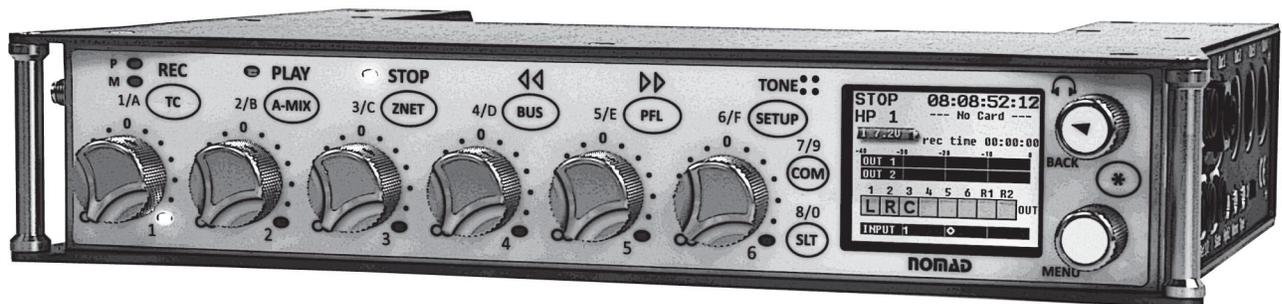


# User's Manual

# NOMAD

## Production Sound System



## Portable Multi-track Digital Audio Mixer / Recorder

Firmware Version: 6.08  
Updated: October 2013

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

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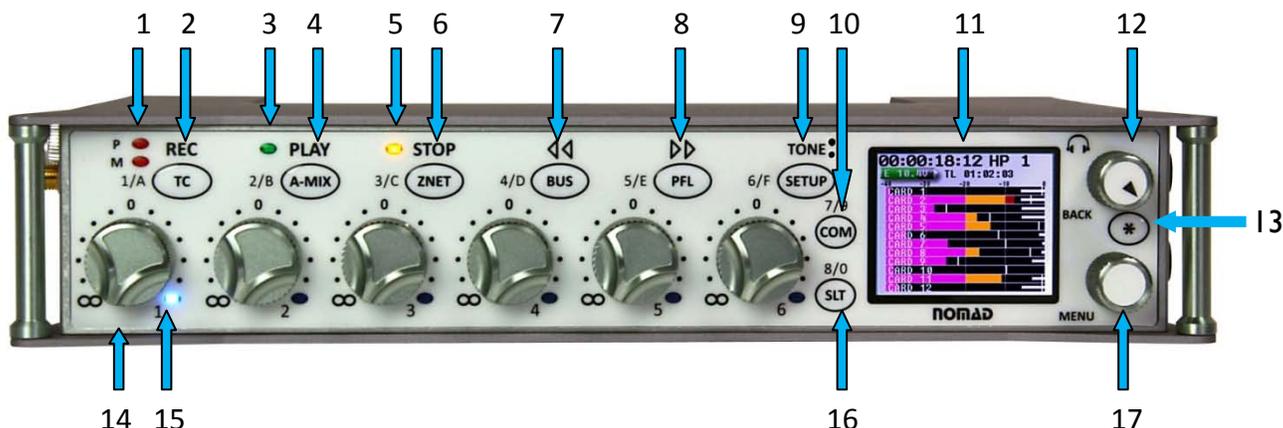
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Know Your Nomad



1. **Primary/Mirror Record LEDs**  
Indicates the unit is in Record mode and which card is being written to (**Primary Card, Mirror Card**). The Mirror LED is intentionally dimmer than the Primary LED
2. **TC / REC / 1 / A – multi-function key**
  - In **SHIFTED MODE** pressed once, it opens the **Timecode Slate page**.
  - In **SHIFTED MODE** pressed & held for one second, puts the unit into Record mode.
  - When a number is needed in a data entry field, press it for the number/channel 1.
  - When an “A” for user-bits is required, double click it.
3. **Play LED**  
Indicates the unit is in Playback mode.
4. **A-MIX / Play / 2 / B – multi-function key**
  - In **SHIFTED MODE** pressed & held for one second, puts the unit into Playback mode.
  - When a number is needed in a data entry field, press it for the number/channel 2.
  - When a “B” for user-bits is required, double click it.
  - When recording press it to toggle for MP3 marking.
  - When Auto-Mix is engaged, and MP3 support is off, pressing will access Auto-Mix menu.
5. **STOP LED**  
Indicates the unit is in Stop mode.
6. **ZNET / STOP / 3 / C – multi-function key**
  - In **SHIFTED MODE** pressed & held for one second, will Stop Recording or Stop Playback.
  - After stopping recording press & hold for one second, opens the **False Start page**.
  - When a number is needed in a data entry field, press it for the number/channel 3.
  - When a “C” for user-bits is required, double click it.
7. **BUS / 4 / D – multi-function key**
  - When in the ENG Home Page a single press allows you to adjust the quick pan matrix.
  - A second press or a press from any other Home page takes you into the **Bus Routing page**.
  - When a number is needed in a data entry field, press it for the number/channel 4.
  - When a “D” for user-bits is required, double click it.
8. **PFL / 5 / E – multi-function key**
  - Pressing from any Home Page put Nomad into pre-fader listen mode.
  - When a number is needed in a data entry field, press it for the number/channel 5.
  - When an “E” for user-bits is required, double click it
  - Pressing from the Meta Data menu or Track Naming menu will open the list of presets.

9. **SETUP / TONE / 6 / F – multi-function key**
  - In Stop mode, pressing it opens the **Analog Input Setup page**.
  - Pressed alone & hold for one second, toggles tone generation on/off.
  - When a number is needed in a data entry field, press it for the number/channel 6.
  - When an “F” for user-bits is required, double click it.
10. **COM / 7 / 9 – multi-function key**
  - Press and hold to activate the Com mic.
  - When a number is needed in a data entry field or need to select a channel #:
    - press it for the number/channel 7
    - double click it for the number/channel 9
11. **Color LCD Screen**

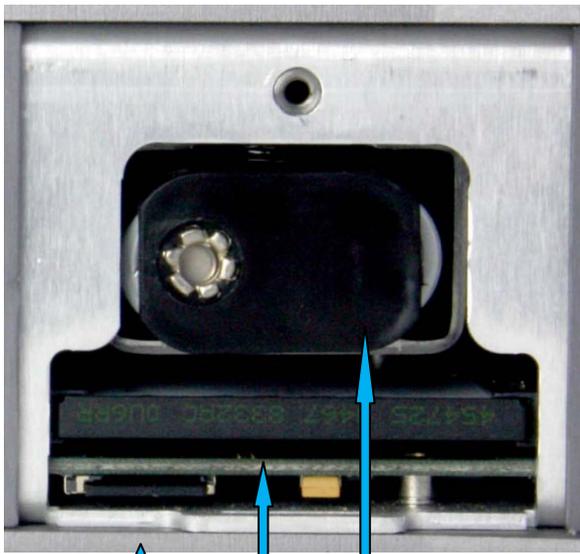
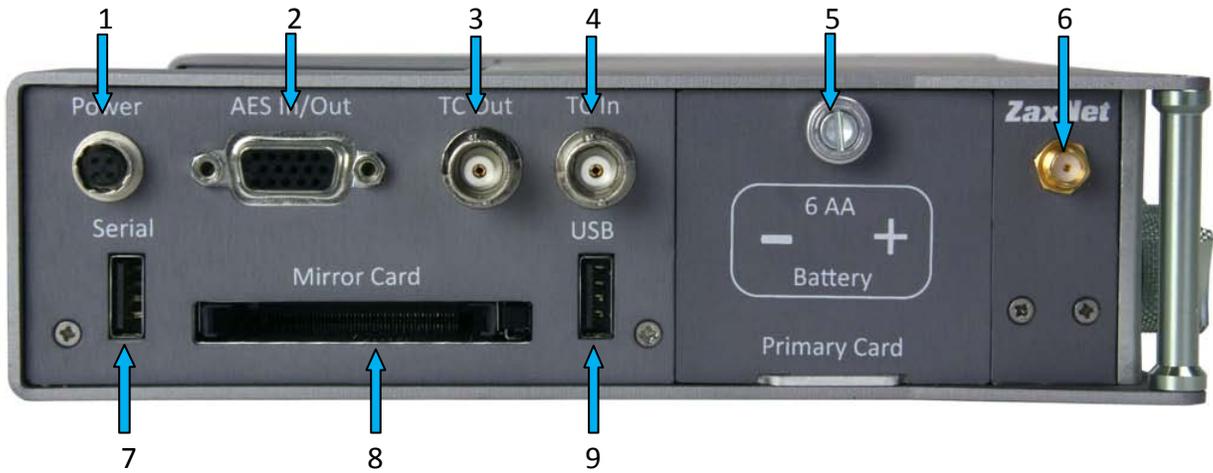
Daylight-readable color LCD screen,
12. **HEADPHONE knob / BACK knob**
  - Press it to back out of a page to the previous page.
  - Turn it to adjust headphone #1 volume.
  - Press and hold will enter user inputted data
13. **Star key**
  - From the any **Home page**, it advances to the next **Home page**.
  - In the **Bus Routing** matrix, **Head Phone** setup matrix, and **Card Mix** matrix pressing it you will add phase reverse to your cross point options
  - In the **Fader Assign** matrix pressing it will add Trim and ZaxNet to your cross point options.
  - If pressed while powering-up, starts the software update process.
14. **Fader 1 (of 6 total)**

Each of six faders can be assigned to any channel or combination of channels, or act as a hardware trim knob.
15. **Auto-Trim™ LED (of 6 total)**

Indicates which fader is active for AutoTrim™.
16. **SLT / 8 / 0 key**
  - Press and hold it to activate the Slate mic.
  - When a number is needed in a data entry field or need to select a channel #:
    - Press it for the number/channel 8
    - Double click it for the number/channel 0
17. **MENU knob / SHIFT key**
  - From the **Home page** press it to access the **Main Menu**.  
If you have virtual fader engaged you have to push and hold to access the **Main Menu**.
  - Turn it to scroll through the items on a page.
  - Press to select a page item.

**SHORTCUT:** While scrolling through a parameter with a long list, pressing the **MENU** knob while turning it will of speed up the scroll speed by 10 times.

Left Side



Battery Compartment Area (behind the door view)



Battery Carrier (w/ 6 batteries installed)

Always observe the correct battery polarity. The negative contact on the battery is always connected to the spring contact in the carrier.



Battery Connector (far end)

1. **External Power connector (Hirose-4F)**  
10 to 18 VDC {1/2 A @ 12 VDC}

**WARNING:** Do NOT connect the external power connector to a source higher than 18.0 VDC.

This is the **ABSOLUTE** upper limit. If you exceed it by even 0.1 VDC, you will **BLOW** the unit's power supply and require it to be sent in for maintenance. The warranty will be **VOID** if it is determined that the power supply was blown by violating this warning.

**2. AES Input/Output connector (DE-15F)**

Nomad has four AES input pairs and four AES output pairs. The Input has a sample-rate conversion, allowing each input to have a different sampling-rate. Nomad will accept any unlocked AES signal with a sampling-rate of 44.1 to 96 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.

**NOTE:** Currently, if you are using ZaxNet there is a limitation on the number of AES channels available. See input configure menu.

The DB-15 connector can be wired with eight separate XLR-3 style inputs / outputs four inputs and four outputs. Each is a stereo pair - 1/2, 3/4, 5/6, 7/8.

**3. TC Output connector (BNC)****4. TC Input connector (BNC)****5. Battery Door**

The Silver knob rotates clockwise to lock the battery compartment door. Inside, you will find space for the battery carrier with six AA batteries, a slot for the Primary CF card and a slot for the MicroSD card.

**WARNING:** Use **ONLY** NiMH rechargeable or Lithium batteries. If you use ANY other chemistry, they will EXPLODE and can SEVERLY damage or DESTROY the unit.

**YOU HAVE BEEN WARNED!!!!**

**6. ZaxNet RF connector (SMA-F)****7. Serial connector**

Connection for Zaxcom Mix 8 control panel.

