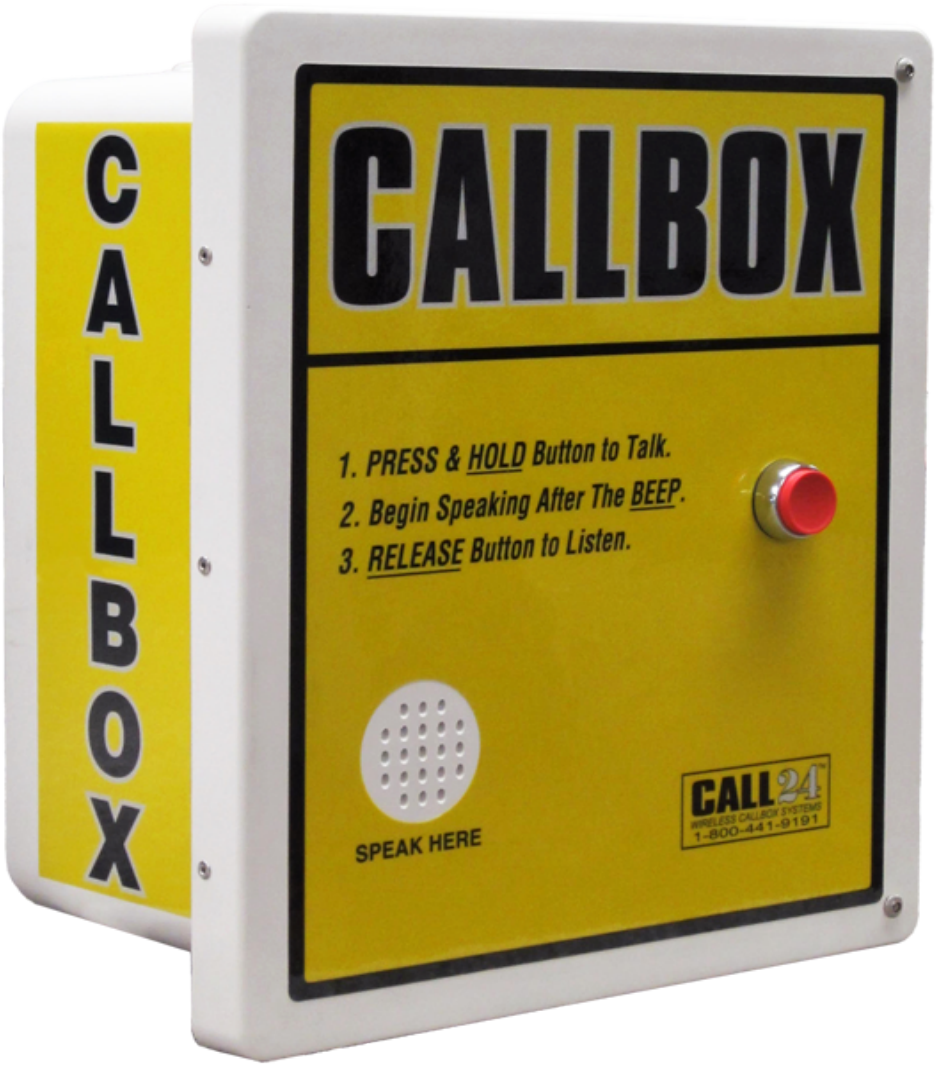
The *M-Series*
Wireless Callbox



C24-001246
Mv5 CallBox
AC Powered

August 2022

MADE IN USA

800 Megahertz Drive, Winston-Salem, NC 27107· USA
PH: 336-788-9191: 800-441-9191· FAX: 336-650-1124
Web: www.call24wireless.com

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What This Manual Covers
This manual covers operation and installation of the ***M-Series*** call box.

