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User Manual

USER MANUAL
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ZAXCOM.COM

IFB200

ZaxNet Remote Control. Reinvented

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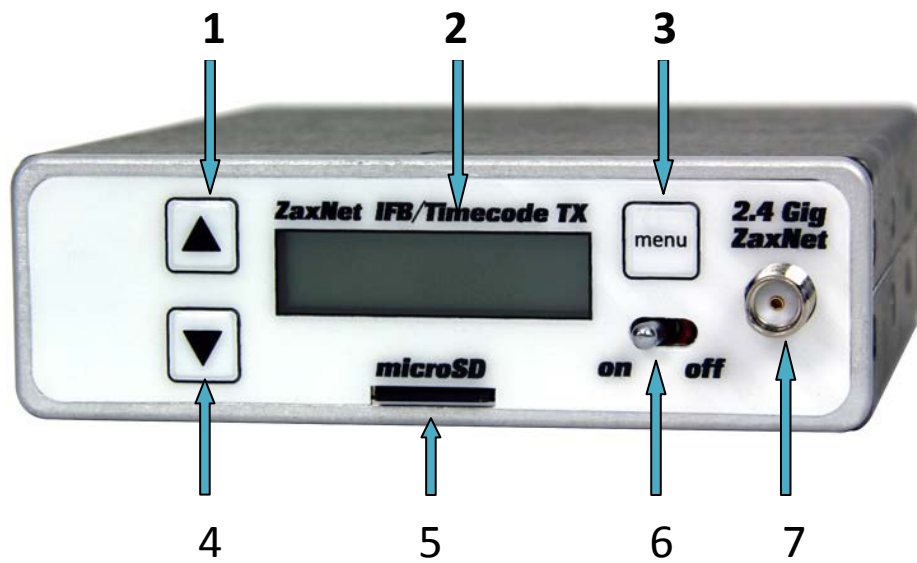
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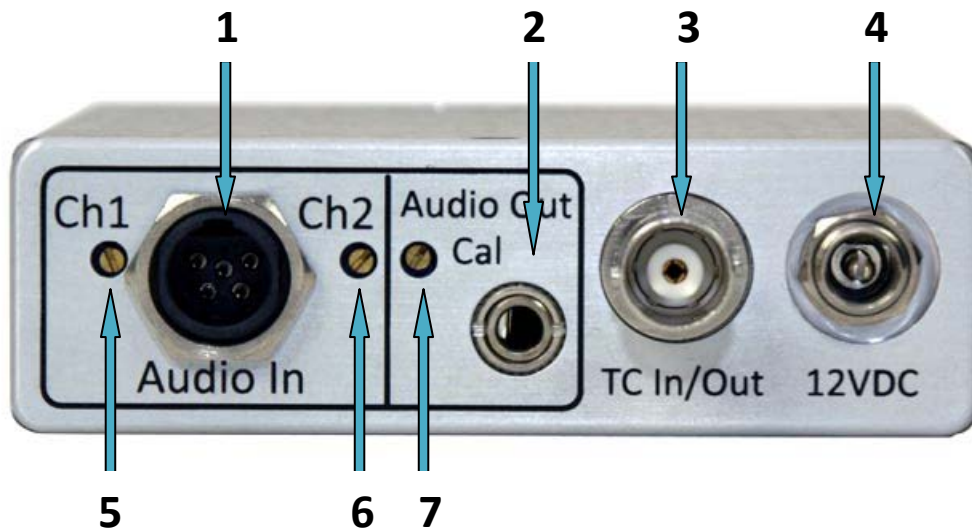
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Knowing your IFB-200



1. INC Key
 - Increases the parameters of a menu item.
 - From the home screen will change the transport commands of the corresponding transmitter.
2. LCD Display
3. Menu Key
 - Press it to access the menu and to advance to the next menu item..
 - 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. Antenna Connector – ZaxNet
8. * Antenna connector type is RSMA

