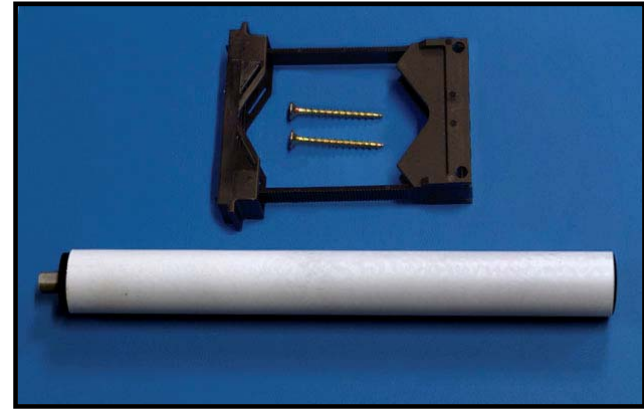


Figure 4 – Signal Antenna and Mounting Bracket



Note: If you need to adjust the Signal Antenna after securing it to the bracket, insert a small flat-head screwdriver on each side of the bracket bridge. Pushing down on the bridge grips will allow you to slide the bridge off each tab.

Mounting Signal Antenna to an Attic Top or Main Beam

If a cross-beam is not available, the antenna bracket can be mounted to a main beam. Secure the bracket near the top of the Signal Antenna instead of near the base.



Figure 5 - Mounting Signal Antenna to a Main Beam

Running the Coaxial Cable to the Base Unit

After installing the Signal Antenna and connecting the coaxial cable, run it to the location in your home where you plan to install the Base Unit. It is highly recommended that you refrain from securing your cable, drilling any holes, etc. until you complete and test the installation of the Base Unit.

For example, if you plan to use the Base Unit in the living room of a two-story home, first run the cable from the attic down the stairs to the living room. After the Base Unit is installed and successfully working, find a more direct and permanent route for the cable (e.g., dropping it through the ceiling of a nearby closet).

Additional Cable Requirements

If the distance between the Signal Antenna and the Base Unit exceeds 35 feet (YX500-PCS) or 50 feet (YX500-CEL or YX510-PCS-CEL), you will need to purchase additional coaxial cable. You must use RG-6 coaxial cable and F connectors which are rated for outdoor satellite TV use and can be found at many home improvement and electronic stores.

For the best performance, purchase Wi-Ex RG-6 low-loss extension cables from our website or your retailer (see page 4). The total cable length should not exceed 70 feet unless you also purchase an upgraded signal antenna (page 4). A longer cable is helpful only if it allows you to place the signal antenna in a location where you measure stronger signal.

**Caution:**

Before drilling any holes into a wall to run your cable, make sure you know where existing electrical wiring is located. Drilling into live electrical wiring could cause an electrical shock and sever the wire.

Routing the Coaxial Cable Alongside an Attic Pipe

To simplify the effort needed to route the coaxial cable from the Signal Antenna to the Base Unit, Wi-Ex recommends the following procedure:

- 1) Locate a pipe which descends from the attic down to a location in or near the room where signal coverage is desired.
- 2) Tie a weight to a pull string and lower the weight down alongside the pipe.
- 3) In the lower room, tie the pull-string onto one end of the cable.

- 4) From the attic, gently pull up the string until the coaxial cable can be grasped.
- 5) Connect the coaxial cable to the Signal Antenna.

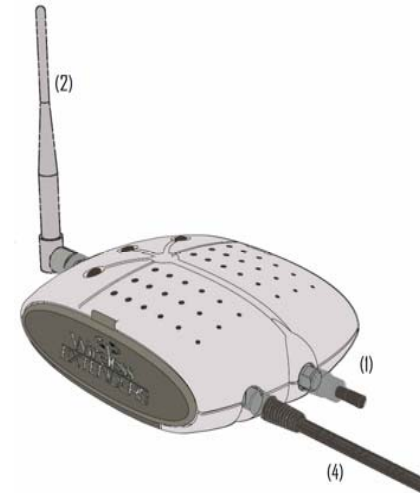


Figure 6 - Base Unit with Power Cord and Cable Connectors

Installing the Base Unit

For the widest possible signal reception, it is recommended that you install the YX500 Series Base Unit near the middle of a room or on an interior wall. This Base Unit uses an omni-directional antenna which delivers the signal in a circular pattern around the antenna. If you decide to install the Base Unit on or near an outside wall, we recommend purchasing a Directional Base Unit Antenna (see page 4). This antenna will focus the signal in toward the rooms.