OPTIONAL ACCESSORIES AVAILABLE
Mounting Kits
Locator/Strobe Lighting Kits
Gate Control Kits
GENERAL INFORMATION:
Indoor/Outdoor, fiberglass enclosure
VHF, UHF, 800/900Mhz
Internal antenna
Battery Powered

IMPORANT NOTES

DO NOT drill or penetrate the enclosure for mounting purposes. Use only the pre-drilled holes for mounting

All wiring connections are to be made through the bottom or bottom back of the box using a WATER TIGHT SEAL!!

NEVER SHIP CALLBOX WITH THE BATTERY INSIDE OF THE CALLBOX . WARRANTY IS VOID IF SHIPPED WITH BATTERY INSIDE .

IMPORTANT SAFETY INSTRUCTIONS

1. **Read these instructions.**
2. **Keep these instructions.**
3. **Heed all warnings.**
4. **Follow all instructions.**
5. **Do not install this apparatus near a "fire sprinkler head" or use near any other source of water.**
6. **Clean only with clean dry cloth.**
7. **Do not block any ventilation openings (if any). Install in accordance with the manufacturer's instructions.**
8. **Do not install near any heat source such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.**
9. **Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture or does not operate normally.**

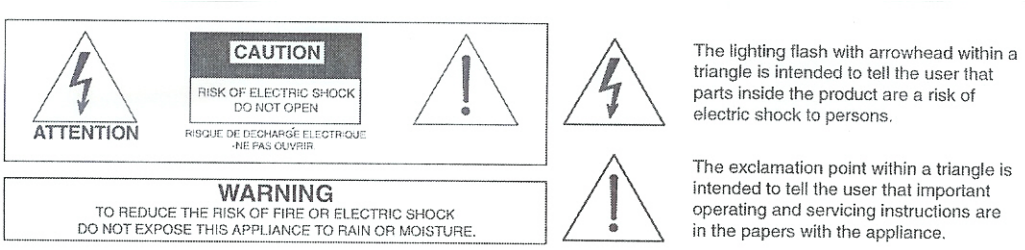
Please Read Carefully Before Installing Or Operating This Product

Many Safety Messages Are Included In This Manual. Please Be Sure To Observe These As They Are Important.
We Recommend That You Keep This Manual Close By For Future Reference

- **Do not install this device in dusty or humid locations, or in direct exposure to sunlight. In addition, locations that have steam or sooty conditions are not to be used, as this may result in fire or electric shock.**

- **Use only the specified accessories and attachments specified in this manual.**

- **Have servicing done only by qualified personnel. Servicing will be required when the product is damaged in any way, when liquid has been spilled or objects have fallen into the device. Servicing will also be required when this device has been exposed to rain, does not operate normally, or has been dropped.**



SAFETY PRECAUTIONS

- **Read the instructions very carefully before using this product**
- **Observe the instructions in this manual as conventions of safety; symbols and messages regarded as important precautions are included.**
- **Retain this manual for future reference.**

Message Conventions and Safety Symbols

Before installing and operation this product, read this manual so you are fully aware of the potential safety hazards and understand the safety symbols and messages. The safety symbols and messages shown below are used in this manual to prevent bodily injury and property damage from mishandling.

WARNING **Indicates a potentially hazardous situation which, if mishandled, could result in death or serious injury.**

CAUTION **Indicates a potentially hazardous situation which, if mishandled, could result in moderate or minor personal injury, and/or property damage.**

WARNING **WHEN INSTALLING THE PRODUCT**

- **Do not expose the product to rain or in an environment where it may be exposed to water or other liquids, which may result in fire or electric shock**
- **Operate the product only with the voltage specified on the unit. Fire and /or electric shock may result if a higher voltage is used.**
- **Do not modify the wiring or the product itself, doing so may result in fire or electric shock.**
- **Close the door when not servicing the unit. Do not stick your fingers into the outlet, shock may result.**
- **Ensure that the safety ground terminal is connected to a proper ground. Never connect the ground to a gas pipe as a catastrophic disaster may result.**
- **Be sure the installation of the product is stable, avoid slanted surfaces as the product may fall and cause injury or property damage**
- **Not to be exposed to excessive heat such as sunshine, fire or the like.**