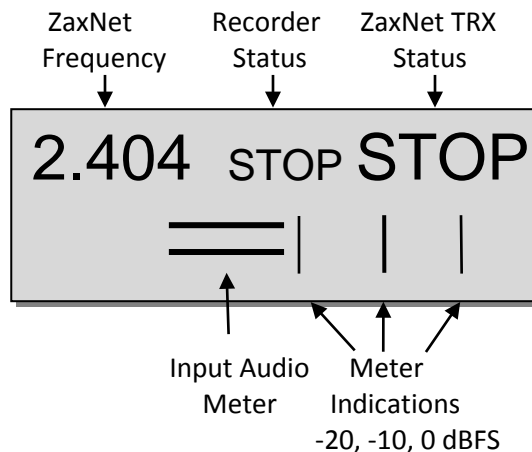


1. Audio In Connector - TA5M
This connector will be used to input both analog and digital audio.
 - Analog audio is two channels balanced line level.
 - Digital audio is an AES pair.
2. Audio Out - 3.5mm (summed to mono on tip of a TRS)
 - When in playback the playback audio from the card will be outputted.
 - 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.
3. Time code IN/OUT - BNC –
The BNC is menu selectable to be used as a time code 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 that the IFB200 is operating on.

Recorder Status

This displays the transport status of the internal recorder. When a valid time code signal is being received this will flash "JAM". When a formatted card is inserted the approximate record time left on the card will also flash.

ZaxNet TRX Transport Status

This displays the transmit commands being sent to 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 IFB200 is not sending any commands.
- STOP - TRX Recording / Playback is stop commands will be sent.
- PLAY - TRX playback commands will be sent.

Please note that this is the order of the commands as they appear in the IFB200. 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.

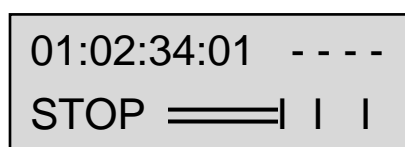
Input Audio Meter

This 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. If a formatted card is inserted 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 IFB200 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.

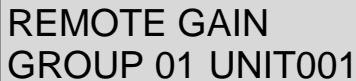
Main Menu

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

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

Adjusting the transmitter gain

- 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 a specific transmitter to be controlled individually from the IFB200. This menu allows for the unit code to be changed so each transmitter can be individually adjusted from the IFB200. If "ALL" is selected multiple transmitters, in the same group, can be adjusted at the same time.

So when the unit code number selected in this menu matches the unit code on a TRX transmitter that transmitter can be remotely controlled that transmitter(s).

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 the IFB200 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

When the frequency of the transmitter that are being controlled is changed

If the unit code is set to "ALL" the IFB200 will display "WARNING" and the frequencies cannot be changed. This is because if "ALL" is selected all transmitters will be re-tuned to the same frequency.

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

Remote Power Mode

REMOTE POWER MODE
0: POWER = ON

The remote power mode menu allows for the power setting of the TRX transmitters to be adjusted. The TRX transmitter have three selectable power settings:

- **NORMAL** - The transmitters are at full transmitting power.
- **WAKE** - If the TRX transmitter is set to REMOTE STANDBY it will power up to a non-transmitting super low power mode. A TRX transmitter 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 set the TRX menu set the 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 IFB200 to wake it. Once the TRX is awoken the only way the TRX will go back into this mode is with 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 use approximately 50% of the power of normal operations which will extend the battery life of the transmitter. The TRX transmitter can be put into or taken out of LOW 2 mode when selected in this menu. The TRX transmitter can be put into, and taken out of, Low 2 mode as often as you like.

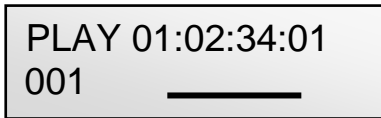
Settings:

- **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 select 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 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 TRX900CL. Once you power up the IFB200 all TRX’s being controlled will automatically come up to full power since after a power cycle the IFB200 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.

Playback Control



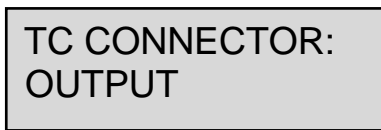
Recorded files can be played back from this page.

