USER MANUAL

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Firmware Version ZMT270

ZAXCOM.COM

ZMT5-HH

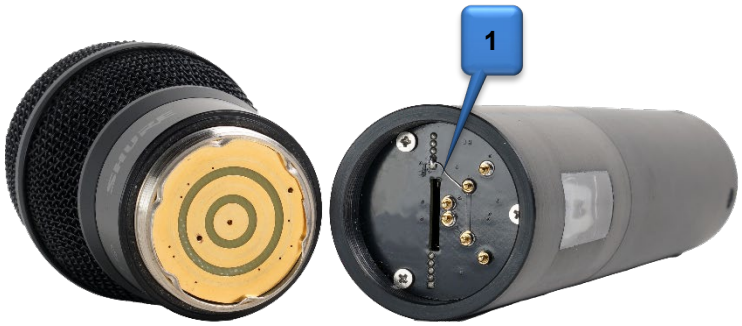
Handheld Transmitter

Knowing Your ZMT5-HH

1. **Microphone Capsule:** Compatible with only Shure microphone capsules.
2. **OLED Display**

XLR View : When looking at the OLED Display the INC key will be on the top and the DEC key will be on the bottom seperated by the MENU key.

3. **Menu / Play Key**
   - Press it to access the next menu item.
   - Press it with the rubber membrane key to playback a segment.
4. **INC / Record Key**
   - Increases the parameters of a menu item.
   - When in the home screen pressing INC with the rubber membrane key will put the transmitter into record.
   - Press it while in the home screen will display the group and unit code and ZaxNet status and frequency.
5. **DEC / Stop Key**
   - Decreases the parameters of the menu items.
   - When in the home screen pressing DEC with the rubber membrane key will stop the recording.
   - Press it while in the home screen will display time code, user bits and frame rate as well as the time left on the card
6. **Card / Power Key**
   - Push and hold for 2 seconds to power on.
   - Push and hold 3 seconds followed by a quick press of the MENU key to power off.
   - Press 3 times quickly to access the sub menus.
   - Press 3 times quickly to return to the home screen.



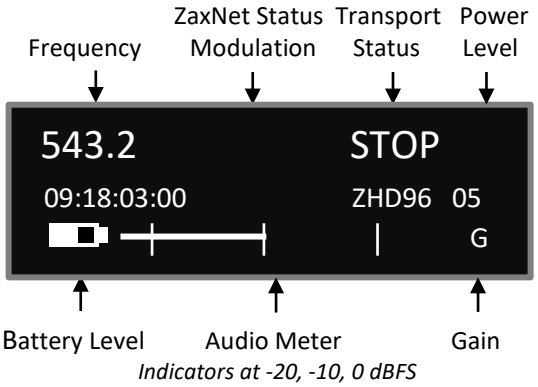
1. **MicroSD Card Slot**
   Inserting media:
   - With the OLED screen of the transmitter facing you, the card contacts should be facing you and pointing down toward the slot.
   - Insert the card into the slot and press it down until you hear a slight click.
   - To remove it, press the card in until you hear the same click again.
   - Please see the Media Section of this manual for card recommendations.

2. **Battery Compartment**
   Inserting batteries:
   - The ZMT5-HH uses one 18650 Li-ion battery.
   - The negative side of the battery must be inserted into the unit.
   - The positive end will face out.

Warning: Batteries can vary in diameter. Thicker batteries my not fit into the unit.

Warning: Do not insert batteries into the holder positive end first. Damage to the unit may result.

Home Screen



Indicators at -20, -10, 0 dBFS

Frequency

- This is the transmit frequency of the ZMT5-HH.
- If the ZMT5-HH is being used in RECORD ONLY mode “NOTX” will be displayed.

Transport Status

- Displays the current mode of the recording feature.
- STOP: Recording / Playback is stopped
- LREC: Recording in LOOP RECORD mode.
- REC: Recording in NON-LOOP RECORD mode.
- PLAY: Playing back a recorded audio file.

Time code

- Displays the transmission time code of the unit.

Modulation Type

- Displays the transmission modulation type.

Segment

- Displays the number of recorded segments on the microSD card.
- **Note: Regardless card capacity size, it is limited to 500 segments.**

Battery

- This displays the approximate percentage of remaining battery power.

Audio Meter

- Displays the modulation of the inputted audio signal.

