

# USER MANUAL

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ZAXCOM.COM

## Zaxcom Deva24

Elevating Recording

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## Front Panel



### 1. Pre fader listen keys PFL (12 total)

- Press to listen to the input that is routed to that fader.
- When in the fader assign menu pressing the key will jump to the fader assign matrix for that fader.
- When in the input configure menu pressing the key will jump to the assigned input and PFL that input.

### 2. Fader knobs (12 total)

Each of 12 faders can be assigned to act as a fader, input trim knob or a ZaxNet control knob.

### 3. Internal slate microphone

4. **Color LCD Touch Screen** - Daylight-readable color LCD touch screen.

5. **Headphone knob** - Rotate to adjust the headphone volume.

6. **ZNET key** - Press to open the ZaxNet transmitter menu.

7. **Setup key** - Press to open the input configure menu.

8. **Wireless key** - Press to open the RX-12 interface page.

9. **Scene / Take / Note keys** - Opens the Meta Data entry pages.

10. **Cue key** - Press to open the cue menu on the home screen.

11. **Time Code key** - Press to open the time code menu. A second press will display the time code slate.

12. **REC / STOP / PLAY keys** - Starts and stops recording and initiates playback. Pressing stop after stopping a segment will open the false take screen.

13. **PRI / CF1 / CF2 LED** - Indicates that those drives are being written to.

14. **SLT / Com keys** - Press to activate the internal slate microphone (SLT) or external slate microphone (COM).

15. **Menu encoder knob** - Pressing the menu knob will open the main menu. When a parameter key is highlighted in orange, turning the menu knob will adjust that parameter.

### 16. Back key

- Press to jump back one menu
- Press and tap a track on the home screen to name the track.

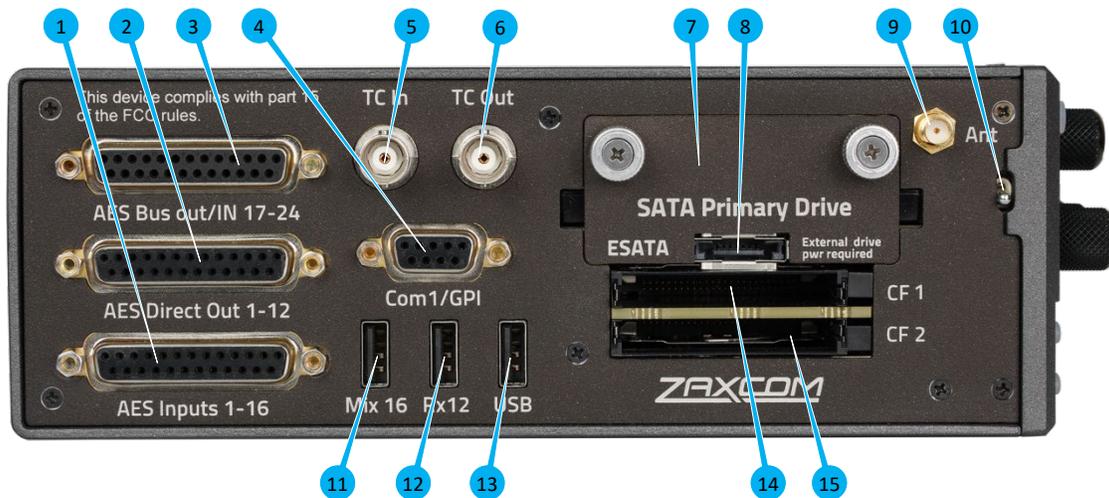
**17. Shift key**

- Press and tap a track on the home screen to record enable / un-enable the track.
- Press and tap the navigation arrows in the input configure menu to jump 4 inputs.
- Press and tap the input name key in the input configure menu to name the input.
- Press and tap the track name key in the mix track menu to name the mix track.
- Press and tap the output bus in the output routing menu to name the output bus.
- Press and tap the knob assign preset position to name the knob preset.
- Press and tap the aux knob preset to name the aux knob assign preset.
- Press and tap the headphone preset name key in the headphone assign menu to name the preset.
- Press and tap the folder in the primary folder menu to name the folder.
- Press and tap a segment from the folder menu to edit the metadata for the segment.
- Press and press the F5 key to update the software.

**18. HPH key** - Press to advance to the next headphone preset. Press and hold to jump back one headphone preset.

**19. Aux 1 / Aux 2 knob** - Rotate to adjust aux send levels.

## Left Side



**1. AES Input 1 thru 16 (DB-25F)**

These inputs will support an AES42 microphone. The input has a sample-rate conversion, allowing each input to have a different sampling-rate. Deva will accept any unlocked AES signal with a sampling-rate of 32 to 192 kHz. The dynamic range of the sample-rate conversion is 124 dB, offering completely transparent conversion of digital audio from one sample-rate to another.

**2. AES Direct Outputs (DB-25F)**

Direct AES outputs of the 12 analog inputs. These outputs are direct outputs with no effects or equalization applied.

**3. AES Bus outputs and AES input 17 thru 24 (DB-25F)**

AES output busses 1 thru 8.

AES inputs 17 thru 24 - *please note these inputs do not support AES42 microphones.*

**4. COM1 / GPI (DB-9F)**

This connector is used for word clock out, USB keyboard and supports a general purpose serial and parallel interface.

**5. Time Code Output connector (BNC)**

**6. Time Code Input connector (BNC)**

**7. SATA- Primary Drive**

The drive gets inserted behind the removable door. To remove the door turn the thumb screws counterclockwise.

**8. Connection for ESATA - mirror drive**

**9. ZaxNet antenna connector (SMA F)**

**10. Power switch**

**11. Mix16 connector**

**12. RX12 connector**

**13. USB connector - for connection to a PC or MAC**

**14. Compact flash 1 drive - mirror drive**

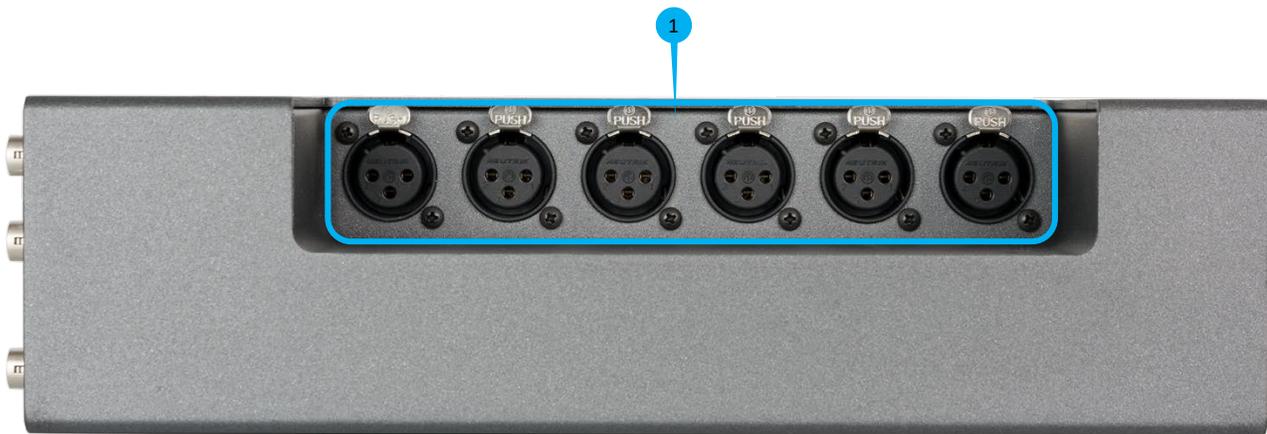
**15. Compact flash 2 drive - mirror drive**

## Right Side



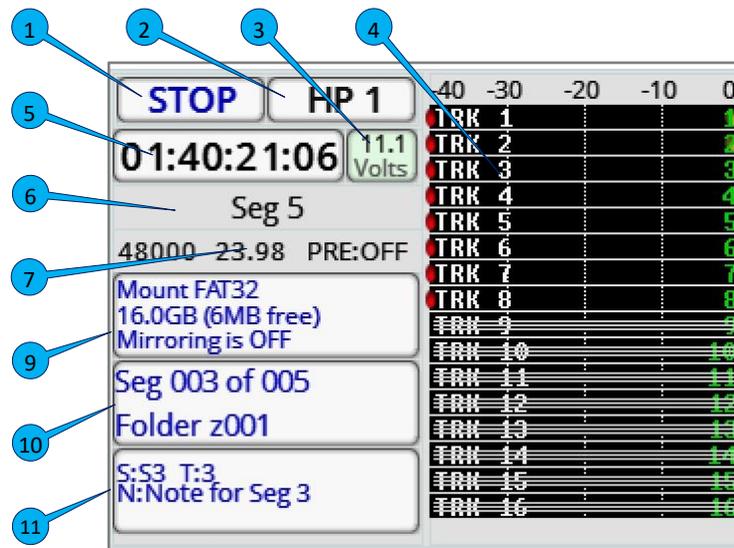
- 1. Front panel headphone output (1/8" stereo jack)**  
This connector mirrors the 1/4" main headphone connector
- 2. Analog inputs 7 thru 12 (TA-5M)**  
These inputs are switchable between line level and mic level. These inputs have patented NeverClip preamps with 136dB of dynamic range.
- 3. External Power Connector (Hirose-4F) X 2**  
These are redundant power inputs which will seamlessly switch to the supply with the higher voltage. Deva 24 will operate on 10 to 18 VDC {1/2 A @ 12 VDC}  
**WARNING:** Do NOT use a source higher than 18.0 VDC. Doing so can damage the unit's power supply.
- 4. External front panel slate microphone input (1/8" (3.5mm) TRS)**  
This is where the external slate microphone is plugged into when using EXT FRONT setting.
- 5. Outputs 1 - 6 (TA-5M)**  
Outputs 6 channels of audio via output buses 1 thru 6
- 6. Returns 1 - 4 (TA-5M)**  
These inputs accept a headphone level or line-level signal (Range: -20dBu and +30dBu)
  - Line level analog inputs 13 thru 16
  - These inputs can be used as returns. Each input is independent so audio can be monitored from four different sources
- 7. Headphone #1 (1/4" stereo jack)**  
Main headphone out
- 8. External side slate microphone input (1/8" (3.5mm) TRS jack)**  
This is where the external slate microphone is plugged into when using EXT SIDE setting.
- 9. Headphone #2 (1/8" (3.5mm) TRS jack) Buses 7 / 8**
- 10. Mono output (1/8" (3.5mm) TRS jack) Bus 10**
- 11. Tape output (1/8" (3.5mm) TRS jack) Bus 9**
- 12. Outputs 1 - 4 (XLR-3M)**  
Outputs 4 channels of audio via output buses 1 thru 4
- 13. DC output (Hirose 4-F)**  
Supplies DC power to another device (1 amp max)

## Rear

**1. Analog inputs 1 thru 6 (XLR-3F)**

These inputs are switchable between line level and mic level. These inputs have patented NeverClip preamps with 136dB of dynamic range.

## Home Screen



1. **Transport status** - Displays the status of the recorder. Tapping on the transport status key is a shortcut to the main menu.
2. **Headphone status** - Displays what audio is being sent to the headphones. Tapping on the headphone status key is a shortcut to the headphone routing matrix.
3. **Voltage** - Displays the incoming voltage of the power supply that is powering the Deva 24. If Deva 24 has a power supply connected to both DC power inputs, the input with the higher voltage will be the one that is powering the Deva 24 and that will be the voltage that is displayed.
4. **Track Meters** - Shows the record tracks levels in dBFS.
 

*Please note that the number of track meters displayed can be adjusted in the mode menu - this example shows 16 tracks.*

  - If the track is named that track name will be displayed within the meter.
  - If there is a horizontal line going through the track, that is showing that track is not record enabled. If a track is record enabled there will be a red dot to the left of the meter.
 