WARNING WHEN THE DEVICE IS IN USE

- **To prevent electric shock, do not remove the outlet cover as there is 110VAC inside. Refer all servicing to CALL24 or a qualified electrician. There are no user serviceable parts in this device.**

- **Should any of the following irregularities occur during use, immediately switch off the power from breaker panel and contact CALL24 or qualified personnel. Do not attempt to continue operation with the product as this may cause fire or electric shock:**

  ***Smoke or strange smell coming from the unit.**
  ***If the product falls or the enclosure is damaged**
  ***If water or metallic objects fall into the product**
  ***If the wiring is damaged in any way**
  ***If the unit is malfunctioning.**

- **Do not insert or drop metallic objects or flammable materials into the audio holes of the product's front panel (if so equipped), as this may result in electric shock or fire.**

- **Do not place any containers with liquid or metallic objects on the top of the product. If liquid spills into unit, fire or electric shock may result.**

- **Not to be exposed to excessive heat such as, fire or the like.**

Call24 CallBox Enclosures with Outlets are certified by Eurofins Met Laboratories to: UL 60950-22 Standards. Eurofin Met Laboratories File Number: E212736.

General Specifications:

Enclosure: **12" x 10" x 6" Fiberglass**
2 Screw Hinged Cover

Outlet: **Standard Single Receptacle**

Outlet Box: **Standard (2" x 4") Steel Utility Box**

Outlet Cover: **Steel Utility Box Cover for Single Receptacle**

Back Plate: **Easy to Mount to .25" thick ABS Plastic**

GENERAL INFORMATION:

The Call24 Low Voltage Enclosure with Outlet was designed specifically for low voltage devices that can be powered from low voltage Class 2 power supplies. All Call24 low voltage devices making use of these enclosures operate from 15VDC Class 2 power supplies that typically plug into 110VAC outlets. The internal receptacle shall be protected by a Residual Current Protective Device (RCD) with rated residual operating current not exceeding 30mA. **These devices shall be used for a Class 2, or equivalent, circuits only. If used the Push Button shall be connected only to Class 2 Circuits.**

Low voltage devices such as radio public address systems, outdoor WiFi nodes and radio callboxes often require weatherproof enclosures with internal AC outlets. Depending upon the facility where the devices are installed, enclosures with outlets that carry a UL Listing may or may not be required. These enclosures can be installed indoors or outdoors where standard AC power is available and are typically hardwired to a 110VAC source to power equipment intended for Overvoltage Category II.

The **C24-001190 Enclosure with Outlet** has no factory holes and is identified as Type 4, and may also be identified with any other type rating of the component enclosure. It has a Pollution Degree of 2.

The **C24-001191 Enclosure with Outlet** has Speaker and Push Button Holes and is only identified as complying with Type 3R enclosure rating. It has a pollution Degree of 3. A 1/8" drain hole is provided.

In order to maintain enclosure ratings, any fittings installed to the enclosures must maintain the necessary Type rating.

FEATURES:

- Low Power Consumption
  The Control Circuits draw zero current until activated. However, the C24-001246 is an Always On CallBox that maintains power to the Radio even though the control circuits are off. Resulting in approximately 50 mA in stand-by. Once activated the current for the Radio and its power supply is approximately 100 mA @ 12VDC
  Once activated these boxes use 250 mA in receive mode and 900 mA when transmitting.

- Adjustable Shut off Timer
  The timer can be set from 1 minute to 5 minutes.
  30 seconds are added to the time out when PTT is pressed during last 30 seconds of the time.