Gain

- “G” Appears when the transmitter is receiving change of gain commands via ZaxNet.

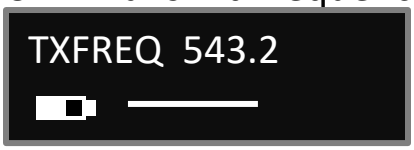
Main Menu

To cycle through the Menu press the MENU key.

Microphone Gain Set

- The microphone gain is adjusted from this menu.
- To increase the gain press the INC key and to decrease the gain press the DEC key.
- This menu displays the gain setting in decibels and a meter indicating the audio signal.
- The meter is displayed horizontally from left to right.

UHF Transmit Frequency Set



- This menu is where the UHF transmit frequency is set.
- To adjust the frequency, press the INC and DEC keys.
- 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.

Transmitter Lock Page

← Countdown clock starting at 5 seconds

← After the transmitter locks

- Enables a Key Lock function, so no parameters can be changed.
- When the lock page is landed on a countdown clock will begin.
    - After 5 seconds the transmitter will lock and the display will indicate that it is LOCKED.
    - If this screen is exited before the 5 seconds are up the transmitter will not lock.
    - To lock the transmitter before the 5 seconds press and hold the DEC key.
- Pressing the INC key when the transmitter is locked will display the group and unit code, its transmit frequency and serial number.
- Pressing the DEC key will display the units name, battery voltage and current record segment number.

Unlock the transmitter

- Press and hold the MENU key and press INC keys 5 times.

Sub Menus

Sub Menu Groups

The ZMT5-HH has six sub menu groups:

- **Record**: Changes the parameters of the on-board recorder.
- **Transmit**: Changes the parameters of the UHF transmitter.
- **ZaxNet**: Changes the parameters of the ZaxNet transceiver.
- **Audio**: Changes the parameters of the transmitted and recorded audio.
- **Time Code**: Changes the time code parameters.
- **Setup**: Changes the parameters of the general operations.

Accessing and Navigating the Sub Menu Group

- From in the home screen press the CARD key three times or hold the MENU key while booting up.
- Pressing the INC or DEC key will cycle thru the menu items.

Entering and Navigating the Sub Menu Group

- After landing on the desired menu group press the MENU key to enter that menu.
- To return to the top of the menu press the MENU key to cycle to the top or press and hold the MENU key for 1.5 seconds.

Exiting the Sub Menu Group

- Press the CARD key 3 times or press the MENU key to cycle through the sub menu items until HOME MENU is displayed then press the MENU key.

Record Menu

SD Card Format

- **Note: This menu only appears if a card was inserted prior to booting up.**

- The microSD card is erased and formatted from this menu.
- All cards need to be formatted in the ZMT5-HH prior to recording.
- Before formatting the card, the transmitter can optionally be named *(see Setup Menu)* with the talent names or any other unique identifier makes.
    - When a transmitter is named that name is included in file name.
- The card name menu is located at the end of the set up menu.
- The factory default name is the transmitter's serial number.

Partial Format

- If the card's FAT32 file structure gets corrupt during a file transfer, and the card is no longer recognized by the transmitter or by ZaxConvert, a partial format can be done. The partial format rewrites the FAT32 file structure and leaves the recorded audio untouched.
- To perform a partial format from this menu press the DEC key 9 times "PARTIAL FORMAT" will then be displayed.

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 time code frame rate and the audio level.

Playing back from the Transport Page:

- Pressing the INC key while stopped will play the segment number that is displayed.
- Pressing the DEC key while playing back will stop the playback.
- Pressing the DEC key while stopped will jump back.
- Holding the INC key will jump ahead one segment.
- Holding the DEC key will jump back one segment.
- Pressing the INC key while in play mode will cause the playback to jump ahead, repeated quick presses will cause playback to advance in larger increments.

Time Left on Card

- **Note: This menu only appears if a card was inserted prior to booting up.**

- Displays the remaining time left on the card as well as the time already recorded on the card.

Automatic Record after Boot Up

- Record on boot up allows the internal recorder to automatically start recording.
- **ON**: The internal recorder will automatically start to record after the ZMT5-HH boots up.
- **OFF**: The internal recorder will wait for a ZaxNet command or a manual record trigger to start recording.