As short cut hold the shift key and tap the track will record enable that track.
  - If the compressor is engaged there will be a white line going from the right to the left showing the compression.
  - Tap on the track will isolate that track to the headphones.
5. **Time Code** - Displays the time code. This is user selectable to show the time code from either the time code generator or the card. Tapping on the time code key is a shortcut to the time code menu.
6. **Record time** - Displays the time left on the primary media, the folder being recorded to and the segment number and the .
7. **Sample Rate / Frame Rate / Pre Record time** - Displays sample rate, time code frame rate and pre-record buffer time.
8. **Record media information** - Displays the remaining capacity on the primary and mirror media, the percentage of the file that is being mirrored and what file number of the folder is being mirrored. Tapping on the key is a shortcut to the My Deva menu.
9. **Segment** - Displays the current segment being recorded and the folder it is being recorded to. Tapping on the Segment key is a shortcut to the primary folder menu.
10. **Scene / Take / Note** - Displays the current scene, take and note metadata. Tapping on the key opens the metadata management screen.

## Main Menu

To access the main menu, press the MENU knob or tap the transport status key.

To return to the home screen, press the BACK button.

MAIN MENU			
TRACK MIX	OUTPUT ROUTING	ISO ROUTING	FADER ASSIGN
SETUP	INPUT CONTROL	MY DEVA	CUE MODE
OFF TONE	HPH MIX	RECORD ENABLES	ABOUT DEVA

From the main menu the following menu items can be selected.

- **Track Mix** - This is where mix tracks (tracks 1 thru 8) are assigned inputs. Please note a mix track can also be an ISO track if only one input is assigned to the track.
- **Output Routing** - This is where the 10 output busses get their assignments, and where the output levels are adjusted.
- **ISO Routing** - This is where the ISO tracks (tracks 9 thru 24) are assigned an input.
- **Fader Assign** - This is where the 12 hardware knobs and 2 AUX knobs are assigned a function.
- **Setup** - This contains the sub menus where the Deva 24's parameters are adjusted.
- **Input Control** - This is where the input parameters for the 16 analog and 24 digital inputs are adjusted.
- **My Deva** - This is where the record drives are enabled and the record parameters are adjusted.
- **Cue Mode** - This opens the cue menu on the home screen.
- **Tone** - Tapping the tone key toggles the internal tone oscillator on and off.
- **HPH Mix** - This is where the 10 headphone presets are set up from.
- **Record Enables** - This is where the record tracks are enabled and assigned to a record media(s).
- **About Deva** - This will display the information about the Deva.

## Track Mix

The track mix menu is where the mix tracks (tracks 1 thru 8) are assigned their inputs. Any combination of the 16 analog inputs or 24 digital inputs can be assigned to the any of the mix tracks from this menu. If a single input is assigned to a track that track would become an ISO track.

### Assigning inputs to a mix track

#### Selecting the track to assign

Select the track to be assigned by tapping on the arrow keys on either side of the track name.



#### Naming a mix track

A mix track can be optionally named by holding the SHIFT key and tapping on the track name key (between the arrows) which will open the on screen keyboard. After a mix track is named, that name will be displayed in the meters and will be in the metadata. A track name can contain up to 16 characters. A list of 18 preset track names can be accessed by tapping on the PRESET key to the right of the track name box.



#### Setting the paramaters for the input(s) that will be assigned

From the lower left corner tap on the desired key to set the input parameter:

- Phase - normal or inverted
- Input type - analog or digital
- Routing - pre or post fader

After the parameters have been set, any input selected will follow the chosen parameters. So for the example to the right when tapping on an input number (1 thru 24) that input will be assigned to the mix track as analog input, routed post fader with normal phase. Any combination of input parameters can be assigned to a record track.



### Assigning the inputs to the track

Tap on the desired input(s) (1 thru 24) to route those input to the selected mix track. The number in the box represents the input number, for both analog and digital. After the box is tapped the chosen parameter for that input will be displayed as:

- An analog assignment will be displayed as an "A"
- A digital assignment will be displayed as a "D"
- If the phase is inverted a line will appear on top of the letter
- If the input is routed post fade the letter will be black with a light grey background.
- If the input is routed pre fader the letter will be white with a dark grey background.

To remove an assignment select the same parameters (phase, input and fader), then tap on the input to be removed.



### Setting the parameters for the track

Tap on the desired key to:

- Enable the slate microphone for that track
- Set the desired ISO attenuation (0dB, -6dB, -12dB, -18dB, -24dB) for that track
- Enable tone to that track - when tone is engaged
- Enable the compressor / limiter to that track



# Output Routing

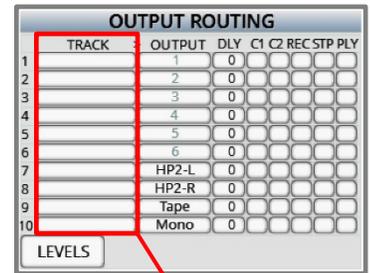
The output routing menu is where the record tracks are assigned to an output bus / busses.

## Routing record tracks to an output bus

### Selecting the output bus to be routed

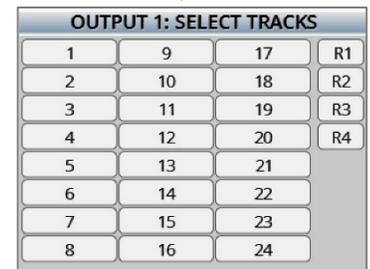
Tap on the track box for the desired bus (1 thru 10) which will open the track select matrix. The bus numbers are listed on the left.

- Output buses 1 thru 6 are routed to their corresponding XLR and TA5 output number.
- Output bussed 7 and 8 are routed directly to the headphone 2 output.
- Output busses 9 and 10 are routed the tape and mono output.



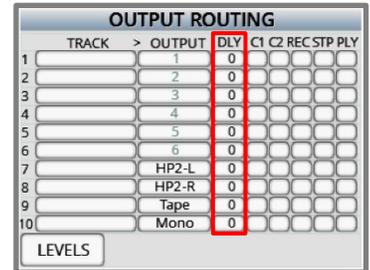
### Selecting the track(s)

When the track select matrix is open, tap on the track(s) and or return input(s) to be routed to the output bus. After the track(s) have been selected the track number(s) will be displayed in the track box.



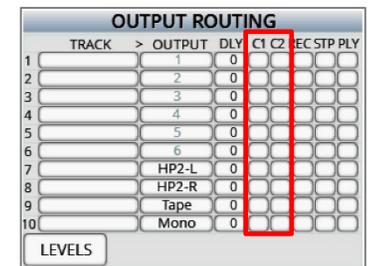
### Adding delay to the outputs

Delay can be optionally added to each output bus. To add delay, tap on the delay box for the desired bus. Tap on the box once and it will turn it orange; when the box is orange the menu encoder knob can be used to adjust the delay. Tap on the box one more time to open the delay entry menu. From the menu the delay can be manually entered. Delay can be set up to 999mS.



### Assigning coms to an output bus

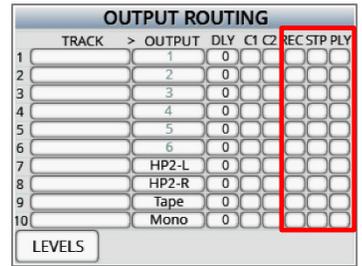
Tap on the desired Com box to route the coms (C1 and C2) to output bus. An "X" will appear when a com has been routed to the bus. Please note access to com 2 is only available when using the Mix 16.



### Muting an output

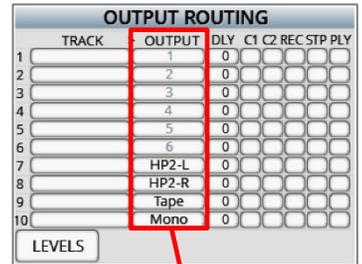
Tap on the desired box to mute that output bus during the selected transport mode. An "M" will appear in the box that has been muted.

- **REC** - Record mode
- **STP** - Stop mode
- **PLY** - Playback mode



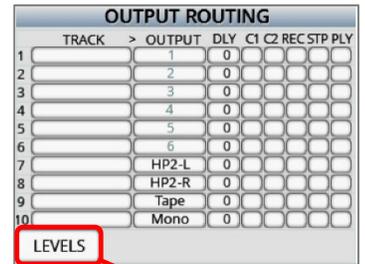
### Naming the output bus

Each output bus can be optionally named for easy identification. To name the output bus, hold the SHIFT key tap on the output bus number to open the text entry keyboard. Then from the keyboard enter the desired name.

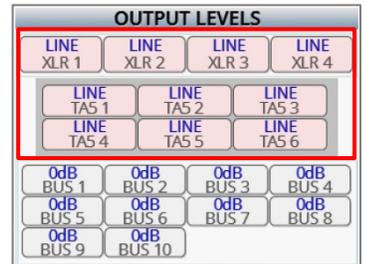


### Adjusting output levels

Tap on the LEVELS key on the lower right corner to open the output level menu.

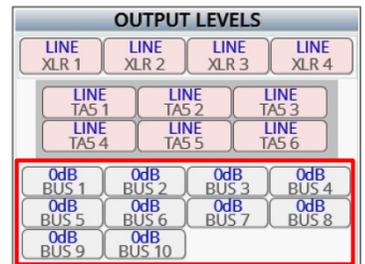


From the output level adjust menu the individual output levels for the XLR and TA5 connectors can be adjusted. Tapping on the output key will cycle through Line, Mic and -10dB.



### Attenuating an output bus

From the output levels menu tapping the BUS keys will allow for the individual bus output to be attenuated up to 24dB.



## ISO Routing

The ISO routing menu is where the ISO tracks (tracks 9 thru 24) are assigned an input. Any of the 16 analog inputs or 24 digital inputs can be assigned to the any one of the ISO tracks.

### Assigning an input to a ISO track

#### Setting the ISO track as pre or post fader

Each ISO track can be routed as either pre or post fader. Tapping on the FADER key on the lower left will toggle between “Pre” and “Post” fade. This sets the state of how the input will be routed. So for example if the “Pre” is displayed any input selected will be routed pre fader. If the “Post” is displayed any input selected will be routed post fader.



#### Routing an input to the ISO track

Select the desired ISO track (9 thru 24) to be assigned by tapping on the track number. This will open the ISO source menu for that track.

To remove an ISO routing select the track number which will open the ISO source menu, then tap on the input to toggle it off.

If the input is named, that name will be displayed in the input box on the ISO source menu.



An analog input routed post fader will be displayed light green and an analog input routed pre fader will be displayed dark green.

A digital input routed post fader will be displayed light blue and a digital input routed pre fader will be displayed dark blue.



#### Enabling ISO attenuation

The NeverClip™ inputs allow large signals to travel through the digital mixing engine using 32 bit floating point numbers. Once these large signals are recorded into a 24-bit WAV (or MARF) file, the advantage of floating point math is lost and these signals can clip if not using a card limiter.

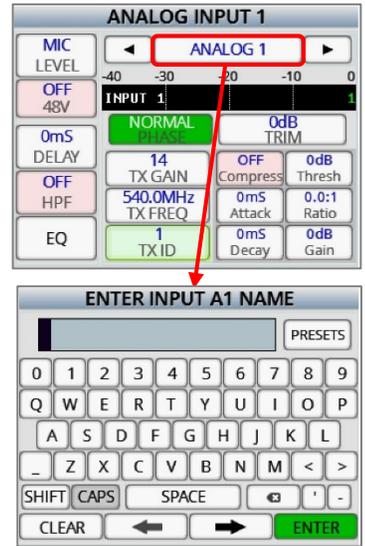
ISO Attenuation allows the ISO record tracks to be attenuated by a user selectable amount of 6, 12, 18 or 24dB. This allows audio to be recorded without clipping even if its dynamic range would normally be too large. This gain reduction amount is stored in the metadata of the WAV file so post production can easily restore the amplitude of the ISO tracks when necessary. To enable ISO attenuation tap on the desired attenuation amount from the ISO attenuation matrix. Please note that the ISO attenuation is a global setting - meaning the same amount of attenuation will be applied to all tracks.



### Naming an ISO track

An ISO track will be named when it is assigned a named input.