- Wireless
  The M Series Mv5 Callbox may use conventional or digital radios on any frequency. The only wires that need to be run are from the power source. (110VAC)

OPERATING THE *M-SERIES*:

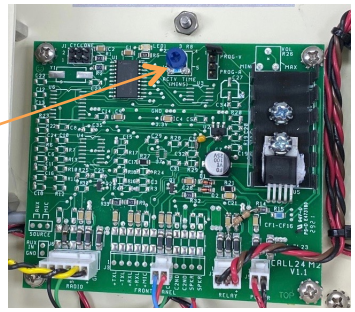
NOTE: The ***M-Series*** Call Box will not send or receive communications until the CallBox has been activated. This is accomplished by pressing the Call Box button. The CallBox will automatically de-activate after the programmed On Time (i.e.: 1 min., 2 min. etc.).
NOTE: The On Time may be re-triggered; meaning that as long as the PTT is depressed within the 30 second window at the end of the programmed time, the box will stay activated and only de-activate 30 seconds after the last PTT.

To Activate the CallBox:
Push Button
Wait for Beep
Push and Hold Button to Talk
Release to Listen

To Receive a Response:
You Must Release The Button to Listen
Any response will be heard through the speaker after releasing the PTT Button. If a reply is not received in the set amount of On Time (factory set at 1 min.), the box will automatically reset to Off. You may reactivate the CallBox by pushing the button again.

ADJUSTING THE TIME-OUT TIMER (On Time):
The timer is set to the length of time it will take the callbox to shut off automatically after the box has been activated, and has not sent (PTT) any transmissions. The factory setting for this feature is 1 minute (60 seconds). Time range for this feature is 1 minute to 5 minutes.

The timer is field/user programmable by turning the Blue pot on the main control board, refer to the picture on the right.



CallBox Front Panel Volume
The user may set the volume heard from the speaker on the CallBox by adjusting the volume knob on the radio to the desired level.

CallBox performance can be improved by adding an external antenna located a minimum of four feet above the CallBox.

Solving Problems

Battery: Ninety Percent of CallBox problems are related to "Batteries". It is recommended that batteries be checked yearly and replaced every two years. The AC source should be checked first if you have a dead battery and before you replace the battery.
Radio: If the radio cannot communicate, unplug the speaker-mic cable from the CallBox and check to see if the radio will communicate when disconnected from the CallBox.
RFI: Sometimes the RF energy from the radios' antenna will interfere with the operation of the CallBox, this may happen if the radio has been moved inside the enclosure or the wiring inside has been moved from it's original position.
Reversed Connections: If the battery leads get reversed (even for a moment) damage may occur to the control board and/or the radio.
Call Call24: Our technicians can offer solutions if you will call us (1-800-441-9191) while you are at a troubled CallBox.

Contact Information

Email: service@call24wireless.com.
Phone: 1-800-441-9191
Shipping: 800 Megahertz Drive
Winston Salem, NC 27107

IDENTIFICATION OF INTERNAL COMPONENTS.

This CallBox is Certified to UL 60950-22 Standards and makes use of Call24 MetLabs Certified C24-001191 Enclosure Configuration

Installation on a Flat Surface:
The CallBox is supplied with set of (4) stainless steel mounting tabs for installation on walls and other flat surfaces that exceed 10".

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Optional Mounting Brackets are available for installation on round or square poles.

It is recommended that all mounting hardware be made of stainless steel or aluminum.

Installation

Connecting AC Power to a CallBox with the Power Cord Option

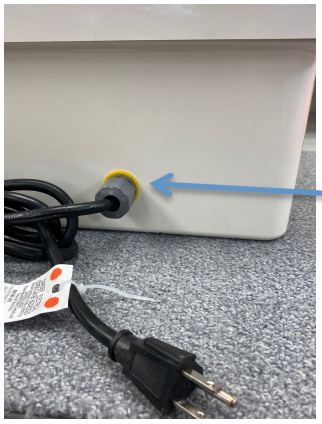
1. Plug the power cord into an acceptable outlet.
2. Verify that the Class 2 Power Supply is plugged into the internal callbox outlet.