Record Mode

- Record Mode sets what the recorder will do after the card is full.
- **Note: Regardless of this setting the card can only record 500 files.**
- **NON-LOOP RECORD:** Once the card is full the recording will stop and FULL will be displayed.
  - This setting prevents overwriting any portion of the audio.
- **LOOP RECORD**: Once the card is full, new audio will begin overwriting the oldest audio on the card.

Low Battery Stop

- Low Battery Stop will set the amount of time, after a low battery warning occurs, the internal recorder will close the current file and stop recording.
  - This prevents possible file corruption if the unit powers off or due to a dead battery.
- **NEVER STOP**: The internal recorder will not stop recording unless it is manually stopped by a key press, or when it receives a stop command via ZaxNet, or if the battery dies.
- **Any interval from 1 to 99 minutes**: Once the battery indicator starts blinking a low battery warning the internal recorder will continue to record for the time set then it will close the file and stop recording.

TRANSMIT MENU

UHF Transmitter Power Level

- The UHF transmitter power level is set on this page.
- The transmit power can be adjusted to output 25, 50 or 75mW.
    - The higher the power setting the more battery power will be required.

UHF Transmit Modulation

- The UHF transmission modulation is how audio is sent the receiver.
- The modulation format is set from this menu.
- **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.**
- **Note that after any change to the transmit format the unit will need to be rebooted by pressing the card key before the new format takes effect.**

	MONO	XR	ZHD 96	ZHD 48
Modulation Bandwidth	200 kHz	200 kHz	96 kHz	48 kHz
Minimum Channel to Channel Spacing	400 kHz	400 kHz	200 kHz*	100 kHz**
6 MHz TV Channel Capacity	15	15	30	60
Latency	3.5ms	6ms	6ms	18ms
Compatibility with a 200 Series Receiver	2 Transmitters	2 Transmitters	2 Transmitters	1 Transmitter

Transmitter Disable - Record Only Mode

- **Record Only Mode**: Will set the ZMT5-HH to act as a standalone recorder and will not transmit audio.
- **Note the XLR output will still be active. This mode will also conserve battery power since the transmitter is disabled**.
- **Normal TX Mode**: Will allow the ZMT5-HH to both transmit audio and record to its internal microSD card.

ZAXNET MENU

ZaxNet Mode

- This menu sets the mode of the ZaxNet receiver.
- **OFF**: The ZaxNet transceiver is disabled. The ZMT5-HH will not receive ZaxNet commands or time code and it will not transmit any ZaxNet audio.
- **Note if ZaxNet mode is set to OFF, several ZaxNet menu items will not appear.**
- **RX:** The ZaxNet transceiver will receive ZaxNet commands and time code.
  - This screen will display what ZaxNet data is being received. Including total received information packets, ZaxNet TC received and remote control commands received.
  - This information is used for debugging purposes.

ZaxNet Receive Frequency

- **Note: This menu will only appear if the ZMT5-HH is set to receive (RX) mode.**

- The ZaxNet Receive Frequency is the frequency that will receive 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, TRX900CL or IFB100/200.
  - The ZMT5-HH can also receive ZaxNet time code from another TRX transmitter or a ZFR recorder that is transmitting ZaxNet on this frequency.
  - **Note: The range will be limited when receiving ZaxNet from a TRX or ZFR.**
- When the ZMT5-HH is receiving a valid ZaxNet signal the signal strength will be shown as well as signal strength meter that runs vertically on the far right side of the screen.

ZaxNet Transmit Frequency

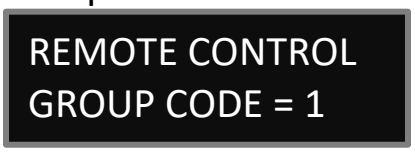
- **Note: This menu will only appear if the ZMT5-HH is set to transmit (TX) mode**

- The ZaxNet Transmit Frequency is the frequency that the ZaxNet transmitter will broadcast time code and confidence audio on.
- **Note: The ZaxNet transmitted audio is for quality control purposes and the expected range will be less than 20 feet.**

Low Power ZaxNet

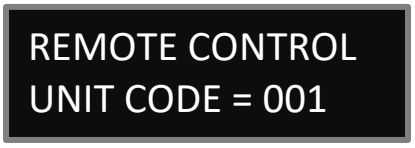
- This menu sets the mode of the ZaxNet receiver.
- **OFF**: The ZMT5-HH will act normally. It will receive both ZaxNet audio and commands.
- **ON:** Shuts off the ZaxNet receiver's ability to receive ZaxNet audio. The ZMT5-HH will still receive commands via ZaxNet.
    - This setting will conserve battery power.