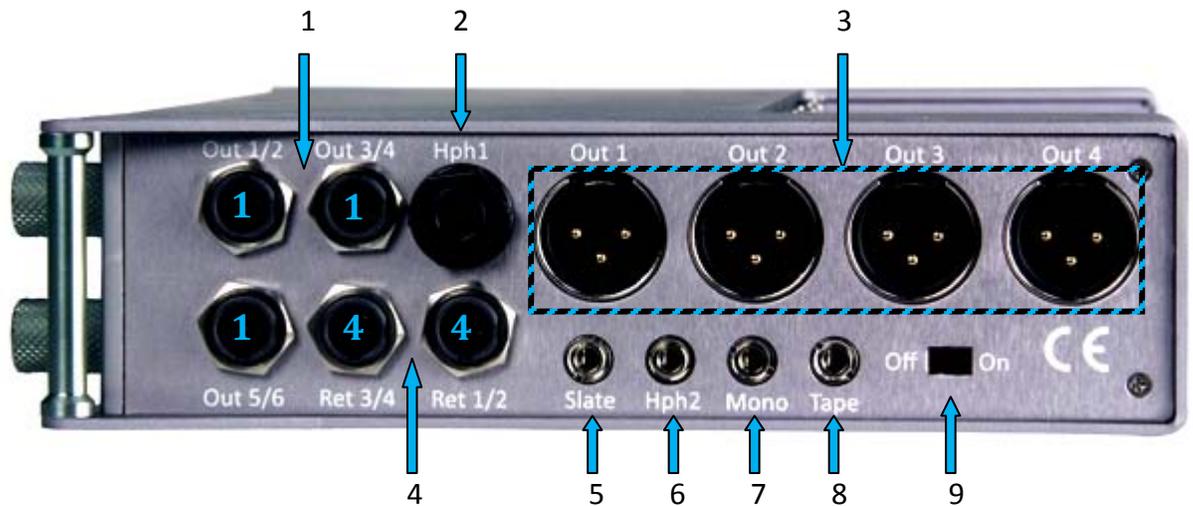
**8. Compact Flash Card Mirror Media Slot****9. USB port**

For USB capable external drives and USB keyboard (Nomad 8 and 12 only).

**10. MicroSD Media Slot****11. Compact Flash Card Primary Media Slot****12. Internal Battery Compartment**

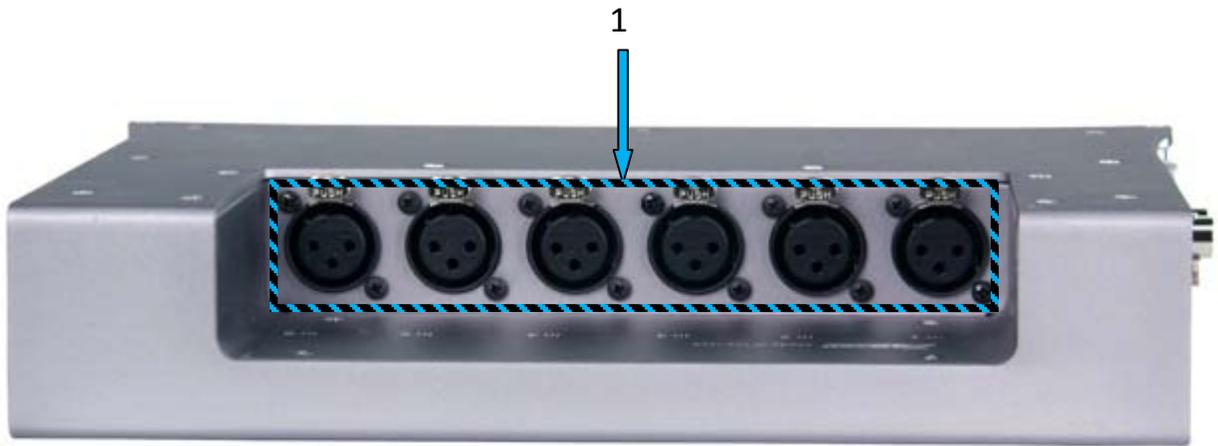
**NOTE:** It is possible to insert the battery carrier incorrectly. Even if you insert with the contacts reversed it will do NO harm to the unit because there is reversed current protection. Nomad just won't turn on.

Right Side



1. **Outputs 1 – 6 (TA-5M)**  
Outputs 6 channels of audio via output buses 1-6  
TA5 out 1/2 carries output bus 1 and 2  
TA5 out 3/4 carries output bus 3 and 4  
TA5 out 5/6 carries output bus 5 and 6
2. **Headphone #1 (1/4" stereo jack)**
3. **Outputs 1 – 4 (XLR-3M)**  
Outputs 4 channels of audio via output buses 1- 4  
XLR 1 carries output bus 1  
XLR 2 carries output bus 2  
XLR 3 carries output bus 3  
XLR 4 carries output bus 4
4. **Returns 1 – 4 (TA-5M)**  
Accepts a Headphone Level or Line-Level signal (Range: -20dBu and +30dBu)
  - These can act as camera returns and each is independent and can be used to monitor audio from 4 different sources
  - Or
  - Line level analog inputs for inputs 7 through 10
5. **External Slate Microphone input (1/8" (3.5mm) TRS jack)**  
This is where you plug-in the external Com / Slate microphone
6. **Headphone #2 (1/8" (3.5mm) TRS jack)**
7. **Mono Output (1/8" (3.5mm) TRS jack)**  
This is a user assignable mono out
8. **Tape Output (1/8" (3.5mm) TRS jack)**  
This is a user assignable mono out
9. **Power Switch**

Back Side



1. Mic/Line-level Inputs 1 – 6 (XLR-3F)

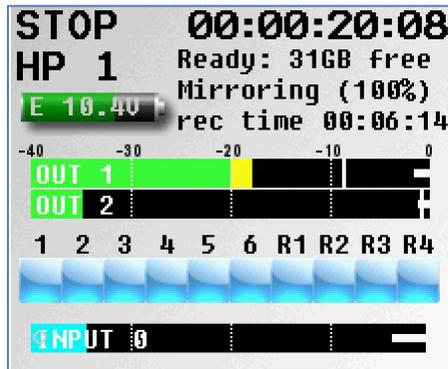
### Home Screen / Meters

There are several selectable Home meter screens from which to choose. You can toggle through the different screens by pressing the **Star** key – or by pressing the **MENU** knob and the **SLT** or **COM** key at the same time.

The color of the left half of the meter indicates the source type being metered:

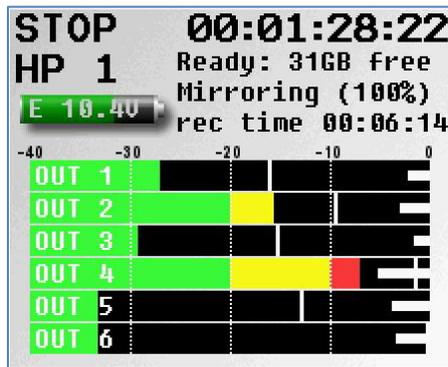
- Light blue for an input
- Green for an output bus
- Purple for a recorded track

The track name is indicated within the meter itself to aid in channel identification. If a compressor is engaged, a white gain reduction line will appear at the right side of the meter if the compression is being applied.



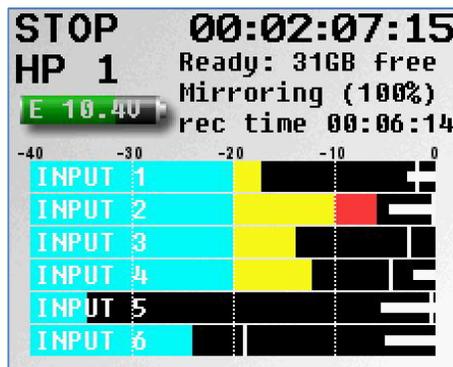
- ← Output busses 1 and 2
- ← Quick Pan Matrix
- ← AutoTrim™ Meter / Virtual Faders for mixing Inputs 7 through 10 (click [ENG / EFP Bag Operation](#))

ENG Home Screen



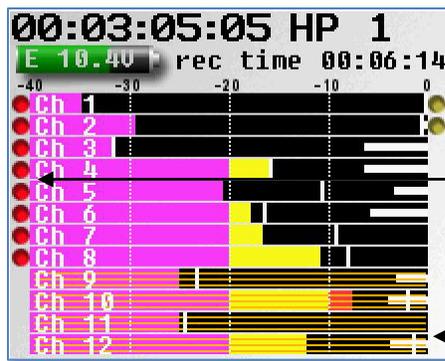
- ← 6 Output Busses

Output Bus Home Screen



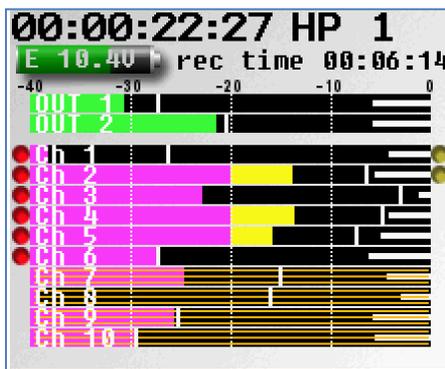
- ← Input signal from XLR Inputs

6 Channel Mix Home Screen



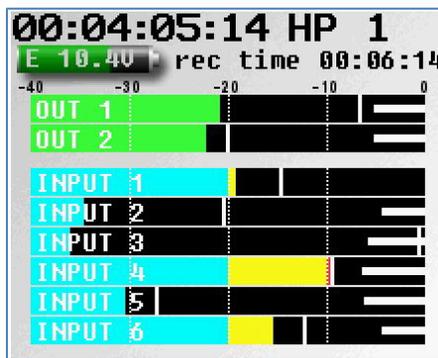
- ← Yellow ISO Attenuation Enabled Indicators
- ← Red Record Enabled Indicators – Show which tracks will be recorded
- ← Card Meter Tracks
- ← Yellow Strike Through – Represents that these tracks will not be recorded

Card Track Home Screen



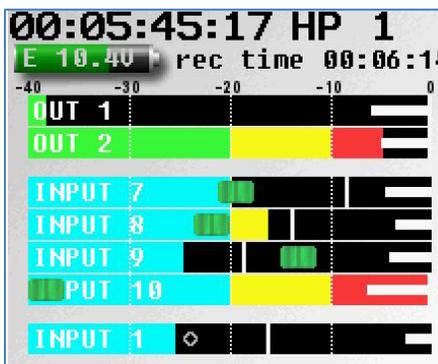
- ← Output Buses 1 and 2
- ← Card Meter Tracks

Card Meters w/ Output Bus



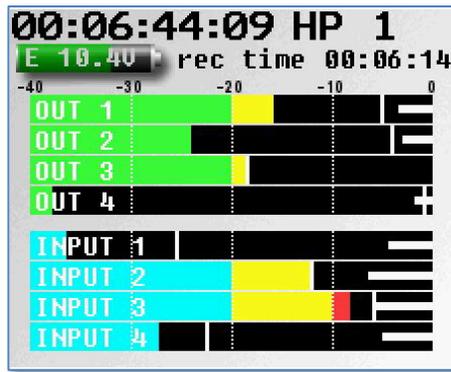
- ← Output Buses 1 and 2
- ← Input signal from XLR Inputs

2 Output over 6 Input Home Screen



- ← Output busses 1 and 2
- ← Line level inputs 7 through 10 with virtual fader control
- ← Auto Trim Meter

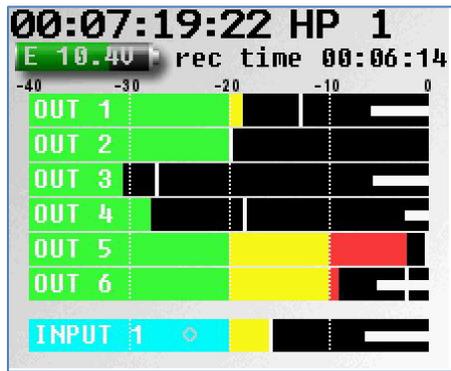
Virtual Fader Home Screen



← Output Busses 1-4

← Inputs 1-4

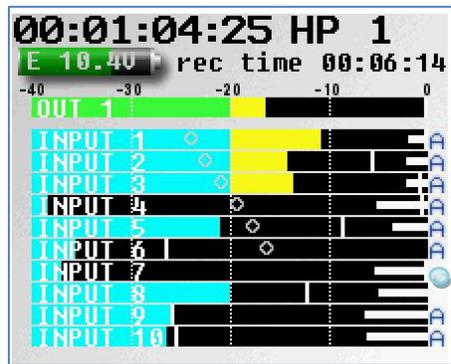
4 Out over 4 In



← 6 Output Busses

← Auto Trim Meter

6 Output Busses with Input Trim



← Output Bus 1 (Auto-Mix Output)

← Auto-Mix Inputs - "A" designates inputs assigned to Auto-Mix. Blue dot shows which inputs are "open"

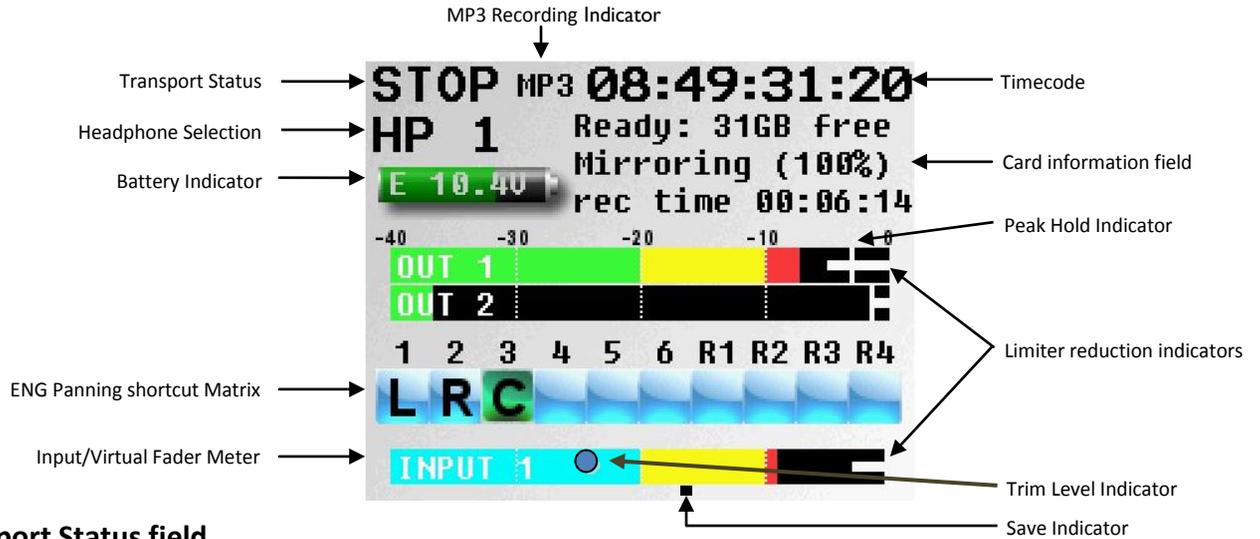
Auto-Mix Meter Screen

### Store/Recall a Home Screen Configurations

You can "park" two home screens for a quick recall of the Home Screen.