To name an input go to the input control menu and hold the SHIFT key and tap on the INPUT NAME key to open the on screen keyboard. Each input name can be up to 16 characters in length. Then when that input is assigned to an ISO track the inputted name will become the track name, and will be stored in the metadata.



# Fader Assign

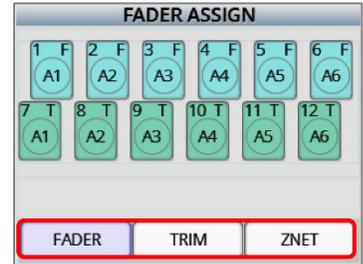
The fader assign menu is where the 12 hardware faders are assigned their function. Each individual fader can be assigned to control input trim, it can be assigned to be a fader for any input or, it can be assigned to remote control the transmitter input gain, via ZaxNet, for any unit code.

## Assigning a function to a fader

### Setting the function of the fader

Tap the assign key on the bottom of the screen.

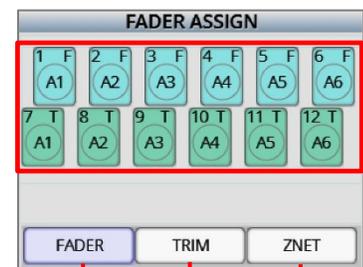
- **FADER** - The knob will be a fader for the selected input.
- **TRIM** - The knob will control the input trim for the selected input.
- **ZNET** - The knob will control the input gain of a Zaxcom transmitter.



### Assigning an input to the fader

After setting the function tap the desired fader (1 thru 12). Then, depending status of the assign key, the fader, trim or ZaxNet assign matrix will open. Then from that matrix tap on the desired input to be assigned to the fader. If desired multiple inputs or multiple trims can be assigned to a single fader.

To remove or change an assignment, select the same assignment or choose a different input.



Please note that when assigning a fader to control transmitter gain via ZaxNet the unit code will need to be assigned for that input from the INPUT CONTROL menu. To do so from the INPUT CONTROL menu tap on the TX ID key and assign a unit code for that input. Then when assigning a knob for that input to ZaxNet the unit code will be displayed on the input key

## Setup Menu

The parameters of Deva 24 are adjusted from the setup menu.

SETUP			
48000 Sample Rate	0ms Mix Ahead	OFF Pre Record	OFF Post Record
Modes	Meters	Tone Settings	Effects Copy
Clock	Memory	Mixer Faders	User Interface

### Sample Rate

Tapping on the SAMPLE RATE key will cycle through the sample rates. Deva 24 can record sample rates of 48000, 48048

### Mix Ahead - future feature

Mix Ahead allows for a user selectable amount of time, up to 250ms, can be inserted between when the audio heard in the headphones and the fader motion recorded to the MixAhead track. For example if 100ms of MixAhead is set, this will allow an extra 100ms in order to make fader adjustments. This 100ms eliminates the problem of fader latency and human reaction time, which can potentially ruin the mix track. So basically MixAhead adds time to the fader moves which can make the mix cleaner and more accurate.

A MixAhead track will be an additional track that can be utilized by post or not, as the traditional mix track is always recorded as well. Deva 24 will time align all Mix, ISO and MixAhead tracks so that post production can seamlessly cross fader between any combination of tracks.

Tapping on the MIXAHEAD key will turn the key orange, then using the menu encoder knob the MixAhead time can be dialed in. Tapping the key again to open a numeric key board where the MixAhead time in milliseconds can be entered.

### Pre-Record Time Set

From the point the Deva24 is powered up, all inputted audio is being processed. When pre-record is enabled, up to 10 seconds of that processed audio is held in a pre-record buffer. Then when the record key is pressed that stored audio, with its time code, is included the current take.

Tapping the PRE-RECORD key will turn the key orange, then using the menu encoder knob the pre-record time can be dialed in. Tap on the key again will open a numeric key board that will allow the pre-record rate to be entered. The pre-record buffer can be set from 1 to 10 seconds in 1 second increments.

Please note the prerecord buffer is dumped after any of the following settings are changed: sample-rate, time code, user-bits, frame-rate or record enable. After these parameters are changed the buffer will start to re-build.

### Post-Record Time Set

When post-record is enabled, up to 10 seconds of audio will be added to the take after the STOP is pressed.

Tapping the POST-RECORD key will turn the key orange, then using the menu encoder knob the post-record time can be dialed in. Tap on the key again will open a numeric key board that will allow the post-record rate to be entered.

The post-record can be set from 1 to 10 seconds in 1 second increments.

## Modes Menu

Tap on the MODES MENU key to open the mode sub-menu.

MODES			
NORMAL TRANSPORT	OFF REMOTE ROLL	INTERNAL SLATE MIC	
NORMAL TC SLATE	16D-16A INPUT MODE	OFF HP REC BEEP	
0dB HP BEEP GAIN	0 HP SIDE COM GAIN		
NORMAL AES 9-10	NORMAL AES 11-12	NORMAL AES 13-14	NORMAL AES 15-16
NORMAL AES 17-18	NORMAL AES 19-20	NORMAL AES 21-22	NORMAL AES 23-24

**Transport Control** - The transport control adjusts the way Deva 24 will go into record.

- NORMAL - Deva 24 will go into record when the record button is pushed.
- AUTO-LOAD - Deva 24 will go into to record when it senses record run time code coming from an external source. Please note auto-load mode only works when using record run time code.

## Remote Roll Enable

When using a general purpose interface connected to the COM / GPI port the Deva 24 can remote roll.

- OFF - Remote roll will be shut off
- RISING - Remote roll will engage when there is a low to high voltage transition.
- FALLING - Remote roll will engage when there is a high to low voltage transition.

## Slate Mic Select

- INTERNAL - The internal slate microphone on the front panel will be used when the SLT key is pushed.
- EXT SIDE - The slate microphone that is connected to the "SLATE" input jack on the main body of Deva 24 will be used when the SLT key is pressed.
- EXT FRONT - The slate microphone that is connected to the "MIC" input jack on the side of the front panel of Deva 24 will be used when the SLT key is pressed.

## TC Slate Orientation

- NORMAL - The time code slate will appear right side up.
- FLIPPED - The time code slate will appear inverted. This is for when the Deva 24 is being worn in a sound bag and a camera needs to shoot the slate for reference. This way the slate will appear in the correct perspective to the camera.

## Input Mode

- 24D - 8A + 4 RET - Deva 24 can receive 24 digital inputs and 8 analog inputs plus 4 return.
- 16D - 16A - Deva 24 can receive 16 digital inputs and 16 analog inputs.

## Headphone Record Beep

- ON - An audible beep will be heard in the headphone when Deva 24 goes in and out of record.
- OFF - No beeps will be heard when Deva 24 goes in and out of record. Please note the beep will be heard in the headphones only and will not be recorded or outputted.

## Headphone Record Beep Gain

Sets the level of the record beep that is sent to the headphones. The level can be set from 1 to 20dB in

## HP Beep Gain

The level of the record beep heard in the headphones can be adjusted here. The level can be adjust from 1dB to 20dB's in 1dB increments.

### HP Side Com Gain

If desired the com audio can be heard in the headphones. To hear the com audio adjust the gain from 0 to the desired level.

### Dante Routing 16a 16d

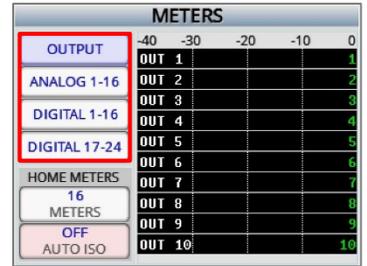
*Only available for Dante enabled units*

- **NORMAL** - Those AES inputs will be active.
- **DANTE** - Those AES inputs will be disabled which allow Deva 24 to receive data channels Dante (up to 16 channels of audio via Dante).

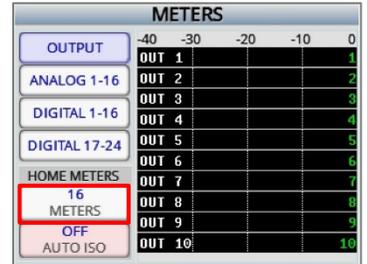
### Meters Menu

Tapping the METERS key will open the meter menu.

To view the input source meters tap the source key on the upper left. This will change which meters are displayed on this screen, please note this will not change the meters displayed on the home screen.

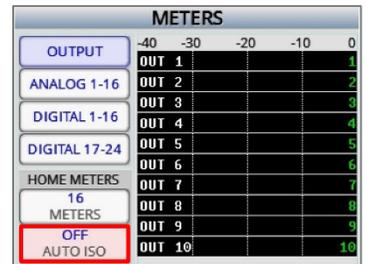


Tapping on the METERS key will cycle through the number of record track meters that will be displayed on the home screen. The choices are 8, 12, 16, 20 or 24 meters.



Tap on the AUTO ISO key to remove mix tracks (tracks 1 thru 8) with nothing assigned to them from the home screen

- **OFF** - All mix track meters will be displayed on the home screen.
- **ON** - Only mix tracks with something assigned to them will be displayed on the home screen.



## Tone Settings

Tapping the TONE SETTING key will open the tone menu.



## Tone Level

Tapping the TONE LEVEL key will adjust the level of the reference tone that is recorded on the record tracks and sent to the output busses. The tone level can be set to -12, -14, -16, -18 or -20dB.

Please note it is recommended, for most applications, to keep the tone level set at -20dB.

## Tone Frequency

Tapping the TONE FREQUENCY key will adjust the frequency of the tone. The frequency can be set from 200Hz to 2000Hz in 1Hz increments.

## Tone Enable

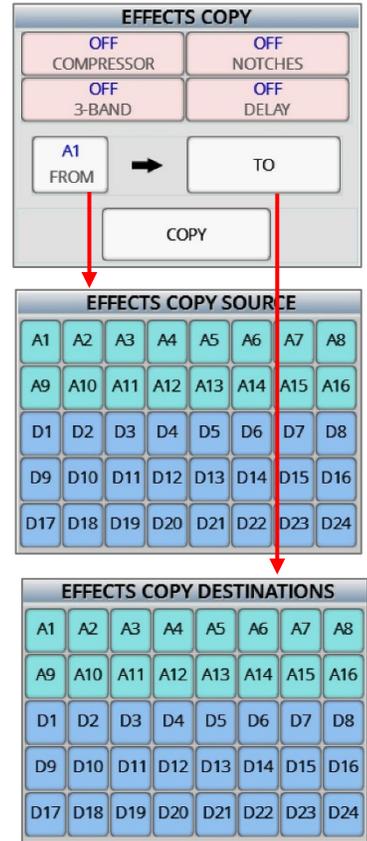
Tapping the TONE ENABLE key will toggle tone on and off. Please note tone will only be sent to the record tracks and outputs that it was assigned to.

### Effects Copy

Effects copy will allow the compressor, notch, equalization and delay settings to be copied from one input to other inputs.

To copy the effects:

- Turn on the desired effects to be copied by tapping the desired effects key(s).
- Select the input to be copied FROM by tapping the FROM key.
- Select the input(s) that the effects will be copied to by tapping the TO key.
- Tap the COPY key.



## Clock and Date Set

Tapping on the CLOCK key will open the date and clock menu. This is where Deva 24's internal clock and calendar will be adjusted from.

The date style can be set to either US (MMDDYY) or European style (DDMMYY).

The screenshot shows the 'CLOCK' menu with the following settings:

CLOCK			
DATE	18 DAY	9 MONTH	2017 YEAR
TIME	9 HOURS	18 MINUTES	2 SECONDS
24 HOUR MODE		US MMDDYY DATE STYLE	

## Maintaining the internal clock

Please note that Deva 24 contains a battery backed real-time clock. This clock is used to maintain running time code and internal calendar. It is advised to change the battery every 2 to 3 years.

The battery is a CR2320 3V coin cell battery.