Group Code



- This menu is where the ZMT5-HH is assigned to a group.
- The group code allows transmitters to be grouped together so they can be controlled via ZaxNet without affecting others.
    - Example: A ZMT5-HH set to Group 1 will be controlled by a ZaxNet transmitter set to Group 1.
    - Example: A ZMT5-HH Set to Group 2 will be controlled by a ZaxNet transmitter set to Group 2.
- This is helpful if two or more people on set are sending ZaxNet commands.
- Different Group Codes allow each person to be independent and not interfere with each other.
- Group Codes can be set from 1 to 99.

Unit Code



- This menu is where the ZMT5-HH is assigned a unit code.
- The unit code is a unique number used to identify each ZMT5-HH within a particular group.
- This allows individual transmitters within the same group to be independently controlled.
- Each transmitter should have a different Unit Code.
- Unit Codes can be assigned any number from 1 to 200.

ZaxNet Voting

- **Note: This menu will only appear if the ZMT5-HH is set to receive (RX) mode.**

- Voting allows the ZaxNet receiver in the ZMT5-HH to choose, and switch to, the stronger signal from two different ZaxNet transmitters. One purpose of this is if on a large set a second IFB transmitter can be placed at a different location so the ZaxNet receiver in the ZMT5-HH can choose the stronger signal.
- **Note: The second ZaxNet transmitting frequency must be set 2 MHz higher than the first ZaxNet transmitter.**

ZaxNet Receive Before Transmit Time

RX TO TX TIME:
OFF (NORMAL RX)

Receive only mode.

The ZaxNet transceiver will only receive ZaxNet and NOT go into transmit mode. Therefore no ZaxNet TC and/or audio will be transmitted. This setting shuts off the ZaxNet transmitter.

ZAXNET RX TO TX:
0 SEC: TX ONLY

Transmit only mode.

The ZaxNet transceiver will only transmit ZaxNet TC and audio and will NOT receive wireless TC or ZaxNet commands. This setting shuts off the ZaxNet receiver.

ZAXNET RX TO TX:
20 SEC

Receive then Transmit mode.

After boot up the ZaxNet transceiver will search for a ZaxNet signal for the selected time so it can receive and lock time code before it begins to transmit TC and confidence audio.

- This menu adjusts the state of the ZaxNet transceiver. This also sets how long after boot-up up the TRXLT3 will search for ZaxNet time code before it begins transmitting its audio over ZaxNet for monitoring purposes. This is so the ZMT5-HH can lock to ZaxNet time code source before the unit will send confidence audio over ZaxNet.

Record Beep

- **Note: This menu will only appear if the ZMT5-HH is set to transmit (TX) mode.**

ZNET RECORD BEEP
OFF

- When the record beep is set to ON, and the ZMT5-HH is recording, the confidence audio sent to the ERX via ZaxNet will have an audible beep, in variable intervals, giving conformation that the ZMT5-HH is indeed recording.
- The beeps will only be heard in the ERX and will not be recorded on the card, or be sent to the UHF receiver.
- The intervals can be set between 2 to 18 seconds in 2 second increments.

Audio Menu

High Pass Filter

- The high pass filter is turned on and adjusted from this menu.
- The high pass filter range is 70Hz to 220Hz in 10Hz increments.

2K Notch Filter

- The 2K notch filter is useful in removing digital RF interference that can be introduced into some microphones**.**

Dynamics

- The dynamics is a soft knee compressor that is located after the analog to digital converter which will limit the dynamic range to prevent clipping during occurrences of loud audio. Dynamics is comprised of both a compressor and an expander, which operate jointly. The compressor in the dynamics can set to mild or extreme compression and features a soft knee for more transparent operation.

To Enter the Dynamics Menu

- Press the INC or DEC key : “PARMS” (parameters) will be displayed on the right.
- To move to the next parameter, press the MENU key.
- To exit this page, hold the MENU key for 1 second.