- To store a configuration under the **COM** key, press and hold the **MENU** knob, and press the **COM** key. Every time you press the **COM** key, the next configuration in sequence is displayed. When you are happy with the configuration being displayed, release the **MENU** knob.
- Repeat the process with the **SLT** key.
- To return to the saved **COM** key setting, press the **MENU** knob and **COM** key together.
- To return to the saved **SLT** key position, press the **MENU** knob and **SLT** key together.

### Home Screen Explained



#### Transport Status field

Displays the current operating mode **RECORD**, **PLAY** or **STOP**.

#### Timecode field

Displays the current timecode.

#### MP3 Indicator

Displays if your files are being marked to write as an MP3 file.

#### Headphone Selection

Displays which headphone setup is being monitored.

- Once the **PFL** key is pressed, the name in the Headphone Monitor field is replaced with “**PFL**” alternating with the selected channel number(s) as follows:



- Press the corresponding multi-function key to select a channel to **PFL**. If you want to listen to multiple channels at the same time, just press and hold an additional multi-function key for approximately 1 second to add that channel to the PFL circuit.
- Press the **HEADPHONE** knob to restore normal headphone monitoring.

#### Battery Indicator

Displays the power source (**I** – Internal / **E** - External), a numeric display of the current voltage

#### Save Indicator

A moving pixel on bottom of screen moving right to left indicates that the Nomad is saving a parameter setting to its memory. If you power down while the pixel is moving the settings will not be saved.

#### Card Information Field

##### Top Line - Mirror Card Free Space

Displays available Mirror Card space

##### Second Line - Mirror File Progress

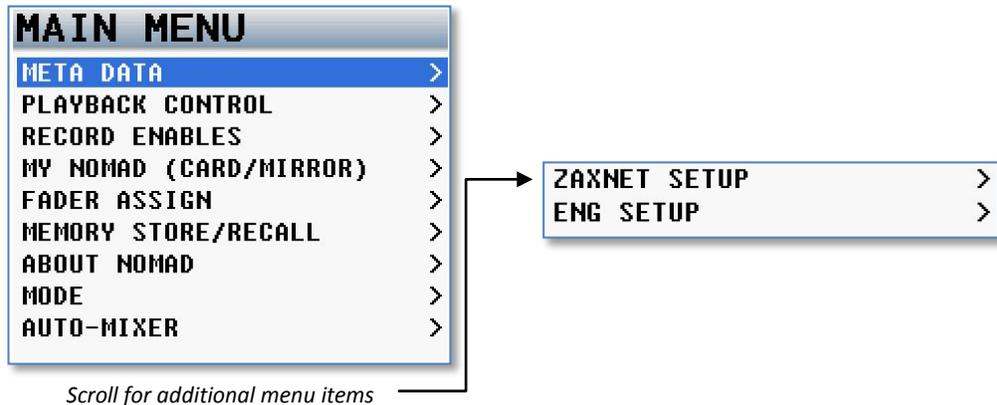
Displays what percentage of mirroring is left

**Third Line** - This line will alternate between:

- Time left on the Primary Card
- Segment number and total running time of current take being recorded.
- Mirror process – File number currently being written to the Mirror Card
- Mirror Status (ON, OFF or Continuous)

### Main Menu

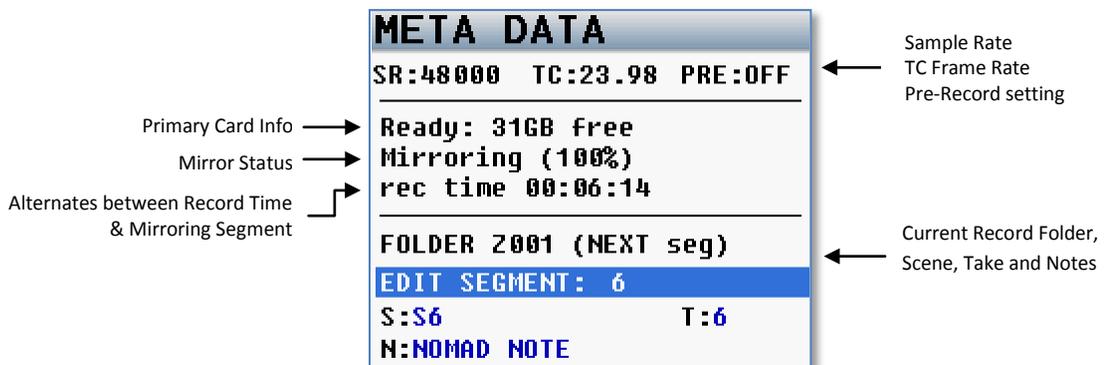
To access the **Main Menu** press the **MENU** knob.



**NOTE:** If you are in the **ENG Home screen** and you have your virtual fader mode on, you have to press and hold the **MENU** knob for 1 second to enter the **Main Menu**.

### Meta Data

This menu displays and allows you to adjust the meta data.



To adjust the **META DATA** select one of the data fields and press the **MENU** knob.

Meta Data can be edited and changed before Nomad starts recording a file or even while Nomad is recording if you are in Continuous Mirror Mode. If Changes are made after stop is pressed the file will need to be re-mirrored for the changes in the Meta Date to be reflected in the mirror file.

Nomad also features a preset list of notes you can create and recall from.

**To select from the list of Note Preset:**

1. Highlight the note field
2. Press the PFL button
3. Select the preset note you want enter
4. Press the Menu knob

### Playback Control

This menu controls playback of recorded files.

The screenshot shows the 'PLAYBACK CONTROL' menu with the following text and annotations:

- STOP 00:00:00:00**: Annotated with 'Segment Timecode' pointing to the timecode.
- PLAY SEGMENT: 2**: Annotated with 'Segment Currently Playing' pointing to the segment number.
- SCRUB: 0**: Annotated with 'Playback Shuttle Control' pointing to the scrub value. Below this is the instruction: 'Turn the MENU knob to adjust Press and turn for 10X adjustment'.
- TIME:00:00 TOTAL:00:00**: Time and total time display.
- S:S2**: Annotated with 'Playing Segment Meta Data' pointing to the segment identifier.
- N:Nomad seg002**: Annotated with 'Playing Segment Meta Data' pointing to the segment name.
- T:2**: Annotated with 'Playing Segment Meta Data' pointing to the track number.
- FOLDER 2001 (5 segs)**: Annotated with 'Folder Playing' pointing to the folder name.
- 5 TRACKS**: A track bar at the bottom with markers at -40, -30, -20, -10, and 0.

**NOTE:** While in this menu, the **STOP** key and **PLAY** key function immediately, even if the **Transport Keys** are set to shifted mode.

Record Routing – Nomad Lite Only

The Record Routing menu is only in Nomad Lite and takes place of the Card Mix Matrix

MAIN MENU		RECORD ROUTING	
META DATA	>	CARD1	(OFF)
PLAYBACK CONTROL	>	CARD2	(OFF)
<b>RECORD ROUTING</b>	<b>&gt;</b>	CARD3	(OFF)
MIRROR ENABLES	>	CARD4	(OFF)
MY NOMAD (CARD/MIRROR)	>	CARD5	(OFF)
FADER ASSIGN	>	CARD6	(OFF)
MEMORY STORE/RECALL	>	CARD7	(OFF)
ABOUT NOMAD	>	CARD8	(OFF)
MODE	>	CARD9	(OFF)

The record routing in Nomad Lite is slightly different from the card routing in Nomad 10 or 12. Nomad Lite doesn't have a record enable matrix or a card routing matrix. With Nomad Lite, you can route all your inputs and all your record busses to any one of the 10 record tracks.

**NOTE:** All ISO tracks are recorded Pre-Fade only. All Output busses are recorded Post-Fade

RECORD ROUTING	
CARD1	Input 1
CARD2	Input 2
CARD3	Out 1
<b>CARD4</b>	<b>Out 2</b>
CARD5	(OFF)
CARD6	(OFF)
CARD7	(OFF)
CARD8	(OFF)
CARD9	(OFF)

Shows Card Tracks 1 and 2 will Record Inputs 1 and 2

Shows Card Tracks 3 and 4 will Record Output buses 1 and 2

In the record routing page you select and highlight which card track you want to record on then you can choose what source you want to assign and record on that channel. You can choose between all 10 analog inputs or any of your 6 output busses.

Record Enables – Nomad Lite Only

This menu controls which of the tracks are copied on Nomad Lite's mirror compact flash card.

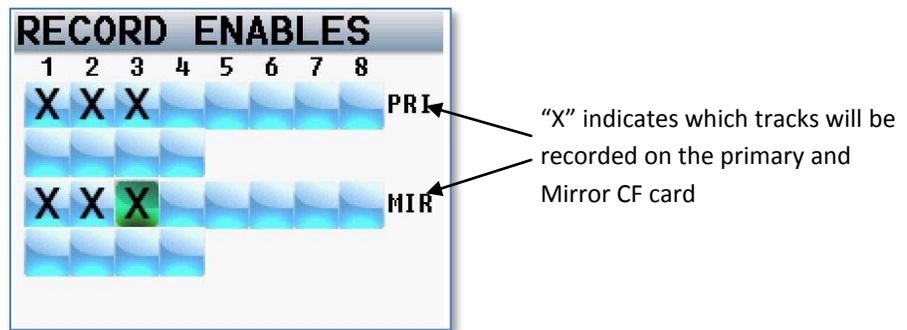
MIRROR ENABLES							
1	2	3	4	5	6	7	8
X	X	X	X				
							MIR

"X" indicates which tracks will be recorded on the Mirror CF card

**SHORTCUT:** It is not necessary to remove record enable cross points from the Mirror Matrix. If a Primary card track doesn't have anything routed to it; it will NOT be recorded and therefore NOT written to the Mirror card. This allows you to leave all of the Mirror tracks enabled. This makes it unnecessary to change the tracks being mirrored every time you change a tracks record enable state.

**Record Enables – Nomad 10 and 12**

This menu controls which of the recorder's tracks are enabled and recorded on each Compact Flash Card

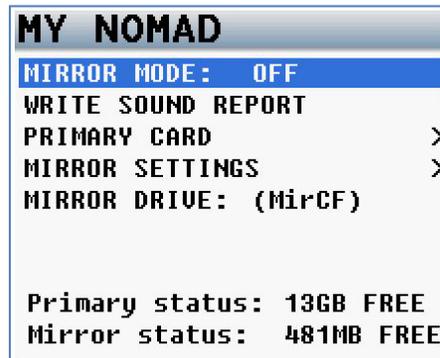


**NOTE:** If sample-rate is set to 88.2 kHz or 96 kHz, only eight Primary and Mirror tracks can be selected and recorded

**SHORTCUT:** It is not necessary to remove record enable cross points from the Mirror Matrix. If a Primary card track is not selected, it will NOT be recorded and therefore NOT written to the Mirror card. This allows you to leave all of the Mirror tracks enabled. This makes it unnecessary to change the tracks being mirrored every time you change a tracks record enable state.

## My Nomad Menu

This menu controls the primary recording and mirroring functions.



### Mirror Mode

- **OFF:** Nomad will not mirror any files.
- **ON:** Nomad will only start to mirror once the unit has gone into Stop mode.
- **CONTINUOUS:** When Nomad is recording, the audio is copied to the mirror card immediately after it is written to the primary card. Depending on the track count, the mirror card may lag behind a bit. Not to worry, after you go into Stop mode, the mirror card will catch up.

**NOTE:** If you are finding that mirroring is lagging you may be using too much of Nomad's processing power elsewhere. Many times there are items that are on that are not needed. These items can often be shut off to conserve processing power and speed up the mirroring process. You can check to see that some of these items are not unnecessarily on:  
Bus Assignments Cross Points, Compressor Enables (input, output and card), High Pass Filters and Notch Filters.

