User Manual Published September 2015 Software Version RX2-405



RX200 Goes Anywhere

RX200	4
FRONT	4
Rear	5
SIDE	6
HOME SCREEN	7
MAIN MENU	•
NAVIGATING THE MAIN MENU	
EXITING THE MAIN MENU	_
FREQUENCY DISPLAY AND SELECT	
FREQUENCY SCAN	
Scanning for a frequency	
Selecting the frequency	
SETTING THE SCAN RANGE	
TEST TONE OUTPUT	
TIME CODE	
EXTENDED MENU	10
NAVIGATING THE EXTENDED MENU	
EXITING THE EXTENDED MENU	
Audio Out	
Output Level	
Mute Time Code Until Jammed	
TIME CODE OUTPUT LEVEL	
SOFTWARE UPDATE	
Modulation Select	11
BLUE LED SET	12
LED Brightness Set	
OLED Brightness	12
HIDE ENCRYPTION MENU	12
ENCRYPTION CODE SET	13
Adjusting the encryption code	13
WIRING DIAGRAMS	14
AUDIO OUTPUT CONNECTOR TA5	14
Single Analog Channel out - TA5	
Two Analog Channels out - TA5	
AES Digital out of TA5	
12 VOLT DC POWER - SWITCHCRAFT 760K	14
OPERATING FREQUENCIES	15
UHF Audio	
ANTENNA CUTTING CHART	16

FIRMWARE	17
Updating the RX200 software using a TRX transmitter	18
SPECIFICATIONS	10
SPECIFICATIONS	13
PRODUCT SUPPORT	20
ZAXCOM WARRANTY POLICY AND LIMITATIONS	21

Zaxcom RX200 Front

RX200

Front



- 1. OLED Display
- **2. INC Key** Used to increase the parameters of a menu item.
- 3. UHF Antenna Connectors (2) SMA connectors.
- 4. Receiver Sataus Indicator

Red – receiver is not getting a valid signal Green – Receiever is getting a valid signal

- **5. DEC Key** Used to decrease the parameters of a menu item.
- **6. Menu Key** Used to advance to the next menu item.
- 7. Power Switch

Zaxcom RX200 Rear

Rear



1. Audio Out Connector - TA5M

The same connector is used to output either analog audio or AES audio. The audio assignment is set in the extended menu.

2. **DC Power Input** - Switchcraft 760K The RX200 will accept external DC voltage from 6 to 18 volts.



- 3. Time Code Out BNC
- 4. **Com Serial Port** This is reserved for future expansion

Zaxcom RX200 Side

Side



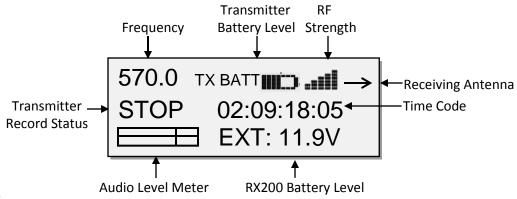


Side Mounted LEDs - The LEDs give visual indication if RF and / or audio are being received by the RX200. The LED settings are adjusted in the extended menu.

Battery Door - The thumb screw opens the battery door. The RX200 will work with alkaline, NiMH or lithium AA batteries.

Zaxcom RX200 Home Screen

Home Screen



Frequency

This is the UHF frequency that the RX200 is set to.

Transmitter Battery Level

The battery diagram displays a rough indication of the transmitter's battery level. For a more accurate battery reading the battery type being used in the transmitter needs to be set in the TRX extended menu. The battery symbol will start to blink just before transmitter shuts down.

RF Signal Strength

The RF strength meter shows the radio signal strength of the transmitter. The RF signal is depicted as a staircase pattern with the lowest step (low signal strength) on the left and building up to the right (higher signal strength). When more stairs are showing the stronger the signal is.

Transmitter's Record Status

This is the current recorder status on the transmitter that is feeding the RX200

- STOP The recorder is stopped.
- · REC The recorder is recording.
- PLAY The recorder is playing back.

Audio Level

Displays the incoming audio level, the meter extends from the left to the right. The vertical bar is the -20dBFS mark and the far right side of the box is 0dBFS. Two meters will be displayed when a stereo signal is being received. A single thick meter will appear when a mono signal is being received.