Dynamics Parameters

- **Link L-R: OFF / ON:** If using a stereo transmitter this links the left and right signal so if one side of the signal needs compressing / expansion the other side will do the same to match.
- **SPEED (Decay Speed): SLOWEST / SLOW / NORMAL / FAST / FASTEST:** Sets how gradual the signal level decreases after a signal reaches the threshold setting. This is typically set to FAST.
- **ATTACK (Attack Speed) : SLOWEST / SLOW / NORMAL / FAST / FASTEST:** Sets the speed in how fast the gain is reduced once the signal exceeds the threshold setting. This is typically set to FAST.
- **CMP RATIO (Compressor Ratio):** Valid range: 1.0: to 5.0:1, in 0.1 steps**.** The amount of gain reduction is determined by the compressor ratio setting. A compressor ratio for example of 2.0:1 means for every 1 dB above the compressor threshold the gain will be reduced 2dB. A higher ratio setting makes the compressor more aggressive.
- **CMP THRESH (Compressor Threshold):** Valid range: 0 to –96dB, in 1dB steps. This sets the level in which gain reduction occurs.
- **CMP KNEE: (Compressor Soft Knee):** Valid range: 0 to 20dB, In 1dB steps. Sets the compressor's soft knee. A soft knee reduces “softens” the audible change from uncompressed to compressed, this is useful especially for higher ratios where the changeover is more noticeable.
- **EXP RATIO (Expansion Ratio):** Valid range: 1:1.00 to 1:4.00, In 0.01 steps. Sets the expansion ratio. For example a 1:2.0 expansion ratio means for every 1 dB below the expansion threshold the gain will be reduced 2dB.
- **EXP THRESH (Expansion Threshold):** Valid range: 0 to –96dB, in 1dB steps. Sets the threshold above which gain reduction occurs.
- **REDUCE (Expander Gain Reduction):** Valid range: 0 to –36dB, in 1dB steps. This sets the limit on the amount of gain reduction caused by the expander.
- **GAIN (Make-up Gain):** Valid range: 0 to 30dB, In 1dB steps.Gain is used to compensate for the gain reduction caused by the compressor. Because the compressor is reducing the gain (or level) of the signal, the ability to add a fixed amount of make-up gain at the output is provided so that an optimum level can be reached.

Time Code Menu

Time Code Frame Rate

- The time code frame rate menu is where the time code frame rate is set.
- The ZMT5-HH will lock to and record all standard time code frame rates.
    - 23.98, 24, 25, 29.97DF, 29.97DF, 30 DF, 30 NDF

TC Jam Mode

- This menu controls if the ZM54-HH will go into record when it receives a record run time code.
- **AUTO-JAM NORMAL:** The ZMT5-HH will continuously jam time code via ZaxNet and will go into record when receiving a record command via ZaxNet or if the unit is put into record manually by pressing the CARD and INC keys simultaneously.
- **AUTO-LOAD REC RUN:** The ZMT5-HH will go into record when it detects rolling time code, and will stop when the time code stops. If time code 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 time code signal is restored.

Mute Time Code Transmission Until Jammed

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

Auto Frame Rate

- **Turned ON:** The ZMT5-HH will automatically set its frame rate to the frame rate that is being transmitted from the ZaxNet transmitter feeding the ZMT5-HH.
- **Turned OFF:** The frame rate will need to be adjusted manually.
- **Note that auto frame rate will only work when the time code is being received over ZaxNet and will not work when time code is being received via the audio input.**

Setup Menu

Key Function

- This menu sets the function of the mute key.
- **OFF:** The key has no function.
- **PUSH TO TALK:** The key need to be pushed to transmit, record or output audio.
- **PUSH TO MUTE:** Pushing the key will mute the audio.
- **TAP TO TOGGLE:** Pushing the key toggles between mute mode and un-mute mode.

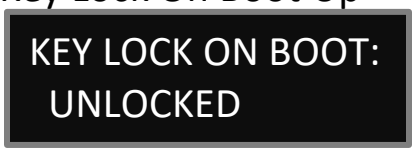
Test Tone

- The ZMT5-HH has an internal tone generator so the signal chain can be properly gain staged.
- From this menu pressing the INC key will turn on the tone generator pressing the INC key will cycle trough the different tone options (500Hz at -20, 1000Hz at -20 or 500Hz at full scale).

Standby Mode After Boot Up

- This menu sets what power mode the ZMT5-HH boots up to.
- **NORMAL MODE:** The transmitter will boot up normally.
- **STANDBY MODE:** The transmitter boots up in low power standby mode. The transmitter will be waiting for a manual press the of the MENU key to come up to full power.
- **REMOTE STANDBY:** The transmitter boots up in low power standby mode. The transmitter will be waiting for a ZaxNet “WAKE” command to come up to full power.