The Base Unit can either be directly mounted on a wall or set on a furniture piece (e.g., a bookshelf, desk, filing cabinet, end table etc.). The Base Unit performs best when located at least 4 feet above the floor or at about the height of the cell phone when it is typically in use (avoid placing the Base Unit on the floor).

For the best results, avoid placing the Base Unit antenna within 2 feet of other wires or metal objects.

- 1) Attach the coaxial cable, which should already be attached to the Signal Antenna, to the Base Unit
- 2) Attach the antenna to the Base Unit and position it vertically.
- 3) Set the Base Unit on a furniture piece or shelf.

- 4) Attach the power supply to the Base Unit and plug the power supply into an outlet. See the Troubleshooting section if a Red light is lit.

Wall Mounting the Base Unit

The Base Unit can also be easily mounted on a wall using the included mounting bracket hardware. The Base Unit should be a minimum distance of 4-5 feet off from the floor so there is clearance for the Base Unit antenna extension.

Perform the following steps to mount the Base Unit on a wall:

- 1) Remove the mounting bracket from the Base Unit by slightly spreading the tabs on the gray mounting bracket.
- 2) Fasten the mounting bracket to the wall using the self-tapping wall/ceiling anchors
- 3) Attach the coaxial cable from the Signal Antenna to the Base Unit.
- 4) Attach the antenna to the Base Unit.
- 5) Attach the power supply to the Base Unit and plug the power supply into an outlet. See the Troubleshooting section if a Red light illuminates.
- 6) Snap the Base Unit into the mounting bracket.

Confirm That Your zBoost is Working Properly

Perform the following steps to confirm that the unit is now working properly:

- 1) Unplug the Base Unit power cord.
- 2) Turn on your cell phone and check the signal meter.
- 3) Plug the power cord into the Base Unit.
- 4) Hold your cell phone about 5 feet from the Base Unit and then turn it on. Wait up to 1 minute for the cell phone to register the signal coming from the Base Unit.
- 5) If the signal meter shows an improvement, your zBoost unit is working properly.



Note:	The Signal light may flash green indicating that a call is in progress and zBoost is boosting your signal. In some cases, it may only flash at the beginning of the call. If the Signal light displays either a solid or flashing red move your phone away from the Base Unit and see the troubleshooting section.
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Improving Your Coverage Area

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, building construction, and general installation care. Coverage in adjoining rooms (next to, above, or below) will be reduced due to the walls or the ceiling/floor.

Should you desire to improve coverage, you may:

- 1) Move the Base Unit and/or adjust the angle of the Base Unit antenna.
- 2) Move the Signal Antenna to a higher location in your attic or outside
- 3) Purchase a Signal Antenna Upgrade (see Page 4)
- 4) Purchase a Base Unit Antenna Upgrade (see Page 4).



Important Note on Using Signal Bars to Determine Coverage Area

Cell phone signal bars are approximate and very coarse. The number of bars can fluctuate widely, depending on the exact location of the phone, hand positioning, 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.

THE BEST INDICATOR OF COVERAGE AREA IS YOUR ABILITY TO RELIABLY PLACE AND RECEIVE CALLS.

Troubleshooting Your zBoost System

Base Unit Indicator Operation

In most cases, problems with zBoost can be diagnosed using the Base Unit's LED indicators. Please note that for YX510, GREEN indicates CEL band operation and AMBER indicates PCS band operation.

Power Light	Install Light	Signal Light	Condition
Cycle RED and GREEN for 3 seconds	Cycle RED and GREEN for 3 seconds	Cycle RED and GREEN for 3 seconds	Normal condition at Power Up
Solid GREEN	Off	Off	Normal condition with no cell call in progress
Solid AMBER or Solid GREEN	Off	Flashing or solid GREEN or GREEN With flashing AMBER	Normal condition indicating that a call is in progress and the system is providing improved coverage. The Signal Light may also flash periodically with no call in progress indicating normal communication between the cell phone and the cell network.
Flashing GREEN	Off	Off	Base Unit has detected a software error. Remove power for 5 seconds and reconnect power. If condition still exists, contact Wi-Ex Customer Service.
Solid AMBER or Solid GREEN	Flashing RED or Solid RED	Off	Insufficient distance exists between the Signal Antenna and the Base Unit. Indoor coverage will be reduced. Increase distance between Signal Antenna and Base Unit to achieve maximum performance and coverage. If condition persists after relocating Signal Antenna and/or Base Unit, contact Wi-Ex Customer Support for additional information on Installation.
Solid AMBER or Solid GREEN	Solid RED	Solid RED	Signal received from cell tower is too strong. Relocate Signal Antenna to a different location to reduce received signal. Locating the Signal Antenna at an indoor location such as the attic or to a lower height should reduce the received signal strength. Remove power for 10 seconds and reconnect power to reset error.

