

PPA R38

PPA SelectView™ FM Receiver

USER MANUAL



PPA R38 Receiver

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Safety Warnings

HEARING SAFETY

CAUTION!

This receiver is designed to amplify sounds to a high volume level, which could potentially cause hearing damage if used improperly. To protect your hearing and the hearing of others:

1. Make sure the volume is turned down before putting on the earphone or headphone—only then adjust the volume to a comfortable level.
2. Set the volume level at the minimum setting that you need to hear.
3. If you experience feedback (a squealing or howling sound), reduce the volume setting and move the microphone away from the earphone or headphone.
4. Do not allow children or other unauthorized persons access to this product.

BATTERY SAFETY AND DISPOSAL

CAUTION!

This receiver may be used with non-rechargeable alkaline batteries. Do not attempt to recharge non-rechargeable batteries; they may explode, release dangerous chemicals, cause burns, or cause other serious harm to the user or product.

This receiver can be used with, and recharge, NiMH Batteries. To reduce the risk of fire or burns, do not attempt to open, disassemble, or service NiMH batteries. Do not crush, puncture, short contacts or dispose of in fire or water. Do not incinerate or expose to temperatures above 140F (60C). Replace only with battery type designated for this product. Recycle or dispose of properly.

Do not attempt to charge this receiver with any charger other than a Williams Sound compatible charger. When charging NiMH batteries in the receiver, the battery switch must be in the “NiMH” position.

PACEMAKER SAFETY

CAUTION!

If you have a pacemaker or other medical device, make sure that you are using the receiver in accordance with safety guidelines established by your physician or the pacemaker/medical device manufacturer.

Service or attempting to service this device will void the warranty

Refer servicing to qualified personnel at Williams Sound.

Recycling Instructions

Help Williams Sound protect the environment! Please take the time to dispose of your equipment properly.

Product Recycling Instructions:

Please do NOT dispose of your Williams Sound equipment in the household trash. Please take the equipment to an electronics recycling center; OR, return the product to the factory for proper disposal.



Battery Recycling Instructions:

Please do NOT dispose of used batteries in the household trash. Please take the batteries to a retail or community collection point for recycling.



Receiver Applications

- Tours
- Schools
- Hearing Assistance
- Conference Rooms
- Language Interpretation

Important Note about OLED Care

The PPA R38 must be powered off before removing the batteries. Failure to do so may decrease the life of the OLED display.

Receiver Overview

Thank you for purchasing the PPA R38 PPA SelectView™ FM Receiver.

Much like a miniature radio station, a Williams Sound FM transmitter broadcasts audio over an FM radio signal. Receivers are used to pick up the broadcast up to 1000 feet away, depending on environmental conditions. The system helps large or small groups overcome background noise and distance to clearly hear the speaker.

The Williams Sound PPA T45, PPA T35, PPA T46, or PPA T27 FM transmitters broadcast voice and/or audio programs on one of 17 available channels, 72-76 MHz. Listeners use either the PPA R38 receiver equipped with headphones, earphones, or neckloops to hear the broadcast.

The PPA R38 has an easy-to-read high-resolution OLED display. The unit also has push-button on/off controls, settings lock and many other features.

To avoid difficulties, please read through these instructions, and keep them for reference.

Main Features

- NEW! OLED high-resolution screen - easy to read and provides a quick view of receiver status.
- NEW! Sleep/Auto-Off Feature saves 80% power!*
- All user settings are accessible via the on-screen menu – including all 17 wideband channels.
- Stylish new design
- Stereo headphone jack
- Can use rechargeable or non-rechargeable batteries
- Digital volume control
- 4-step battery level indication
- Display shows channel number or frequency
- Step/seek function allows user to increment channel manually, or seek to the next active channel
- Squelch Adjustment

*Up to 80% less power consumption while in sleep mode.
Total battery life dependent on device usage and user settings such as screen time-out.

Feature Detail

CHANNEL STEP/SEEK

Step: If the listener *knows* what channel or frequency they need to be on, they can change to that channel by stepping through each channel in the menu. See Step 1 under “Basic Settings”.

Seek: If the listener *does not know* what channel or frequency they need to be on, they can seek through actively-broadcasting channels (similar to the seek function on a car radio). See Step 1 under “Basic Settings”.