Key Lock On Boot Up

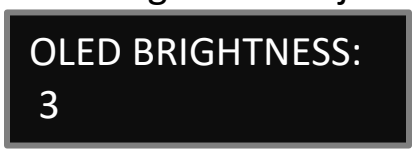


- This menu sets what happens to the keys on the face of the ZMT5-HH after boot-up.
- **LOCKED**: After boot-up has completed, the transmitter will automatically go into lock mode and the keys will be locked to prevent accidental changes to the settings.
- **UNLOCKED** : After boot-up the keys will remain unlocked. In unlocked mode the keys can still be locked 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 key 5 times.

QRX / ERX Firmware Update

- This page is used to update the firmware on a QRX or ERX receiver.
- If the ZaxNet mode is set to OFF or receive (RX) this menu will allow for QRX firmware to be update. If the ZaxNet mode is set to transmit (TX) then this menu will allow for ERX to be updated.
- For complete update instructions see the FIRMWARE section.

OLED Brightness Adjust



- This setting adjusts the brightness of the OLED display. The brightness setting is from 0 to 3 with 3 being the brightness.

OLED Display Dim

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

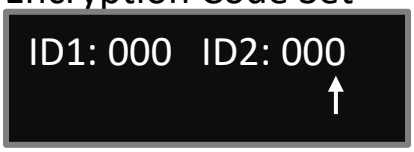
Information Page

- This page displays the current firmware version, the serial number, the DSP version, and the option code.

Hide Encryption Menu

- This setting will hide the encryption menu. A hidden encryption menu allows for quicker navigation and prevents accidental changes.
- **HIDDEN**: The encryption menu doesn't appear when cycling through the menu settings.
- **DISPLAYED**: The encryption menu will appear.

Encryption Code Set



- If an encryption code is set 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. So if using encryption it is important to make sure the matching receiver has the same code.
- These two sets of numbers are formed into a single six-digit encryption code which provides a total of 16,777,216 possible combinations.
- **Note that both of these codes should be set to 000 for normal un-encrypted operations**

Adjusting the Encryption Code

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

Hide Transmitter Name Menu

- This setting will hide the name menu. A hidden name menu allows for quicker navigation and prevents accidental changes.
- **HIDDEN:** The name menu doesn't appear when cycling through the menu settings.
- **DISPLAYED**: The name menu will appear.

Transmitter Name

- The transmitter name menu allows the transmitter to be named 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 recorders.
- The maximum name length is 8 characters. Any letter or number can be used. If desired a space can even be used.

Set/Change Transmitter Name:

- Press the INC or DEC key to change the character in the current position above the arrow.
- Press the MENU key to proceed to the next character.
- When finished, press and hold the MENU key to set the name.

Media

- The ZMT5-HH can use microSD cards up to 16 GB. While any size card will work, we recommend using 4GB cards.
- We also recommend only buying a brand-name card such as Transcend or SanDisk.
- All cards must be formatted in a 3 series transmitter to work correctly. Cards formatted in any other series transmitter will not record properly.
- **Note: Regardless of the size of the card, the onboard recorder will only be able to record up to 500 individual segments on any given card.**
- **Note: Transcend Premium cards with the red stripe are not recommended.**
- **Note: Buy all cards from a reputable dealer because counterfeit cards exist and can cause recording issues.**
  - Format the card in the transmitter.
  - Power cycle the transmitter.
  - Record at least 20 minutes of audio to the card with no time code source.
  - Look at the Main Screen, it should still be recording in Segment #1.
  - Playback and listen to the file.

Media Capacity

- Available recording times depend on the selected modulation and are as follows:

SD Card Size	Available Record Time Mono	Available Record Time XR / ZHD
512 MB	3 hours	6.75 hours
1 GB	6 hours	13.5 hours
2 GB	12 hours	27 hours
4 GB	24 hours	54 hours
8 GB	48 hours	108 hours
16 GB	96 hours	216 hours

- **Note the transmitter will NOT record onto the card if:**
  - The card was not inserted before the ZMT5-HH booted up.
  - If the card was removed while the power was on.
  - If 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. ZaxConvert is available to anyone for free at http://www.zaxcom.com/support/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/support/updates

A newer version of beta firmware may be found on the Zaxcom Forums:

- http://www.zaxcom.com/forum

It is recommended to keep a copy of the "SNXXXX.ME" file for each transmitter. The SNXXXX.ME file contains the setup parameters of that specific transmitter - so in the event that there is a problem with the transmitter and the settings get corrupt the SNXXXX.ME file can be used to recreate the setting for that transmitter. To copy and save the SNXXXX.ME files simply format a card in each transmitter then copy and archive the SNXXXX.ME files to a computer.