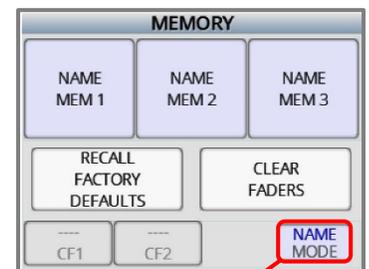
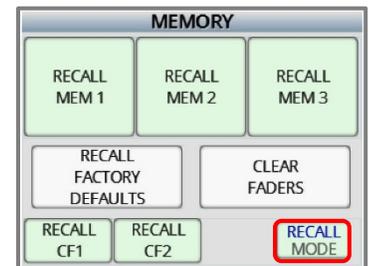
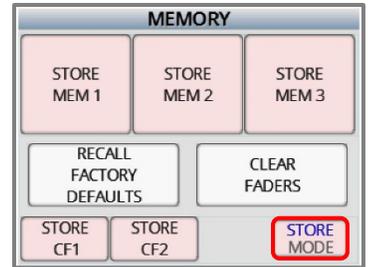
### Memory Menu

Tapping on the MEMORY key will open the memory menu. Deva 24 has 3 user assignable memory presets where all user set parameters are saved and can be recalled as needed. Please note that after doing a factory restore, all stored memories will be erased.

#### Saving a Deva 24 setup to a memory position

From the lower right corner tap on the MODE key to cycle through the memory functions.

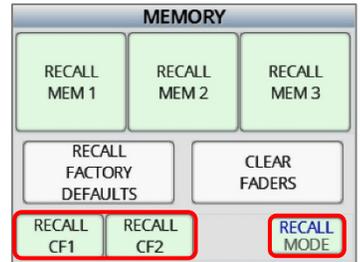
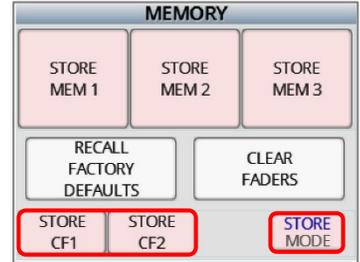
- **STORE** - Allows for a setup to be saved to a memory position.
- **RECALL** - Allows for a stored memory to be recalled.
- **NAME** - Allows a memory set up to be named. Each memory name can contain up to 6 characters. To name the position tap on the NAME MEM key to open the text entry keyboard.



### Saving a Deva 24 setup to a compact flash card or ESATA drive

The Deva 24 setup can be saved to either compact flash card or ESATA drive, so the settings can easily be transferred to another Deva 24, or saved so a set up can be recalled after a factory default reset is done.

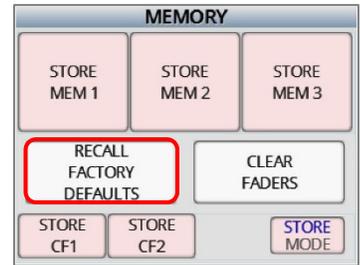
- To save the settings set the mode key on the lower right to STORE then tap on the desired CF position - or if Deva 24 is set to record to an ESATA drive ESATA will appear as one of the choices.
- To recall the setting from a set the MODE key on the lower right to “RECALL” the tap on the desired drive position.



### Recalling factory defaults

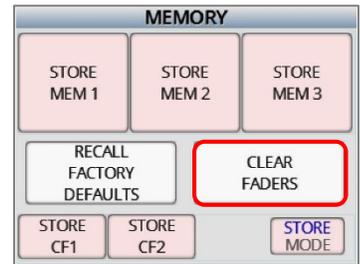
From the memory menu the Deva 24 factory defaults can be recalled by tapping on the RECALL FACTORY DEFAULTS key.

Warning all user set parameters will be cleared when a factory recall is done.



### Clearing fader assignments

From the memory menu the Deva 24's faders assign can be cleared by tapping on the CLEAR FADER key.

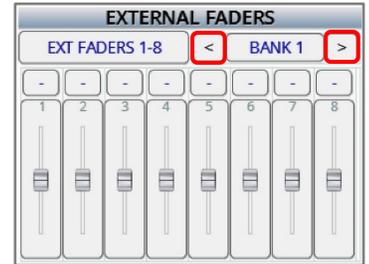


### Mixer Faders

The MIXER FADERS key assigns input(s) and sets functions to the faders of a Mix 16 control panel.

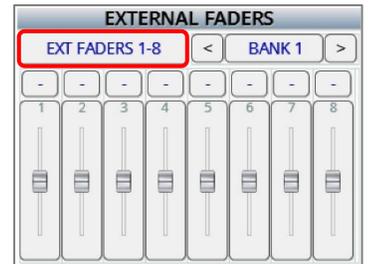
#### Selecting a fader bank to assign

Tap on the arrow keys on either side of the BANK key to select one of the 5 Mix16 fader banks.



#### Selecting fader groups

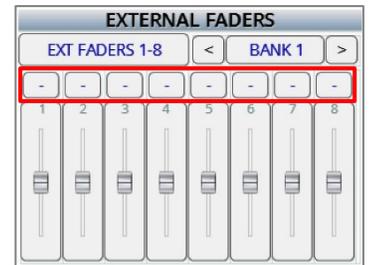
Tap on the EXT FADER key on the top left to toggle between fader groups 1 thru 8 and fader groups 9 thru 16.



#### Assigning a trim pot function to a fader strip

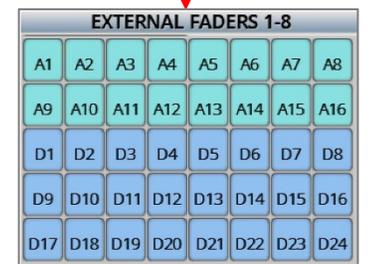
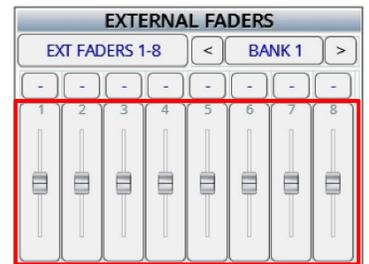
Tap on the box above the fader to assign a function to that trim pot.

- Z - The fader will control the input gain from a Zaxcom wireless transmitter for the selected input.
- T - The fader will control the input trim for the selected input.



#### Assigning an input(s) to the fader

Tap on the fader to open the fader assign matrix. From the matrix any analog or digital input(s) can be assigned to a Mix16 fader. Multiple inputs can be assigned to any fader.



## User Interface

USER INTERFACE		
8 LCD BRIGHTNESS	OFF USE MIX16 HP POT	OFF LIMIT TRK1 SHIFT CLICK
OFF HP3 IS HOME KEY	OFF FALSE START DELETE	OFF DONT EDIT NEXT SEG
OFF EXTERNAL KEYBOARD	OFF MIX16 TRK BUTTONS	

### LCD Brightness

From the user interface menu the LCD BRIGHTNESS key adjusts the LCD screen and the membrane keys. To adjust tap on the LCD BRIGHTNESS key, which will turn the key orange, then the menu encoder can be used to adjust the brightness. If the key is tapped a second time the on screen keyboard will open and the brightness level can manually be entered. The brightness can be adjusted from 1 to 10 with 10 being the brightest.

### Use MIX16 Headphone Pot

- **OFF** - The headphone potentiometer on Deva24 will be active.
- **ON** - The headphone potentiometer on Deva24 will not be active and the headphone potentiometer on the Mix-16 will be active.

### Limit Track 1 Shift Click

When set to ON it prevents accidentally disengaging track 1 when in the home screen

### Headphone 3 is home key

- **ON** - The HP3 key on Mix 16 will become a shortcut to the home menu.
- **OFF** - Pressing the HP3 key on the Mix 16 will access the HP3 preset.

### False Start Delete

When set to ON it prevents accidentally deleting a false start

### Dont Edit Next Seg

- **ON** - When pressing the SCENE or TAKE key the current segment will open for metadata entry instead of going to the next non-existent segment.
- **OFF** - When the SCENE or TAKE key is pressed Deva24 will allow for the metadata for the next segment to be entered.

### External Keyboard

- **ON** - Activates the DB9 connector so that an external USB keyboard (via a USB to serial adaptor) can be used.
- **OFF** - Tells Deva24 to ignore the DB9 serial port (the port where the USB keyboard gets plugged into) because if no keyboard is plugged in Deva24 can be unstable.

### Mix16 Trk Buttons

- **ON** - The TRK buttons on the Mix16 function normally.
- **OFF** - Disables the TRK buttons on the Mix16 to prevent accidentally enabling or disabling the tracks.

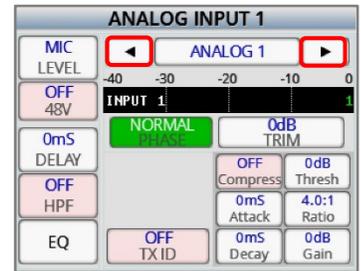
# Input Control

The input control menu is where input parameters are adjusted for both the analog and digital inputs.

## Configuring an input

### Selecting an input to configure

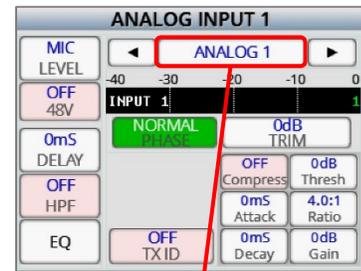
To select the desired input tap on the arrow keys on either side of the input name. That will jump to the next / previous input. Holding the SHIFT key while tapping the arrows will change inputs by 4.



### Naming an input

Each input can be optionally named for ease of identification. When a named input is assigned to an ISO track the entered name will become the track name. That name will be displayed in the track meter on the home screen and will be embedded in the metadata for that track.

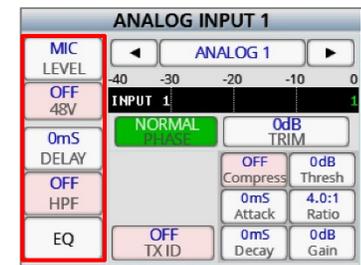
To name the input hold the shift key and tap on the INPUT NAME key to open the on screen keyboard. Each input name can be up to 16 characters in length.



### Adjusting the input parameters

From the left side of the input configure screen the following parameters can be adjusted:

- Mic / Line input - analog input 1 thru 12 only
- 48 volt phantom - analog inputs 1 thru 12 only
- AES 42 power - digital input 1 thru 16 only
- Input delay - adjustable from 0 to 40 milliseconds
- High pass filter - adjustable from 0 to 240Hz. Please note by entering 0Hz in the text input menu will not turn off the HPF. To turn off the HPF turn the menu encoder knob down until "OFF" appears.
- Limiter Off and On
- Equalization - opens the equalization adjust screen.



### Adjusting the equalization

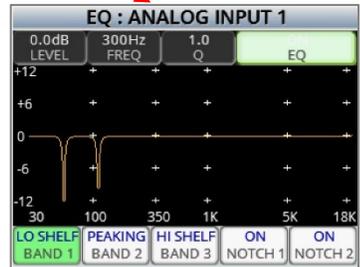
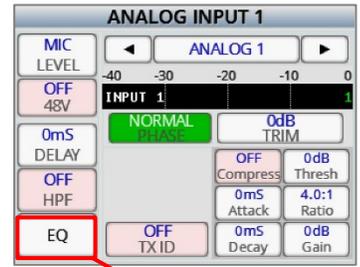
Deva 24 has a three band equalizer for each input. To access the equalization adjust menu tap on the EQ key.

From the equalization menu the low shelf, peaking, and high shelf can be adjusted by tapping on the desired key.

After the parameter is selected the level, frequency and Q can be individually adjusted for each parameter. To adjust the parameter tap the key once which will turn the key orange and the parameter can be adjusted with the menu encoder knob. Tap on the key again will open the numeric entry menu where the desired value can be manually entered. As the equalization is adjusted it can be seen on the frequency response graph.