Power Light	Install Light	Signal Light	Condition
Flashing AMBER or Flashing GREEN	Flashing Red	Flashing RED	System is receiving signals from either the cell phone or the cell tower which are too strong for proper operation. This may be due to improper installation or operation. Remove power for 10 seconds and reconnect power to reset error. If the error persists, contact Wi-Ex Customer Service for additional information or installation assistance.

For more troubleshooting tips, visit www.wi-ex.com

YX500-CEL Technical Specifications

Frequencies	824 - 896 MHz (CEL only)
Networks:	CDMA, GSM, TDMA, AMPS
Total Signal Gain:	56dB (adaptive)
RF Output Power:	½ Watt EIRP (with included antenna)
Base Unit Weight:	12 oz.
Base Unit Size:	5" x 7" x 2"
AC Power Input:	100 – 120 VAC 60Hz
DC Power Output:	5VDC, 2.0A
FCC ID:	SO4YX500-CEL
Industry Canada ID:	5544A-YX500CEL
Patents pending	

YX500-PCS Technical Specifications

Frequency	1850 - 1900 MHz (PCS only)
Networks:	CDMA, GSM, TDMA
Total Signal Gain:	60dB (adaptive)
RF Output Power:	¼ Watt EIRP (with included antenna)
Base Unit Weight:	12 oz.
Base Unit Size:	5" x 7" x 2"
AC Power Input:	100 – 120 VAC 60Hz
DC Power Output:	5 VDC, 2.0A
FCC ID:	SO4YX500-PCS
Industry Canada ID:	5544A-YX500PCS
Patents pending	

YX510-PCS-CEL Technical Specifications (Dual Band Unit)

Frequency	824 - 896 MHz 1850 - 1900 MHz
Networks:	CDMA, GSM, EDGE, TDMA, AMPS, EV-DO
Total Signal Gain:	55 dB CEL, 62 PCS dB (Adaptive)
RF Output Power:	½ Watt EIRP (with included antenna)
Base Unit Weight:	15 oz.
Base Unit Size:	5" x 7" x 2"
AC Power Input:	100 – 240 VAC, 47 – 63Hz
DC Power Output:	3.6 VDC, 2.0 A
FCC ID:	SO4YX510
Industry Canada ID:	5544A-YX510
Patents pending	

Frequently Asked Questions

For more FAQ's, visit our website: www.wi-ex.com

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

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 walls in the home, the placement of the unit and proximity to cellular towers.

Your expectations should be that your indoor coverage will be improved. You will be able to make calls where you couldn't before. The coverage improvement will depend upon many factors. The intent of the Wi-Ex products are to bring outside coverage inside. If you want an even stronger signal, consider a more powerful signal antenna or an internal directional antenna, available as options in our online shopping cart.

My carrier is Cingular, how do I know which unit to purchase?

The choice of which unit to purchase is determined by the frequency on which your carrier is operating. However in many areas, carriers operate on both Cellular and PCS frequencies. When this occurs, we find that the YX500-CEL is most often the best choice. Of course, if it happens that your phone is indeed working on the PCS frequencies, we will swap units with you for free.

Where should I put my Wi-Ex base unit to get the best coverage?

You should install your base unit where you need coverage the most. The Wi-Ex base unit is the component that amplifies the signal inside. The coverage is improved in a circular manner from the base unit. The farther you are away from the base unit, the weaker the signal. The base could be placed in the family room, the basement, an office, a bedroom, a home office or a central location.

Note: if you install the Signal Antenna too close to the Base Unit, the system will shut down (both the Install and Signal lights will blink red). This is a normal condition for this scenario. It just means that you need to ensure that you have sufficient distance between the 2 antennas; otherwise, it will detect feedback or noise and will automatically shut down.

Where is the best place to put my Wi-Ex Signal Antenna?

The Wi-Ex signal antenna should be placed at the highest point in your house in order to "catch" the strongest signal. This location could be in the attic or on the roof. The placement of the Signal Antenna is very important. It is best to place this in an un-obstructed area. If you install it outside, place it above the roof line in a vertical position. Or, this antenna can be placed in the area around your home that has the greatest signal strength.

Note: if you install the Signal Antenna too close to the Base Unit, the system will shut down (both the Install and Signal lights will blink red). This is a normal condition for this scenario. It just means that you need to ensure that you have

proper isolation between the 2 antennas; otherwise, it will detect feedback or noise and will automatically shut down.

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

The Wi-Ex 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 or office uses a different frequency.

Is your product available for international use?