Updating the Firmware

1. Format a micro SD card in the transmitter.
2. Remove the card and with a computer delete the "SNXXXX.ME" file.
3. Download the ZMT5-HH firmware "ZMT-XXX.bin" from the Zaxcom website and copy it onto the formatted card.
4. Power down the ZMT5-HH and insert the card into the transmitter.
5. Hold down the Rubber Membrane Key while powering up the unit.
6. The screen will display "PRESS MENU TO BURN" with the version of firmware that is going to be loading.
7. Press the MENU key.
8. From power up to "DONE" will take about 30 seconds.
9. Upon completion, cycle the power and confirm that the transmitter is running the new firmware.

WARNING: Before updating the firmware be sure to insert a fresh battery and do not power down the unit during the update process, if the unit should lose power during the upgrade, it may need to be sent back to Zaxcom for repair.

Updating ERX firmware with a ZMT5-HH

1. From the ZaxNet menu set ZaxNet mode to transmit (TX).
2. Check that the ERX is set to the same ZaxNet frequency that the ZMT5-HH is set to transmit on. Check that the GROUP ID is set the same in both the ZMT5-HH and ERX, and make sure encryption is shut off.
3. Format a micro SD card in ZMT5-HH transmitter.
4. Remove the card, and with a computer delete the "SNXXXX.ME" file.
5. Download the ERX firmware "ERX-XXX.bin" from the Zaxcom website and copy it onto the formatted card.
6. Insert the card into the transmitter.
7. Proceed to the SETUP MENU and select PRESS UP TO SEND ERX PROG FILE
8. From the firmware update menu on the ERX press the INC key 5 times to see WAITING FOR PROGRAM.
9. Press the INC key on the transmitter to trigger the update process.
10. The ERX should indicate its progress after a few seconds.
11. When the ERX has been updated the screen will display "SUCCESS".

WARNING: Before updating the firmware be sure to insert a fresh battery and do not power down the unit during the update process, if the unit should lose power during the upgrade, it may need to be sent back to Zaxcom for repair.

Updating QRX firmware with a ZMT5-HH

1. Format a micro SD card in a ZMT5-HH transmitter.
2. With a computer take the formatted card and perform the following:
   - Delete the “SNXXXX.ME” file from the card.
   - Download the new QRX firmware and load it into the card. (QR2-XXX.BIN)
3. Insert the card and a fresh battery in the transmitter.
4. At the QRX:
   - Verify the QRX is set to single mode and modulation is set to mono.
   - Verify encryption is off (ID1 and ID0 are both set to 000)
   - Set the UHF Frequency to the same frequency as the programming transmitter.
   - The QRX receiver status LEDs should both be green.
   - From the extended menu go to the firmware update page and press the INC key.
   - The screen will display waiting for program. This indicates the receiver is ready to download the new firmware. This can be done to several QRXs so they will be updated at the same time.
5. At the transmitter proceed to the setup menu proceed to the firmware update menu (see manual) and press the INC key.
6. Each QRX should indicate it is receiving the program.
7. After the firmware send cycle, all of the receivers should be re-programmed and “SUCCESS . . . REBOOT NOW” will be displayed. If there was a reception error, the affected receiver will automatically restart the process with the start of the next send cycle.
8. Reboot the QRX and verify the QRX is running the new firmware version.

WARNING: After the QRX has received its entire program, it will erase and burn its firmware into the ROM. During this process, which only takes a few seconds, you **MUST NOT** turn ‘OFF’ the QRX. If the program is never fully received, it is safe to cycle the power.