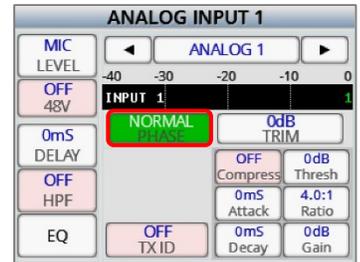
Deva 24 also has a bypass feature where the set equalization can be bypassed while still maintaining the configured settings, to bypass the equalization tap on the BYPASS key on the top left.

If the PFL key is pushed the equalization menu will jump to the input associated with that PFL button, and the audio from that input will be isolated to the headphones. There are also two notch filters can be enabled and adjusted from this screen. Both the frequency and Q can be adjusted for each notch filter.



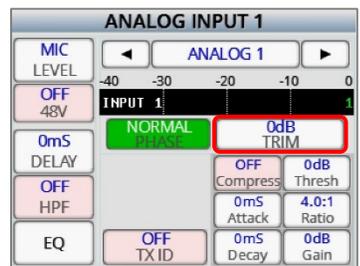
### Adjusting the phase of an input

Tapping on the PHASE key will invert the phase of the input. If the phase is set to normal the key will be green, if the phase is inverted the key will turn red.



### Adjusting the input trim

Tapping on the TRIM key will turn the key orange; this will allow the trim to be adjusted using the menu encoder knob. Tap on the key again to open the numeric entry menu when the trim can be manually entered. Please note if input trim is assigned to a hardware fader the trim will not be able to be adjusted with this key.

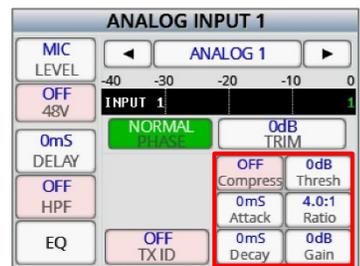


### Adjusting the compressor settings

From the right side of the input configure screen the compressor can be enabled and the following parameters can be adjusted:

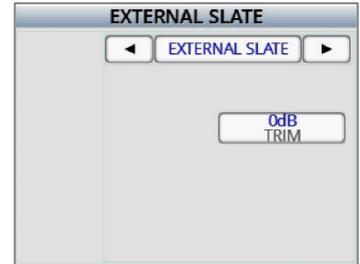
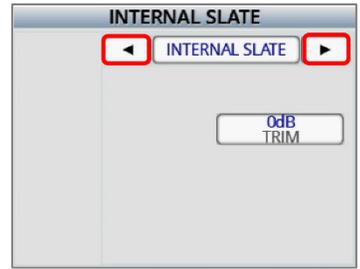
- Attack
- Decay
- Threshold
- Ratio
- Gain

Please note the compressor settings are global - meaning that the same compressor settings will be applied to each input that has the compressor enabled.



### Adjusting the slate and com levels

To access the internal slate and external slate inputs use the arrow keys on either side of the input name. The slate and com settings are located after the digital inputs.



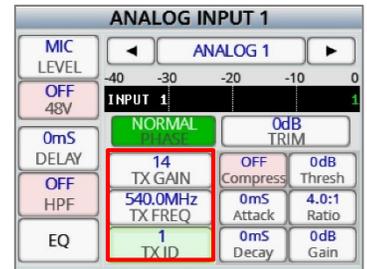
## Adjusting wireless transmitters via ZaxNet

If an input is receiving audio from a Zaxcom wireless transmitter the input gain and UHF transmission frequency can be remotely adjusted from the input control screen.

### Setting the ZaxNet unit code

Each individual transmitter needs to have a unique identification number so the remote control commands can be sent to the proper transmitter. To set the transmitter identification code, tap the TX ID key and set the desired number. After the TX ID is set, the keys for remote TX GAIN and TX FREQ adjustment will appear.

Then, if desired, a fader can be assigned to control the input gain for that transmitter. To do so simply select ZNET in the fader assign menu, then choose that input in the ZaxNet assign matrix. Then the selected knob will remotely adjust the input gain on the transmitter.



### Adjusting transmitter gain

Tap on the TX GAIN key to turn the key orange, when the key is orange the menu encoder knob can be used to remotely adjust the input gain of transmitter with the corresponding transmitter ID.

### Adjusting the transmitter frequency

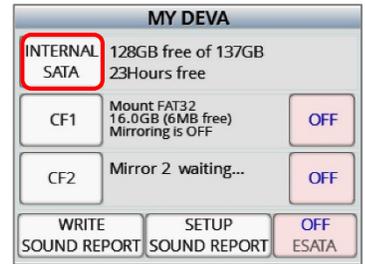
Tap on the TX FREQ key to turn the key orange when the key is orange the menu encoder knob can be used to remotely adjust the UHF frequency of the transmitter with the corresponding transmitter ID. If the key is tapped again the transmitter frequency menu will appear and the desired frequency can be manually entered.

# My Deva

The My Deva menu is where the record parameters for the primary drive and mirror drives are adjusted from.

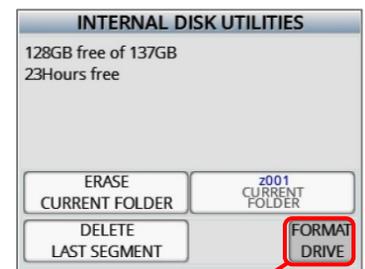
## Primary Drive - Internal SATA

The SATA drive is the primary record drive, primary audio is recorded as a MARF II file. MARF II (Mobile Audio Recording Format) is a lossless fault tolerant recording system. MARF II is a very robust recording system where the recorded digital files do not need to close or finalize. So if power is lost during recording, all audio right up to the point when power is lost, will be preserved. MARF II's robustness also lends itself to be often immune from viruses and corruption that can affect standard recording formats. MARF II files can be quickly and easily converted to BWF files and MP3 files by using ZaxConvert. When using ZaxConvert all timecode and Meta Data is preserved. ZaxConvert is available for free and can be downloaded from the Zaxcom website.



## Formatting the SATA drive

From the My Deva page tap on the INTERNAL SATA key to open the internal disk utilities menu. Then tap on the FORMAT DRIVE key.

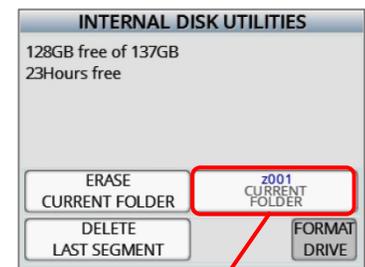


A confirmation screen will appear before the drive can be formatted. Please note when formatting the drive all previously recorded audio will be erased.



## Selecting a record folder

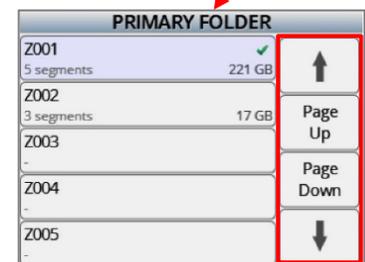
All files are recorded into individual folders. To select a folder tap on the CURRENT FOLDER key, this will open the folder list.



The folder list will display the folder name, how many segments are recorded in the folder and, the total size of the files in each folder.

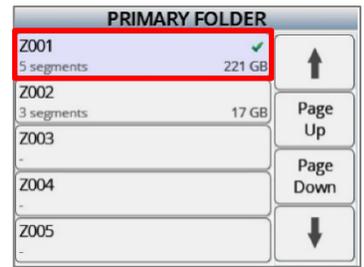
To choose a folder use the navigation keys on the right side of the screen, or scroll using the menu knob to the desired folder and tap on the folder to select it. After the folder is chosen a green check will indicate the folder that will be recorded to.

Please note that mirror mode needs to be set to OFF before the primary folder can be changed.



### Naming a folder

To name a folder hold the SHIFT key and tap the folder box. This will open the text entry keyboard. The folder name can contain 19 characters.

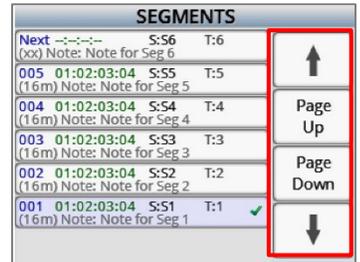


### Viewing, navigating and playing back the contents of a folder

To view the contents of a folder, tap on the desired folder key to open the segments page. Each segment box will display the segment number, the starting time code, the running time of the file, and the scene, take and note information.

When in the segments folder turn the menu knob to scroll through the segments of the folder, or use the navigation keys on the right side of the screen.

To playback from the segments menu tap the desired segment and press the play key.



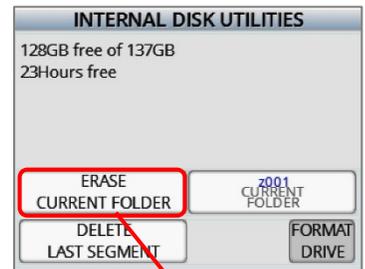
### Editing the metadata for a segment

From the segments menu hold the SHIFT key and tap the desired segment to open the metadata edit menu for that segment.



### Erasing the current folder

Tapping on the ERASE CURRENT FOLDER key will give the option to delete the entire contents of the current record folder.



A confirmation screen will appear before the folder can be erased.

Warning erasing a folder will permanently delete all recorded audio from the folder.



### Deleting the last segment

Tapping on the DELETE LAST SEGMENT key will give the option to delete the last recorded file.

A confirmation screen will appear before the segment can be deleted.  
Warning deleting a segment will permanently delete that segment.

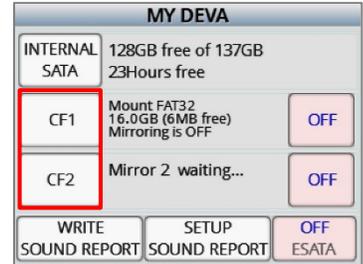


### Mirror drives - CF1 and CF2

The two compact flash drives are the mirror drives. The mirror drives are where recorded as Broadcast Wave files (BWF) these are the files that are generally handed off to post production. The CF drives can be recorded to individually or simultaneously in which two copies are recorded at the same time.

#### Selecting a drive

From the My Deva menu tap on one of the compact flash keys CF1 or CF2 key to open mirror disk utility menu. From the utilities menu, the record setting for that drive can be adjusted.

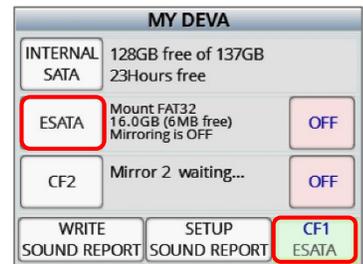


### Recording to an external SATA (eSATA) drive.

If desired Deva 24 can mirror to an external eSATA drive in lieu of one of the compact flash drives.

Tapping on the ESATA key will toggle between the two compact flash drives. The selected compact flash drive will be turned off and mirroring will take place on an eSATA drive connected to the eSATA port.

Please note that an eSATA interface cable will be needed to record an eSATA drive.



### Setting the mirror parameters

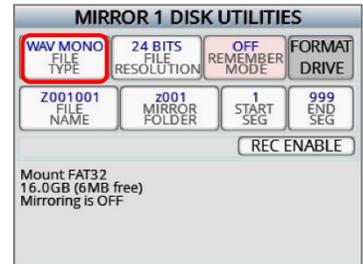
#### Setting the file type

- WAV MONO

A MONO file creates one file for each track that is recorded. So if 1 track is recorded, 1 file will be created. If 2 tracks were to be recorded 2 files will be created, one representing track 1 and the other representing track 2. Similarly if 24 tracks were recorded 24 files will be created.

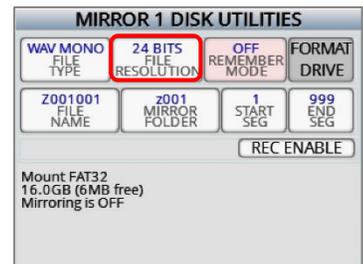
- BWAV POLY

A POLY file creates one file for that take; even if the take recorded has multiple tracks. So with a POLY file if a take is only 1 track, the file would be 1 track. If the take was 2 tracks, it would still be one file with both tracks. This is often referred to as being "2 tracks wide". Similarly, if 24 tracks were recorded it would still be only one file, 24 tracks wide.