Connecting a CallBox with the Hardwired Option (Licensed Electrician Required)

1. Pull AC power into the junction box (see hole in bottom of CallBox)
2. Connect the AC Power to the Outlet and install the junction box cover.
3. Plug the Class 2 Power Supply into the outlet.
4. Turn the AC power on at the source.

Class 2 Power Supply

Internal Outlet



AC Power Cord Option.

To install the battery:

Open the box and set the battery in the box on top of the "place battery here" label

1. Connect the black negative (-) wire to the black negative (-) terminal on the battery.
2. Connect the red positive (+) wire to the red positive (+) terminal on the battery.
3. Close the box and use it as normal.

Warning

Pay Attention to Battery Polarity when connecting the CallBox Battery Wires. Reversing them will destroy the CallBox and Radio !!!!!!!!!!

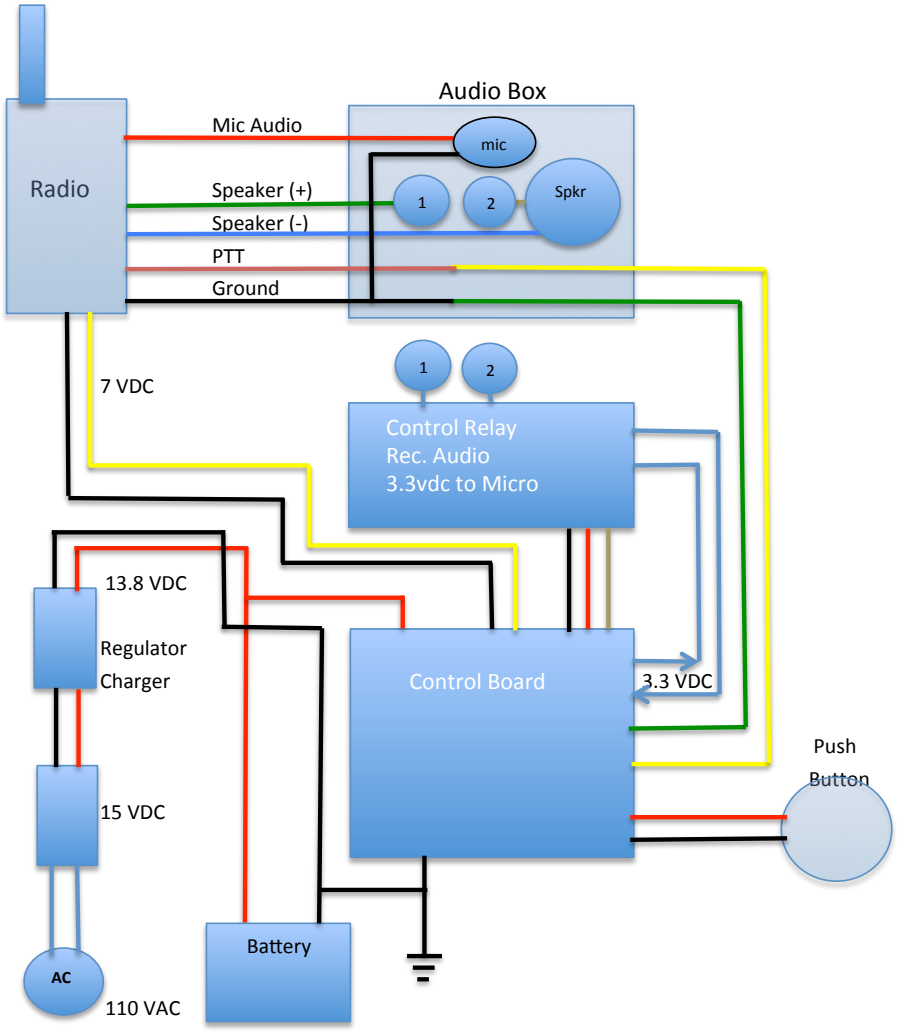
How it works: Power Distribution

1.) The CallBox operates from the Battery only.
2.) AC Power is applied to the AC/DC Power Supply.
3.) The power supply output is 15 VDC.
4.) The 15 VDC is applied to the 13.8 VDC regulator.
5.) The 13.8VDC is applied to the control board.
6.) On the Control Board a 7 VDC regulator powers the radio.
7.) The 13.8 VDC Regulator also acts as a Battery float charger.
8.) When the Push-Button is pressed, the control board powers up and starts a timer (see page 3 of this Manual).
9.) It also activates a control relay.
10.) The relay completes the Receive Audio path to the speaker.

To Program the Radio:
1.) Before Installation with no power applied to CallBox.
2.) Disconnect Radio Speaker-Mic connection to the CallBox.
3.) Connect Radio Programming Cable.
4.) Connect Battery and let Radio power-up.
5.) Program Radio.
6.) Then turn off radio and remove the programming cable.
7.) Reconnect CallBox Speaker-Mic Connection Cable.
8.) Then turn radio back on and set radio volume.
9.) Test CallBox.

M-Series Mv5

Block Diagram



Part Numbers & Specifications

M-Series

Mv5 CallBox, 110VAC	**C24-001246**	**VHF/UHF/800MHz**
Owners Manual	**C24-001256**	**Basic Description, Operation & Safety**
Light Option	**C24-001005**	**Round Pole Side Mount Low Profile Strobe**
Light Option	**C24-001006**	**Flat Surface Mounted Pole or Wall Low Profile Strobe**
Light Option	**C24-000592**	**Pole Top Mounted Low Profile Strobe**
Light Option	**C24-001140**	**Pole Top Mounted Blue Star Locator & Ultra Flash LED**
Pole Option	**C24-001108**	**8' Bronze 4"x4" Aluminum Pole**