POWER-SAVE MODES (IN ORDER OF OCCURENCE):

1. DISPLAY TIME OUT

The display screen has a timer that will turn the screen off after a period with no button pushes. This period can be adjusted in the menu between 5, 30, or 60 seconds. After the screen turns off, The receiver still continues to receive and produce audio after the display screen turns off. This feature, in conjunction with the sleep mode/auto off, serve to save battery life. See Step 5 under “Advanced Settings”.

2. SLEEP MODE

After approximately 6 minutes with no RF signal on the current channel, the receiver goes into “sleep mode” and starts a sleep timer. During sleep mode, the receiver consumes approximately 80% less power. Periodically it checks for RF signal on the current channel. If it finds signal on the current channel, it will wake up, produce audio, and reset the sleep timer. Any button push during sleep mode will also wake the receiver up and reset the sleep timer.

During sleep mode, the receiver will not be looking for signal on any other channel than the one the receiver is set to. So, it will not find another transmitter on a different channel, or wake up simply because there is RF signal present within the 72-76MHz band. It will only wake up if there is a strong broadcast on the channel/frequency the receiver is set to.

3. AUTO-OFF

After approximately 2 hours with no RF signal on the current channel, the receiver will turn itself off completely. Once this happens, it cannot wake up. The user must power the unit ON again with the power button.

SQUELCH

When low RF signal is present from the transmitter, or if the receiver is getting too far away from the transmitter, the receiver may produce static or noisy audio. If the signal is low enough, the receiver will mute the audio completely. The point at which the receiver mutes the audio is adjustable. See Step 2 under “Advanced Settings”.

SOFT AUDIO TURN-ON

When powered on, or if the channel is changed, the receiver will mute the audio, then gradually bring the audio level up to the current volume setting. This setting can either be the last volume used, or a specific volume level. See “Volume Level at Turn On” under “Hidden Settings”.

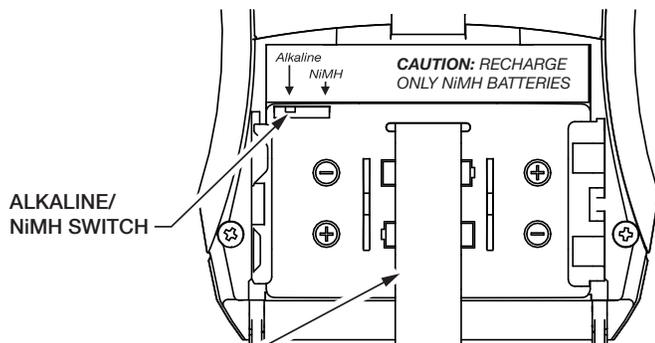
Initial Setup

1. Open the battery compartment. Slide the battery selection switch to the correct position for the type of batteries that will be used. Use “Alkaline” for non-rechargeable batteries, “NiMH” for rechargeable NiMH batteries (only). (Figure A)

IMPORTANT: If the battery switch is not in the correct position, damage may be caused to the unit. Alkaline batteries cannot be recharged.

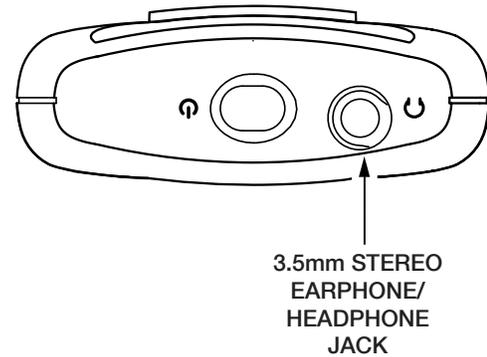
2. Install the AA batteries. Be sure to observe proper polarity (+/-). Damage due to improper battery installation may void the warranty on the product. The battery icon on the display and the “Power On” LED on top of the unit will flash when the batteries are getting low; you may continue to use the receiver until it quits operating, then replace or recharge the batteries. (Figure A)