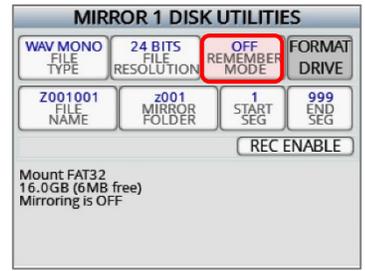
#### Setting the file resolution

The file resolution sets the bit depth that Deva 24 will mirror the files at. Files can be record at either 16 bit or 24 bit.



### Remember mirror mode

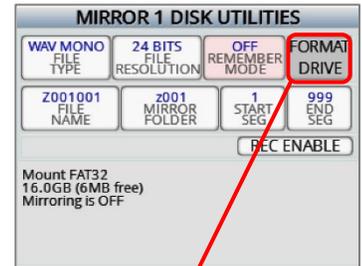
When set to ON the state of the mirror setting (OFF, ON or CONTINUOUS) will be remember after a power cycle. If the remember mode is set to OFF the mirror mode will always be set to off after a power cycle.



## Formatting the mirror drive

To format the compact flash card tap on the **FORMAT DRIVE** key. A confirmation screen will appear before the drive can be formatted.

Please note when formatting a card all previously audio will be permanently erased.



## Setting the file naming protocol

Tap on the **FILE NAME** key to toggle through the different file naming protocols.

- **Z001001** - Creates a file name in the format of - **Folder Name** and **Segment Number**.

This is the default file naming protocol where the file name consists of the folder name (Z001 or whatever name was created) followed by the segment number (for example 018) so in this case the file name would be Z001018.WAV (folder name / file number) that would be followed by file Z001019WAV.

- **1 T2 Z001** - Creates a file name in the format of - **Scene**, **Take**, **Folder Name** and **Segment Number**.

For example scene "1", Take "2" in folder "Z001" and the segment number is "18", the file name will be "1\_T2\_Z001018.WAV". Warning - when using this naming option do not create a scene or take with any characters other than letters or numbers.

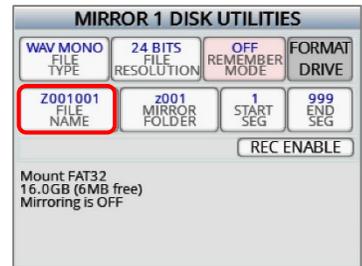
- **1 T2** - Creates a file name in the format of - **Scene** and **Take** separated by an underscore.

For example scene "1", Take "2" in folder "Z001" and the segment number is "18", the file name will be "1\_T2.WAV". Warning when using this naming option avoid creating duplicate file names within a folder, if duplicate file names are created the files will not mirror properly.

- **1T2** - Creates a file name in the format of - **Scene** and **Take** with no separation.

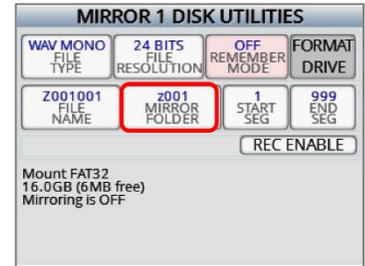
For example scene "1", Take "2" in folder "Z001" and the segment number is "18", the file name will be "1T2.WAV". Warning when using this naming option avoid creating duplicate file names within a folder, if duplicate file names are created the files will not mirror properly.

Please note that all segment numbers will be a three digit number and the first file in a folder will always be segment 001.



### Selecting the folder to mirror

The MIRROR FOLDER key specifies which folder the audio will be mirrored (copied) to. For continuous mirroring, this folder needs to match the primary folder.



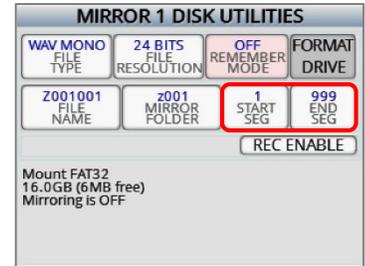
### Selecting the mirror start and end segments

#### Start Segment

The start segment number will be the first segment that Deva 24 will mirror, or re-mirror. When recording the start segment will automatically increase with each file.

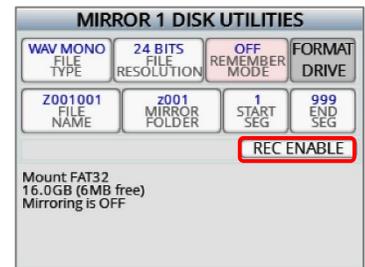
#### End Segment

The end segment number will be the last segment that Deva 24 will mirror or re-mirror.



### Record Enable

Tapping on the REC ENABLE key will open the record enable matrix (see the record enable menu on page 43)

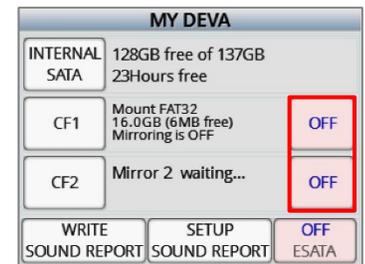


### Setting the mirror mode

Tapping on the mirror STATUS key will toggle through the mirror mode options for that card.

- **OFF** - No files will be copied to mirror CF card.
- **ON** - The audio will only be copied to the mirror CF card only when recording has stopped.
- **CONTINUOUS** - The audio is copied to the mirror card immediately after it is written to the primary SATA drive.

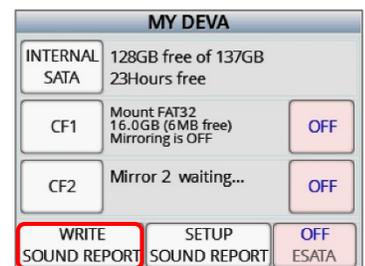
Please note that if remember mirror mode is not enabled, mirror mode will always boot up to the OFF setting.



### Writing a sound report

When WRITE SOUND REPORT key is tapped, Deva 24 will create a sound report of the recorded files within the current folder, and write the report to the mirror CF card. The sound report contains the metadata information for those files.

Please note to write a sound report mirror mode must be set to OFF.



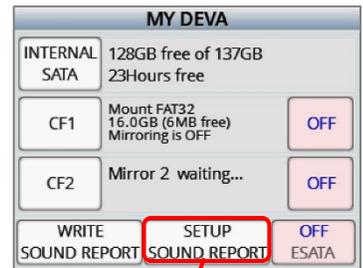
### Setting up the sound report

To customize the sound report tap on the SETUP SOUND REPORT key. That will open the sound report setup menu where the sound report can be customized.

Tap on the desired key to open the text entry keyboard for that field.

Deva 24 has 5 customized sound reports presets which can be created and saved. To navigate thru the sound reports tap on the arrow keys on either side of the preset number key.

Each setup can be named for easy identification. To name the sound report press and hold the SHIFT key and tap on the preset number key.



## Cue Mode

Tapping on the CUE key will open the playback navigation keys on the home screen.  
If desired a segment or a timecode in point can be entered.



## Turning on tone

Tapping the TONE key will toggle on the internal tone oscillator.

Please note that the tone level can be adjusted, if desired, in the Setup menu.

MAIN MENU			
TRACK MIX	OUTPUT ROUTING	ISO ROUTING	FADER ASSIGN
SETUP	INPUT CONTROL	MY DEVA	CUE MODE
OFF TONE	HPH MIX	RECORD ENABLES	ABOUT DEVA

# Headphone Mix

The HEADPHONE MIX menu is where the 10 headphone presets are assigned.

## Selecting a headphone preset position

To select a headphone memory preset position tap on the arrow keys on either side of the memory position number.

Each headphone preset can be optionally named for easier identification. To name the headphone preset press and hold the SHIFT key and tap on the HP # key.



## Selecting the audio to be monitored

From the matrix select the source(s) to be monitored by tapping on the desired track number or return input. Tapping the key will cycle through the monitoring options:

- **LR** - That source will be sent to both the left and right side of the headphones.
- **L** - That source will be sent to just the left side of the headphones.
- **R** - That source will be sent to just the right side of the headphones.



## Inverting headphone phase

The phase can be optionally inverted for each selection. The phase can be set differently for the left and or right side of that selection. To invert the phase tap on the PHASE key on the lower left, then tap on the assignment. If the phase is inverted there will be a line over the assignment.



## Enabling the preset position

Pressing the HPH key on the face of the Deva 24 will cycle through the headphone mix presets. To monitor a preset it must be enabled. To enable a headphone preset tap the SELECT ENABLE key. If the key is not enabled that setup will be skipped over when cycling through the headphone monitoring options.



### Record Track Enable

The record enable menu is where the 24 record tracks are enabled to record to the primary drive (SATA) and the two mirror drives (Compact Flash 1 and 2).

#### Selecting the media to enable

From the upper left corner tap on the drive(s) to be enabled. Please note that the mirror drives (CF drives) cannot be enabled unless the primary (SATA drive) is enabled for that track.



#### Enabling a track

After the drive(s) are selected tap on the track(s) to be enabled. The track will turn green when the primary drive is enabled. And the track will display which CF card will be recorded to.



#### Disabling a track

To disable a track tap in the track box again - when a track is disabled the track box will be greyed out with a red slash through it.



#### Clearing a track assignment.

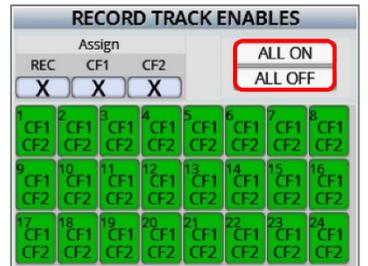
To clear a track, select the same media that is displayed in the track box, and then tap the track box again.



#### Enabling / Disabling all tracks

From the upper right corner tap on the ALL ON key to enable all tracks to record to the selected media.

From the upper right corner tap on the ALL OFF key to disable all tracks from the selected media.



## About Deva

This page displays the information about the Deva 24.

ABOUT
Model: Deva24
Serial Number: 12345
Front DSP Version: v0.00
Record DSP Version:
Main DSP Version: v0.00
Record PLD and PCB: 00, 00
Zaxnet Version: 1.00
Main CPU Usage: 50%
Record CPU Usage: 70%
Max Record Tracks: 24
Owner Name:

## Pressing the ZNET Key

Pressing the ZNET key opens the menu for the internal ZaxNet transmitter.

ZAXNET			
SEND ZAXNET RECORD	SEND ZAXNET STOP	7 TX Power	DYNAMIC Power Roll
ON Transport Control	1 Group Code	ON TX Enable	2.403 GHz TX Frequency
OUT 9 Audio Source			Update IFB Firmware

### Send ZaxNet Record / Stop

Send ZaxNet Record/Stop key will send a command to Zaxcom wireless transmitter(s) to start or stop recording.

### TX Power

This key sets the output power level of the internal ZaxNet transmitter. The transmitter can be set from 0 (off) to 7.

### Power Roll Enable

The POWER ROLL key enables the power roll function on Deva 24.

Power roll allows the transmitter(s), which are being controlled via ZaxNet, to increase its output power level when Deva 24 goes into record, and decrease to a lower power setting when recording stops. Decreasing the power level when not recording allows the transmitters to conserve battery power. To use power roll, the power-roll setting on the wireless transmitter must be set to "Deva Trigger".

- **LOW** - When low is selected the wireless transmitter(s) will manually go into the low power setting.
- **DYNAMIC** - When dynamic is selected the wireless transmitter(s) will run at low power when Deva 24 is not recording and automatically go into high power when Deva 24 goes into record.
- **HIGH** - When high is selected the wireless transmitter(s) will manually go into the high power setting.

### Transport Control Enable

- **ON** - All transmitters that are being controlled via ZaxNet will go into record when Deva 24 starts recording, and stop when Deva 24 stops recording.
- **OFF** - All transmitters that are being controlled via ZaxNet will not be affected by the state of Deva's record status.

### Group Code

Group code sets the group ID number for Deva 24's ZaxNet transmitter. ZaxNet uses group codes to allow a specific "group" of transmitters to be controlled. For example, setting the group code to 1 allows Deva 24 to control all group 1 transmitters. Setting it to 2 allows all group 2 transmitters to be controlled. Group codes can be set from 1 to 99.

### TX Enable

- **ON** - Power on and enables the ZaxNet transmitter.
- **OFF** - Powers down and disables the ZaxNet transmitter.

### TX Frequency

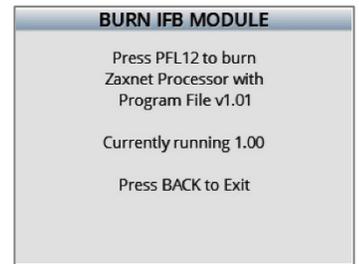
Sets the frequency of the ZaxNet transmitter. This is the frequency that IFB audio, time code and ZaxNet commands will be transmitted on. The ZaxNet frequency range is from 2.403 to 2.475 GHz.

### Audio Source

Sets the source of the IFB audio that will be sent to the ERX receivers.

### Update IFB Firmware

Tap to update the ZaxNet module software. The software is already embedded in the Deva 24 software

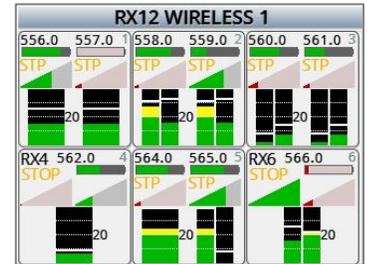


## Pressing the Wireless Key

Deva 24 can interface with 2 RX12 receivers. When an RX12 is connected to the Deva 24 pressing the WIRELESS key opens the RX12 interface menu. The RX12 menu is divided into six sectors, one sector for each QRX 212 module. Each sector will display the following information:

### RX12 interface

**Frequency** - This is the frequency the RX12 is set to. If the module is in dual mode both frequencies will be displayed, the A frequency will be on the left and the B receiver will be on the right. If the frequency is highlighted in red that means the selected frequency is outside the range of 35MHz filter. Keep in mind while frequencies outside the range of the 35MHz may still work though performance will be less than optimal.



**Battery level** - A battery indicator will display the approximate battery level for each transmitter. A fully charged battery will display green and then turn red as the battery depletes its charge. The battery icon will start blinking when the battery has roughly 15 to 30 minutes of charge left. Please note that when the battery is low the transmitter may not go into record.

**Transport status** - The transport status of the transmitter's onboard recorder will be indicated just above the RF signal strength meter:

- STOP / STP- Recording / Playback is stopped
- REC - The transmitter is recording
- PLAY - The transmitter is playing back

**RF Signal Strength** - Each module has two RF meters, one for each receiver. The meters show the amount of RF signal being received. The signal level is visually displayed in the ramp shaped RF meter icon. As the shading increases from the left to the right the more signal is present. If the icon is shaded red when the transmitter is powered down that means the receiver is seeing unwanted RF from a source other than from the corresponding transmitter. If the icon is green the RF is being received from the corresponding transmitter. Within the icon the actual signal strength, in decibels, is displayed numerically.

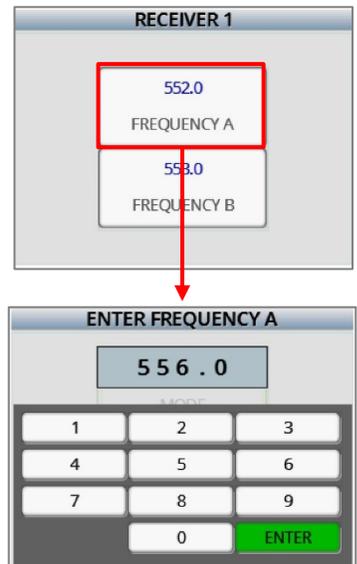
**Audio Meter** - Each module will display audio meter(s) for each signal received. If the module is set to single mode one large meter will be shown. If the module is set to dual mode, two large meters will be shown. If the module is receiving a signal from a stereo transmitter, the large meter will be split in half into two smaller meters, representing the left and right audio of the transmitter. The meters will show the audio modulation in dBFS. Within each meter the signal will be represented in green, yellow and red showing the levels, there is also a peak hold indicator. If a meter has a white X through it that is showing that the receiver is not receiving a valid signal.

### Adjusting the receiver paramaters

Tapping on one of the six individual modules will open the frequency menu for that module.

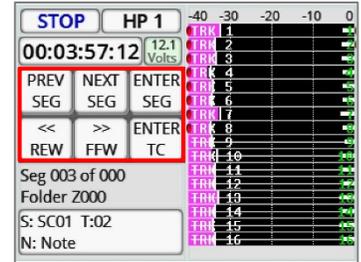
### Adjusting the receiver frequency

To change the receive frequency of the receiver tap on the desired FREQUENCY key. When the key turns orange the menu encoder can be used to adjust the frequency. Tapping on the key a second time will open a keyboard that will allow for the frequency to be manually entered. If the corresponding transmitter is being controlled via ZaxNet the transmitter's frequency will automatically change as well.



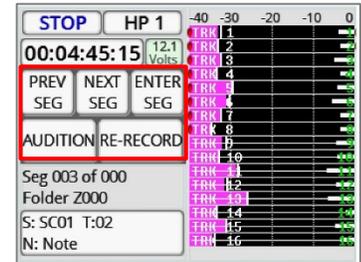
## Pressing the Cue Key

Tapping on the CUE key will open the playback navigation keys on the home screen. Using the keys allows for navigating to specific segments, or to a specific time code.



Tapping on the CUE key a second time will open the audition and re-record feature. The audition / re-record feature allows for audio recorded on Zaxcom wireless transmitter(s) to remotely sync up to a specific time code and then simultaneous playback from all wireless transmitters so that a scene can be remixed and re-recorded in Deva 24.

Either a specific segment can be replayed or a time code in-point can be entered. Re-record will create an additional remixed file with time code that will match the original file.



- Pressing the AUDITION key will mute the live audio being received from the transmitter(s) and playback the selected scene from the transmitter(s) but not record them in Deva 24.
- Pressing the RE-RECORD key will mute the live audio being received from the transmitter(s) and playback the selected scene from the transmitter(s) and Deva 24 will record the new mix as a separate file.

Please note the user bits must match the transmitter's user bits for the selected segment.

Pressing the PLAY key will mute the live audio and playback (audition) the recorded audio to the receiver(s). The segment can be played back as many times as desired by simply repressing the PLAY key.

Pressing the RE-RECORD key will play back the audio and put Deva 24 into record and the scene will be re-recorded.

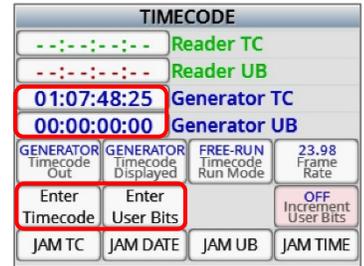
After the scene is re-recorded the note field in the metadata for that new segment will contain the timecode offset so that post production can move the segment to the proper place in the timeline to replace the original recorded segment. After the segment is re-recorded press the STOP key to stop the recording, and stop the playback from the transmitter(s). The segment can be re-recorded as many times as desired by simply pressing RECORD again. When re-record is completed the SEND ZAXNET RECORD key in the ZaxNet menu must be pressed to put the transmitters back into record mode.

## Pressing the Time Code

- Press the TC key once will open the time code menu.
- Press the TC key a second time will open the on screen TC slate.

### Manually entering time code and user bits

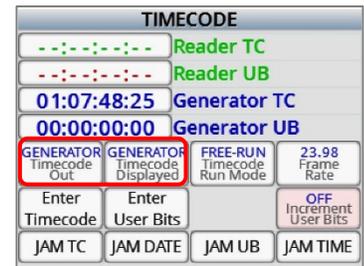
Tap on either the ENTER TIME CODE key / ENTER USER BITS key or tap on the GENERATOR TC / GENERATOR UB keys to open a numeric keyboard where the time code / user bits can be entered.



### Setting the TC out and TC display source

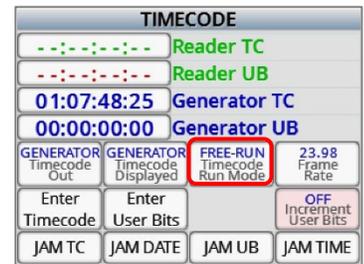
These keys sets what time code source Deva 24 will output from the time code out BNC connector, and what time code source will be displayed on the screen.

- **GENERATOR** - The time code will originate from Deva's internal time code generator.
- **CARD** - The time code will originate from the file that is being recorded or playing back.
- **GEN-STOP** - Only for time code display - When Deva 24 is recording the time code displayed will be from the internal timecode generator, but the time code displayed will freeze on the stopped point when the transport is stopped.



### Setting the TC mode

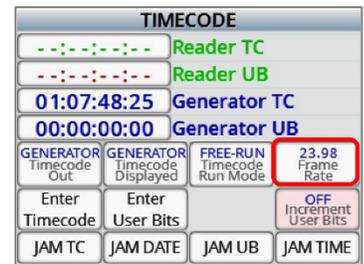
- **FREE-RUN** - Time code will free run continuously.
- **REC-RUN** - Time code will start to run when Deva 24 begins to record and will stop when recording stops.
- **CJAM TC/UB** - Time code and user bits are continuously updated from a connected external source and not Deva's internal time code generator.
- **CJAM TC** - Time code only is continuously updated from a connected external source and not Deva's internal time code generator.
- **CJAM UB** - User bits only are continuously updated from a connected external source.



### Setting the TC Frame Rate

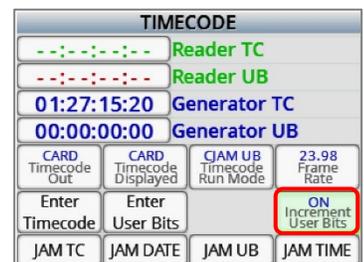
Tapping on the FRAME RATE key will cycle through the time code frame-rates.

Deva 24 supports all standard SMPTE frame-rates: 23.98, 24, 25, 29.97, 29.97DF, 30, 30DF



### Enabling increment user bits

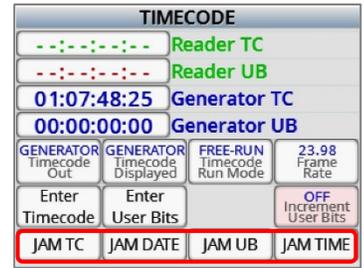
If the incremental user-bits is set to ON the user bits will automatically increase with each take to the next number or letter.



### Jamming time code and user bits

These keys are used to jam Deva 24's time code and user bits.

- **JAM TC** - Jams time code from an external source, such as a camera or a master time code unit.
- **JAM DATE** - The user bits are created from Deva 24's internal calendar.
- **JAM UB** - Jams user bits from an external source, such as a camera or a master time code unit.
- **JAM TIME** - Time code is created from Deva 24's internal clock.



### Displaying the time code slate

Pressing the TC key a second time opens a visual time code slate. The slate is used to provide a visual sync for cameras so the picture can be synced to sound.

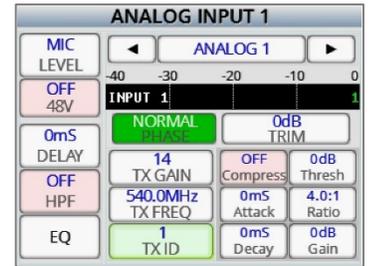
Please note the TC slate can be inverted by going to the SETUP menu > MODES > set TC SLATE to "FLIPPED".

When the time code slated is displayed pressing the MENU knob will freeze the time code display will freeze and a 1-frame beep tone will be sent to any bus that has tone routed to an output.



## Pressing the Inputs Key

Pressing the INPUTS key will open the input configure menu - see the input configure section of this manual on page 33.



### Pressing the Scene / Take / Note Key

Pressing the SCENE / TAKE / NOTE keys will open the on screen keyboard for that selection so the metadata can be entered.