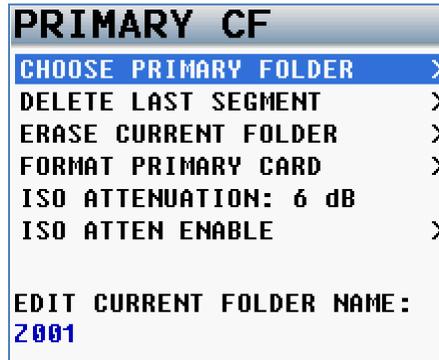
### Write Sound Report

When you select this, Nomad will create a Sound Report and write it on the Mirror CF card. The sound report contains the Meta Data information for what was recorded.

**NOTE:** Mirror mode must be turned off to write a sound report.

### Primary Compact Flash Card Menu

This menu manages the primary recording Compact Flash card.



### Choose Primary Folder

Chooses which folder is used for recording audio.

**PRIMARY FOLDER**

FOLDER	SIZE	SEGS
2001	221 GB	5 ✓
2002	17 GB	3
2003	0 MB	0
2004	0 MB	0
2005	0 MB	0
2006	0 MB	0
2007	0 MB	0
2008	0 MB	0

Green checkmark indicates which folder receives the recorded audio.

**NOTE:** Mirror mode needs to be set to OFF before you can change Primary Folders.

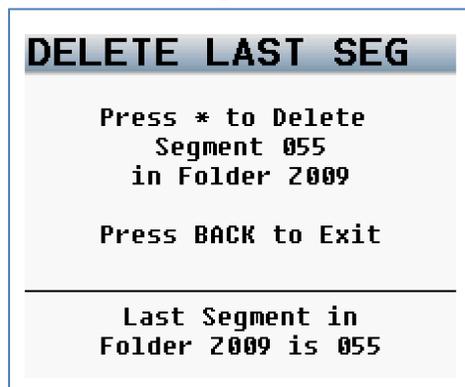
All recorded files are directed to individual folders. This allows you to choose which folder is being used for recording. The folder can be renamed to help identify its contents. To name your folder hit the back button and in the **PRIMRY CF** menu then scroll down to the **Edit Current Folder Name** then press **MENU** to change the name of the folder.

**NOTE:** Folder names need to be seven characters or less, and can contain no spaces or symbols

The primary card is recorded as a Zaxcom MARF file. The advantage: any power loss while recording will not result in the loss of any recorded audio, as is common with all other portable recording systems. In the event of a power loss at power-up, Nomad automatically closes any open files to the point the audio recording was interrupted with no loss of audio up to that point. Even though Nomad uses a proprietary file system, it is 100% compatible with Mac or PC by using the free file conversion utility ZaxConvert. The latest version can be downloaded from [www.zaxcom.com](http://www.zaxcom.com). All MARF files can be converted to either .WAV or MP3 files.

### Delete Last Primary Segment

This menu allows you to delete the last recorded segment



**Erase Current Primary Folder**

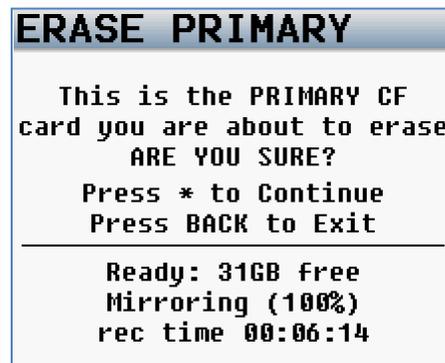
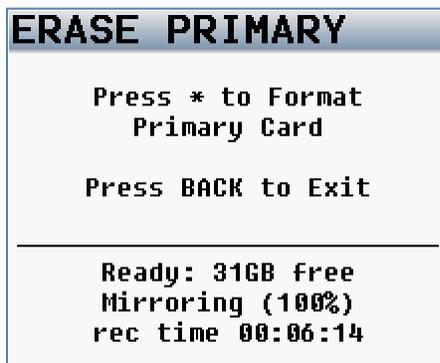
This menu allows you to delete an entire folder on the recording media



**WARNING:** If you have mirrored a folder and need to erase it to make room for more recording files on the primary card, REMOVE the MIRROR card before doing the erase. If you don't, the folder will be ERASED FROM BOTH CARDS!

**Format Primary Card**

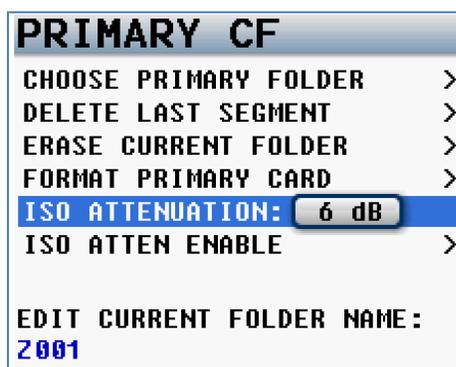
This menu is where the primary CF card is formatted. This process will take about 4 minutes to complete.



**ISO Attenuation**

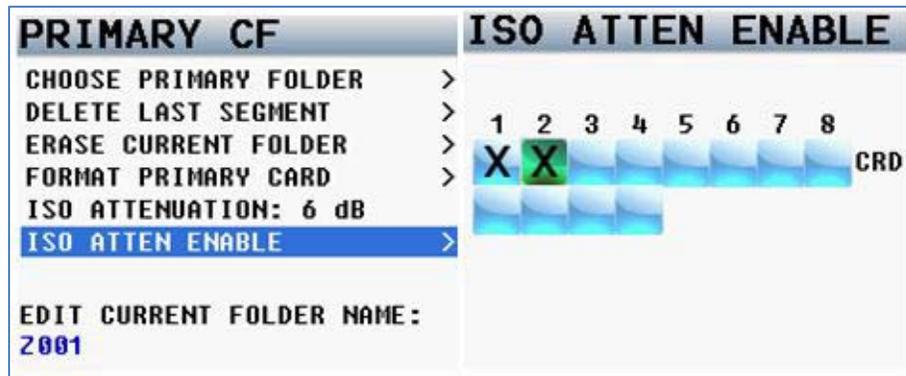
The NeverClip™ inputs allow large signals to travel through the digital mixing engine using 32 bit floating point numbers. Once these large signals are recorded into a 24-bit WAV (or MARF) file, the advantage of floating point math is lost and these signals can clip if you don't use a card limiter.

**ISO Attenuation** allows ISO record tracks to be attenuated by a user selectable fixed amount of **6, 12, 18** or **24 dB**. This allows audio to be recorded, even if its dynamic range would normally be too large. This gain reduction is stored in the metadata of the WAV file so Post can restore the amplitude of the ISO tracks, when needed.



**ISO Attenuation Enable**

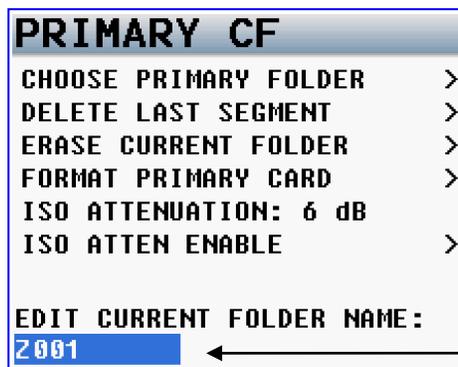
This menu sets which record tracks will be attenuate.



**Edit Current Folder**

To edit the folder name

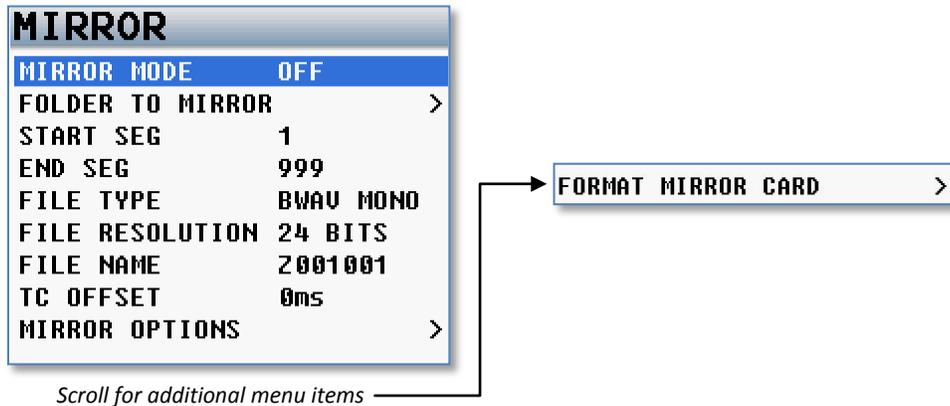
1. Scroll down to the **Edit Current Folder Name**.
2. Press the **MENU** knob to highlight the folder name and to access the [Enter Text page](#)



← Shows current Folder Name

### Mirror Settings Menu

This menu controls the copying of the Primary CF card to the Mirror CF card. The mirror CF card is formatted as FAT32, is fully compatible with all Mac & PC platforms and is generally used as a deliverable format to post. The mirrored files will be recorded as BWAV files.

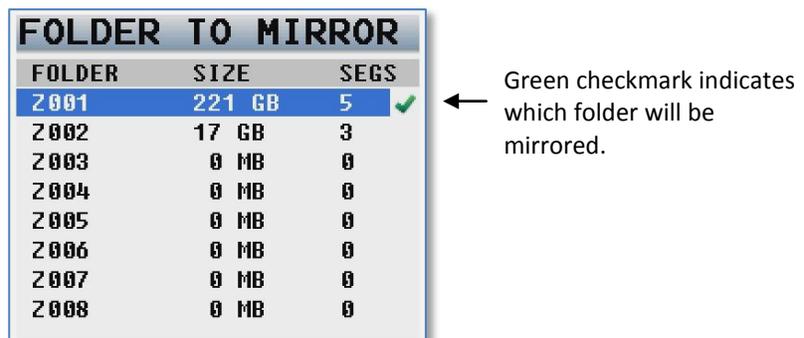


### Mirror Mode

- **ON:** Nomad will start to mirror a file after stop is pressed.
- **CONTINUOUS:** Nomad will mirror while the unit is recording. The audio is copied to the mirror card immediately after it is written to the primary card. Depending on the track count, the mirror card may lag behind a bit. Not to worry, after you go into stop mode, the mirroring will catch up.

### Folder to Mirror

This menu specifies which folder on the primary media is to be mirrored (copied).



- If you want to **CONTINUOUS MIRROR**, this folder needs to match the primary folder.
- If you want to re-mirror a folder, this folder needs to match the primary folder you want to re-mirror.

### Start Segment

Set the first segment that Nomad will mirror or re-mirror. When you are recording the start segment will automatically increment with each file on the primary card.

### End Segment

Sets the last segment that Nomad will Mirror or Re-mirror.

### File Type

Sets the type of file Nomad will mirror

- **BWAV MONO**
- **BWAV POLY**
- **MP3** - only available with a Nomad 12

A **MONO** file is 1 file per track. So if you record 1 track only, 1 file will represent that "take" from the time you press record to the time you press stop. If you were to record 2 tracks for that same take, the Maxx will produce 2 files, one representing track 1 and the other representing track 2.

A **POLY** file creates one file for that take, even if the take was recorded on multiple tracks. With POLY files 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 6 tracks were recorded it would still be only one file, 6 tracks wide.

**File Resolution**

Sets the bit depth that Nomad will mirror files as.



**File Name**

Sets the way your individual files are named.



- **Z001001** – is the default way where the file name consists of the Folder Name (Z001 or whatever name you create) followed by the Segment Number (001).
- **1 T2 Z001** – creates a file name in the format of **“Scene Take Folder Name SegmentNumber”**. For example if you record Scene is “1”, Take “2” in folder “Z001” and the segment number is “2”, the file name is “1\_T2\_Z0012.WAV”.

If the Folder Name is changed, “Z001” will be replaced with the new name of the folder.

**IMPORTANT:** Be careful not to create any Scene and Take text with characters other than letters or numbers with the second file naming option

**Mirror Options**



This setting allows Nomad to stay in mirror mode after it has been powered off. If this option is set to **OFF**, any time Nomad is powered down it changes the **MIRROR MODE** to **OFF**.

**IMPORTANT:** If Nomad is setup to allow Mirroring mode to be remembered after a power cycle - if a CF card is not installed in the Mirror slot after the unit boots-up, mirror mode will be turned off and must be manually turned on by the user when a Mirror Card is inserted.

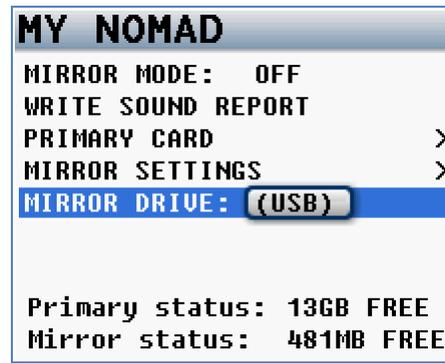
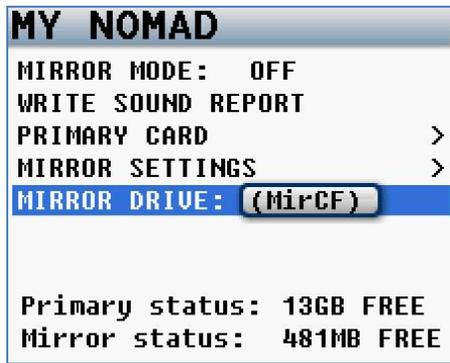
**Format Mirror Card**

This menu is used to format the Mirror CF card. Nomad will format the card as a FAT32 format.