Figure A: Battery Compartment



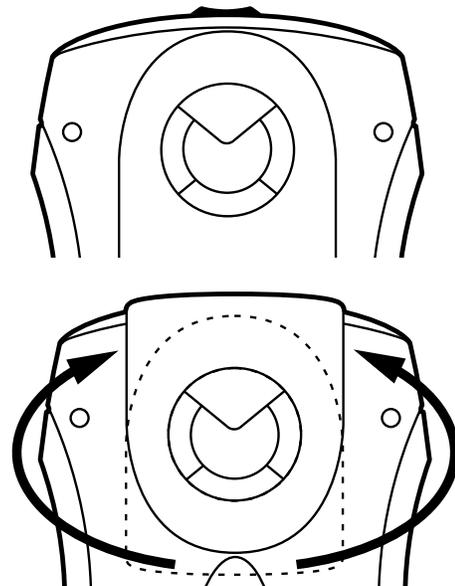
3. Plug in an earphone, headphone, or neckloop using the 3.5mm jack on the top of the receiver. **Note that the earphone, headphone or neckloop cable is also the receiving antenna.** (Figure B)

Figure B: Headphone Jack



4. To install the belt clip on the rear of the R38, position the belt clip on the back of transmitter. Turn the belt clip 180° left or right to secure the clip. The transmitter can now be clipped onto a belt. To remove, turn the belt clip 180° so the open end of the clip points up, and gently pull the belt clip off. (Figure F)

Figure C: Belt Clip Installation



Controls and Display

The top and front controls referred to in this manual, along with an illustration of the indicators on the main screen, are shown in Figures D, E and F.

Figure D: Top Controls

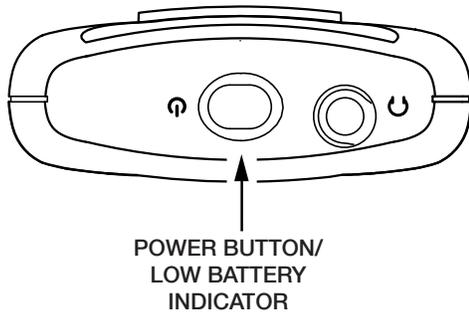


Figure E: Front Controls

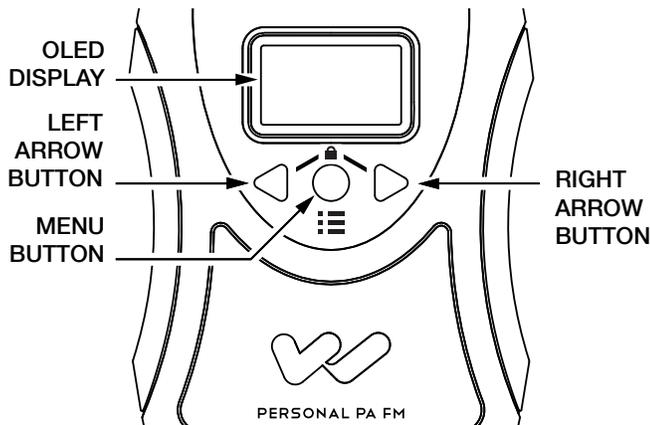


Figure F: Display showing Main "Home" Screen



Basic Settings

The Basic Setup functions allow the user to change the most frequently used settings easily. The user can change the receiving channel (or frequency), and the volume level. Before performing these steps, plug in earphones, headphones, or a neckloop into the headphone jack on the receiver.

1. **POWER UP:** Turn on the receiver by pushing and holding the power button for 3 seconds. The receiver will start up and show the following three screens. The last screen is the Main or "Home" screen.



2. **CHANNEL:** Next, set the receiving channel. Push the menu button once to show the channel set screen.



Push either arrow button to **step** to one of the 17 channels (above) -or- push-and-hold either arrow button to **seek** to the next active channel (below). The receiver is seeking the next *frequency*, so channels may appear out of order when seeking.



If no actively-broadcasting channels are found during the seek, a message is displayed (below). Make sure you are on the same channel as the transmitter. When finished, push the menu button once to get back to the home screen, and go to step 3.



3. **VOLUME:** Adjust the volume level to your taste by using the left or right arrow buttons. This can only be done from the home screen. The display will indicate the current volume level.



3. **CH/FREQ DISPLAY MODE:** To change the display to show either channel number (1-17) or frequency (72.1-75.9MHz) push the left or right arrow buttons to toggle between "CH NUMBER" or "FREQUENCY".