## Metadata

Tapping on the metadata display on the lower right hand corner of the home screen will open the metadata management menu.



## Entering metadata

Tapping on the SCENE, TAKE, or NOTE key will open a keyboard where the information for those items can be entered or adjusted.



## Increasing the scene number

Tapping the INC SCENE key will advance the scene to the next number / letter.



## Resetting the take

Tapping the RESET TAKE key will reset the take to 1.



## Storing a note preset

After a note has been entered in the NOTE field, tapping on the STORE NOTE key will highlight the note preset list. Then tap on the desired preset position to save the note to.



## Clearing the note field

Tapping the CLEAR NOTE key will clear the note field.



### Navigating the folder

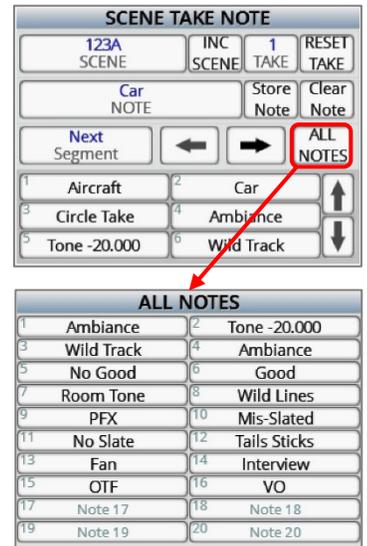
Tapping the SEGMENT key will turn the key orange and the menu encoder can be used to scroll thru the metadata for each segment in the selected folder

Tapping the ARROW keys will advance or back thru the segments for the selected folder.



### Viewing the preset note list

Tapping the ALL NOTES key will open the preset note list.



## SATA Drives / Compact Flash Cards

Currently we recommend using SanDisk or Transcend media. Any size compact flash card up to 128GB; and any size SATA drive, up to a terabyte will be fine. For normal operation it is not necessary to use fast speed cards as it will not make Deva 24 write any faster.

We do not advise using Lexar, Kingston, Delkin or off brand media from questionable manufacturers. And please only buy media from reliable sources and avoid questionable retailers, because counterfeit media exist and can be unreliable and can cause crashing.

It is recommended to test all media before use, even if it is a brand/size that has been used in the past. To test simply perform a record test for 15 to 20 minutes. If Deva 24 stops recording it is most likely a result of bad media.

## Syncing Deva 24 to a Denecke Slate

The LTC stream out of the Deva has a “jitter” in the time code signal at 29.97 fps and 23.976 fps. This can result in the Denecke TS-C or the TS-3 slates identifying the wrong code, if the slate is set to “Auto Set” (Position 5). In addition if “Auto Set” is used the slate can experience a time code drift.

So when setting the slate to receive time code at 29.97 or 23.976, do not use the auto set mode. Just simply set the rotary dial to the corresponding time code frame rate. When syncing the slate “Sync Err” will be displayed. Simply ignore this. The slate will accept the sync and the slate and Deva will stay in perfect sync with each other.

## Deva 24 Connector Assignments

### Audio Input / Output Connectors (XLR-3)

- Pin 1 - Ground
- Pin 2 - Signal (+)
- Pin 3 - Signal (-)

### Audio Input / Output Connectors (TA-5)

- Pin 1 - Ground
- Pin 2 - Channel A (Left) ( + )
- Pin 3 - Channel A (Left) ( - )
- Pin 4 - Channel B (Right) ( + )
- Pin 5 - Channel B (Right) ( - )

### Mono & Tappe Output Connectors (1/8" TRS or 1/8"TS)

- Tip - +
- Ring - N/C
- Sleeve - Ground

### Slate Microphone Input Connector (1/8" TRS)

*This is a balanced input and can be used with dynamic microphones. It can also be used unbalanced with low voltage microphones.*

- Tip - ( + ) / Hot - Biased to 5 Volts
- Ring - ( - ) / Cold - Biased to 5 Volts
- Sleeve - Ground

### Headphone Output Connectors (1/4" TRS or 1/8" TRS)

- Tip - Signal Left
- Ring - Signal Right
- Sleeve - Signal ground

### Power Connectors (Hirose-4 Connector)

- Pin 1 - Ground ( - )
- Pin 2 - Not Connected
- Pin 3 - Not Connected
- Pin 4 - DC ( + )

### Com 1 / GPI Remote Roll (DB9)

- Pin 1 - RS422 In
- Pin 2 - GPI Out
- Pin 3 - Word Clock Out
- Pin 4 - GPI In
- Pin 5 - Ground
- Pin 6 - RS422 In
- Pin 7 - 5V Out
- Pin 8 - RS422 Out
- Pin 9 - RS422 Out

## AES In 1 thru 16 (DB25)

*All inputs support AES 42*

<b>AES INPUT</b>	<b>DB25 PIN NUMBER</b>
Input 1/2 ( + )	24
Input 1/2 ( - )	12
Input 3/4 ( + )	10
Input 3/4 ( - )	23
Input 5/6 ( + )	21
Input 5/6 ( - )	9
Input 7/8 ( + )	7
Input 7/8 ( - )	20
Input 9/10 ( + )	18
Input 9/10 ( - )	6
Input 11/12 ( + )	4
Input 11/12 ( - )	17
Input 13/14 ( + )	15
Input 13/14 ( - )	3
Input 15/16 ( + )	1
Input 15/16 ( - )	14
Ground pins 2, 5, 8, 11, 16, 19, 22, 25	

**AES Direct Out 1 thru 12 (DB25)**

*These are direct (pre equalization) ISO outputs of the 12 analog inputs*

<b>AES ISO OUTPUT</b>	<b>DB25 PIN NUMBER</b>
Direct Out 1/2 ( + )	24
Direct Out 1/2 ( - )	12
Direct Out 3/4 ( + )	10
Direct Out 3/4 ( - )	23
Direct Out 5/6 ( + )	21
Direct Out 5/6 ( - )	9
Direct Out 7/8 ( + )	7
Direct Out 7/8 ( - )	20
Direct Out 9/10 ( + )	18
Direct Out 9/10 ( - )	6
Direct Out 11/12 ( + )	4
Direct Out 11/12 ( - )	17
Ground pins 2, 5, 8, 11, 16, 19, 22	

## AES In 17 thru 24 / AES Out Buses 1 thru 8 (DB25)

*These inputs do not support AES 42*

<b>AES INPUT / OUTPUT</b>	<b>DB25 PIN NUMBER</b>
Input 17/18 ( + )	24
Input 17/18 ( - )	12
Input 19/20 ( + )	10
Input 19/20 ( - )	23
Input 21/22 ( + )	21
Input 21/22 ( - )	9
Input 23/24 ( + )	7
Input 23/24 ( - )	20
Output Bus 1/2 ( + )	18
Output Bus 1/2 ( - )	6
Output Bus 3/4 ( + )	4
Output Bus 3/4 ( - )	17
Output Bus 5/6 ( + )	15
Output Bus 5/6 ( - )	3
Output Bus 7/8 ( + )	1
Output Bus 7/8 ( - )	14
Ground pins 2, 5, 8, 11, 16, 19, 22, 25	

## ing Firmware

Each Deva 24 is shipped with the latest firmware version installed. When 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>

### How to updating Deva 24 firmware

*Warning do not update Deva 24 in an RX-12 is connected.*

1. Format a compact flash card in the Deva 24 Compact Flash 1 slot.
2. Download the Deva 24 zip file and extract the Deva 24 program (.BIN) file.
3. Copy the .BIN file on to the formatted card and insert it back into the CF1 slot on the Deva 24.
4. After the Deva 24 is booted up - press the SHIFT key while pressing the F5 key.
5. Deva 24 will indicate its progress on the screen - the update will take approximately 4 minutes.  
*Please note it is important that the Deva 24 does not lose power during the update.*
6. After the update is complete power cycle the Deva and verify that it's running the new software (see the About Deva menu)

## 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/377474752660175/>

## Deva 24 Specifications

### Analog In

12 Mic/line-level with NeverClip™ 48V phantom power & 4 line-level (camera return or mix inputs)  
Connectors: 6 x XLR-3F & 5 x TA5 (two inputs per TA5)  
Mic level input range: -56 to -26 dBu  
Line level input range: -20 to +8 dBu  
Distortion: 0.0015%  
ADC bit-depth: 24 bits  
ADC dynamic range: 136 dB  
Clipping level: +28 dBu  
Frequency response: 20 Hz to 22 kHz (48 kHz sampling-rate)  
THD + noise: 0.0015%  
Slate mic input: External balanced / unbalanced with +5V bias

### Analog Out

4 Balanced XLR, 0dBu, -10dBu and -30dBu  
3 Balanced TA5 (two outputs per TA5) 0dBu, -10dBu and -30dBu  
Tape/mono output: 2 unbalanced 3.5mm adjustable from -12dBu to 20dBu  
Headphone 1: 1/4 inch and 3.5mm (front panel) stereo bus  
Headphone 2: 3.5mm stereo bus  
Output level: 0 dBu @ -20 dBFS  
Clipping level: +20 dBu  
DAC Bit-depth: 24 Bits  
DAC Dynamic Range: 115dB  
Impedance: 30 ohm

### Digital In

Digital Inputs: 24 (8 AES/AES42 pair with SRC)  
Connector: DB-25 female

### Digital Out

Bus output channel count: 4 AES pairs (8 channels)  
AES direct out: 6 AES pairs (12 channels processor independent)  
Connector: DB-25 female

### Recording

Track count: 24 (16 ISO tracks + 8 mix or ISO tracks)  
Bit-depth (primary): 24 bits  
Bit-depth (mirror): 24 bits  
Sample rates (kHz): 48, 48.048  
Head room: 12 to 20 dB (NeverClip extends analog dynamic range)  
Primary Format: MARF II / .ZAX  
Mirror Format: FAT32 / BWF-P, BWF-M  
Max Pre-record duration: up to 10 seconds  
MixAhead™: .5 seconds max in 10mS steps  
2 simulations mirror media

### Data Storage

Primary Media: 2.5" SanDisk SSD drive  
Mirror Media: 2 x CF Card slots, eSATA port  
(2 media simultaneous mirror)

### Internal Mixer

Mixer Type: 32 bit floating point DSP  
Recording track mix bus: 8  
ISO track routing: 16 tracks + 8 when a single source is routed to a mix bus  
Stereo headphone busses: 2  
Busses: 10 (including headphone output x 2)  
Mixer Cross Point: 32 input x 16 output (Pre-fader / Post-fader / Phase Inversion)  
A-D / D-A resolution: 24 bit  
Head room: Selectable 12 to 20 dB  
Output bus delay: 0 to 100mS in 1mS steps

### Effects

Delay: 0 to 60mS in .1mS steps  
3 Band shelving filter EQ  
Notch filter: 2 band, 20 Hz to 20 kHz frequency range adjustable  
Compressor type: Soft knee with side chain  
High Pass Filter: 20 Hz to 230 Hz

### Timecode Reader/Generator

Timecode Type: SMPTE  
Time code Connector: BNC x 2  
Input Voltage: 1-4VPP  
Output Voltage: 2VPP  
Clock Accuracy: 1.54 PPM (1 frame out in 6 hours)  
Timecode Frame-rates: 23.98, 24, 25, 29.97NDF, 29.97DF, 30NDF, 30DF

### Power

Type: Dual external with auto switching  
External Power: 8 to 18 VDC @ 1 amp  
Power Connector: 4-pin Hirose female x 2  
Battery Meter: On LCD display  
Output power: 4-pin Hirose female (1 amp)

### Physical

Size (H x W x D) while looking at screen: 3.0" x 10.5" x 7.0"  
Weight: 5.4 pounds (with SATA drive)

### Miscellaneous

Display: 2.8" full color sunlight readable LCD touch screen  
Slate Mic: Internal / External  
Serial/RS-422: 3 x 4-Pin USB style  
Serial/RS422: 1 DB9 connection  
Serial Port: Zaxcom Proprietary  
Compatible with Mix-16, Oasis

# 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 Deva 24 ("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 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.

## 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.