Round Pole Mounting Kit	**C24-000581**	**3.5" to 8" Round Pole is required**
Square Pole Mounting Kit	**C24-001128**	**3.5" to 8" Square Pole is required**
Control Relay Kit	**C24-000576**	**DTMF Control for Gates, etc.**

Frequency Range	Determined By Radio
RF Output Power	Determined By Radio
Number of Channels	Determined By Radio
Channel Spacing	Determined By Radio
Code Signaling	Determined By Radio
ANI-ID Signaling	Determined By Radio
CallBox Battery	5 AHr 12VDC GelCell
CallBox Antenna	Internal Antenna (Standard Stubby)
Two-Way Voice & Reset Control	Automatic
Operating Temperature	-22F ~ +140F (-30C ~ B15+60C)
Dimensions	13.56H x 11.43W x 5.21D
Weight	8.5 lb. w/battery
Enclosure, Nema 3R	Sealed Fiberglass w/Security Fasteners
FCC ID / Compliance-Type 1	ALH36413110, 22/74/80/90
Industry Canada Certification	282D-36413110
M Series CallBox Warranty	One Year (at Factory)
MetLabs Certified	UL 60950-22

FCC Requirements

The Rules and Regulations of the United States Federal Communications Commission (FCC) require you or your radio service provider to have a license for your radio system before activating the radio transmitter in your ***M-SERIES*** call box. If you already have an operating licensed radio system you can probably add an ***M-SERIES*** call box to your system without making any changes to your license.

The station licensee is responsible for ensuring that transmitter power, frequency and modulation are within the limits specified by the station license, and also for proper operation and maintenance of the radio equipment. Responsibilities include checking the transmitter frequency and modulation periodically, using appropriate methods. For more information, go to the FCC website at: http://www.fcc.gov

Manufacturer Warranty Terms

CALL24 Factory Product Warranty for the M-Series

This warranty applies to the original purchaser of the equipment only. From the date of shipment, CALL24 warrants the **S-Series** systems product line to be free from defects in material and workmanship for **12 months from date of shipment**.
This warranty does not apply to any parts damaged due to improper use; including accident, neglect, unreasonable use, vandalism, improper installation, unauthorized alterations, modifications, or improper maintenance of the equipment. It does not extend to damage incurred by natural causes such as lighting, fire, hail, floods, or other catastrophes, or to damage caused by environmental extremes such as power surges or transients.