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 in play mode will fast forward.
- 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.

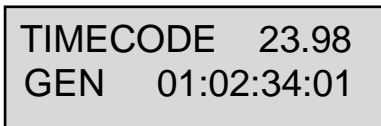
Timecode Routing



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

- OUTPUT - The IFB200 will output time code on the BNC connector.
- INPUT - The IFB200 will receive time code on the BNC connector.

Time Code Frame Rate Select

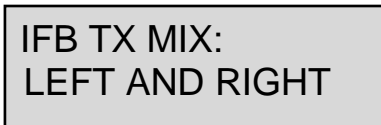


The time code frame-rate that will be recorded and transmitted over ZaxNet is set from this menu.

The IFB200 will lock to and transmit all standard time code frame rates.

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

IFB Audio Mix



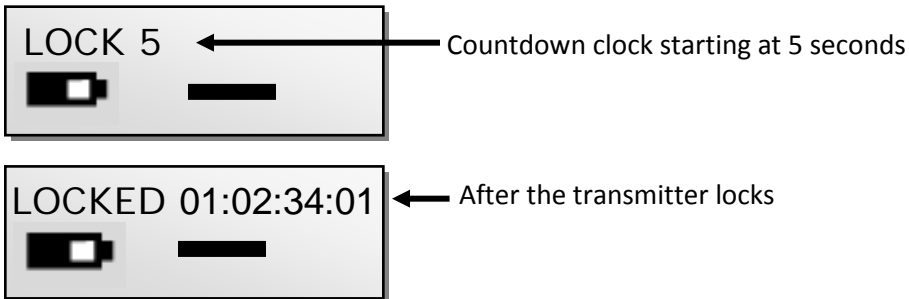
Zaxcom IFB200

Main Menu

The IFB audio mix sets what audio will be transmitted from the IFB200 via ZaxNet.

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

IFB200 Lock Page



This page enables a lock function to prevent any accidental key presses. When you land on this page a countdown clock will begin. After 5 seconds the transmitter 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 IFB200 will not lock.

To unlock the IFB200

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

Extended Menu

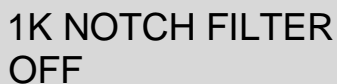
Entering and Navigating the Extended Menu

- Press and hold the MENU key while powering up the unit.
- Pressing the MENU key will advance you 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

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



RECORD FORMAT:
STEREO

This menu adjusts the record format. Please note that any changes to the record format will require the IFB200 to be rebooted.

- US MONO - The IFB200 will record both inputs summed to mono.
- STEREO -The IFB200 will record both inputs independently.
- US MONO-R -This setting is not applicable on the IFB-200

IFB Transmit Power

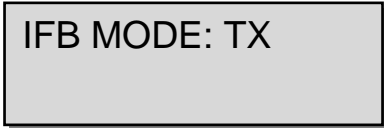
This menu will only appear if IFB mode is set to TX.



IFB TX POWER: 5

This menu sets the transmit power of the IFB200 ZaxNet transmitter. Power range is 0 through 5 with 5 being the highest

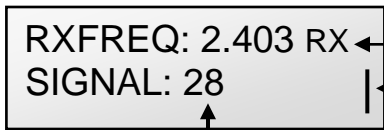
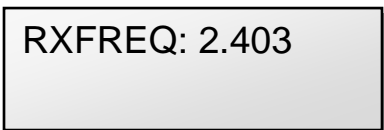
IFB Mode



This menu sets if the IFB200 will be a ZaxNet transmit or ZaxNet receiver. Please note that if the IFB200 is set to receive the TRX transmitter control items in the main menu will not be available.

- RX - The IFB200 will receive ZaxNet IFB audio and time code.
- TX - The IFB200 will send ZaxNet commands, IFB audio and time code.