RX200 Battery Level

This is the voltage level of the internal (INT) or external (EXT) battery that is powering the RX200. The RX200 will automatically switch to the higher voltage source, which is usually the external DC input. Therefore if the RX200 is connected to a DC source and external power is lost then the RX200 will seamlessly switch to the internal batteries. So please note that if the RX200 has internal AA batteries installed and is being powered by a cameras DC output, if the camera is powered down the RX200 will remain on using the internal batteries unless the power switch on the RX200 is turned off.

Time Code

Displays the time code the RX200 is receiving and outputting.

Receiving Antenna

This shows the antenna that is receiving the RF signal.

Zaxcom RX200 Main Menu

Main Menu

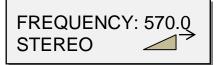
Navigating the Main Menu

- To enter the main menu press the MENU key.
- To advance to the next menu press the MENU key again.

Exiting the Main Menu

• To exit the main menu at any time press and hold the MENU key for 1.5 seconds.

Frequency Display and Select



The frequency select menu is where the RX200 receive frequency is set. This frequency needs to match the frequency that is set on the corresponding transmitter. To adjust the frequency press the INC key to increase the frequency and press the DEC key to decrease the frequency. Also displayed is the modulation format.

Frequency Scan

PRESS † TO SCAN (ALL 200: 512-698)

The frequency scan menu is where the RX200 can scan the user specified frequency range and search for a clear frequency. After the scan is completed a graphic display of the RF that is present in that specified range will be shown. The RX200 will also suggest a clear frequency. That frequency can be accepted by pressing the INC key. Or press the DEC key to skip the chosen frequency and have the RX200 suggest another frequency.

Scanning for a frequency

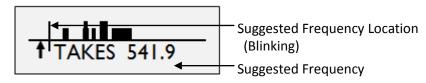
- Turn off the TRX transmitter.
- From the frequency scan menu press the INC key to initiate a scan.



While the RX200 is scanning, the frequency being examined is displayed in the bottom half of the screen.
 Once the scan has completed a graphic map of the scans will be displayed. The low end of the frequency range is on the left side and the high end is on the right. Wherever RF is found, a vertical line is drawn. The line extends from the baseline up. The length of the line indicates the level or strength of the found RF at that frequency.

Selecting the frequency

When the scan is complete the RX200 will draw a vertical blinking line on the display to indicate where the first suggested frequency is and the



frequency in MHz will appear below the scan graphic.

• Press the INC key to accept the new frequency.

Zaxcom RX200 Main Menu

• Press the DEC key to suggest another frequency.

Setting the Scan Range

SCAN LIMIT ALL 200 512 - 698

The scan range menu sets the frequency range that the RX200 will scan when doing a frequency scan. Pressing the INC and DEC key will cycle through the scanning options. If the scan range is changed the RX200 will jump back to the scanning menu when the MENU key is pressed.

Available Scan Ranges

- All 200 The RX200 will scan all frequencies from 512.0MHz through 698.0MHz.
- **LO 100** Corresponds to the frequency range of TRX2.5 transmitters, when selected the RX200 will scan all frequencies from 512.0MHz through 614.0MHz.
- **HI 100** Corresponds to the frequency range of TRX2.6 transmitters, when selected the RX200 will scan all frequencies from 596.0 through 698.0MHz.
- BLK (20 -26) choose to scan a specific block (Blocks 20-26).
 - Block 20 518-542 MHz
 - Block 21 536-572 MHz
 - Block 22 560-590 MHz
 - Block 23 590-614MHz (block 23 needs to be enabled)
 - Block 24 614-644 MHz
 - Block 25 638-668 MHz
 - Block 25 662-698 MHz

Test Tone Output

TONE: OFF

The test tone menu allows the RX200 to output tone from the TA5 outputs. This is useful to set levels and check routing.

Pressing the INC and DEC key will cycle through the different tone settings.

- **OFF** No tone is being outputted.
- -20dBFS -Tone is simultaneously sent to both outputs at -20dBFS.
- +OdBFS Simultaneously sends tone to both outputs at full scale OdBFS.

Time Code

TC: 02:09:18:05 29.97DF

The time code menu displays the time code that the RX200 is receiving from the transmitter. The RX200 will automatically detect and adjust and display the time code frame rate.

Extended Menu

Navigating the Extended Menu

- Press and hold the DEC key while in the home screen to enter the extended menu.
- To advance to the next menu press the MENU key.
- Press and hold the MENU key at any point to return to the top of the extended menu.