4. **8/17 CHANNEL MODE:** 17-channel mode allows the receiver to change to any one of the 17 possible broadcast channels. 8-channel mode restricts the receiver to the 8 non-interfering (simultaneous broadcast) channels. To change the receiver between 8-channel and 17-channel modes, use the arrow buttons to toggle between "17 CHANNEL MODE" or "8 CHANNEL MODE".



Advanced Settings

The Advanced Setup Menu provides the ability to change between 'channel' and 'frequency' display mode, adjust the squelch, change the receiver to 8 or 17-channel mode, change the amount of time for the display to time-out, change the screen brightness, or restore factory default settings.

1. **ADVANCED SETUP MENU:** To access the Advanced Setup Menu, push-and-hold the Menu button for 3 seconds until you see the "LOADING ADVANCED SETUP" screen displayed.



Within the advanced menu, pressing the menu button will advance to the next setting.

2. **SQUELCH:** This is the first screen in the Advanced Menu. The receiver will silence the audio if the RF signal strength falls below a certain level. The squelch adjustment sets the level of RF signal strength at which the audio will be muted. This has the effect to the listener of eliminating static when the broadcast signal is weak. Push the left or right arrow buttons to adjust the squelch level (1-4).

5. **DISPLAY TIME-OUT:** This feature sets the amount of time before the display turns off. Use the left or right arrow buttons to toggle between "5 SECONDS" "30 SECONDS" or "60 SECONDS". Note that even though the display is off, the receiver still continues to function.



6. **SCREEN BRIGHTNESS:** To change the display brightness (level 1-4), use the left, right arrow buttons to toggle between "1", "2", "3" or "4".



7. **RESTORE FACTORY SETTINGS:** The next screen shows: "ERASE ALL SETTINGS RESTORE DEFAULTS?" (below).



To reset, push the right arrow button to choose "YES". After this you will see the confirmation screen "FACTORY DEFAULTS RESTORED", followed by the home screen.



If you chose "NO" to NOT reset, you will be returned to the squelch screen (step 2).

8. At any time, the Advanced Setup menu can be exited in three different ways:
- Push and hold the menu button for 3 seconds, or
 - wait 20 seconds without pushing any buttons, or
 - repeatedly push the menu button until you see the screen "EXIT ADVANCED SETUP?" screen. Push the right arrow button to choose "YES". The Home Screen will then be displayed.



Hidden Settings

TURN-ON VOLUME

When the unit is *powered on*, or when the *channel is changed*, the audio will be muted, then rise to a set volume. This set volume can be: (1) a specific volume level or (2) the last volume used when the receiver was powered off. This is called the “Turn-On Volume” setting.

To access the Turn-On Volume setting, the receiver must be off. Hold down the right arrow button and while holding it, hold down the power button to turn the receiver on. The receiver will turn on and display “VOLUME AT PWR ON”.



The default turn-on volume from the factory is 8. This means every time the receiver turns on, the audio will rise to volume level 8. To change this to a different level, use the left or right arrow buttons to adjust it. (Note that this screen times-out in 20 seconds without any button pushes). The highest turn-on volume level is 15. The lowest setting (where “0” would be) will restore the audio to the last-used volume. Instead of “0”, the words “LAST SETTING” will be displayed. This means the next time the receiver is turned on, the audio will rise to the volume setting used when the receiver was turned off.



RSSI DISPLAY MODE

The receiver can be used as a portable RF field-strength meter for testing the amount of signal received from a transmitter. In this mode, the receiver will display a numeric value between 000000 and 032764, representing the level of RF field strength received. This numeric readout is displayed in place of the battery strength bars on the home screen. This is called the RSSI (Received Signal Strength Indicator) Display Mode.

To put the receiver in RSSI Display Mode, the receiver must be off. Hold down the menu button and while holding it, hold down the power button to turn the receiver on. The receiver will turn on in RSSI Display Mode and “RSSI” with the numeric value(s) will be displayed in place of the battery strength bars.



Note that the receiver will remain in this mode until it is powered off. When powered back on, the receiver will return to its normal home screen, displaying the battery strength bars.

SETTINGS LOCK

To lock (or unlock) the settings, you must first be on the home screen. Push-and-hold the left and right arrow buttons at the same time. While holding the buttons, you will see the following dashed-lines *appear* one-by-one, then *disappear* one-by-one. **Keep holding** the buttons until all three lines disappear and the “**PRESS MENU TO LOCK**” screen is displayed.