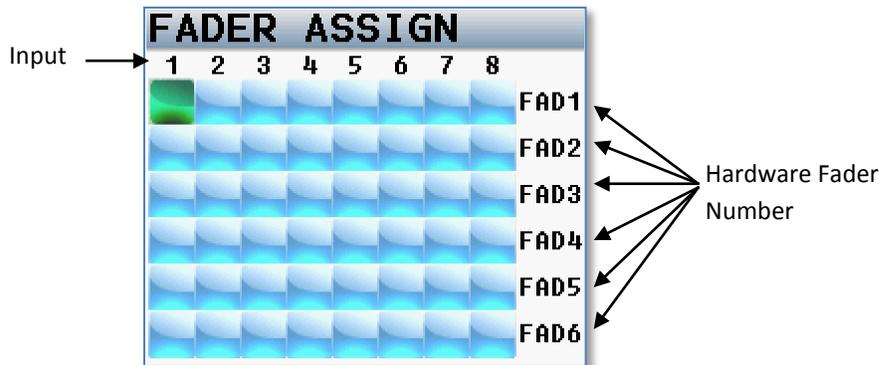
**Mirror Drive - Nomad 12 Only**

This menu selects if Nomad will mirror to a Compact Flash card or USB Drive.



### Fader Assign Matrix

This matrix controls which inputs are assigned to the six hardware faders.



Because Nomad is a digital mixer, no actual audio is going through the Nomad Fader controls allowing for complete flexibility for the mixing hardware faders. Any one of the analog inputs 1-8, digital inputs 1-8, analog trim controls or ZaxNet trim can be routed to any hardware fader.

#### Setting a Cross point

Rotate the **MENU** knob to scroll through the matrix. Stop in the matrix, at the intersection of the input channel and output channel, where you want to send that specific input. Press the **MENU** knob to cycle through the available cross points, which are:

- Blank – no connection
- **A** – Assign an analog input to a fader
- **D** – Assign a digital input to a fader
- **T** – Trim where the fader knob will work as a hardware trim knob
- **Z** – Assigns the fader to control the trim of a Zaxcom wireless transmitter

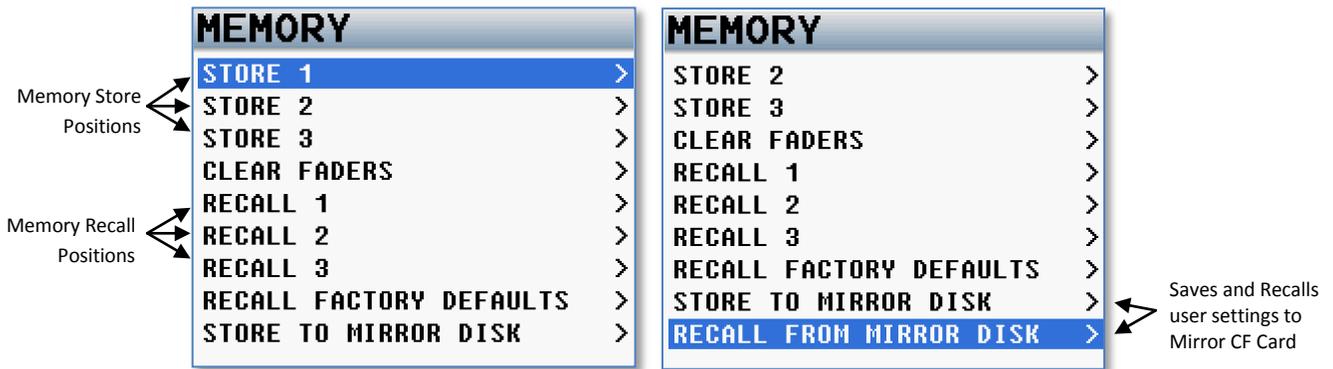


**NOTE:** Assigning a “Z” can only be done when ZaxNet is in transmit mode

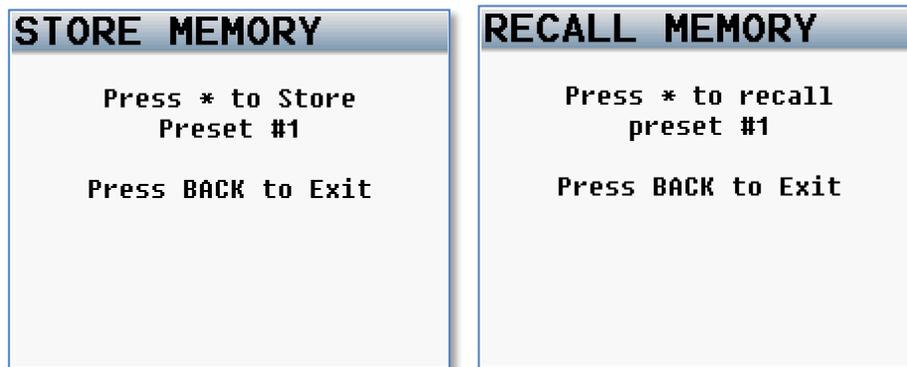
**NOTE:** To have access to the “T” Trim or “Z” ZaxNet, press the *Star* key on the front panel when in this matrix. That will add the “T” and “Z” to the cycle.

**NOTE:** If you are using a multiple-element mic (i.e., stereo, surround, etc.) and you assign all of the channels to one master fader you need to disable the AutoTrim™ function.

Memory menu



Store / Recall using Memory

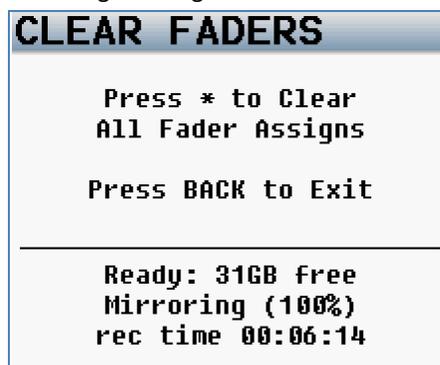


From this menu, Nomad can save and recall three full recorder setups for different work scenarios. All user set parameters are saved and can be recalled as needed.

**WARNING:** If you do a factory restore, all of the saved memories will be erased.

Clear Fader Assigns

This menu clears all of the current fader assign settings.



**Factory Reset**

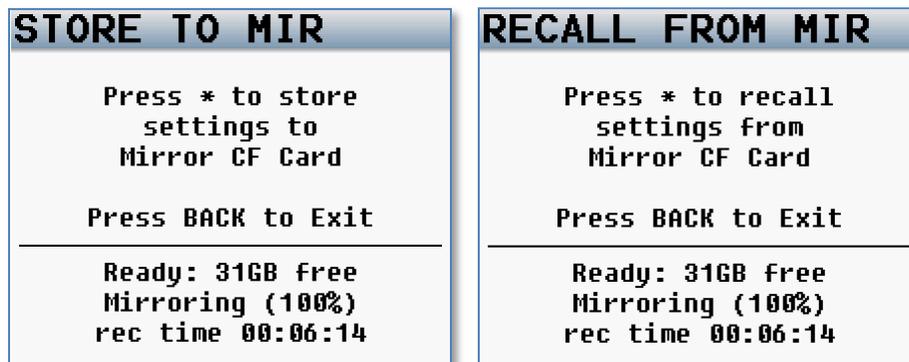
This menu resets all the parameters back to factory default.



**WARNING:** If a factory reset is run, all of your user setting will be lost and have to be re-input. Though a factory restore will not erase Note and Track presets. To do a full restore - including Note and Track names hold the stop key on boot up.

**Store / Recall using Mirror Card**

Nomad also has the option to save settings to (and restore settings from) the mirror Compact Flash card. This allows settings to be exchanged between multiple Nomads.



### About Nomad Menu

This menu provides information about Nomad

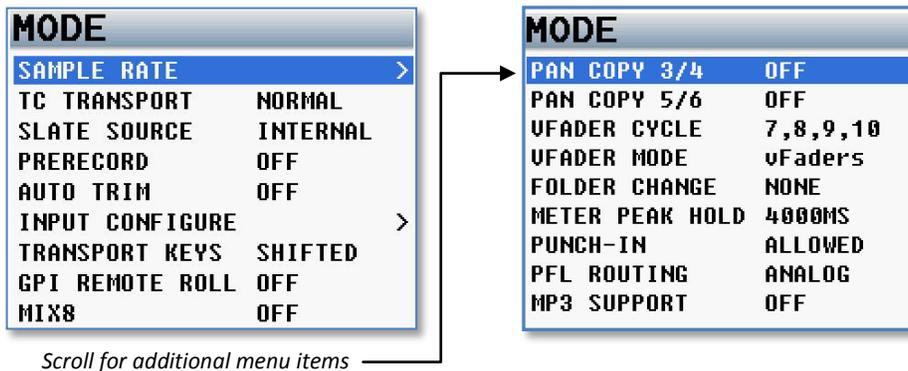
ABOUT NOMAD	
MODEL	Nomad 12
SERIAL NUMBER	01234
SOFTWARE VER	v4.16
DSP REV	B
AUDIO REV	13
MAIN REV	56
ZAXNET VER	0.33
CPU USAGE	57%

Software Version

ZaxNet Software Version

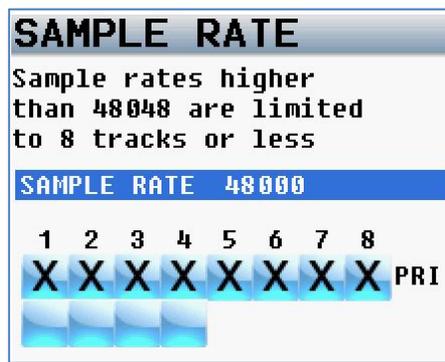
Indicates current CPU Usage. Normal operations should be 55 - 80%

Mode Menu



Scroll for additional menu items

Sample Rate



Selected Sample Rate

Enable a Sample Rate over 48048 and you will have to run less than 8 tracks. This matrix allows you to deselect tracks.

Available sample-rates: 44100, 47952, 48000, 48048, 88200, 96000

TC Transport

This adjusts the way Nomad will go into record mode

- **Normal** – Nomad will go into record when the record button is pushed.
- **Auto Load** – Nomad will go into to record with it senses record run TC coming from an external source.



Slate Source

Selects if internal the slate mic or an external slate mic will be used when the **SLT** key is pressed. The external microphone will be connected to the External Slate Microphone input jack on the side of Nomad.



Prerecord

This allows Nomad buffer the audio in a prerecord buffer. You can choose to buffer up to 10 seconds of audio. From the point the Nomad is powered up, it is always processing data, any sound coming in from any input is always being processed. When pre-record time is enabled, the signal is held in a buffer until you press the **REC** key. At that time, all stored audio in the buffer is included the current Take.

The pre-record buffer is dumped after any of the following settings are changed:

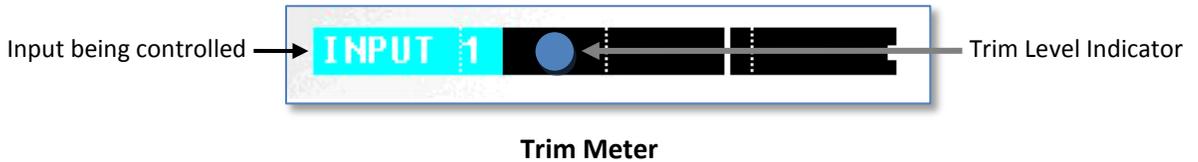
- Sample-rate, Timecode, User-bits, Frame- Rate, Track count

**NOTE:** Prerecord is only available when the sample rate is 48048 or lower.

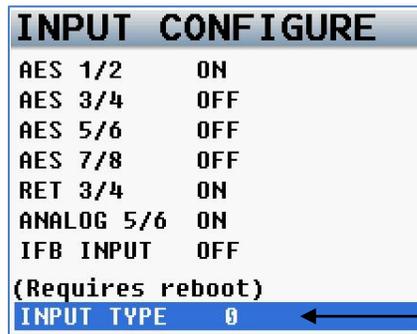
**NOTE:** Running prerecord doesn't use any additional battery power.

**AutoTrim™**

AutoTrim™ is a feature that makes the **MENU** knob act an individual trim knob for all you analog inputs. When AutoTrim™ is turned on and you adjust a fader the blue LED next to that fader will illuminate indicating the input associated with that channel will be trimmed when you rotate the **MENU** knob. When you adjust another fader, the trim function will move to that input.