Exiting the Extended Menu

• To exit the extended menu - hold the MENU key to jump to the top of the extended menu. Then press the INC key to exit the extended menu.

Audio Out

AUDIO OUT: AES

The audio out sets the format that the RX200 will output audio on the TA5 connector.

- AES The RX200 will output AES audio.
- ANALOG The RX200 will output analog audio.

Please note that some Sony F5 cameras may not be able to lock on to the AES signal out of the RX200. If this is the case from the home screen of the RX200 press the INC or DEC key to send a signal to the AES out that will cause the camera recognize and lock to the AES signal from the RX200.

Output Level

OUTPUT LEVEL: 0 dB

The output level set the audio level of the RX200.

The RX200 can output audio at:

- OdB Line level
- -10dB Consumer level
- -35dB Mic level

Mute Time Code Until Jammed

MUTE TC UNTIL JAMMED: ON

If mute time code is set to on, the time code out of the BNC is muted and will not output any time code until the RX200 receives and locks to the time code that is being sent from the transmitter. This is to prevent incorrect time code being outputted.

Time Code Output Level

TC OUTPUT LEVEL: 1.5 VOLTS

The RX200 has variable time code output level and is adjustable from .01 to 1.5 volts.

Software Update

PRESS ↑ TO UPDATE SOFTWARE

This menu is where the RX200's software is updated from.

When in this menu pressing the INC key will start the update process, the RX200 will wait and search for software that will be transmitted from a TRX transmitter (running software version 9.21 or higher) or a TRX900CL (running software version 1.80 or higher). After the RX200 starts to receive the program from the transmitter the RX200 will automatically begin updating the software.

Modulation Select

RX FORMAT: STEREO

The modulation menu is where the receive format is set. Modulation is simply the way a transmitter "modulates", or sends, its signal to the RX200. This setting needs to match the modulation mode that the corresponding transmitter is set to - if the two setting do not match the RX200 will not be able to receive and decode the signal from the transmitter.

Modulation types

- **STEREO** Select when receiving audio from a TRX900CL Camera Link, Maxx transmitter, TRXLA2S, or a TRXLT2S stereo transmitter.
- XR MONO Select when using extended range modulation (XR) on a TRXLA or TRXLT transmitter.
- MONO Select when using a mono transmitter and XR modulation is not available in the software.
- EU Select when using a transmitter that is set up for European broadcast standards.

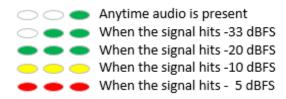
Blue LED Set

LED METER MODE: BLUE PLUS METERS

The LED meter mode sets the action of the side mounted LEDs. The side mount LEDs were designed to give visual confirmation that audio and RF is being received at the RX200.

- **BLUE ONLY** The middle LED will illuminate blue when the RX200 is receiving a valid RF signal and the other LEDs will not illuminate.
- **BLUE PLUS METERS** The middle LED will illuminate blue when the RX200 is receiving a valid RF signal. In addition the LED above will illuminate when audio is being receiver on the left channel and the bottom LED will illuminate when audio is being received by the right channel.

Mono mode LED colors



Stereo mode LED colors

When the signal is -20dBFS or less
 When the signal is between -19 and -6 dBFS
 When the signal is -5dBFs and above

LED Brightness Set



The LED brightness menu sets the brightness of the side mount LED's.

- Off The LEDs don't illuminate.
- Numeric Value (variable values) adjustable brightness levels.
- Bright The LEDs are on their brightest setting.

OLED Brightness



The OLED brightness menu adjusts the brightness of the OLED display. The brightness can be adjusted from 0 to 3 with 0 being the dimmest setting and 3 being the brightest.

Hide Encryption Menu



This menu allows for the encryption menu to be hidden preventing accidental changes.

- HIDDEN The encryption menu does not appear when cycling through the menu settings.
- **SHOW** The encryption menu will appear.

Encryption Code Set

ID1: 000 ID0: 000

This menu is where the encryption is turned on and the code is set. This code needs to match the encryption code of the associated transmitters. If an encryption code is set on the transmitter the transmitted audio will be encrypted and can only be listened to if the RX200 has the same matching encryption code entered. When the codes do not match, all that will be heard is white-noise.

These two sets of numbers are formed into a single six-digit encryption code which provides a total of 16,777,216 possible combinations. For non-encrypted operations all six numbers should be set to 0.

Adjusting the encryption code

- 1. To change the designated character, press the INC or DEC key
- 2. Press the menu key to advance to the next character.
- 3. To exit this page, press and hold the MENU key.

Zaxcom RX200 Wiring Diagrams

Wiring Diagrams

Audio Output Connector TA5

Single Analog Channel out - TA5

TA5 out on RX200	XLR into Camera or Mixer
PIN 1	→ PIN 1
PIN 2	→ PIN 2
PIN 3	→ PIN 3
PIN 4	No Connection
PIN 5	No Connection

Two Analog Channels out - TA5

TA5 Out on	XLR into Camera or
RX200	Mixer
PIN 1 —	→ PIN 1 on both XLRs
PIN 2	PIN 2 - Left
PIN 3	→ PIN 3 - Left
PIN 4	PIN 2 - Right
PIN 5	PIN 3 - Right

AES Digital out of TA5

The TA5 connector is also used to output AES digital audio. The TA5 will output a stereo pair on connectors 1, 2 and 3 with pin 1 being ground.

When receiving audio from a mono transmitter the RX200 will output the same audio on both pairs on the TA5. IMPORTANT: While sending digital audio, it is necessary that the unit on the other end (recorder, mixer, etc.) have digital inputs with sample rate convertors, as there is no way to synchronize the output data with the recorder's digital input.

TA5 out on	XLR into Camera or
RX200	Mixer
PIN 1	→ PIN 1
PIN 2	→ PIN 2
PIN 3	→ PIN 3
PIN 4	No Connection
PIN 5	No Connection

12 Volt DC power - Switchcraft 760K

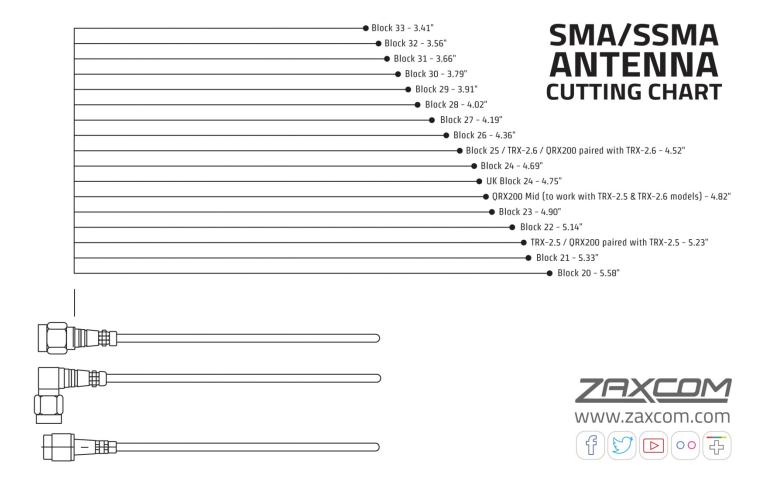
DC Power		
In		
+ _	CENTER PIN	
_	SLEEVE	

Operating Frequencies

UHF Audio

512.0 MHz to 698.0 MHz (Blocks 20 through 26)

Antenna Cutting Chart



Zaxcom RX200 Firmware Update

Firmware

Each RX200 is shipped with the latest firmware version installed.

Each time the RX200 is powered up, the firmware version number is displayed briefly on the screen. Pressing the DEC key during the boot up will slow down the screen to allow easier viewing of the information.

As newer firmware becomes available, it can be downloaded from the Zaxcom website http://www.zaxcom.com/software-updates

Zaxcom RX200 Firmware Update

Updating the RX200 software using a TRX transmitter

Please note the TRX needs to be running software version 9.21 or higher or TRX900CL running 1.80 or higher.

- 1. Format a micro SD card in a TRX transmitter.
- 2. With a computer take the formatted card and perform the following:
 - Delete the "DELETE.ME" file from the card.
 - Download the new RX200 software and load it into the card (RX2-XXX.BIN).
- 3. At the RX200:
 - Verify the receiver mode is set to mono mode.
 - Verify encryption is off (ID1 and ID0 are both set to 000)
 - Set the UHF Frequency to the same frequency as the programming transmitter.
 - From the extended menu go to the software update page and press the INC key.
 - The screen will display waiting for program. This indicates the receiver is ready to download the new version.
 - Place the RX200 within 10' and line-of-sight of the programming transmitter. All of the units should remain motionless to insure they receive a strong and undisturbed signal.
- 4. At the transmitter:
 - Insert the card.
 - Press and hold the MENU key while powering up the transmitter.
 - If the receiver has a good connection, the status indicator on the RX200 will be green.
 - Verify the allow IFB remote control is set to OFF if applicable.
 - Advance to the Send QRX Program menu.
 - Press the INC key.
 - The TRX will indicate that it found the program on the card and has started sending it. Please note the transmit process will cycle over and over until manually stopped.
- 5. The RX200 should indicate it is receiving the program.
- 6. After the software cycle, all of the RX200 should be re-programmed. If there is a reception error, the RX200 automatically restarts the process with the start of the next cycle.
- 7. When the RX200 is done updating the software "SUCCESS . . . REBOOT NOW" will be displayed.
- 8. At the Programming Transmitter:
 - Press the MENU key to stop the download process.
 - If appropriate, change the allow IFB remote control back to ON.
 - Cycle its power.
- 9. At the RX200:
 - · Cycle the power
 - Verify the new firmware version number is displayed during the boot process

WARNING: After the RX200 has received its entire program, it will erase and burn its firmware into the ROM. During this process, which only takes a few seconds, you must not turn 'OFF' the RX200.

Do not turn off the RX200 until "SUCCESS . . . REBOOT NOW" has been displayed.

If the program is never fully received, it is safe to cycle the power.

Zaxcom RX200 Specifications

Specifications

Receiver

Receiver RF Channels: 1

Diversity method: antenna switching RF Modulation: proprietary digital method RF Frequency Range: 518 to 698 MHz

RF Frequency Step: 100 KHz RF Signal Bandwidth: 200 KHz

Channel Separation: 500 KHz (700 KHz recommended)

Sensitivity: -114 dBm

Antenna Connector: 50-ohm SMA female (x 2)

Receiver Audio – Analog Output (x 2)

Dynamic Range: 116 dB Distortion: 0.002%

Frequency Range: 20Hz to 16kHz

DAC Bit-depth: 24 bits Connector: TA-5M

Audio Output: Active analog balanced

Audio Output Level: -35dBm (mic), -10dBm (consumer) or 0dBm (line)

Receiver Audio – Digital Output

Signal Format: AES Balanced AES dynamic range: 123dB Frequency Range: 20Hz to 16kHz AES output: AES3 balanced at 96KHz Audio Output Connector: TA-5M

Timecode

Timecode output connector: BNC

Timecode output level: .01VPP, .2VPP, .5VVP, .9VPP, 1.5VPP Time code output rate: 23.98, 24, 25, 29.97 ND, 29.97 DF, 30

Power

External Power: 6 to 18 VDC (140mA @ 12VDC)

Power Connector: Switchcraft 760k Internal Power: 4 AA Batteries Li-Ion Battery Life: Up to 12 hours NiMH Battery Life: Up to 8.5 hours Alkaline Battery life: Up to 7 hours

Miscellaneous

Serial Control Port: RS422

Weight: 7.7 oz. (without internal batteries)

Dimensions: 1.0" x 3.5" x 3.5" (25mm x 89mm x 89mm)

Display: Graphic White OLED Panel

Zaxcom RX200 Support

Product Support

Register your product with Zaxcom: http://zaxcom.com/support/product-registration/

Download the latest **Firmware** from: http://zaxcom.com/support/updates/
http://zaxcom.com/support/updates/

Submit Technical Questions at: http://www.zaxcom.com/submit-a-technical-question

Submit information for **Repair Services** at: http://www.zaxcom.com/support/repairs
Join the **Zaxcom User Forum** at: http://www.zaxcom.com/forum/forum.php

Join the Zaxcom Face Book User Group at: https://www.facebook.com/groups/682199065139938/

Zaxcom Warranty Policy and Limitations

Zaxcom Inc. values your business and always attempts to provide you with the very best service.

No limited warranty is provided by Zaxcom unless your RX200 ("Product") was purchased from an authorized distributer or authorized reseller. Distributers may sell Product to resellers who then sell Product to end users. Please see below for warranty information or obtaining service. No warranty service is provided unless the Product is returned to Zaxcom Inc. or a Zaxcom dealer in the region where the Product was first shipped by Zaxcom.

Warranty Policy

The Product carries a Standard Warranty Period of one (1) year.

NOTE: The warranty period commences from the date of delivery from the Zaxcom dealer or reseller to the end user.

There are no warranties which extend beyond the face of the Zaxcom limited warranty. Zaxcom disclaims all other warranties, express or implied, regarding the Product, including any implied warranties of merchantability, fitness for a particular purpose or non-infringement. In the United States, some laws do not allow the exclusion of the implied warranties.

Troubleshooting & Repair Services

No Product should be returned to Zaxcom without first going through some basic troubleshooting steps with the dealer you purchased your gear from.

To return a product for repair service, go to the Zaxcom Repair Services page http://www.zaxcom.com/repairs and fill in your information; there is no need to call the factory for an RMA. Then send your item(s) securely packed (in the original packaging or a suitable substitute) to the address that was returned on the Repair Services page. Insure the package, as we cannot be held responsible for what the shipper does.

Zaxcom will return the warranty repaired item(s) via two-day delivery within the United States at their discretion. If overnight service is required, a FedEx or UPS account number must be provided to Zaxcom to cover the shipping charges.

*Please note a great resource to troubleshoot your gear is the Zaxcom Forum: http://www.zaxcom.com/forum.

Warranty Limitations

Zaxcom's limited warranty provides that, subject to the following limitations, each Product will be free from defects in material and workmanship and will conform to Zaxcom's specification for the particular Product.

Limitation of Remedies

Your exclusive remedy for any defective Product is limited to the repair or replacement of the defective Product.

Zaxcom may elect which remedy or combination of remedies to provide in its sole discretion. Zaxcom shall have a reasonable time after determining that a defective Product exists to repair or replace a defective Product. Zaxcom's replacement Product under its limited warranty will be manufactured from new and serviceable used parts. Zaxcom's warranty applies to repaired or replaced Product for the balance of the applicable period of the original warranty or thirty days from the date of shipment of a repaired or replaced Product, whichever is longer.

Limitation of Damages

Zaxcom's entire liability for any defective Product shall, in no event, exceed the purchase price for the defective Product. This limitation applies even if Zaxcom cannot or does not repair or replace any defective Product and your exclusive remedy fails of its essential purpose.

No Consequential or Other Damages

Zaxcom has no liability for general, consequential, incidental or special damages. These include loss of recorded data, the cost of recovery of lost data, lost profits and the cost of the installation or removal of any Product, the installation of replacement Product, and any inspection, testing or redesign caused by any defect or by the repair or replacement of Product arising from a defect in any Product.

In the United States, some states do not allow exclusion or limitation of incidental or consequential damages, so the limitations above may not apply to you. This warranty gives you specific legal rights and you may also have other rights, which vary from state to state.

Your Use of the Product

Zaxcom will have no liability for any Product returned if Zaxcom determines that:

- The Product was stolen.
- The asserted defect:
- Is not present,
- · Cannot reasonably be fixed because of damage occurring when the Product is in the possession of someone other than Zaxcom, or
- Is attributable to misuse, improper installation, alteration, including removing or obliterating labels and opening or removing external covers
 (unless authorized to do so by Zaxcom or an authorized Service Center), accident or mishandling while in the possession of someone other than
 Zaxcom.
- The Product was not sold to you as new.

Additional Limitations on Warranty

Zaxcom's warranty does not cover Product, which has been received improperly packaged, altered or physically abused.



Declaration of Conformity

ZAXCOM, INC. 230 West Parkway, Unit 9 Pompton Plains, NJ 07444 September 1, 2015

We certify and declare under our sole responsibility that the following product:

QRX200, QRX235, RX-12 and RX200 wireless microphone receivers Restrictive use for residential, office and professional use only

Conforms with the essential requirements of the EMC Directive 2004/108/EC and R&TTE Directive 99/5/EC, based on the following specifications applied:

EN 300 422-2 v1.3.1 Radio Parameters

EN 301 489-9 v1.4.1 Immunity

EN 60950: 2006/A1:2011 Product Safety (low voltage directive)

EN 50566: 2013 RF Exposure Safety

Our authorized representative in Europe is Mr. Roger Patel, Director of Everything Audio located at Elstree FIlm Studios, Shenley Road, Borehamwood, Herts WD61JG in England.

Glenn Sanders

President

Zaxcom, Inc.

FCC Notice:

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. The 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: • Reorient or relocate the receiving antenna • Increase the separation between the equipment and receiver • Connect the equipment into an outlet on a circuit different from that which the receiver is connected • Consult the dealer or an experienced radio/TV technician for help. Changes or modifications to this equipment not expressly approved by Zaxcom, Inc. could void the user's authority to operate it.