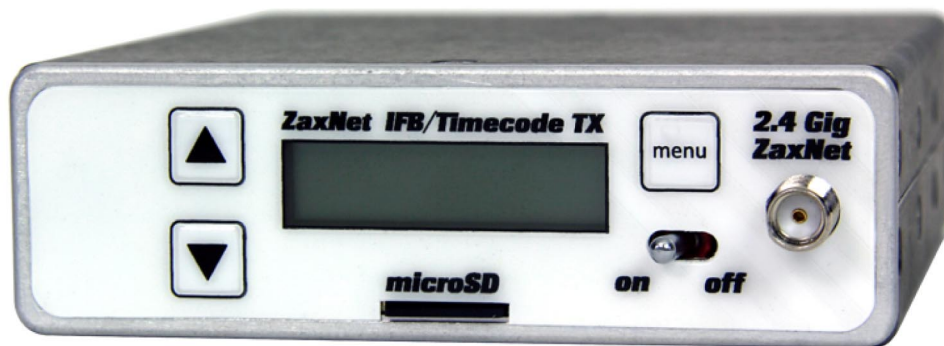


# User's Manual

## ***IFB200***



### ***2.4 GHz ZaxNet & IFB Transmitter / Receiver with Backup Recording***

Firmware v1.48  
Release Date: October 2013

Zaxcom Digital Wireless is protected under patent #'s: 7,711,443 & 7,929,902

**NOTE: All specifications in this manual are subject to change without notice.**

**Zaxcom**

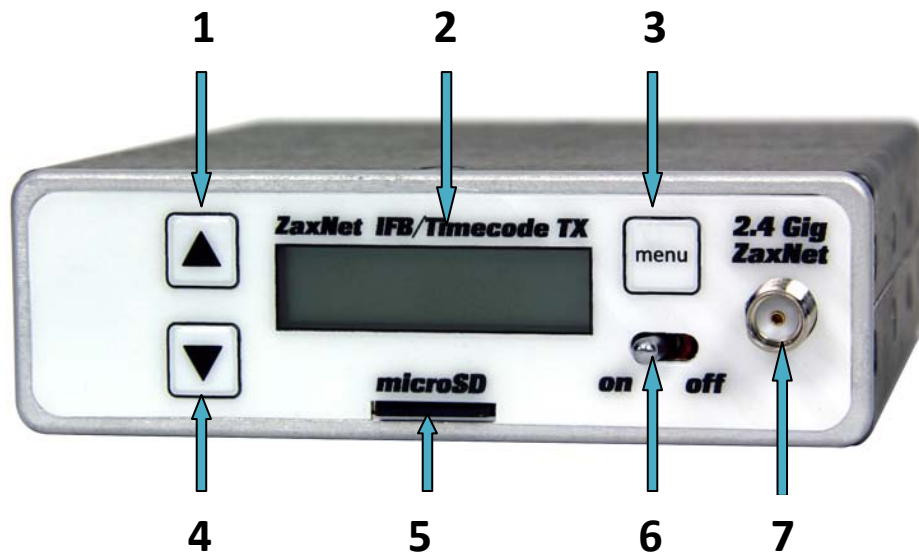
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# Knowing your IFB-200



## 1. INC Key

- Increases the parameters of a menu item.
- From the home screen will change the transport commands of the corresponding transmitter.
- Pressing from the home screen while recording will display the current record segment number of the internal recorder.

## 2. LCD Display

## 3. Menu Key

- Press it to access the Menu.
- Press it again to access additional Menu items.
- Holding it while powering up will take you into the **Extended Menu**