Our devices currently operate in the 800 and 1900MHz frequencies. Some countries outside the US use the same frequencies and the current Wi-Ex models are compatible with these networks. Check the frequencies for a particular country for compatibility. We are developing European and Asian frequencies that should be available before 2008.

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

Our YX500-PCS product has a total gain (antenna to antenna) of 58 dB. The YX500-CEL has 56 dB. You will not observe that gain 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 2x, 6dB is 4x, and 10dB is 10x. On a four bar phone, 1 "bar" equals about 10dB.

The increase in signal you will see depends upon:

- 1) The level of signal at the Signal antenna (outdoor),
- 2) The care of the installation (few feet away from metal, adequate antenna separation [15-20 feet vertical recommended]),
- 3) The signal already present inside (related to building losses)
- 4) The distance of your phone/device from the Base Unit (signal spreads or diminishes rapidly with distance.)

How do I know if I need a grounding kit and how do I install it?

Generally, we recommend grounding kits to those installations in areas that receive lightning storms frequently (i.e. many places of Florida) or in situations where the antenna is placed at a high point above ground.

Secondly, the recommended method of grounding your antenna is by attaching the grounding wire to a cold water pipe or a ground rod.

If you intend to purchase a grounding kit, you will need to purchase the YX012. Ordering can be done via our website or by contacting WI-Ex.

My signal light is continually blinking

What you are witnessing on your unit is completely normal and your unit is functioning within normal parameters. In order for the signal light to flash, all the base station has to do is to receive a signal from any phone. Phones will periodically update themselves to their network. What the base unit is receiving is that update signal. The frequency and duration of the update will vary from phone to phone, and from areas of weak signal, to areas of ideal signal. If this occurs when all cellular phones are off, please call technical support.

Will you be developing a zBoost that is compatible with my Nextel phone?

Due to the FCC restructuring of the Nextel and Public Safety frequencies, we have postponed development of the YX500-NEX unit until this transition is completed.

Can I use my existing RG-59 cable to install my unit?

To answer your question, the cable that is currently in the wall is most likely a cable we refer to as RG-59. It has been a common cable in use for cable TV applications for the last 30 years. The cable we use with our unit is called RG-6. It is most commonly associated with the satellite industry and is used over RG-59 because of the lower signal loss that it provides, and to the extra benefit of an increased run length. We would advise against using the RG-59 in any application with our unit.

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

The YX500/510 Series is designed to cover multiple signals simultaneously and will allow multiple users to operate at the same time. For example, if there were 8 people in the same room then the system would help each of them.

Limited 1 Year Warranty

Wi-Ex warrants every Wi-Ex 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 document showing that you purchased the product 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. This warranty does NOT extend to commercial users.

What is Covered?

Warranty coverage begins the day you purchase the product. For 1 year from the original date, at the option of Wi-Ex, the Cell Phone Signal Booster will be repaired or replaced with a new, repaired, refurbished or comparable product (whichever is deemed necessary) if it becomes defective or inoperative. This exchange is done without charge to you for parts and labor. You will be responsible for the cost of shipping to and from the location designated by Wi-Ex. If Wi-Ex cannot reasonably repair or replace the unit then Wi-Ex may, at its sole discretion, refund the price you paid for the product or the price of the unit.

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 installation or setup of the unit.
- Product replacement because of misuse, accident, lightning damage, unauthorized repair or other cause not within the control of Wi-Ex.
- 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 Wi-Ex will void this limited warranty.
- A product 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 Guide and keep both nearby. Also keep the original box and packing material in case you need to return your product.

Before requesting repair service...

PLEASE CHECK THE TROUBLESHOOTING SECTION OF THE GUIDE. This may save you a call.

To Get Warranty Service...

Warranty service will be provided by Wi-Ex. If you believe you need service for your unit, contact Wi-Ex at 1- 800- 871-1612. 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.

To get out of warranty service...

To obtain out of warranty service, contact Wi-Ex at 800 971-1612 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 # _____

SERAIL # _____

FCC Information

FCC ID: SO4YX500-CEL

:SO4YX510-PCS

: SO4YX500-PCS

:SO4YX510

:SO4YX510-CEL

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 the residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction, 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:

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

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One Meca Way, Norcross, GA 30093, U.S.A

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Industry Canada Regulations

Canada IC :5544A-YX500CEL	:5544-YX510PCS
:5544A-YX500PCS	:5544-YX510CEL
	:5544A-YX510

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.

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.

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.

END OF ADDENDUM. 01 ATTACHMENT

Wi-Ex
One Meca Way
Norcross, GA

DMAN-0015-Rev A
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December 22, 2006