**Input Configure**



Displays Input Configuration Type when you Scroll through (see chart below)

**IMPORTANT:** If the Input Configuration is changed, you **NEED** to re-boot Nomad

The factory default is set up so that Nomad can handle one pair of AES inputs. If more than one pair of AES inputs are required or need to use ZaxNet IFB, then the Input configuration must be changed. The Input Configuration menu is used to select between AES inputs and other Nomad resources. Put simply, for Nomad’s processors to handle the additional AES channels, other input sources, or ZaxNet, may need to be deactivated. Fifteen selections are provided to give you various combinations of AES inputs, return 3/4 and analog input 5/6 and IFB.

INPUT TYPE	AES 1/2	AES 3/4	AES 5/6	AES 7/8	RETURN 3/4	ANALOG Input 5/6	IFB INPUT
0	ON	OFF	OFF	OFF	ON	ON	OFF
1	OFF	ON	OFF	OFF	ON	ON	OFF
2	OFF	OFF	ON	OFF	ON	ON	OFF
3	OFF	OFF	OFF	ON	ON	ON	OFF
4	ON	ON	OFF	OFF	OFF	ON	OFF
5	ON	OFF	ON	OFF	OFF	ON	OFF
6	ON	OFF	OFF	ON	OFF	ON	OFF
7	ON	ON	ON	ON	OFF	OFF	OFF
8	OFF	OFF	OFF	OFF	ON	ON	ON
9	OFF	OFF	OFF	OFF	ON	ON	ON
10	OFF	OFF	OFF	OFF	ON	ON	ON
11	OFF	OFF	OFF	ON	OFF	ON	ON
12	ON	OFF	OFF	OFF	OFF	ON	ON
13	ON	OFF	OFF	OFF	OFF	ON	ON
14	ON	OFF	OFF	OFF	OFF	ON	ON
15	OFF	ON	ON	ON	OFF	OFF	ON

**Transport Keys**

**SHIFTED**

If the **TC**, **A-MIX** or **ZNET** key is pressed, the items associated with those keys will open. To go into Record, Playback or Stop, it is necessary to SHIFT those keys. You will need to press the **MENU** knob to “SHIFT” while simultaneously pressing the **REC**, **PLAY** or **STOP** key to go into that mode.

**NOTE:** It is still possible to directly access the **REC**, **PLAY** and **STOP** functions by pressing the appropriate key for 1 second. This is the most popular choice.

**UNSHIFTED**

Pressing the **REC**, **PLAY** or **STOP** key immediately puts Nomad into Record, Playback or Stop. To display the pages associated with the **TC**, **A-MIX** or **ZNET** key, it is necessary to press the **MENU** knob while pressing the **TC**, **A-MIX** or **ZNET** key.

**GPI Remote Roll**

“ON” allows Nomad to use a remote switch to start and stop recording.

To operate you will need to connect a toggle switch to the serial port closest to the back of Nomad. Do not connect the switch to the USB port. For pin configuration please see the Connector Assignments in the back of this manual.

**NOTE:** GPI remote roll can not be used at the same time as Mix 8 / 12

**Mix-8**

“ON” allows you to operate a Mix-8 fader panel with Nomad

**Pan Copy**

If you are using the **ENG Home screen** pan matrix to assign inputs to output buses, this gives you the option to have output buses 3 / 4 and or buses 5 / 6 follow the same pan selection. This is useful if you are feeding the same source to multiple cameras.

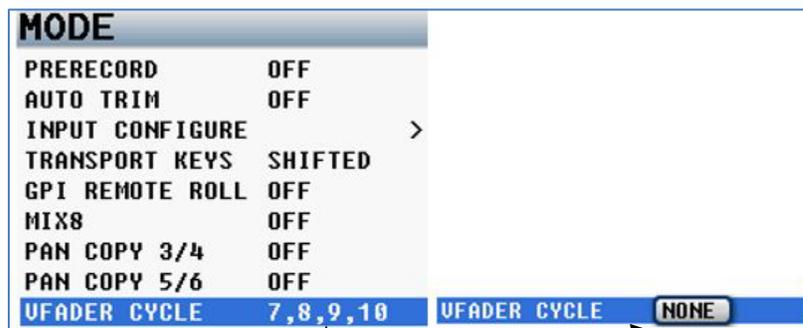
**VFader Cycle**

Virtual fader will allow you to mix all 10 channels right from the **ENG Meter screen**.

If “VFADER CYCLE” is activated, you can adjust the mix for inputs 7-10 right from the **ENG Home screen**. The **MENU** knob will become the hardware fader for those inputs.

**VFADER CYCLE** lets you choose which inputs (if any) you want to be able to mix in the **ENG Home screen**:

- NONE
- 7 ONLY
- 7, 8
- 7, 8, 9
- 7, 8, 9, 10

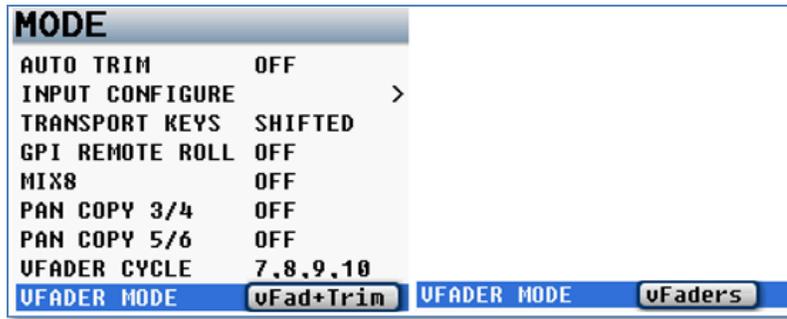


Shows which inputs will be available when the Virtual Fader is activated

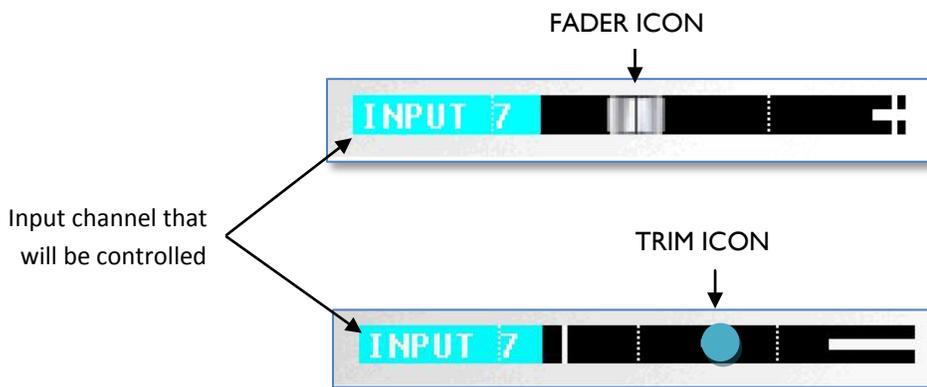
**NOTE:** If you need to access the **Main Menu** from the **ENG meter screen** while the **VFader mode** is active, you will need to press and hold the **MENU** knob for approximately 1.5 seconds.

**VFader Mode**

This lets you choose to control the Fader only or alternate between Fader and Trim for the inputs that you chose to be active in the **VFADER CYCLE**.



When the virtual fader is active the bottom meter on the **ENG Meter Screen** will display what you will be controlling. Either fader only or fader and trim for an input channel.



This mode is only active while in the **ENG Meter Screen**.

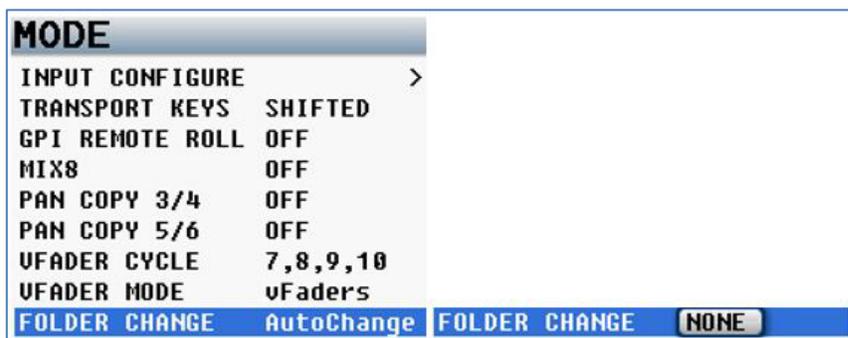
When in this mode to control the faders for inputs 7 – 10:

- Press the **MENU** knob and the bottom meter on the ENG meter screen will display what input you are controlling with the **MENU** knob.
- If the Fader Icon is displayed the **MENU** knob will adjust the mix.
- If the Blue Trim Icon is displayed the **MENU** knob will control the input Trim of that input.

**Folder Change**

If set this to **AutoChange**, when the Primary Folder is changed, the Mirror Folder automatically changes to the newly selected folder.

**IMPORTANT: Mirror Mode** needs to be turned **OFF** before changing the Primary Folder.



**Meter Peak Hold**

This sets the duration the peak indicator is held. The range is **400MS – 8000MS** with a step value of **200MS**.

MODE	
TRANSPORT KEYS	SHIFTED
GPI REMOTE ROLL	OFF
MIX8	OFF
PAN COPY 3/4	OFF
PAN COPY 5/6	OFF
UFADER CYCLE	7,8,9,10
UFADER MODE	vFad+Trim
FOLDER CHANGE	AutoChange
METER PEAK HOLD	4400MS

**Punch-In**

This item allows the user to turn ON/OFF the ability to start a new segment while recording. If it is **ALLOWED**, you can create a new file while recording by pressing (or holding) the **REC** key (depending if you are in shifted or unshifted mode). If it is **DISABLED**, you cannot manually create a new file while recording.

If you turn on the Rec/Stop warning option in the **ENG Home screen**, there will be an audible beep when a new file is created. The beep is heard in the main headphones only.

MODE	
GPI REMOTE ROLL	OFF
MIX8	OFF
PAN COPY 3/4	OFF
PAN COPY 5/6	OFF
UFADER CYCLE	7,8,9,10
UFADER MODE	vFaders
FOLDER CHANGE	NONE
METER PEAK HOLD	4000MS
PUNCH-IN	ALLOWED

**NOTE:** Regardless of this setting Nomad will create a new file when the current file reaches 2GB in size.

**PFL Routing**

This sets what will be listened to when the PFL key is pushed.

- **FADER** – the PFL is listening to whatever that fader is controlling. The fader is set in the [Fader Assign page](#) including AES inputs.
- **ANALOG** – the PFL is listening to the corresponding analog input.

MODE	
MIX8	OFF
PAN COPY 3/4	OFF
PAN COPY 5/6	OFF
UFADER CYCLE	7,8,9,10
UFADER MODE	vFad+Trim
FOLDER CHANGE	AutoChange
METER PEAK HOLD	4400MS
PUNCH-IN	DISABLED
PFL ROUTING	FADER
PFL ROUTING	ANALOG

MP3 Support

MODE	
PAN COPY 5/6	OFF
VFADER CYCLE	7,8,9,10
VFADER MODE	vFaders
FOLDER CHANGE	NONE
METER PEAK HOLD	4000MS
PUNCH-IN	ALLOWED
PFL ROUTING	ANALOG
<b>MP3 SUPPORT</b>	<b>OFF</b>
MP3 MIX	FIRST CH

MP3 Support needs to be turned on when formatting your primary card, and recording to create MP3 Files. You can choose to create 64, 96 or 128Kbps files.

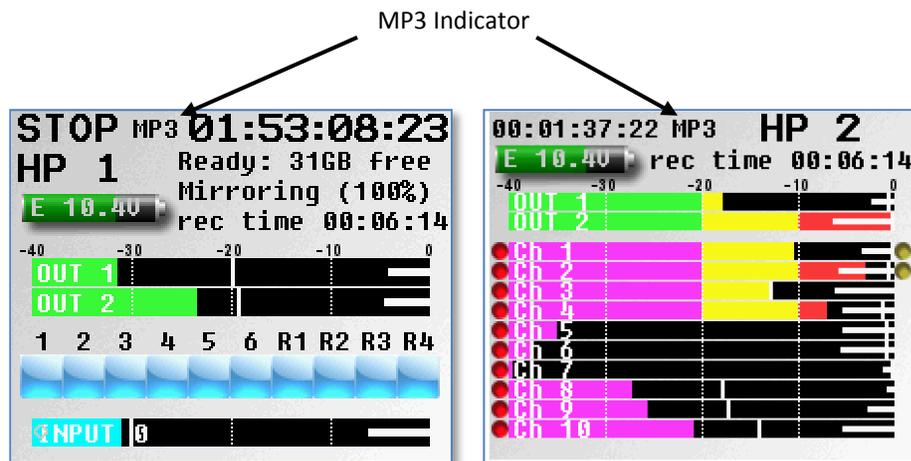
To record MP3 files you will need to first format your primary card with the **MP3 SUPPORT** turned on to create an MP3 folder on the primary card. Formatting the card will create a large (700Mbyte) loop onto the PRIMARY card. This loop will hold up to 24 hours of MP3 audio (at 64kbps).

**NOTE:** After the loop has been filled the MP3 feature will restart and begin writing over the oldest audio segments.

**NOTE:** If you turn **MP3 SUPPORT** to **ON** and you didn't format the primary card with **MP3 SUPPORT** turned **ON** Nomad will not know where to write the MP3 files to and you will see "???" error where the MP3 Indicator is on the meter screen.