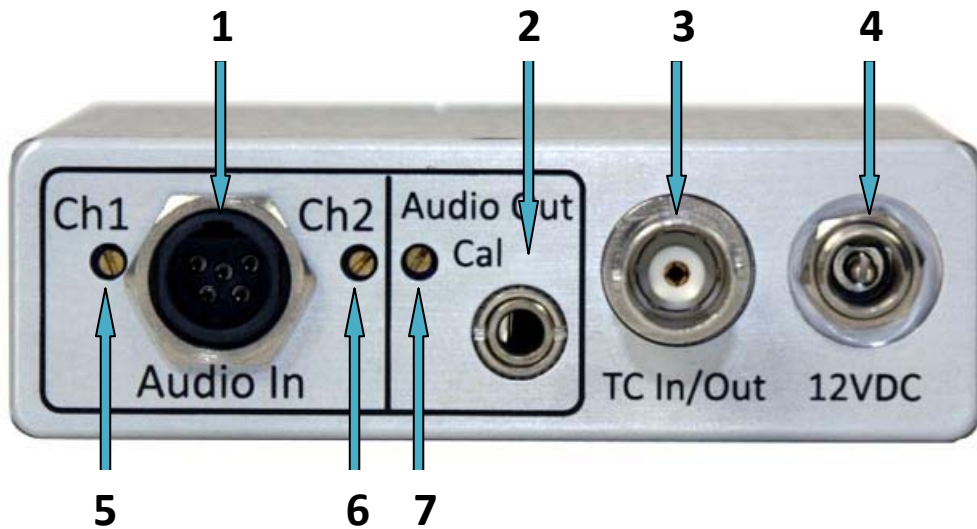
## 4. DEC / Stop Key

- Decreases the parameters of the menu items.
- From the home screen will change the transport commands of the corresponding transmitter.

## 5. Micro SD Card Slot

## 6. Power Switch

## 7. SMA Antenna Connector - ZaxNet

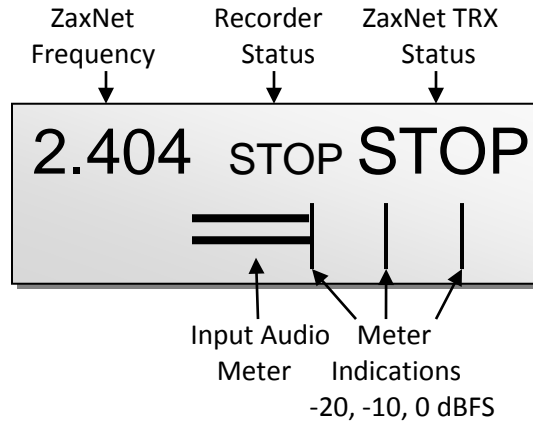


1. **Audio In Connector - TA5M**  
This connector will be used to input both analog and digital audio.
  - Analog audio is two channels balanced line level.
  - Digital audio is an AES pair.
2. **Audio Out - 3.5mm (summed to mono on tip of a TRS)**
  - When in playback the playback audio will be outputted.
  - When in transmit mode the inputted audio will be outputted.
  - 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.
3. **Timecode IN/OUT - BNC**  
Menu selectable to be used as a timecode input or output.
4. **DC Power Input - Switchcraft 761 connector.**



5. **Analog input trim adjust - Channel 1 ( Left )**
6. **Analog input trim adjust - Channel 2 ( Right )**
7. **Audio out level adjust**

# Home Screen



**Frequency** -This is the ZaxNet transmit / receive frequency of the IFB-200.

**Recorder Status** - Displays the status of the internal recorder. When in RX mode this will flash “JAM” when receiving a valid ZaxNet time code signal.

**ZaxNet TRX Control Status** - Displays the current mode of the transmitters. When in RX mode this will become the status of the internal recorder.

- **REC** - TRX record commands will be sent.
- **----** - Is displayed when the IFB-200 is not sending any commands.
- **STOP** - TRX Recording / Playback is stopped.
- **PLAY** - TRX playback commands will be sent.

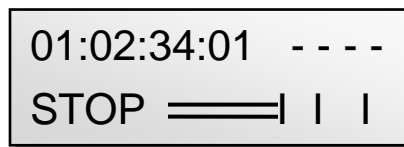
This is the order of the commands as they appear in the IFB-200. So for example to go from **REC** to **PLAY** you would need to press the **DEC** key 3 times. And to go from **PLAY** to **STOP** you would need to press the **INC** key once.

**Input Audio Meter**- Displays the modulation of the inputted audio signal.

- When the **Record Format** is set to **MONO** you will see one meter.
- When in receive mode the meter will display the received audio.

## Alternate Home Screen

If the **HOME TC DISPLAY** menu is set to **ON** then the frequency will be replaced with the timecode and the record status is moved to the lower left corner.