WARRANTY REPAIR

CALL24 reserves the right to make changes in design and/or improvements to its products without any obligation to include these changes in any products previously manufactured. During the warranty period, all replacement parts must originate from CALL24. Correction of defects by repair or replacement shall constitute fulfillment of all warranty obligations on the part of CALL24. Corrective actions may include replacement of defective parts with new or manufactured parts that are warranted for the remainder of the warranty period if the repairs are incorporated into existing units under warranty. If a defect in materials or workmanship is reported to CALL24 within the warranty period set forth hereinabove, CALL24 will, at its discretion, either repair or replace the defective item or component without charge for materials or factory labor when returned to CALL24, in Winston Salem, North Carolina. If found defective, returned equipment will be shipped back to the customer F.O.B. Winston- Salem, freight prepaid and absorbed. Equipment found to be not defective shall be returned at buyer's expense, and testing and handling expense shall be borne by the buyer. Out-of-warranty repairs will be billable at the current CALL24 hourly rate plus the cost of any needed components. To expedite service while in warranty; requests or orders for parts under warranty require a purchase order. A credit to the account will be considered if parts replaced are returned and indeed found defective and if the replaced parts are returned at CALL24 within 15 business days. No credit shall be allowed for work performed by the buyer. CALL24 is not responsible for costs related to trouble-shooting, removal, shipping, or replacement of parts from their installed location.

Warranty repairs will be performed at the place of manufacture or through a CALL24 Authorized Dealer. If applicable, the buyer will be responsible for the cost of shipping or delivery to warrantee center. The Sole Exception to the above warranty shall be call box batteries. Batteries are covered for 120 days from date of shipment. Callbox service replacement parts purchased after the equipment warranty date has expired are covered for 90 days from shipment. Custom designed and engineered call boxes are covered for 12 months after date of shipment. Warranty does not cover problems created by co-channel, adjacent channel, or intermodulation interference. CALL24 is not liable under this warranty, or any implied warranty, for loss of use or for other consequential loss or damage experienced by the buyer, or any third party arising out of or connected with buyer's purchase and use of CALL24's products or services. Some states do not permit the exclusion or limitation of implied warranties or consequential damages. The foregoing is the sole and exclusive remedy of the buyer and is in lieu of any and all other warranties expressed or implied as to merchantability, fitness for purpose sold, description or quality.

FREIGHT CLAIM AND PRODUCT RETURN

Title to the equipment passes to the buyer upon delivery to a carrier, at which time risk of loss or damage passes to the buyer. Claims for box shortages and external damages, concealed or otherwise, must be reported directly with the carrier upon receipt and noted on delivery bill by driver. Concealed damages and concealed shortages must be reported to CALL24 within 7 days of delivery. In the event that damage is found, the delivery carrier must be immediately contacted to inspect the shipment. If buyer fails to notify CALL24 within 7 days after receipt of equipment of any shortage, or other failure to conform to the official written purchase order the equipment shall be considered accepted by the buyer as delivered. Damaged parts should be reordered. Returns for any reason other than repair must be previously authorized by CALL24 and are subject to a 15% restocking charge. No returns, refunds or exchanges are authorized once 30 days have elapsed from the day of CALL24's shipment date. Returns are not authorized for poles, custom decaled or custom engineered/designed call boxes. Returns for repair must be approved by CALL24 and include a letter stating the nature of the problem and referencing the call box serial number.

Please request service assistance support or replacement parts from your local supplier, or by contacting CALL24 directly at service@call24wireless.com, or directly 1-336-788-9191 EST Mon.-Fri, 8-5:00PM.

Yours Notes: