

USER MANUAL

Published October 2015

Software Version 1.67



ZAXCOM.COM

TRX900CL

The Ultimate In Sending Audio to Camera

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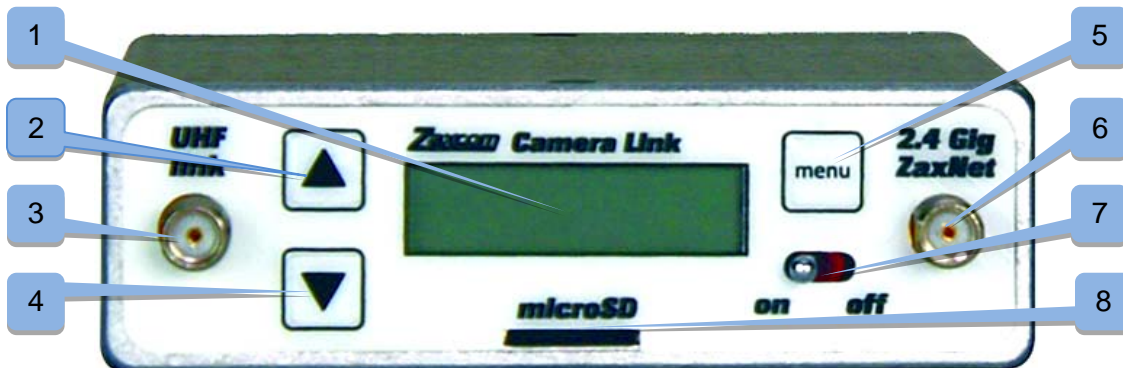
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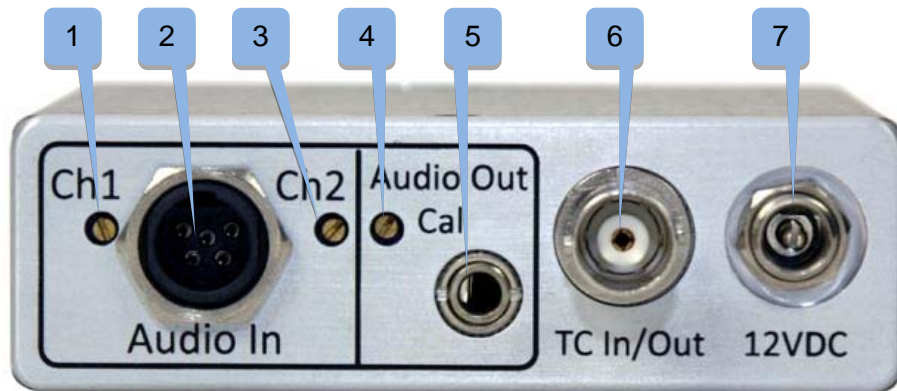
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Knowing your Camera Link



1. LCD Display
2. INC / Record Key
 - Increases the parameters of a menu item.
 - When in the Home Screen:
 - Pressing and hold when home screen record is enabled will put the TRX900CL into record.
 - When in the Transport Control Screen:
 - When not recording a quick press will cause the TRX900CL to play back.
 - A quick press while playing back will jump ahead within the same segment.
 - Press and hold to advance to the next segment.
3. SMA Antenna Connector - UHF
4. DEC / Stop Key
 - Decreases the parameters of the menu items.
 - When in the Home Screen:
 - Press and hold when the home screen record enabled to stop recording.
 - A quick press will display the record segment.
 - When in the Transport Control Screen:
 - A quick press when playing back will cause the TRX900CL to stop playback.
 - Press and hold while playing back will jump to the start of that segment.
 - A quick press while stopped will jump back to the previous segment.
5. Menu Key
 - Press it to access the menu and to advance to the next menu item.
 - Hold while powering up to access the Extended Menu.
6. SMA Antenna Connector - ZaxNet
7. Power Switch
8. Micro SD Card Slot

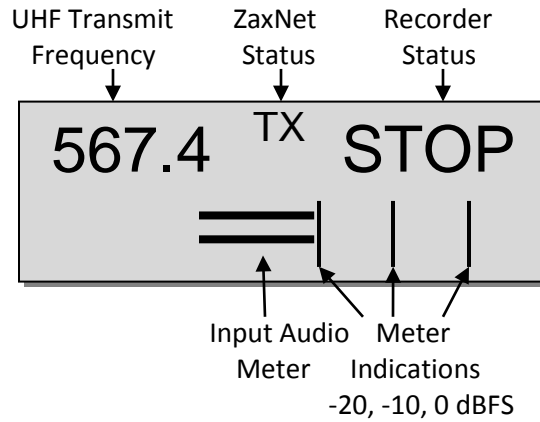
To insert a Micro SD card, turn the card so the finger contacts are facing up towards the LCD screen and down toward the slot. Insert the card into the slot and press it down until you hear a slight click. To remove it, press the card in until you hear the same click again.



1. Analog Input Trim Adjust - Channel 1 (Left)
2. Audio In Connector - TA5M
This connector will be used to input both analog and digital audio.
 - Analog audio is two balanced line level inputs
 - Digital audio is an AES pair.
3. Analog Input Trim Adjust - Channel 2 (Right)
4. Audio Out Level Adjust
5. Audio Out - 3.5mm (summed to mono on tip of a TRS)
 - When in playback the playback audio from the card will be outputted.
 - When in transmit mode the inputted audio will be outputted.
 - When in receive mode the ZaxNet received audio will be outputted. If there is no ZaxNet audio present the inputted audio will be outputted.
 - When recording the inputted audio will be outputted. When recording in receive mode the ZaxNet received audio will be outputted.
6. Time Code IN/OUT - BNC
Menu adjustable to be used as a time code input or output.
7. DC Power Input - Switchcraft 760K connector.

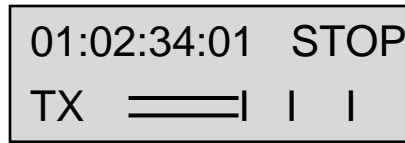


Home Screen Explained



Frequency

This is the transmit frequency or can optionally display the time code of the TRX900CL. The TRX900CL, by default, will display the operating UHF frequency of the unit. If the transmitter is turned off and the TRX900CL is in RECORD ONLY mode "NOTX" will be displayed. If the HOME TC DISPLAY menu is set to ON then the frequency will be replaced with the time code and the ZaxNet status is moved to the lower left corner.



Home Screen with time code

ZaxNet Status

The ZaxNet status will alternate between its status and time remaining on the card.

- TX - The TRX900CL is transmitting ZaxNet time code and audio over ZaxNet.
- JAM - The transmitter time code is currently jammed either via ZaxNet or from the BNC input - depending on the menu setting.

Transport Status

Displays the current mode of the on board recorder and what transport commands are being sent to the TRX transmitters via ZaxNet.

- REC - TRX record commands will be sent / the internal recorder is recording
- STOP - TRX recording and playback is stopped / the internal recorder is stopped.
- PLAY – Will be displayed while playing back.

Input Audio Meter

Displays the modulation of the inputted audio signal.

Main Menu

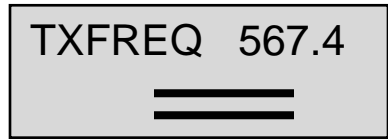
Navigating the Main Menu

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

Exiting the Main Menu

- To exit the menu at any time press and hold the MENU key for 1.5 seconds

UHF Transmit Frequency Set

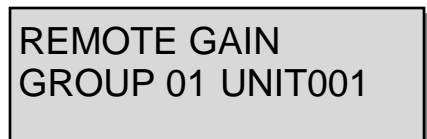


The UHF transmit frequency is set from this menu.

- Short presses of the INC or DEC key causes the value to change by 0.1 MHz.
- Holding the INC or DEC key causes the value to change by 0.5 MHz.

Remote Transmitter Gain Adjust

This menu will only appear if IFB mode is set to TX (transmit).



The remote gain menu adjusts the gain, via ZaxNet, of the TRX transmitter that has the same group and unit code displayed if "ALL" is selected for the unit code each TRX transmitter in that group will be adjusted simultaneously. If the TRX is not in range of the ZaxNet signal, the gain command will have to be repeated once the transmitter comes back into range

Please note that this does not affect the gain of the TRX900CL.

Adjusting the TRX transmitter gain remotely

- Press the INC key to increase the gain. The display will show "++" in the top right hand corner as the gain is being adjusted.
- Press the DEC key decrease the gain. The display will show "--" in the top right hand corner as the gain is being adjusted.
- Each key press will alter the gain by 2dB.

Unit Code Select

REMOTE CONTROL
UNIT CODE = ALL

Each TRX transmitter can be assigned a specific unit code. That unit code allows for that specific transmitter to be controlled individually from the TRX900CL. This menu allows for the unit code to be changed so an individual transmitter can be controlled. If "ALL" is selected multiple transmitters, in the same group, can be adjusted at the same time. The unit code can be set to any number from 1 to 200 or "ALL" can be selected - to control all transmitters at the same time.

Please note that if the unit code is changed pressing the MENU key will navigate back to the remote gain menu. If no changes are made to the unit code pressing the MENU key will advance to the next menu item.

Remote Frequency Adjust

This menu will only appear if IFB mode is set to TX (transmit).

REMOTE CH 548.0
UNIT CODE = 1

The remote frequency adjust menu is where the frequency of the transmitter that is being controlled is changed from. If the unit code is set to ALL "WARNING" will be displayed and the frequencies cannot be changed. This is because if ALL is selected all transmitters will be re-tuned to the same frequency.

Adjusting the TRX transmitter frequency remotely

- In the unit code menu set the unit code for the transmitter to be adjusted.
- Press the INC key to increase the frequency.
- Press the DEC key to decrease the frequency.
- Pressing the INC or DEC key will change the frequency by .1 MHz
- Pressing and holding INC or DEC the key will change the frequency by 1MHz.

Remote Power Mode

This menu will only appear if IFB mode is set to TX (transmit)

REMOTE POWER MODE
0: POWER = ON

The remote power mode menu allows for the RF power setting of the TRX transmitters to be adjusted.

The TRX transmitters have three selectable power settings:

- **NORMAL** - The transmitters are at full transmitting power.
- **WAKE** - If a TRX transmitter is set to REMOTE STANDBY it will power up to a non-transmitting low power mode. A transmitter set to wake will save approximately 75% of the power of normal operations. To use wake mode set the BOOT UP MODE to REMOTE STANDBY in the TRX transmitter. When in remote standby the TRX, when powered up, will remain in standby mode until it receives the wake command from the IFB200 to wake it. Once the TRX is awoken the only way for the TRX to go back into standby mode is by a power cycle. So when "WAKE" is selected in this menu the TRX transmitter will go to full power.
- **LOW 2** - Low 2 disables the RF power amplifier, RF board and microphone pre-amp on the TRX transmitter. In LOW 2 mode the TRX will save approximately 50% of the power of normal operations. The TRX transmitter can be put into or taken out of LOW 2 as often as desired when selected in this menu.

Settings:

- **0: POWER=ON** – Normal operation - the TRX will be fully powered ON
- **1: POWER=ON** – Normal operation (same as 0) filler to prevent accidental power setting adjustment.
- **2: POWER=ON** – Normal operation (same as 0) filler to prevent accidental power setting adjustment.
- **3: POWER=ON** – Normal operation (same as 0) filler to prevent accidental power setting adjustment.
- **4: POWER=ON** – Normal operation (same as 0) filler to prevent accidental power setting adjustment.
- **5: POWER=WAKE** – This would be selected to wake a TRX transmitter to full power when the boot up mode is set to remote standby.
- **6: POWER=LOW2** – This setting will put the TRX transmitter into and out of a low power mode. A transmitter can come in and out of LOW 2 mode as needed. When in LOW 2 mode "LOW 2" will be displayed on the TRX's home screen. Please note LOW 2 will not disable recording but audio will be muted. Once the TRX power is set to Low 2 the TRX900CL can be powered down. Then when the TRX900CL is powered up all TRX's being controlled will automatically come up to full power since the TRX900CL will always boot up to the 0 Power setting. Please note if the TRX transmitter is not in range of the ZaxNet signal, the power setting command will have to be repeated once the transmitter comes back into range.

Transport Menu

```
STOP 01:02:34:01
001  ==
```

Recorded files can be played back from this page.

The top line displays the current mode of the recorder: REC, PLAY or STOP followed by the time code.

The bottom line contains the current segment number and the audio level.

Playing back from the transport page

- Pressing the INC key while stopped will play the segment that is displayed.
- Pressing the INC key while playing back will jump ahead approximately 2 minutes.
- Press and holding the INC key will advance to the next segment.
- Pressing the DEC key while playing back will stop the playback.
- Holding the DEC key while playing back will take you to the start of that segment.
- Pressing the DEC key while stopped will jump back a segment.

Time Code Routing

```
TC CONNECTOR:
OUTPUT
```

The time code routing menu sets the function of the BNC time code connector.

- **OUTPUT** - The TRX900CL will output time code on the BNC connector.
- **INPUT** - The TRX900CL will receive time code on the BNC connector.

Time Code Frame Rate Select

```
TIMECODE 23.98
GEN 01:02:34:01
```

The time code frame-rate that will be recorded and transmitted over ZaxNet is set from this menu.

The TRX900CL will lock to and record all standard time code frame rates.

- 23.98, 24, 25, 29.97DF, 29.97DF, 30 DF, 30 NDF

IFB Mode

```
IFB MODE=OFF
```

This menu enables, disables the IFB board in the TRX900CL.

- **OFF** - The IFB board will be shut off and the TRX900CL will not send or receive IFB audio or time code via ZaxNet nor can remote control commands be sent.
- **RX** - Enables the IFB board so that the TRX900CL will receive ZaxNet IFB audio and time code.
- **TX** - Enables the IFB board so that the TRX900CL will send ZaxNet IFB audio and time code and send remote control commands to the TRX transmitters.

Audio Output

AUDIO OUTPUT
REC/PLAY

The audio output menu sets what audio will be outputted on the 3.5mm audio out connector on the TRX900CL.

- **REC/PLAY** - Outputs the audio from the SD card - this is the audio that is either currently being recorded or playing back.
- **IFB RX AUDIO** - Outputs the audio that is being received from ZaxNet IFB.
- **IFB MIX ALL** - Outputs a mix of the recording / playback audio and the IFB audio.

IFB TX Adjust

IFB TX MIX:
LEFT AND RIGHT

The IFB audio mix sets what audio will be transmitted from the TRC900CL via ZaxNet. Please note that this only affects the ZaxNet IFB audio and not the UHF transmitted audio.

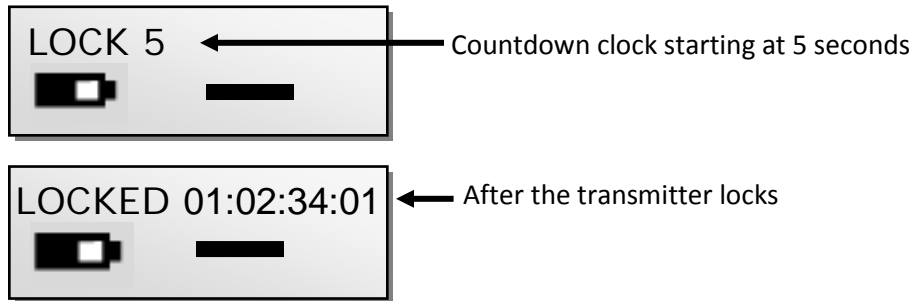
- **RIGHT ONLY** - Right inputted audio only will be transmitted.
- **LEFT ONLY** - Left inputted audio only will be transmitted.
- **LEFT AND RIGHT** - Both Left and right audio will be summed to mono and transmitted.

Time Left

TIME LEFT	20H
TIME USED	4H

This page displays the remaining record time left on the card and the time already recorded on the card. Please note that this page will not be displayed if the card was not inserted prior to boot up.

Transmitter Lock Page



This page enables a lock function to prevent any accidental key presses.

When stopping on this page a countdown clock will begin. After 5 seconds the keys will lock and the display will indicate that it is LOCKED followed by the time code.

If you exit this screen before the 5 seconds is up the TRX900CL will not lock.

To unlock the transmitter

- Simultaneously press the MENU and INC keys.
Or
- Powering down the unit will clear the lock.

Extended Menu

Entering and Navigating the Extended Menu

- Press and hold the MENU key while powering up the unit.
- Pressing the MENU key will advance to the next menu item.

Exiting the Extended Menu

- Hold down the MENU key to get back to the extended menu home page then press the INC key.
Or
- Cycle the power

UHF Signal Format



TX FORMAT:
STEREO

The UHF transmission format is selected from this page.

- **STEREO** -This format is used for stereo transmission.
Stereo will be used with the NORMAL setting on the QRX and 2=ST setting on the RX900 receiver.
- **US MONO** - This format is used for mono transmission.
US MONO will be used with the NORMAL setting on the QRX and the 0=US setting on the RX900 receiver.
- **EUROPEAN** -This format is for use in countries where a normal width channel is NOT legal.
European will be used with the NARROW setting on the QRX and 1=EU setting on the RX900 receiver.
- **US MONO-R** -Similar to **US MONO**. This can be used to force mono audio to the right channel.

Please note if the transmission format that is set here, and the format set on the receiver do not match, the receiver will be unable to decode the audio from the transmitter. Also note that after any changes to the transmit format the TRX900CL will be required to be rebooted before the new setting takes effect.

UHF Transmitter Power Level



TX POWER: 100 MW

The UHF transmit power of the TRX900CL is set from this page.
The TRX900CL can be adjusted to output 10, 25 or 100mW

IFB Transmit Power

This menu will only appear if IFB mode is set to TX (transmit).

IFB TX POWER: 7

The ZaxNet transmit power of the TRX900CL is set from this page.

IFB Mode

IFB MODE: TX

This menu sets if the on ZaxNet transceiver in the TRX900CL will transmit or receive ZaxNet.

Please note that if the IFB mode is set to off or RX (receive) the TRX transmitter control menu items in the main menu will not be available.

- **OFF** - The ZaxNet transceiver is turned off and the TRX900CL will not transmit or receive ZaxNet.
- **RX** - The IFB-200 will receive ZaxNet IFB audio and time code.
- **TX** - The IFB-200 will send ZaxNet commands, IFB audio and time code.

IFB Voting Enable

This menu will only appear if IFB mode is set to RX (receive).

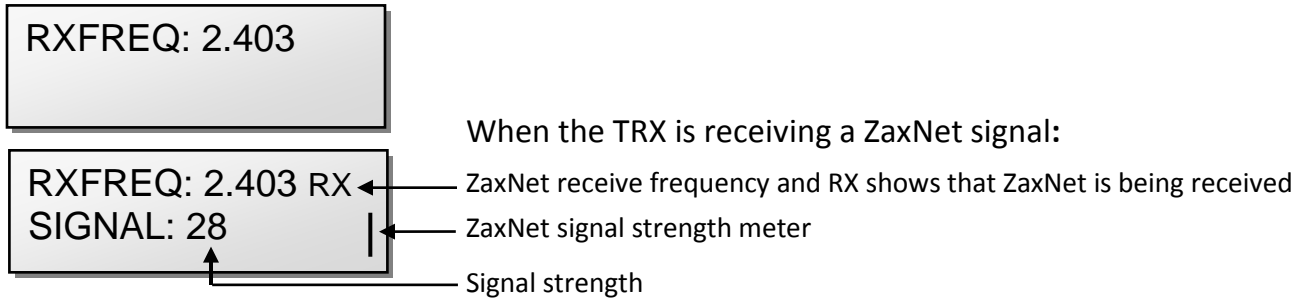
IFB VOTING
NORMAL (OFF)

This menu enables / disables the IFB Voting function when the TRX900CL is being used to receive ZaxNet.

The purpose of IFB voting is to allow the TRX900CL to choose, and switch to, the stronger signal from two different ZaxNet transmitters. IFB voting allows a second IFB transmitter to be placed at a different location then the ZaxNet receiver will choose the stronger of the two signals to listen to.

Please note that when using IFB voting the second ZaxNet transmitting frequency must be set to exactly 2MHz higher than the first ZaxNet transmitter.

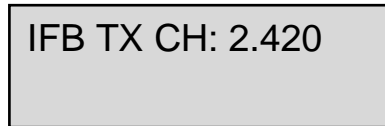
ZaxNet Receive Frequency Set



This menu is where the ZaxNet receive frequency is set.

The ZaxNet receive frequency is the frequency that the TRX900CL will get its wireless time code and remote control commands on. This frequency will need to match the frequency of the corresponding ZaxNet transmitter. The ZaxNet transmitter can be a QRX with QIFB, Nomad, or an IFB100/200. There are 72 selectable ZaxNet frequencies from 2.403GHz – 2.473GHz

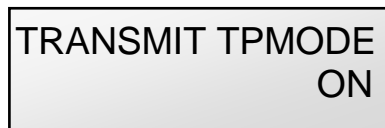
ZaxNet Transmit Frequency Set



This menu is where the ZaxNet transmit frequency is set.

The ZaxNet transmit frequency is the frequency that the TRX900CL will broadcast time code and ZaxNet audio on. The ZaxNet transmission from the TRX900CL can be received by ERX receivers, Nomad, or a QRX receiver with an IFB option board installed. A TRX transmitter or ZFR recorder can also receive and jam its time code from the TRX900CL on this frequency.

Transmitter Remote Roll Enable



This menu enables the TRX transmitters to follow the record and stop commands of the TRX900CL. If this is set to ON and the recording on the TRX900CL is triggered all TRX transmitters that are being controlled via ZaxNet from the TRX900CL will begin to roll.

Power Roll

POWER ROLL:
OFF

Power roll allows a TRX transmitter to stay at lower transmit power setting to conserve battery power when not recording. Then when record the transmitter will increase its output power. Please note to use this feature the TRX transmitter will need to have power roll and it will need to be enabled in the TRX transmitter.

- **OFF** – Power roll is disabled.
- **DIVA TRIGGER** – When a Zaxcom recorder begins to record the ZaxNet information that is embedded in the time code will cause the transmitter to go to full transmit power. To use this feature the IFB200 would need to be hard wired to the time code out.
- **RECORD TRIGGER** – When the TRX900CL receives running time code, in a record run situation, the IFB200 will send a command to the TRX transmitter to go to full power.

IFB Dropout Compensator

This menu will only appear if IFB mode is set to RX (receive)

IFB DROPOUT
COMPENSATOR ON

The IFB dropout compensator menu enables /disables the ZaxNet IFB drop out compensator.

When the drop out compensator is enabled, and if there is a brief drop out in the received ZaxNet audio, the drop out compensator will replace the drop out with a bit of the surrounding audio so the audio will match and there will be no audible drop out.

Power-Up Mode

POWER UP MODE:
LOCKED

The power up mode menu sets what happens to the keys on the TRX900CL after boot-up.

- **LOCKED** – After boot-up has completed, the TRX900CL will automatically go into lock mode and the keys will be locked to prevent accidental changes to the settings.
- **UNLOCKED** – After boot-up the keys will remain unlocked. When in this mode the TRX900CL can always be locked by going in to the lock screen in the main menu and wait 5 seconds.
To unlock the keys at any time - simultaneously press the MENU and INC keys.

SD Card Format

This menu will only appear if a card was inserted prior to booting up

PRESS UP KEY 5X
TO ERASE CARD

The Micro SD card is erased and formatted from this menu. Please note that all cards need to be formatted prior to use and only cards formatted in the TRX900CL will work.

Before formatting the card, you may want to name the transmitter – if so please see the transmitter naming section in this manual.

To Format an SD Card:

1. With the power off, insert the memory card into the media slot with the card label to the back of the unit. Press the card all the way in until it “clicks”.
2. Power up the TRX900CL while holding the menu key to enter the extended menu.
3. Advance to this menu.
4. Press the INC key 5 times.
5. FORMATTING FAT 32 will be displayed.
6. In a few minutes, depending on the size of the card either “SUCCESS” or “FORMAT FAILED ERROR” will be displayed.
7. If “SUCCESS” appears power cycle the TRX900CL.
8. If “FORMAT FAILED ERROR” try to re-format the card, if it fails again it is not advised to use that card.

Time Code Jam Mode

TC JAM MODE:
AUTO-JAM NORMAL

If record run time code is being used this menu will control whether the TRX900CL will automatically go into record when it receives running time code.

- **AUTO-JAM NORMAL**– The TRX900CL will continuously jam time code and will not automatically go into record.
- **AUTO-LOAD REC RUN** – The TRX900CL will start and stop recording when receiving record run time code. In auto-load the TRX900CL will go into record when detecting rolling time code. And will stop when the time code stops. If time code is lost the unit will not stop but will continue in whatever state it was in until the time code signal is restored.

Time Code Source

TC SOURCE:
IFB (RF)

This menu selects how the TRX900CL will receive its time code.

- **IFB (RF)** – The TRX900CL will receive time code via ZaxNet being broadcast from another ZaxNet transmitter.
- **BNC Connector**– If BNC is selected and the TIME CODE CONNECTOR menu is set to “INPUT” the TRX900CL will receive time code via the BNC connector.

Mute Time Code Transmission Until Jammed

MUTE TC UNTIL
JAMMED: OFF

If mute time code is set to ON the ZaxNet transmitter will not broadcast time code over ZaxNet until it receives and jams its own internal time code generator. This prevents the ZaxNet from sending incorrect time code to another device.

Group Code

REMOTE CONTROL
GROUP CODE = 1

Group ID sets the TRX900CL transmitter to a "GROUP".

So for example a TRX transmitter set to Group 1 will be controlled by a ZaxNet transmitter set to Group 1 and a group 2 transmitter will be controlled by a Group 2 ZaxNet transmitter. This allows a group of transmitters to be controlled without affecting others. This will also help if two or more people on set are sending ZaxNet commands each person will be independent and won't interfere with each other. Most users leave this set to 1 on all of their Zaxcom products. Group codes can be set from 1 to 99.

Unit ID Code

REMOTE CONTROL
UNIT CODE=ALL

Each TRX transmitter can be assigned a specific unit code. That unit code allows for that specific transmitter to be controlled individually from the TRX900CL. This menu allows for the unit code to be changed so an individual transmitter can be controlled. If "ALL" is selected multiple transmitters, in the same group, can be adjusted at the same time. The unit code can be set to any number from 1 to 200 or "ALL" can be selected - to control all transmitters at the same time.

Audio Input Select

INPUT: ANALOG

The audio input select sets what audio the TRX900CL will input.

- **ANALOG** – Used when inputting an analog audio signal.
- **DIGITAL L** - Used when Inputting a digital signal on pins 1, 2, 3 on the TA5 connector.
- **DIGITAL R** - Used when inputting a digital signal on pins 1, 4, 5 on the TA5 connector.

Allow IFB Remote Control

This menu will only appear if IFB mode is set to RX (receive).

ALLOW IFB REMOTE
CONTROL: ON

IFB remote control allows the TRX900CL to accept remote control commands via ZaxNet. If IFB remote control is set to on the TRX900CL will accept frequency change commands, remote roll commands and gain changes commands via ZaxNet. If IFB remote control is set to off the TRX900CL will not receive any ZaxNet commands.

QRX / ERX Software Update

PRESS ↑ TO SEND
ERX PROG FILE

This menu is used to update the software on a Zaxcom QRX or ERX receiver. The mode of this menu will be determined by the status of the ZaxNet IFB transceiver – if set to receive (RX) mode this menu will allow the QRX to be updated if set to transmit (TX) mode the ERX can be updated.

To Update the QRX or ERX Software

1. Set the IFB to the appropriate mode depending on which software will be updated.
2. Format a micro SD card in the TRX900CL and with a computer delete the “delete.me” file.
3. Copy the appropriate software on the card and place the card in the TRX900CL.
4. Set up the QRX or ERX to receive the software (see the appropriate manual)
5. Power up the TRX900CL and advance to this menu.
6. Press the INC key.
7. The TRX900CL will begin to transmit the software to a QRX or ERX that is set to receive the software and will continuously resend the program until manually stopped.

Home Screen Record/Stop

ALLOW HOME SCR
REC-STOP: ON

This menu enables the TRX900CL to start / stop recording by using the INC and DEC keys while in the home screen. If enabled:

- Press and hold the INC key from the home screen for 1.5 seconds to start recording.
- Press and hold the DEC key from the home screen for 1.5 seconds to stop recording.

Automatic Record after Boot Up

RECORD ON BOOTUP
ON

Record after boot up will allow the TRX900CL to automatically go into record after it boots up.

- **ON** - The TRX900CL will automatically start to record after it boots up.
- **OFF** - The TRX900CL will wait for a ZaxNet command or a manual record trigger to start recording.

Phase Invert Channel

PHASE INVERT CH2
OFF

If set to ON the phase of the channel 2 (Right) audio input on the TA5 connector will be inverted to correct for a phasing issue with the input cable.

TX Disable - Record only mode

UHF TX MODE:
NORMAL TX MODE

- **Record Only Mode** – This will disable the UHF transmitter and the TRX900CL will not transmit any UHF audio. In this mode the audio can still be inputted and recorded. Please note this has no effect on the IFB transceiver.
- **Normal TX Mode** – The UHF transmitter will be enabled and audio can be recorded on the internal SD card.

Home Screen Time Code Display

HOME TC DISPLAY:
ON

This menu will determine if the TRX900CL will display its UHF transmit frequency or time code on the home screen.


01:02:03:01 STOP
RX ==

ON - The home screen will display time code and recorder status on the top and the ZaxNet status and audio meters on the bottom. When recording the ZaxNet status will also flash the time remaining on the card.

567.4 RX STOP
==

OFF - The home screen will display the UHF transmit frequency, ZaxNet Status and recorder status on the top with the audio meters on the bottom. When recording the ZaxNet status will also flash the time remaining on the card. A quick press of the DEC key while recording will display the current segment being recorded.

Backlight Timer

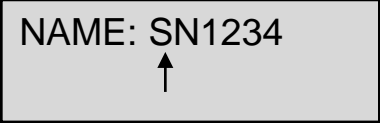


BACKLIGHT TIMER
ALWAYS ON

The backlight menu sets the function of the backlight. Please note that the power draw of the backlight is very negligible and will not be putting a high demand on the battery

- **OFF** - The backlight will always be off.
- **ALWAYS ON** - The backlight will always stay on.
- **1 - 29 seconds** - The backlight will remain on after the last button push for the selected time.

Transmitter Naming



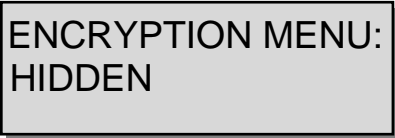
NAME: SN1234
↑

This menu allows the name of the transmitter to be changed from the default name - which is the unit's serial number. The name entered becomes part of the name of the recorded audio files, and is also included in the metadata of the BWF file. Naming the unit aids in identifying the files from several different wireless. The maximum name length is 8 characters. Any letter or number can be used.

To set/change the transmitter name

1. Press the INC or DEC key to change the character above the arrow.
2. Press the MENU key to proceed to the next character.
3. When finished, press and hold the MENU key to set the name or cycle the power.

Encryption Menu Hide

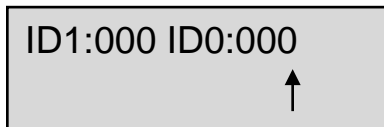


ENCRYPTION MENU:
HIDDEN

This menu allows you to hide the encryption menu to prevent accidental changes.

- **HIDDEN** - the encryption menu does not appear when cycling through the menu settings.
- **ON** - the encryption menu will appear and can be changed.

Encryption Code Set



For normal un-encrypted operations all six numbers should be set to zero. If the encryption code is set to any number other than all zeroes, the transmitted audio will be encrypted and can only be listened to if the receiver has the matching encryption code entered. When a receiver is getting an audio signal, and the codes do not match, all that will be heard is white-noise or silence.

These two sets of numbers are formed into a single six-digit encryption code which provides a total of 16,777,216 possible combinations.

To adjust the encryption code

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

Media

While any capacity card will work we recommend using a 4GB Micro SD card. We also recommend that you buy a brand name card such as Transcend, SanDisk. You should always buy your cards from a reputable dealer because counterfeit cards exist and can cause recording issues.

We also recommend that you test your card before taking them out into the field.

The following is a simple test procedure to determine if the card will function correctly:

1. Format the card in the IFB200.
2. Power cycle the unit.
3. Record at least 20 minutes of audio to a card with no time code source feeding the IFB200.
4. Look at the Main Screen it should still be recording in segment #1.

Please note the transmitter will **NOT** record onto the card if:

- The card was not inserted when the IFB200 was powered up.
- If the card was removed while the power was on.
- If LOW BATTERY is being displayed.

Media Capacity

The IFB200 can use Micro SD cards, ranging in size from 128 MB to 16 GB. While any size card will work we recommend using 4GB cards. Please note that regardless of the size of the card the onboard recorder will only be able to record up to 254 individual segments on any given card.

Available recording times are as follows:

Media Size	Available Recording Time
128 MB	45 minutes
256 MB	1.5 hours
512 MB	3 hours
1 GB	6 hours
2 GB	12 hours
4 GB	24 hours
8 GB	48 hours
16 GB	96 hours

Recording Format

The media card is formatted using a FAT32 file system. While recording, the unit places all recorded audio in a single file on the media.

The files generated will be recorded as a .zax file and can only be recognized by Zaxcom's ZaxConvert program. Using ZaxConvert will convert the file to a Broadcast Wave or MP3 file. This utility is available to anyone for free from the Zaxcom website <http://www.zaxcom.com/software-updates>

Firmware

Each unit is shipped with the latest firmware version installed. As newer firmware becomes available, it can be downloaded from the Zaxcom website:

<http://www.zaxcom.com/software-updates>

Newer version of Beta software may be found on the Zaxcom Forums:

<http://www.zaxcom.com/forum>

Each time the TRX900CL is powered up, the firmware version number is displayed briefly on the LCD screen. Pressing the DEC key during the boot up will slow down the screen to allow easier viewing of the information.

Updating the TRX900CL Firmware

1. Format a micro SD card in the TRX900CL and with a computer delete the “delete.me” file.
2. Download the new firmware from the Zaxcom website and load it onto the formatted card.
3. Insert the card into the TRX900CL.
4. Simultaneously hold down the INC and DEC keys while powering up the TRX900CL.
5. The screen will display “BURN ROM” with the version of firmware that is being loading.
6. From power up to “DONE” will take about 30 seconds.
7. Upon completion, cycle the power to run on the new version.

WARNING: Do not power down the unit during the update process, and before updating the software be sure to insert a fresh set of batteries. If the unit should lose power during the upgrade, it will need to be sent back to Zaxcom for repair.

Updating an ERX with a TRX900CL

1. Format a micro SD card in the TRX900CL and with a computer delete the “delete.me” file.
2. Download the new firmware from the Zaxcom website and load it onto the formatted card.
3. Insert the card into the TRX900CL.
4. Check that the ERX is set to the same ZaxNet frequency that the TRX900CL is set to. Check that the GROUP ID is set the same in both the TRX and ERX. And make sure encryption is shut off.
5. Boot up the ERX while holding the menu key to get to the ERX EXTENDED menu.
6. On the ERX press the menu key until the software update page is displayed.
7. Press the INC key on the ERX 5 times “WAITING FOR PROGRAM” will be displayed.
8. Power up the TRX900CL.
9. If the TRX is running software version 8.0 or higher in the EXTENDED Menu shut off RX to TX mode.
10. Go to the LOCK page in the main menu and press down 6 times quickly to get to the FACTORY Menu.
11. Press the MENU key once to get to the IFBMODE page.
12. Press the INC key 3 times to display IFBMODE 3 TX.
13. Press MENU 3 times until SEND ERX PROG FILE is displayed.
14. Press the INC key to trigger the update process.
15. The ERX should indicate its progress after a few seconds.
16. When the ERX has been updated the screen will display “SUCCESS”.
17. Power cycle both the ERX and the TRX900CL.

WARNING: Do not power down the unit during the update process, and before updating the software be sure to insert a fresh set of batteries. If the unit should lose power during the upgrade, it will need to be sent back to Zaxcom for repair.

Wiring Diagrams

Balanced Line Level Analog In

Uses a Switchcraft TA5-F

XLR Out of Mixer		TA5 On TRX900CL
PIN 1 on both outputs	→	PIN 1
PIN 2 - Left	→	PIN 2
PIN 3 - Left	→	PIN 3
PIN 2 - Right	→	PIN 4
PIN 3 - Right	→	PIN 5

AES Digital in

Uses a Switchcraft TA5-F

XLR Out of Mixer		TA5 On STA Adaptor
Ground	→	PIN 1
Signal	→	PIN 2
Signal	→	PIN 3
No Connection		PIN 4
No Connection		PIN 5

Audio Out

Uses 3.5mm TRS

3.5 mm Audio Out		
SIGNAL	→	TIP
NO CONNECTION	→	RING
GROUND	→	SLEEVE

12 Volt DC power

Uses a Switchcraft 760K

DC Power In		
+	→	CENTER PIN
-	→	SLEEVE

Operating Frequencies

ZaxNet Remote Control and Time Code

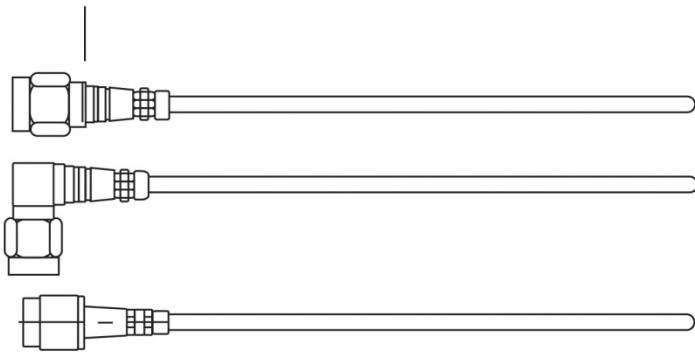
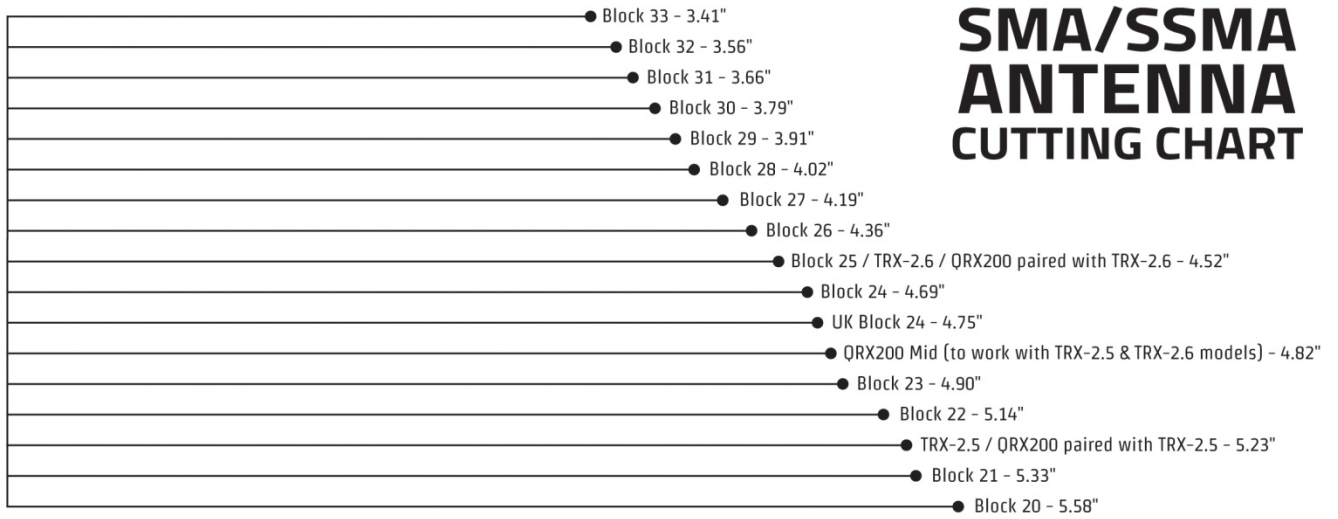
2.403 to 2.475 GHz

UHF Audio

Block	Frequency Range	TV Channels
20	518.0 to 542.0	22 to 25
21	536.0 to 572.0	25 to 30
22	560.0 to 590.0	29 to 33
23	590.0 to 614.0	34 to 37
24	614.0 to 644.0	38 to 42
25	638.0 to 668.0	42 to 46
26	662.0 to 692.0	46 to 50

Antenna Cutting Chart

SMA/SSMA ANTENNA CUTTING CHART



ZAXCOM

www.zaxcom.com



Product Support

- Register** your product with Zaxcom: <http://zaxcom.com/support/product-registration/>
- Download the latest **Firmware** from: <http://zaxcom.com/support/updates/>
- Download the latest **User Manuals** from: <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/>

Specifications

Transmitter

TRX900CL Power Output: 10 / 50 / 100 mW – Software Selectable*
RF Modulation: Proprietary Digital Method
RF Frequency Range: 518.0 to 850.0 MHz (Typical Blocks are 48 MHz wide)
RF Frequency Step: 100 KHz
RF Bandwidth: 200 KHz
Channel Separation: 500 KHz (700 KHz recommended)
Antenna Connector: 50 Ω SMA Female
Emission Designator: 180 KV2E
FCC Part: 75.861

Transmitter Audio

Dynamic Range: 114 dB
Distortion: 0.002%
Frequency Response: Mode 0: 20 Hz to 16 kHz / T & M Mode 0.2 Hz to 16 kHz
System Group Delay: 3.5 ms
Analog Input Range: -10 to +4 dBu
Analog input type balanced line level
Audio input Impedance: 4.7 k Ω
ADC Bit-Depth: 24 Bits
ADC Sampling-Rate: 48 kHz
AES input Balanced with sample rate conversion
Sample rate range 32 KHz to 96 KHz

Timecode Reader / Generator

Clock Accuracy: 1.54 PPM (1 Frame Out in 6 Hours)
Timecode Type: SMPTE
Timecode Frame-Rates: 23.98, 24, 25, 29.97NDF, 29.97DF, 30NDF, 30DF

Internal Recording

Media: MicroSD Card (Flash Memory)
File Format: .ZAX
Recording Time: 96 Hours (16 GB Card)

2.4 GHz ZaxNet Transceiver

RF Frequency Range: 2.403 to 2.475 GHz
RF Modulation: Digital Spread Spectrum
RF Frequency Step: 0.001 GHz (1 MHz)
RF Bandwidth: 1 MHz
Channel Separation: 2 MHz
Sensitivity: -96 dBm
RF power output 100mW

Physical / Power

Weight: 7.3 oz
Dimensions (H x W x D): 1" x 3.55" x 3.23"
Display: Graphic LCD
Power consumption: 2.13 watts
*Power measured pre-output band pass filter

All Specifications are subject to change without notice.

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 TRX ("Product") was purchased from an authorized distributor or authorized reseller. Distributors 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.

NOTICE:

Most users do not need a license to operate a wireless microphone system. Nevertheless, operating a microphone system without a license is subject to certain restrictions:

- the system may not cause harmful interference,
- it must operate at a low power level (not in excess of 50 milliwatts),
- it has no protection from interference received from any other device.

Purchasers should also be aware that the FCC is currently evaluating the use of wireless microphone systems, and these rules are subject to change. For more information, call the FCC at 1-888-CALL-FCC (TTY: 1-888-TELL-FCC) or visit the FCC's wireless microphone website at: www.fcc.gov/cgb/wirelessmicrophones. To operate wireless microphone systems transmitting with greater than 50mW of radiated power, you must qualify as a Part 74 user and be licensed.

This alert does **NOT** apply to Part 74 users

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

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If 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 to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

RF Exposure:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment is in direct contact with the body of the user under normal operating conditions. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

This radio transmitter (contains the module PR6-XRT) and has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Quarter Wave Whip Antenna, 5.19dBi gain, 50 Ohms

Le présent émetteur radio (PR6-XRT) a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal et l'impédance requise pour chaque type d'antenne. Les types d'antenne non inclus dans cette liste, ou dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

Quarter Wave Whip Antenna, 5.19dBi gain, 50 Ohms

USA - FCC Part 74, FCC Identifier PR6XRT

Canada - Industry Canada RSS 210, IC:12755A-XRT

Zaxcom Digital Wireless are protected under following patent #'s:
4,327,066 / 7,711,443 / 7,929,902 / 8,385,814 / 8,878,708 / 8,842,854



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:

TRXLA2, TRXLT2, TRX742 and TRX900CL wireless microphone transmitters
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.

A handwritten signature in black ink, appearing to read "Glenn Sanders", is positioned above the printed name and title.

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