Home Screen with time code

## Home Screen Operations

From the home screen pressing the **INC** or **DEC** key will cycle through the TRX control commands in order. The internal recorder will follow this sequence. For example if you send a record command to the TRX the internal recorder will go into record as well.

The IFB-200 will boot up to “----” mode where no command is being sent. Press **INC** you will see **REC** displayed and a record command will be sent to the TRX and put the internal recorder into record mode. To stop, press the **DEC** key twice. You will cycle through “----” then to **STOP**. Playback would be one more press of the **DEC** key.

## Main Menu

### Navigating the Main Menu

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

### Remote Gain Adjust

*This menu will only appear if IFB mode is set to TX.*

REMOTE GAIN  
GROUP 01 UNIT001

This menu adjusts the gain of the corresponding TRX transmitter.

- Press the **INC** key will increase the gain and the display will show “++” in the top right hand corner.
- Press the **DEC** key decrease the gain and the display will show “--” in the top right hand corner.
- Each key press will alter the gain by 2dB.

The gain will be adjusted for the TRX transmitter with the matching group and unit code. If “ALL” is selected for the unit code each TRX transmitter in that group will be adjusted simultaneously.

**NOTE:** 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.

### Unit Code Select

REMOTE CONTROL  
UNIT CODE = ALL

Each TRX transmitter can be assigned a specific unit code. The unit code allows that specific transmitter to be controlled individually from the IFB-200. This menu allows you to change the unit code so you can adjust each individual transmitter. If “ALL” is selected you can control multiple transmitters, in the same group, at the same time. So when the number selected in this menu matches the unit code on a TRX transmitter you will be controlling that transmitter.

You can select **ALL** or a number from **1** to **200**

**NOTE:** If you change the unit code pressing the MENU key will take you back to the Remote Gain Menu. If no changes are made to the unit code pressing the MENU key will advance the IFB-200 to the next menu item.

## Remote Frequency Adjust

*This menu will only appear if IFB mode is set to TX.*

REMOTE CH 548.0  
UNIT CODE = 1

This menu changes the transmitter frequency.

- Press the **INC** key will increase the frequency.
- Press the **DEC** key will decrease the frequency.
- Pressing the key will increase or decrease the frequency by .1 MHz
- Pressing and holding the key will increase or decrease the frequency by 1MHz.

**WARNING:** If the unit code is set to "ALL" you will see "WARNING" displayed and the IFB-200 will not allow you remotely change frequencies. This is because if "ALL" is selected all your transmitters to jump to the same frequency.

## Remote Power Mode

*This menu will only appear if IFB mode is set to RX.*

REMOTE POWER MODE  
0: POWER = ON

This menu allows you to adjust the power setting of the TRX transmitters.

The TRX transmitter has three power settings

- **Normal Setting-** The transmitters are at full transmitting power
- **WAKE** - When you select "WAKE" in this menu the TRX transmitter will go to full power. If the TRX is set to **REMOTE STANDBY** it will power up to a non transmitting super low power mode. A TRX in this state will use approximately 25% of the power of full operations. This may be helpful if you have to mic someone who will not be on set for a while and you want to conserve battery life.  
To use this feature you would set the TRX **BOOT UP MODE** to **REMOTE STANDBY**. When in **REMOTE STANDBY** the TRX, when powered up, will remain in standby mode until it receives the wake command from the IFB-200 to wake it. Once the TRX is awoken from this power mode the only way the TRX will go back into this mode is with a power cycle.
- **LOW 2-** This setting is used to put the TRX transmitter into Low 2 mode. Low 2 disables the RF power amplifier, RF board and mic pre-amp. The TRX will run on approximately 50% of the power of normal operations which will extend the battery life of the transmitter. The TRX can be put into or taken out of this mode when "LOW 2" is selected in this menu. The IFB-200 can put the transmitter into, and out of, Low 2 mode as often as you like.

**NOTE:** The IFB-200 will always default to **0:POWER=ON** upon power up.

### 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** – You would select this to wake a TRX transmitter to full power when the **Boot Up Mode** is set to **Remote Standby**.
- **6: POWER=LOW2** – This setting can put the TRX transmitter into and out of a low power setting. You can come in and out of LOW 2 mode as needed. When you are in LOW 2 mode "LOW 2" will be displayed on the TRX's home screen. Note LOW 2 will not disable recording but it will be muted. Once you have reduced the TRX power to Low 2 you can power down your IFB-200. Once you power up the IFB-200 all TRX's being controlled will automatically come up to full power since after a power cycle the IFB-200 will boot up to the 0 Power setting.

**NOTE:** If the TRX is not in range of the ZaxNet signal, the power setting command will have to be repeated once the transmitter comes back into range.



## Playback Control

STOP 01:02:34:01  
001 ———

This menu displays the transport status of the recorder and controls playback.

The top line displays the current mode: **REC**, **PLAY** or **STOP** followed by the timecode.

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

### Playing back:

- Pressing the **INC** key while stopped will play the segment that is displayed.
- Pressing the **INC** key while in play mode will fast forward.
- Holding the **INC** key will jump 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 rewind.

## Timecode Routing

TC CONNECTOR:  
OUTPUT

This menu sets the function of the BNC timecode connector.

- **OUTPUT** - The IFB-200 will output timecode on the BNC connector.
- **INPUT** - The IFB-200 will receive timecode on the BNC connector.

## Timecode Frame Rate Select

TIMECODE 23.98  
GEN 01:02:34:01

This menu is where the timecode frame-rate is set.

The IFB-200 will lock to and transmit all standard timecode frame rates.

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

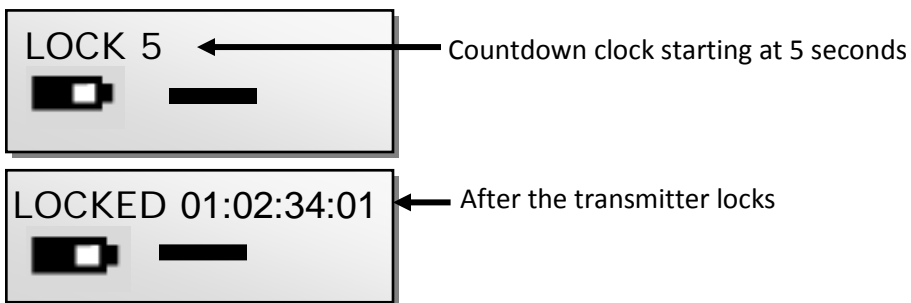
## IFB Audio Mix

IFB TX MIX:  
LEFT AND RIGHT

This menu sets what audio will be transmitted from the IFB-200 via ZaxNet.

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

## Lock Page



This menu enables a lock to prevent any accidental changes.

When you land on this page the countdown clock will begin. After 5 seconds the IFB-200 will lock and the display will indicated **LOCKED**.

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

### To Unlock

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

## Extended Menu

### Navigating the Extended Menu

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

### Exiting the Extended Menu

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

### 1K Notch Filter

1K NOTCH FILTER  
OFF

This menu enables/disables the 1K notch filter.

The 1K notch filter is used to eliminate the 1K tone from being outputted to an ERX receiver.

### Record Format

TX FORMAT:  
STEREO

This menu adjusts the record format

- **US MONO** - The IFB-200 will record both inputs summed to mono.
- **STEREO** -The IFB-200 will record both inputs independently.
- **US MONO-R** -This setting is not applicable on the IFB-200

**IMPORTANT:** Any change to this menu **REQUIRES** a reboot before the new setting takes effect.

### IFB Transmit Power

IFB TX POWER: 7

This menu sets the transmit power of the IFB-200's ZaxNet transmitter.  
Power range is **0** through **7** with **7** being the highest

## Power Roll

POWER ROLL:  
OFF

Power Roll allows a TRX transmitter to stay in a lower transmit power setting to conserve battery power. Then when you begin to record the transmitter will increase its output power.

- **OFF** – Power roll is disabled.
- **DIVA TRIGGER** – When a Zaxcom Deva or Fusion begins to record the ZaxNet information that is embedded in the time code will cause the corresponding transmitter to go to full transmit power. The IFB-200 would need to be hard wired to the Deva or Fusion's time code out. The TRX transmitter can stay in record mode and change power level when the Deva or Fusion goes into record.
- **RECORD TRIGGER** – When the IFB-200 receives running time code, in a record run situation, the IFB-200 will send a command to the TRX transmitter to go to full power.

**IMPORTANT:** The TRX transmitter needs to have the power roll feature for the power level to change when going into record.

## IFB Mode

IFB MODE: TX

This menu sets if the IFB-200 will be a ZaxNet transmit or ZaxNet receiver.

- **RX** - The IFB-200 will receive ZaxNet IFB audio and timecode.
- **TX** - The IFB-200 will send ZaxNet commands, IFB audio and timecode.

**NOTE:** If set to receive the TRX transmitter control menu items in the Main Menu will not be available.

## IFB Voting Enable

*This menu will only appear if IFB mode is set to RX.*

IFB VOTING  
NORMAL (OFF)

This menu allows you to enable / disable the IFB Voting function.

The purpose of voting is to allow the IFB-200 to choose and switch to the stronger signal from two different ZaxNet transmitters. One purpose of this is if you are on a large set you can place a second IFB transmitter at a different location and the TRX will choose the stronger signal. Just set the second IFB transmitting frequency to exactly 2MHz higher than the first unit.

## ZaxNet IFB Frequency

IFB CH: 2.403

IFB CH: 2.403  
SIGNAL: 28 RX

When the IFB-200 is set to RX and is receiving a ZaxNet signal you will also see:

← Signal strength meter

← Signal strength

This is where the ZaxNet frequency is set.

This frequency is the frequency that the IFB-200 will transmit or receive (depending on the IFB Mode menu is set to) that ZaxNet commands, TC and audio on.

There are 72 choices of frequencies from **2.403GHz - 2.475GHz**

## IFB Dropout Compensator

*This menu will only appear if IFB mode is set to RX.*

IFB DROPOUT  
COMPENSATOR ON

This menu allows you to enable /disable the IFB drop out compensator.

The drop out compensator looks at the received audio surrounding a short duration drop out and replaces the lost audio with audio that will match together the audio surrounding the drop out.

## Power-Up Mode

POWER UP MODE:  
UNLOCKED

This menu determines if the keys will lock after power-up.

- **LOCKED** – After the IFB-200 powers-up, the transmitter will automatically go into **Lock Mode** to prevent accidental changes to the settings.
- **UNLOCKED** – The keys are not locked after power-up. You can always lock the keys by going in to the **Lock Screen** in the Main Menu.

### Unlocking the Transmitter

Simultaneously press the **MENU** and **INC** keys.

## Format Micro SD Card

PRESS UP KEY 5X  
TO ERASE CARD

This menu will allow you to erase and format the micro SD card.

**NOTE:** This menu will only appear if a card was inserted prior to booting up. Also if the micro SD card is removed this page will not appear.

### To Format a Card:

1. With the power 'OFF', insert the card into the media slot with the label to the back of the unit. Press it all the way in till it "clicks".
2. Power up the transmitter while holding the Menu key to enter the Extended Menu.
3. Advance to this menu.
4. Press the **INC** key 5 times.
5. You will see "**FORMATTING FAT 32**"
6. The TRX will displays "**SUCCESS**" or "**FORMAT FAILED ERROR**"
7. If "**SUCCESS**" appears power cycle the TRX and make sure the unit will record.

**NOTE:** If you see a "**FORMAT FAILED ERROR**" try to re-format the card and if it fails again **DO NOT** use that card in the transmitter.

## Time Code Jam Mode

TC JAM MODE:  
AUTO-JAM NORMAL

If record run timecode is being used this menu will control weather the IFB-200 will automatically go into record when it receives running timecode.

- **AUTO-JAM NORMAL**– The IFB-200 will continuously jam timecode via ZaxNet.
- **AUTO-LOAD REC RUN** – The IFB-200 will continuously jam timecode via ZaxNet and will start and stop the recording if the unit is receiving record run timecode.

In this mode the transmitter will go into record mode when it detects rolling timecode. And the will stop when the timecode stops. If timecode is lost because the IFB signal is too weak the unit will not stop but will continue in whatever state it was in until the timecode signal is restored.

## Time Code Source

TC SOURCE:  
BNC CONNECTOR

This menu selects how the IFB-200 will receive its timecode.

- **BNC Connector**– The IFB-200, will receive timecode via the BNC connector.
- **IFB (RF)** – The IFB-200 will receive timecode via ZaxNet. This requires theIFB-200 to be in receive (RX) mode.

## Group Code Select

REMOTE CONTROL  
GROUP CODE = 1

This menu allows you to set your IFB-200 to a ZaxNet "**GROUP.**"

Then you can control a group of receivers without affecting others. This would be helpful 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 their Zaxcom products.

So for example an IFB-200 is set to Group 1 it will control all TRX transmitters that is set to Group 1, if set to Group 2 the IFB-200 will control all Group 2 transmitters.

- Group codes can be set from **1** to **99**

## Audio Input Select

INPUT: ANALOG

This menu sets the audio input type.

- **ANALOG** - This setting is used when the IFB-200 will input an analog audio signal.
- **DIGITAL L** - This setting is used when the IFB-200 will input a Digital signal on pins 1, 2, 3 on the TA5 connector.
- **DIGITAL R** - This setting is used when the IFB-200 will input a Digital signal on pins 1, 4, 5 on the TA5 connector.

## Minimum Frequency

MIN FREQ: 512.0  
(TVCHAN MIN 21)

This menu sets the lowest frequency that the IFB-200 will allow tune the TRX transmitters that you are controlling. This eliminates having to cycle through frequencies that are out of your block.

## Maximum Frequency

MAX FREQ: 760.0  
(TVCHAN MIN 59)

This menu sets the highest frequency that the IFB-200 will allow the TRX transmitters that you are controlling. This eliminates having to cycle through frequencies that are out of your block.

## ERX Software Update

PRESS ↑ TO SEND  
ERX PROG FILE

This is used to update the software on a Zaxcom ERX receiver.

### To Update the ERX Software:

1. Copy the ERX software onto a formatted micro SD card.
2. Place the card in the IFB-200.
3. Set up your ERX to receive software (see the ERX manual).
4. Power up the IFB-200.
5. Advance to this menu.
6. Press the INC key.
7. The transmitter will begin to transmit the software. The transmitter will continually resend the program until you manually stop it.

## Record On Bootup

RECORD ON BOOTUP  
ON

This menu will determine if the IFB-200 will automatically go into record after the unit boots up.

- **ON** - The IFB-200 will automatically start to record after it boots up.
- **OFF** - The IFB-200 will wait for a manual record trigger to start recording.

## Input Phase Invert

PHASE INVER CH2  
OFF

This will invert the phase on the channel 2 (Right) audio input on the TA5 connector to correct for phasing issues.



## Home Screen Timecode Display

HOME TC DISPLAY:  
ON

This menu will determine if the IFB-200 will display its ZaxNet transmit frequency or time code on the home screen.

- **ON** - The IFB-200 will display timecode on the home screen. And the on board recorder status will be displayed on the lower left corner. The ZaxNet transport status will be on the top right.

01:02:03:01 - - - -  
STOP ——— | | |

- **OFF** - The IFB-200 will display the ZaxNet transmit frequency followed by the on board recorder status. The ZaxNet transport status will be on the top right.

2.420 STOP - - - -  
————— | | |

## Backlight Timer

BACKLIGHT TIMER  
ALWAYS ON

- **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.

**NOTE:** The power draw of the backlight display is very negligible - if you select always on you will not be putting a high demand on your battery.

## Encryption Menu

ENCRYPTION MENU:  
HIDDEN

This hides the Encryption Menu.

- **HIDDEN** the encryption menu doesn't appear when you cycle through the menu settings.
- **ON** the Encryption will appear.

## Encryption Code



This sets the encryption code on the IFB-200.

If you set an encryption code the transmitted audio will be encrypted and can only be listened to if the ERX receiver has the matching encryption code entered. When receiving 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. To change the designated character, press the **INC** or **DEC** key.
2. Momentarily press the **MENU** key to advance to the next character.
3. To exit this page, press and hold the **MENU** key for 1 second.