When the display shows “PRESS MENU TO LOCK”, release the buttons. Then push the Menu button to lock. The display will show “LOCKED” (below) and then will return to the home screen.



Note: To unlock the settings, perform Step 9 again.

SOFT AUDIO TURN ON

When the unit is *powered on*, or when the *channel is changed*, the audio will be muted, then rise slowly to the turn-on volume setting. This feature allows the user time to turn the volume down or remove the earphones/headphones before the volume level becomes uncomfortable. The rate of the soft audio turn on is not adjustable.

Specifications

Dimensions:	4.1" x 2.85" x 1.38" (104 x 72 x 35mm)
Weight:	4.6oz (130g) with batteries. 2.6oz (73g) without batteries
Color:	Black/Silver. Black ABS Plastic case with Aluminum faceplate.
Battery Type:	(2) AA Alkaline or (2) AA NiMH Rechargeable
Battery Life:	(2) AA non-rechargeable alkaline batteries (BAT 001-2), approx. 50 hrs (2) AA rechargeable NiMH batteries (BAT 026-2), 1500mAh, approx. 32 hrs
Current Consumption:	47mA nominal at 2.4VDC
Operating Temp. Range:	32° – 122°F (0° to 50°C)
Channels:	17 Wideband, accessed via menu
Operating Frequencies:	72.1, 72.2, 72.3, 72.4, 72.5, 72.6, 72.7, 72.8, 72.9, 74.7, 75.3, 75.4, 75.5, 75.6, 75.7, 75.8, 75.9 MHz*
FM Deviation:	75 kHz
De-Emphasis:	75 µS
Display Screen:	1" OLED
Power Indication:	Power button, backlit green. Good battery strength - glows solid. Low battery - flashes. Error - fast flashes with 1 sec. delay.
Sensitivity:	2 µV at 12 dB Sinad with squelch defeated
Input Overload:	100 mV
Frequency Response:	200 Hz – 15 kHz, ±3dB
Modulation:	FM, +/- 75 kHz peak deviation
Signal-to-Noise Ratio:	Minimum 65 dB @ 1.0V
Receive Antenna:	Integral with earphone/headphone cord
Audio Output:	18 mW max at 32 Ω
Headphone Connector:	3.5 mm stereo jack, mono output for stereo or mono earphones, headphones, or neckloops
Earphone/Headphone/Neckloop Impedance:	32 Ω
Power Save - Display Off/Sleep Mode/Auto Off:	Display Off: 5,30, or 60 seconds of no button pushes (adjustable in menu) Sleep Mode: 6 mins of no RF signal or button pushes; wakes up with RF signal or any button push Auto Off: 2 hours of no RF signal or button pushes
Approvals:	FCC, Industry Canada, RoHS, WEEE
Warranty:	Lifetime PLUS Limited Warranty, 90 Days on most accessories.

NOTE: SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

This device complies with "RSS-Gen Issue 2 June 2007" for Industry Canada and FCC part 15.105[b] for the United States.

Operation is subject to the following two conditions: [1] this device may not cause interference, and [2] this device must accept any interference, including interference that may cause undesired operation of the device.

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) This device may not cause interference, and (2) this device must accept any interference, including any interference that may cause undesired operation of the device.

Cet appareil est conforme à la norme RSS Industrie Canada exempt de licence. Son fonctionnement est soumis aux deux conditions suivantes: (1) cet appareil ne doit pas provoquer d'interférences et (2) cet appareil doit accepter toute interférence, y compris les interférences pouvant causer un mauvais fonctionnement du dispositif.

This device complies with ICES-003 class B. Test data is available from the manufacturer on request.