Now to record MP3 files you will need to turn **MP3 SUPPORT ON**. When MP3 Support is on the MP3 files will be written to the MP3 folder on the primary card. As you are recording you will need to "mark" which files you want to mirror later.

To "mark" the file you will need to make sure that MP3 is toggled **ON** before you close the primary file. You will know that MP3 is toggled on when "MP3" appears in the home meter screen as you are recording.



If **MP3 SUPPORT** is on in the Mode menu all files will be "marked" by default. If you don't want to create an MP3 of a particular file you can toggle it off by pressing the **A-MIX** key before or while recording.

After the file is closed you can also mark the MP3 file you want to transfer in the Meta Data Menu. After the file was closed go to the Meta Data Menu and select the file you want to create an MP3 of toggle the **STAR** key and you will see "MP3" for the file.

Then when you are done you will transfer the MP3 files from the Primary card to a USB device or mirror Compact Flash card. The file transfer is quick - a 30 minute file will transfer in about 8 seconds.

## MP3 Mix

MODE	
PAN COPY 5/6	OFF
UFADER CYCLE	7,8,9,10
UFADER MODE	vFaders
FOLDER CHANGE	NONE
METER PEAK HOLD	4000MS
PUNCH-IN	ALLOWED
PFL ROUTING	ANALOG
MP3 SUPPORT	ON 96Kbps
MP3 MIX	FIRST CH

Select which record tracks you want to mirror as an MP3

Nomad will copy up to two card tracks into the MP3 folder. So you will need to select which record tracks you want Nomad to create MP3 files of.

To select which record tracks and choose one of the following options:

- **FIRST CH** – Selects the first record enabled track.
- **LAST CH** – Selects the last record enabled track.
- **FIRST TWO** – Selects the first two record enabled tracks.
- **LAST TWO** – Selects the last two record enabled tracks.

This way you can create an MP3 of your mono mix track or two output buses and allows you to have your mix track as the first or last track.

**NOTE:** When selecting which record tracks will become a MP3 in the **MP3 MIX** menu and you select “**FIRST**” or “**LAST**” that will be the first or last track that is record enabled in the **PRIMARY RECORD ENABLE** matrix. So for example if you have a Nomad 10 and you are recording to primary tracks 1, 4, 6, 8, 10 and select **FIRST TWO** in the **MP3 MIX** you will create an MP3 of tracks 1 and 4 if you choose **LAST TWO** you will create an MP3 of tracks 8 and 10.

## Auto-Mixer - Nomad 6, 8, 10 and 12 Only

When Auto-Mixer is on, and a speaker starts to talk, Nomad will automatically open that microphone and add that microphone to the mix. Then when a speaker stops talking that microphone will be attenuated “closed” and essentially be removed from the mix.

Removing unused microphones will result in a lower noise floor giving you a cleaner, better sounding mix without having to manually ride the faders. Manually riding faders in unscripted dialog often results in missing the start of when a person begins to speak.

Nomad’s Auto-Mixer has no limit on the number of microphones that can be active at one time. The Auto-Mixer also has a last microphone on feature; this means that even if no one is speaking there will always be one microphone included in the mix, which will be the last active microphone. The last mic on feature allows the mix to never go to absolute silence.

**NOTE:** Auto-Mix will be routed to Output Bus 1. When using Auto-Mix make sure you remove all crosspoints from the Bus Assign Matrix for Bus 1. If any crosspoints are active they will be mixed into the Auto-Mixer audio.

AUTO-MIXER SETUP	
A-MIX MODE	OFF
MIC ON THRESH	-10 dB
ATTACK	1 ms
DECAY	50 ms
NOISE REDUCTION	0 dB
ATTENUATION	0 dB
A-MIX ENABLES	>

### A-Mix Mode

Enables Nomads Auto-Mixer and sets if the Auto-Mixer will act pre-fade or post-fade.

- **Pre-Fade** - The Auto-Mixer is inserted before the faders in the audio chain so only the trim control will affect the microphone levels. Since the Auto-Mixer is before the faders the faders have no affect on the levels.
- **Post-Fade** - The Auto-Mixer is inserted after the faders in the audio chain and both the trim and the faders will control the levels of the microphones.

### Mic On Threshold

Sets the level that a microphone needs to be reached before that microphone opens.

When a speaker’s microphone reaches the **Mic On Threshold** level, as indicated on the input meter, that microphone will open and become part of the mix.

- **Mic On Threshold** can be set anywhere between **-60dB** and **-10dB**

### Attack

Sets how fast the microphone is added to the mix when a speaker starts to talk.

- **Attack** can be set anywhere between **1** and **150 ms**

### Decay

Sets how long a microphone will stay active after the signal has fallen 10dB below the Mic On Threshold.

- **Decay** can be set anywhere between **1** and **150 ms**

### Noise Reduction

Sets how much the output noise floor is attenuated when no one is talking.

- **Noise Reduction** can be set anywhere between **0dB** and **-10dB**

**Attenuation**

Sets how much each microphone is attenuated when it is closed.

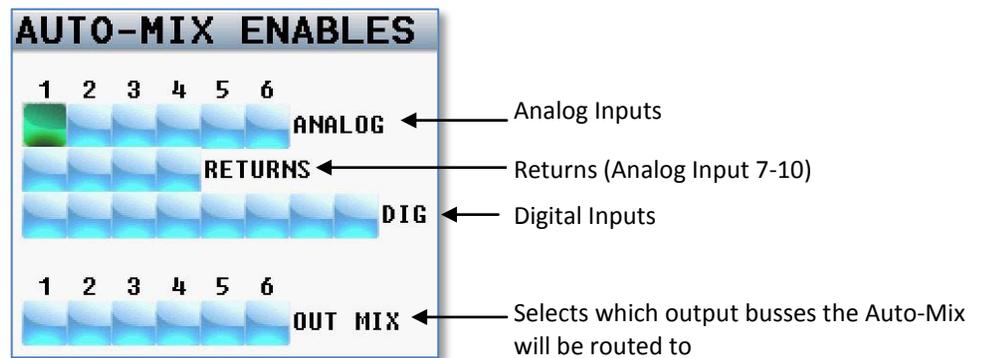
- **Attenuation** can be set between **-10dB** and **-80dB**

**NOTE:** When a microphone is closed the level of that input is actually attenuated rather than muted. The level of attenuation is adjustable by the Attenuation setting. In some noisy environments it may be more palatable to hear some / most of the ambient mic noise all the time rather than hear the noise mute and then re-appear when someone talks.

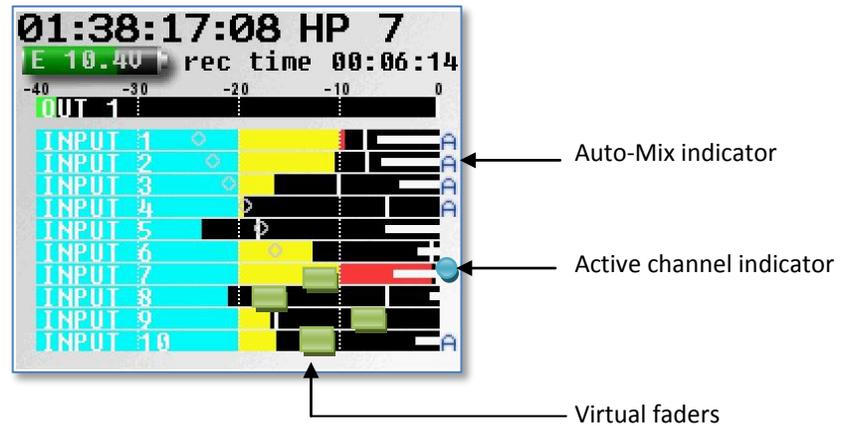
**Auto-Mix Enables**

The Auto-Mix enable matrix sets which inputs are included in the Auto-Mix. When an input is selected to be included in the Auto-Mix an “A” will be displayed to the right of the input meter.

This matrix also sets which output buses the Auto-Mix will be outputted to.



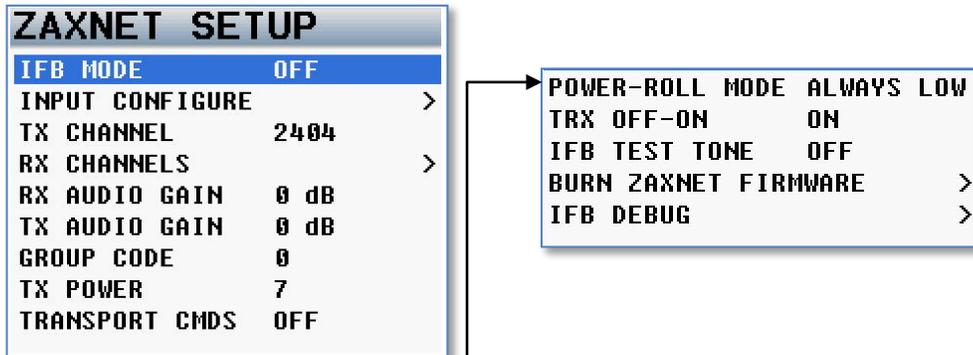
## Using The Auto-Mixer



- The Auto-Mixer menu can be accessed from the Main Menu. After the Auto-Mixer is enabled you can access the menu by pressing the A-MIX key on Nomad. Unless MP3 support is turned on, in that case the A-Mix key toggles the MP3 recording marker.
- After your inputs are assigned to the Auto-Mixer the letter "A" will appear to the right of the meter for that input.
- When that input is active the "A" will be replaced by a blue dot indicating that the input is being included in the mix.
- If return inputs (7-10) are being used the virtual fader will appear over the meters for those inputs. To adjust the levels on those inputs press the Menu knob to highlight that fader. Then by rotating the menu knob will adjust the level to that input. To advance to the next fader press the menu knob. Press the back (headphone) knob to return to normal operations or adjust the hardware fader for a different input. If any of the virtual faders are being used the Menu knob must be held for 1 second in order to access the Main Menu.
- The Auto-Mix output will default to Output Bus 1. Most users will want to make sure all Bus routing is cleared for Output Bus 1 to prevent unwanted audio from mixing into the bus.

**IMPORTANT:** Auto - Mix will not be able to differentiate between a speaker's voice and noise such as a hit to the microphone. So if the noise is louder than the Mic On Threshold that microphone will engage.

### ZaxNet Setup Menu



Scroll for additional menu items

#### IFB Mode

- **OFF** – ZaxNet is off.
- **RX** – The ZaxNet transceiver is set to receive mode.
- **TX** – The transceiver is set to transmit mode. You will be able to transmit audio, timecode and wireless transmitter commands. The unit will be the master for units with its Group ID.
- **TX+RX** – The IFB will stay in transmit mode unless you select to monitor audio via ZaxNet, at which point you will go into receive mode. So if you set up one of your HP selects to monitor a wireless via ZaxNet when you select that preset the IFB will go into RX mode to allow you to monitor for the duration until you deselect it

**CAUTION:** If you set the IFB Mode button to TX, be sure to attach an antenna. If you don't, RF can leak into the mic preamps.

#### Input Configure

To use ZaxNet you will need to set the **INPUT CONFIGURE** to 8 or higher. Click on: [Input Configure page](#)

#### TX Channel

Changes which frequency (2.403 – 2.475 GHz) Nomad will use to transmit IFB audio and ZaxNet commands on.



#### RX Channel

Sets the ZaxNet IFB receive channels frequencies you can chose up to six frequencies.



For monitoring - the channel numbers will correspond with the 6 headphone selects in the HP setup matrix. So for example "RX FREQ 2" will be the 2nd box in the "ZNET" select in the matrix

#### RX Audio Gain

Adjusts the receive audio level of the signal being received from a QRX IFB.



#### TX Audio Gain

Adjusts the transmit audio level of Nomads IFB that will be received by ERX receivers.



**Group Code**

Sets which Group ID number Nomad will control.

GROUP CODE 0

This allows Nomad to control specific transmitters. For example, setting a Group Code to 1 allows you to control all Group 1 transmitters. Setting it to 2 allows you to control all Group 2 transmitters. Group codes can be set from 1 to 99

**TX Power**

This adjusts the transmit power of the ZaxNet transmitter. Power range is 0 through 7 with 7 being the highest.

TX POWER 7

**Transport Commands**

If set to **SLAVED**, the Zaxcom wireless transmitters will start/stop recording each time Nomad starts/stops recording.

TRANSPORT CMDS OFF      TRANSPORT CMDS SLAVED

**Power-Roll Mode**

This setting is for the Zaxcom wireless transmitters that have a variable transmitter power setting:

- **ALWAYS LOW** – the transmitter will always be at the low power setting.
- **DYNAMIC**– the transmitter will run at low power between takes and go into high power when Nomad goes into record.
- **ALWAYS HIGH** – the transmitter will always be run at the high power setting.

**TRX Off-On**

This controls the current power status for each Zaxcom wireless transmitters power:

- **ON** – the transmitter is fully ON.
- **WAKE UP** – wakes up any transmitters that were previously powered down in the LOW (OFF) setting.
- **LOW (OFF)** – disables the **RF Power Amplifier**, **RF Board** and **Mic Pre-amp**. The will cut the power consumption and extend the battery life.