**NOTE:** Both of these codes should always be set to **000** for normal un-encrypted operation.

## Media

While any size 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.

Here is a testing procedure to determine if the card will function correctly:

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

### Media Capacity

The TRX 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.

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

**IMPORTANT:** The transmitter will **NOT** record onto the card if:

- The card was not present when the unit was powered up
- If the card was removed while the power was 'ON'
- If the LOW BATTERY is being displayed.

**NOTE:** Regardless of the size of the card the TRX will only be able to record 254 segments on the card.

### 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 by the recorder can only be recognized by Zaxcom's ZaxConvert program. Using ZaxConvert will transfer 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 a unit 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 IFB-200 Firmware

1. Format a MicroSD card in the IFB-200
2. Place the formatted card in a computer and delete the "DELEATE ME" file.
3. Download the firmware from the Zaxcom website and load it onto the card.
4. Insert the card into the IFB-200.
5. Simultaneously hold down the **INC** and **DEC** keys while powering up the unit.
6. The screen will display "**BURN ROM**" with the version of firmware you are loading.
7. From power up to "**DONE**" will take about 30 seconds.
8. After the update is completed, cycle the power.

**WARNING:** Do not power down the unit during the upgrade process. Before upgrading 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 to feed audio into the IFB-200

XLR Out of Mixer		TA5 On IFB-200
PIN 1 on both	→	PIN 1
PIN 2 - Left	→	PIN 2
PIN 3 - Left	→	PIN 3
PIN 2 - Right	→	PIN 5
PIN 3 - Right	→	PIN 4

**AES Digital in** - Uses a Switchcraft TA5-F to feed audio

XLR Out of Mixer		TA5 On IFB-200
Ground	→	PIN 1
Signal	→	PIN 2
Signal	→	PIN 3
No Connection		PIN 4
No Connection		PIN 5

## Audio Out

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

**12 Volt DC power** -Uses a Switchcraft 760K to feed DC power

DC Power In		
+	→	CENTER PIN
-	→	SLEEVE

# Specifications

## **IFB RF Transmitter**

RF Power Output: 75 mW  
RF Modulation: Digital Spread Spectrum  
RF Frequency Range: 2.403 to 2.475 GHz  
RF Frequency Step: 0.001 GHz (1 MHz)  
RF Bandwidth: 1 MHz  
Channel Separation: 2 MHz  
Antenna Connector: 50-ohm SMA Female  
Emission Designator: 180 KV2E  
FCC Part: CFR Title 47, Part 18

## **IFB Audio Transmitter**

Dynamic Range: 103 dB  
Distortion: 0.01%  
Frequency Response: 20 Hz to 12 kHz  
System Group Delay: 10 ms

## **IFB Analog or Digital Audio Input**

Connector: TA-5M  
Type: Balanced  
Level: -10 dBu to +4 dBu  
Impedance: 10 k  $\Omega$   
ADC Bit-depth: 24 bits  
ADC Sampling Rate: 32 kHz

## **Timecode Input/Output**

Connector: BNC  
Input Level Range: 1 to 5V, P-P  
Output level 2V P-P  
Impedance: 75  $\Omega$

## **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

## **Physical**

Weight: 7.3 oz  
Dimensions: 3.6" x 3.23" x 1.0"  
External Power: 8 to 18 VDC @ 180 mA  
Internal Power: N/A  
Display: Graphic LCD Panel

*All Specifications subject to change without notice*

# Product Support

**Register** your product with Zaxcom: <http://www.zaxcom.com/product-registration>  
Download the latest **Firmware** from: <http://www.zaxcom.com/software-updates>  
Download the latest **User Manuals** from: <http://www.zaxcom.com/instruction-manuals>  
**Submit Technical Questions** at: <http://www.zaxcom.com/submit-a-technical-question>  
Submit information for **Repair Services** at: <http://www.zaxcom.com/repairs>  
Join the **Zaxcom Forum** at: <http://www.zaxcom.com/forum>

# 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 **IFB-200** ("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:
  1. Is not present,
  2. Cannot reasonably be fixed because of damage occurring when the Product is in the possession of someone other than Zaxcom, or
  3. 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.