ZaxNet Receive Frequency Set



When the TRX is receiving a ZaxNet signal you will see:

← ZaxNet receive frequency and RX shows that ZaxNet is being received

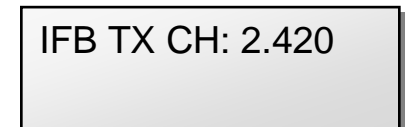
← ZaxNet signal strength meter

← Signal strength

This is where the ZaxNet receive frequency is set.

The ZaxNet receive frequency is the frequency that the ZaxNet receiver will get its wireless time code and remote control commands on. This frequency will need to match the frequency of the corresponding ZaxNet transmitter. There are 71 choices of frequencies from 2.403GHz – 2.473GHz

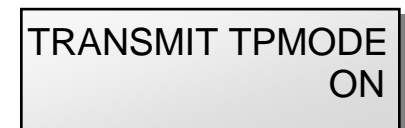
ZaxNet Transmit Frequency Set



This menu is where the ZaxNet transmit frequency is set.

The ZaxNet transmit frequency is the frequency that ZaxNet will broadcast remote commands, time code and ZaxNet audio on. The ZaxNet transmission from the IFB200 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 and receive its remote commands on this frequency. There are 71 choices of frequencies from 2.403GHz – 2.473GHz

Transmitter Remote Roll Enable



This menu enables the TRX transmitters to follow the record and stop commands of the IFB200.

Zaxcom IFB200

Extended Menu

If this is set to ON and you start recording on the IFB200 all TRX transmitters that are being controlled via ZaxNet from the IFB200 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. 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.

Please note the TRX transmitter needs to have the power roll feature, and enabled, for the power level to change when going into record.

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 when the IFB200 is being used to receive ZaxNet.

The purpose of IFB voting is to allow the ZaxNet receiver 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 ZaxNet receiver will choose the stronger signal.

Please note that you need to set the second ZaxNet transmitting frequency to exactly 2MHz higher than the first ZaxNet transmitter.

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 ZaxNet IFB drop out compensator.

Zaxcom IFB200

Extended Menu

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

This menu sets what happens to the keys on the IFB200 after boot-up.

- LOCKED – After boot-up has completed, the transmitter 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. If you are using this mode you can always lock the keys 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 even though many cards are sold preformatted, you must format the card in the IFB200 prior to any recording. Only cards formatted in the TRX will work properly.

Before formatting the card, you may want to name the transmitter. When you name the transmitter that name is included in the recorded file names. By naming the transmitter it makes it easier to differentiate files from different recorders. So for example you can name the card with the talents name or any other unique identifier. The card name menu is located at the end of the extended menu. The factory default name is the transmitter's serial number.

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 transmitter while holding the menu key to enter the extended menu.
3. Press the INC key until this menu appears.
4. Press the INC key 5 times.
5. You will see "FORMATTING FAT 32" displayed on the screen.
6. After about a minute the TRX will displays "SUCCESS" or "FORMAT FAILED ERROR".
7. If "SUCCESS" appears power cycle the TRX.
8. If the TRX displays "FORMAT FAILED ERROR" try to re-format the card, if it fails again it is not advised to use that card in the transmitter.

TC Jam Mode Select

TC JAM MODE:
AUTO-JAM NORMAL

If record run time code is being used this menu controls if the IFB200 will automatically go into record when it receives a record run time code.

- AUTO-JAM NORMAL– The IFB200 will continuously jam time code.
- AUTO-LOAD REC RUN – The IFB200 will continuously jam time code and will start and stop the recording if the unit is receiving record run time code. In this mode the IFB200 will go into record mode when it detects 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:
BNC CONNECTOR

This menu selects how the IFB200 will receive its time code.

- IFB (RF) – The IFB200 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 IFB200, will receive time code via the BNC connector.

Mute Time Code Transmission Until Jammed

MUTE TC UNTIL
JAMMED: OFF

If this menu 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 ID Select

REMOTE CONTROL
GROUP CODE = 1

This menu allows you to set your IFB200 to a ZaxNet "GROUP." This is the group code that the IFB200 is controlled in – not what group the IFB200 is controlling.

Group ID lets you set your IFB200 to a "GROUP" that will be controlled via ZaxNet.

So for example set to Group 1 will be controlled by a ZaxNet transmitter set to Group 1 and a group 2 will be controlled by a Group 2 ZaxNet transmitter. This allows one group 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.

Audio Input Select

INPUT: ANALOG

This menu sets the audio input type.

- ANALOG - This setting is used when the IFB200 will input an analog audio signal.
- DIGITAL L - This setting is used when Inputting a digital signal on pins 1, 2, 3 on the TA5 connector.
- DIGITAL R - This setting is used when inputting 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 UHF frequency that the IFB200 will cycle to when remote controlling TRX transmitters. This eliminates having to cycle through frequencies that are out of the range that you are working in.

Maximum Frequency

MAX FREQ: 698.0
(TVCHAN MIN 51)

This menu sets the highest UHF frequency that the IFB200 will cycle to when remote controlling TRX transmitters. This eliminates having to cycle through frequencies that are out of the range that you are working in.

ERX Software Update

PRESS ↑ TO SEND
ERX PROG FILE

This menu 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 IFB200.
3. Set up your ERX to receive software (see the ERX manual).
4. Power up the IFB200.
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.

Automatic Record On Boot up

RECORD ON BOOTUP
ON

Record after boot up will allow the IFB200 to automatically go into record after the unit boots up.

- ON - The IFB200 will automatically start to record after it boots up.
- OFF - The IFB200 will wait for a manual record trigger to start recording.

Input Phase Invert

PHASE INVERT CH2
OFF

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

Home Screen Time Code Display

HOME TC DISPLAY:
ON

This menu will determine if the IFB200 will display its ZaxNet transmit frequency or time code on the home screen.

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

01:02:03:01 STOP
RX

- **OFF** - The home screen will display the ZaxNet 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.

2.420 RX 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.

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

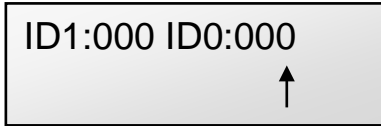
Encryption Menu Hide

ENCRYPTION MENU:
HIDDEN

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

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

Encryption Code Set



If you set an encryption code the transmitted audio will be encrypted and can only be listened to if the 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.

Please note that both of these codes should be set to 000 for normal un-encrypted operations

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 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 time code source.
4. Look at the Main Screen it should still be recording in segment #1.

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

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 the LOW BATTERY is being displayed.

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 (.zax format) 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 the IFB200 Firmware

1. Download the new firmware from the Zaxcom website and load it onto a formatted card.
2. Insert the card into the IFB200.
3. Simultaneously hold down the INC and DEC keys while powering up the unit.
4. The screen will display "BURN ROM" with the version of firmware you are loading.
5. From power up to "DONE" will take about 30 seconds.
6. 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.

Wiring Diagrams

Balanced Line Level Analog In

Uses a Switchcraft TA5-F to feed audio into the IFB200

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 4
PIN 3 - Right	→	PIN 5

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 In

Uses a Switchcraft 760K

DC Power In		
+	→	CENTER PIN
-	→	SLEEVE

Specifications

IFB RF Transmitter

RF Power Output: 10.4 dBm
RF Modulation: Direct Sequence Spread Spectrum
RF Frequency Range: 2.403 GHz to 2.473 GHz
RF Frequency Step: 0.001 GHz (1 MHz)
RF Bandwidth: 1 MHz
Channel Separation: 1 MHz
Antenna Connector: 50-ohm SMA Female
Connector type reverse SMA

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 Ω
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 Ω

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://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/>

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 IFB200 ("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.

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 should be installed and operated with minimum distance 20cm between the radiator and your body. 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 (IFB-200) 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.

2.4GHz Quarter Wave Whip Antenna, 2.2dBi gain, 50 Ohms

Le présent émetteur radio (IFB-200) 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.

2.4GHz Quarter Wave Whip Antenna, 2.2dBi gain, 50 Ohms

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

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.