Operating Frequencies

ZaxNet Remote Control and Time Code

- 2.403 GHz to 2.475 GHz

UHF - Audio

ZMT5-HH

470.0 MHz to 698.0 MHz

Product Support

Product Registration:	**http://zaxcom.com/support/product-registration/**
Download Firmware:	**http://zaxcom.com/support/updates/**
Download User Manual:	**http://zaxcom.com/support/updates/**
Repair Services:	**http://www.zaxcom.com/support/repairs**
Zaxcom User Forum:	**http://www.zaxcom.com/forum/forum.php**

Specifications

Transmitter
RF Modulation: Proprietary Digital Method
RF Frequency Range: 470 - 698 MHz
RF Frequency Step: 100 KHz
RF Bandwidth in ZHD96 Mode: 100 KHz
RF Bandwidth in XR Mode: 200 KHz
Channel Separation in ZHD96 Mode: as close as 200 KHz
Channel Separation in XR Mode: 400 KHz
Emission Designator: 180 KV2E, 100 KV2E, 50 KV2E
FCC Part: 74.8611

Transmitter Audio
Dynamic Range: 128 dB
Distortion: 0.002%
Frequency Response: Mode 0
High Pass Filter: Off or 30 to 220 Hz, Steps
Mic Power: 7v @ 50mA max
Mic Connector: XLR-Female
Mic Configuration: Balanced
Input Range: -60 to -30 dBu
Mic Impedance: 2.0 kΩ
ADC Bit-Depth: 24 Bits
ADC Sampling Rate: 48 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, 29.97 NDF, 29.97 DF, 30NDF, 30 DF

Internal Recording
Media Type: MicroSD Card (Flash Memory)
File Format: ZAX / Converts to BWAV or MP3

2.4 GHz ZaxNet Receiver
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

Physical
Display: Graphic OLED

Power
Battery Type: Single 18650 lithium battery
Battery Life: Up to 10 hours

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 ZMT5-HH ("Product") was purchased from an authorized distributer or authorized reseller. Distributers may sell Product to resellers who then sell Product to end users. Please see below for warranty information or obtaining service. No warranty service is provided unless the Product is returned to Zaxcom Inc. or a Zaxcom dealer in the region where the Product was first shipped by Zaxcom.

Warranty Policy

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

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

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

Troubleshooting & Repair Services

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

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

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

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

Warranty Limitations

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

Limitation of Remedies

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

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

Limitation of Damages

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

No Consequential or Other Damages

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

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

Your Use of the Product

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

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

Additional Limitations on Warranty

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

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

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.

This radio transmitter 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

This device complies with Industry Canada license-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.

"This device operates on a no-protection, no-interference basis. Should the user seek to obtain protection from other radio services operating in the same TV bands, a radio licence is required. For further details, consult Innovation, Science and Economic Development Canada's document Client Procedures Circular CPC-2-1-28, Voluntary Licensing of Licence-Exempt Low-Power Radio Apparatus in the TV Bands."

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.

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.

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.

"Cet appareil fonctionne sur une base sans protection, sans interférence. Si l'utilisateur cherche à obtenir une protection contre d'autres services de radio fonctionnant dans les mêmes bandes de télévision, une licence radio est requise. Pour de plus amples renseignements, veuillez consulter le document CPC-2-1-28, Procédures à l'intention des clients, intitulé Procédures à l'intention des clients, intitulé «Licence volontaire d'appareils radio à faible puissance exempts de licence dans les bandes de télévision»

USA - FCC Part 74, FCC Identifier PR6ZMT5-HH
Canada - Industry Canada RSS 210, IC:12755A-ZMT5-HH

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

EU Declaration of Conformity

We Zaxcom Inc. of 230 West Parkway, Pompton Plains, New Jersey Declare under our sole responsibility that the following Products of wireless microphone transmitters:

ZMT4, ZMT3, ZMT3-X, ZMT4-X, TRXLA3, TRXLA5, TRXFB3, TRXCL3, TRXCL4, TRXCL5, NOVA, NOVA2, TRX743, TRX745, ZMT3-FLEX, ZMT4-FLEX, ZMT3-HM, ZMT4-HM, ZMT5-HH

And Wireless microphone Receivers:

MRX214, MRX414, QRX200, QRX235, RX12, RX8, RX4, RX200, URX50, URX100

Conform to the essential requirements of the following European directives and their associated norms:

RoHS	EN IEC 63000:2018
Human Exposure	Standard EN62311:2020
Radio Directive 2014/53/EU (RED)	Standard EN300 422-1v2.1.2
EMC	Standard EN301 489-1v1.9.2
EMC	Standard EN301 489-9v2.1.1
Safety	EN62368-1 2014

Date: 07/24/2023

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