Troubleshooting

Problem	Solution
Can't hear the person speaking/no audio	<ul style="list-style-type: none"> · Verify transmitter and receiver are both ON · Verify transmitter and receiver are both on the same channel/frequency. · Verify transmitter is set up and working properly; i.e. the mic is not muted. · Make sure the earphone/headphone/neckloop plug is inserted all the way into the jack of the receiver. The cord is the receiving antenna. · Try a different earphone, headphone, or neckloop. · Try a different receiver.
Can't hear the person speaking above the room noise	<ul style="list-style-type: none"> · Adjust the microphone volume on the transmitter. · Reposition the transmitter microphone closer to the mouth.
Limited Range	<ul style="list-style-type: none"> · The earphone/headphone/neckloop cord is the receiving antenna. Make sure it is not coiled up or obstructed, and that it is a Williams Sound approved earphone, headphone, or neckloop. · Verify the transmitter distance from the receiver - try bringing them closer. · Verify there are no other transmitters in the area on the same (interfering) channels. · Transmitter batteries low? Receiver batteries low? Try new batteries.
Feedback (squealing)	<ul style="list-style-type: none"> · Lower the microphone volume on the transmitter · Increase the distance between the microphone and the electronic speaker
Receiver not working, power button blinking	Return receiver to Williams Sound for service. This is an internal error code and cannot be serviced by the consumer.
Screen turns off too quickly	Adjust the screen timeout in the advanced settings menu.
Won't Charge NiMH batteries	Make sure the "Alkaline/NiMH" battery switch (located in the battery compartment) is set to "NiMH".
Can't change channels or access any of the settings. Display shows "LOCKED".	Refer to Hidden Settings for instructions on how to unlock the receiver.

Lifetime Plus Limited Warranty

Williams Sound products are engineered, designed, and manufactured under carefully controlled conditions to provide you with many years of reliable service.

Williams Sound warrants the Personal PA® FM Listening transmitters and receivers (models PPA T45, PPA T35, PPA T27, PPA T46, PPA R38, PPA R37, and PPA R35-8) against defects in materials and workmanship under normal use and conditions for the useful lifetime of the product from date of purchase.

This warranty is available to the original end purchaser of the product and CAN BE transferred to subsequent purchasers of the product.

Microphones, earphones, headphones, batteries, chargers, cables, carry cases, and most other accessory products carry a 90-day warranty.

Williams Sound has no control over the conditions under which this product is used. Williams Sound, therefore, disclaims all warranties not set forth above, both express and implied, with respect to the Personal PA® FM Listening System, including but not limited to, any implied warranty of merchantability or fitness of use of such equipment including, without limitation, any warranty that the use of such equipment for any purpose will comply with applicable laws and regulations. Williams Sound shall not be liable to any person or entity for any medical expenses or any direct, incidental or consequential damages caused by any use, defect, failure or malfunctioning of the product, whether a claim for such damages is based upon warranty, contract, tort or otherwise, the sole remedy for any defect, failure or malfunction of the products is replacement of the product. No person has any authority to bind Williams Sound to any representation or warranty with respect to the Personal PA® FM Listening System. Unauthorized repairs or modifications will void the warranty. This warranty is void if damage occurred because of misuse, or if the product has been repaired or modified by anyone other than a factory authorized service technician. Warranty does not cover normal wear and tear on the product or any other physical damage unless the damage was the result of a manufacturing defect. Williams Sound is not liable for consequential damages due to any failure of equipment to perform as intended. Williams Sound shall bear no responsibility or obligation with respect to the manner of use of any equipment sold by it.

This warranty does not cover reimbursement for your costs of removing and transporting the product for warranty service evaluation or installation of any replacement product provided under this warranty.

The exclusions and limitations set out above are not intended to, and should not be construed so as to contravene mandatory provisions of applicable law. If any part or term of this Disclaimer of Warranty is held to be illegal, unenforceable, or in conflict with applicable law by a court of competent jurisdiction, the validity of the remaining portions of this Disclaimer of Warranty shall not be affected, and all rights and obligations shall be construed and enforced as if this Limited Warranty did not contain the particular part or term held to be invalid. The terms of the warranty are governed by the laws of the State of Minnesota.

Prices and the specifications of the products are subject to change without notice.

*For Complete Warranty Statement go to: www.williamssound.com/warranty-statement

NOTICE: Williams Sound products are NOT designed for use in extreme temperature, humidity or chemical environments. The introduction of chemicals such as chlorine, salt water or human sweat into the product will cause damage to the circuitry. Damage due to these causes is NOT covered under the Product Warranty.

If you experience difficulty with your system, call Toll-Free for Customer Assistance 1-800-843-3544 (U.S.A.) or +1 952 943 2252 (Outside the U.S.A.)

If it is necessary to return the system for service, your Customer Service Representative will give you a Return Authorization Number (RA) and shipping instructions.



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