**IFB Test Tone**

This turns ON/OFF a test tone that is transmitted on the IFB audio channel to Zaxcom ERX receivers.

**Burn ZaxNet Software**

This menu allows you to install and updates the ZaxNet software.  
The ZaxNet software is embedded within the Nomad software.

```

BURN ZAXNET SW

Press * to Program
Zaxnet Processor with
Program File NOPT-033.h

(Currently running 0.29)

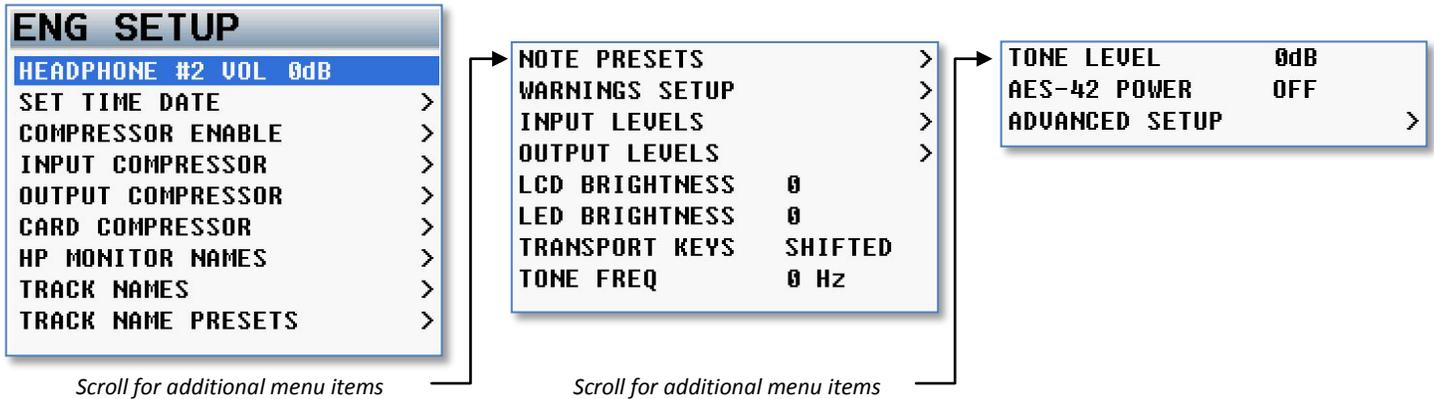
Press BACK to Exit
  
```

**IFB Debug**

This page is used for factory testing of the IFB.

### ENG Setup

This menu sets up Nomad’s engineering parameters.



Scroll for additional menu items

Scroll for additional menu items

#### Headphone #2 Volume

Adjusts the level of the headphone output 2.

#### Set Time & Date page

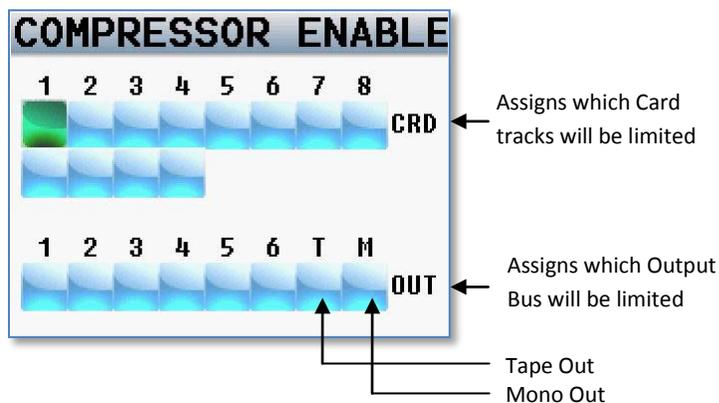
This sets the date and time for the Nomads internal clock and calendar. Nomads’ time can be used as time code and date can be used as user-bits.



**NOTE:** Nomad contains an internal battery that keeps accurate time even if Nomad is powered down for an extended time. The internal battery should last between two to three years. When replacing the battery you will need a 3 volt CR2320 coin cell battery.

#### Compressor Enable

This matrix sets which card tracks, output busses, and if the tape out or mono out will have compressor / limiters enabled.



### Input Compressor Parameters

This menu sets the parameters for the Input Compressor settings. The Input Compressor settings are global, meaning that the settings adjusted here will be the same for all Input Channels.

INPUT COMPRESSOR	
ATTACK	5mS
DECAY	100mS
THRESH	-6dB
RATIO	4.0:1

### Output Compressor Parameters

This menu sets the parameters for the Output Compressor settings. The Output Compressor settings are global, meaning that the settings adjusted here will be the same for all Output Busses.

OUTPUT COMPRESSOR	
ATTACK	5mS
DECAY	100mS
THRESH	-6dB
RATIO	4.0:1
GAIN	0dB

### Card Compressor Parameters

This menu sets the parameters for the Card Compressor settings. The Card Compressor settings are global, meaning that the settings adjusted here will be the same for all Card Tracks.

CARD COMPRESSOR	
ATTACK	5mS
DECAY	100mS
THRESH	-6dB
RATIO	4.0:1
GAIN	0dB

### Monitor Names

This menu allows you to customize the headphone monitor names that appear in the home screens. Once you click on a particular HP number, you will be taken to the [Enter Text](#) menu.

MON MEM NAMES	
1:	HP 1
2:	HP 2
3:	HP 3
4:	HP 4
5:	HP 5
6:	HP 6
7:	HP 7
8:	HP 8
9:	HP 9

### Track Names

This menu allows for the naming of record tracks. The track names are then displayed within the card meters and are contained in the files metadata so post can easily identify the source of a recorded track.

After selecting a track to name pressing the menu knob will open the [Enter Text](#) menu which allows manual name input. Or by pressing the PFL key allows you to choose from the list of preset names.

#### To select from the list of Track Preset Names:

1. Highlight the track you want to name
2. Press the PFL key
3. Select the preset you want enter
4. Press the Menu knob

TRACK NAMES	
1:	Ch 1
2:	Ch 2
3:	Ch 3
4:	Ch 4
5:	Ch 5
6:	Ch 6
7:	Ch 7
8:	Ch 8
9:	Ch 9

### Track Name Preset

This menu allows for the creating a preset list of track names. There are 20 track name presets available. The existing names can be edited and new track names can be created. The track names can be up to 22 characters long.

EDIT TRACK PRESET	
1:	BOOM
2:	MIX
3:	MID
4:	SIDE
5:	
6:	
7:	
8:	
9:	

**Note Presets**

This menu allows for the creating a preset list of notes. There are 20 note presets available. The existing notes can be edited and new notes names can be created. The notes can be up to 22 characters long.

EDIT NOTE PRESET	
1:	AIRPLANE
2:	CIRCLE TAKE
3:	AMBIENCE
4:	TONE -20.000
5:	WILD TRACK
6:	MOS
7:	NO GOOD
8:	EXCELLENT
9:	

**Warnings Setup**

WARNINGS SETUP	
INT BATT WARNING	OFF
INT BATT THRESHOLD	5.5V
EXT BATT WARNING	OFF
EXT BATT THRESHOLD	10.5V
HP BEEP LOUDNESS	20
HP BEEP BATTERY	OFF
HP BEEP LOW DISK	OFF
HP BEEP REC/STOP	OFF

See **NOTE** below.

There is a separate user adjustable voltage cutoff for both internal and external battery.

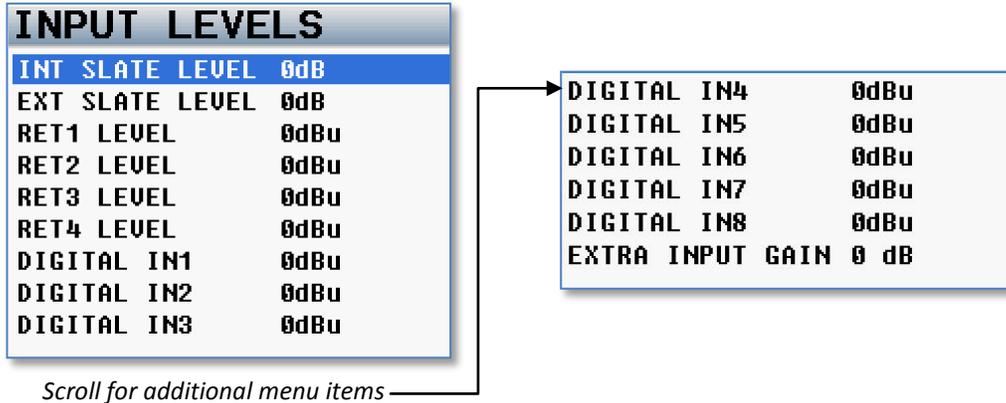
Volume Level of warning beep to the main headphones

This page manages the audible alerts sent to the main headphones only. These warnings will also be displayed on the LCD screen. Once one of the warning pages is being displayed, press the **Headphone** knob to acknowledge it.

**NOTE:** If no internal batteries are being used, it is recommended to turn off the internal battery warning option.

**Input Levels**

This menu manages the audio input levels for the internal slate, external slate, camera returns and digital inputs.



**Internal & External Slate Levels**

This allows you to adjust the internal slate microphone level and the external slate mic connected to External Slate Microphone Input. The levels are independently adjustable in 1 dB steps from **-20dBu** to **30dBu**.

**NOTE:** It is normal for the internal slate audio to have a high noise floor.

**Return 1-4 Input Levels / Line Level Inputs 7-10**

This allows you to adjust the levels of the return inputs. They are continuously adjustable in 1 dB steps from **-12dBu** to **30dBu**.

**Digital Inputs 1-8 Levels**

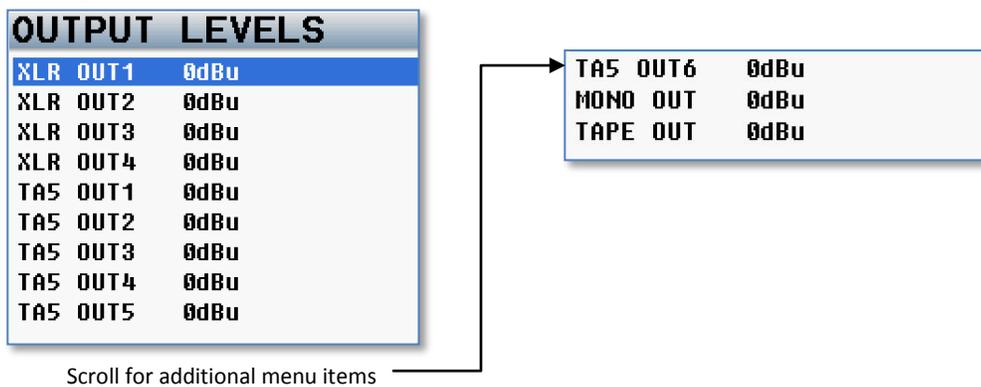
This allows you to adjust the levels of your digital inputs. They are continuously adjustable in 1 dB steps from **-20dBu** to **30dBu**.

**Extra Input Gain**

This allows you to add 10dB of digital gain to your inputs. This is a global setting for your XLR inputs. This will also increase your noise floor.

**Output Levels**

This menu manages the output audio levels.



**XLR & TA5 Output Bus Levels**

Each of the main output can be independently adjusted to one of the following output levels:

- **0dBu** – line level
- **-10dBu** – tape / consumer level
- **-35dBu** – mic level

**Mono & Tape Output Bus Levels**

Independently adjusts the output level for Mono and Tape outs, and each are continuously adjustable in 1 dB steps from **-12dBu** to **21dBu**.

**LCD Brightness**

Adjusts the brightness of the LCD Screen.

LCD BRIGHTNESS 11

**LED Brightness**

Adjusts the brightness of Nomad's LEDs. This is a global setting meaning that all LED lights will be set to the same brightness.

LED BRIGHTNESS 10

**Transport Keys****SHIFTED**

If you press the **TC**, **A-MIX** or **ZNET** key, the pages associated with those keys will open. To go into Record mode, Playback mode or Stop mode, it is necessary to SHIFT those keys. You will need to press the **MENU** knob to "SHIFT" while simultaneously pressing the **REC**, **PLAY** or **STOP** key to go into that mode. This is the most popular choice.

**NOTE:** It is still possible to directly access the **REC**, **PLAY** and **STOP** functions by pressing the appropriate key for 1 second.

**UNSHIFTED**

Pressing the **REC**, **PLAY** or **STOP** key immediately puts the unit into Record mode, Playback mode or Stop mode. To display the pages associated with the **TC**, **A-MIX** or **ZNET** key, it is necessary to press the **MENU** knob while pressing the **TC**, **A-MIX** or **ZNET** key.

**Tone Frequency**

Adjusts the frequency of the reference tone. The range is **20** to **20,000 Hz**.

TONE FREQ 1000 Hz

**Tone Level**

Adjusts the output level of reference tone. The range is **-90** to **0dB**

TONE LEVEL -20dB

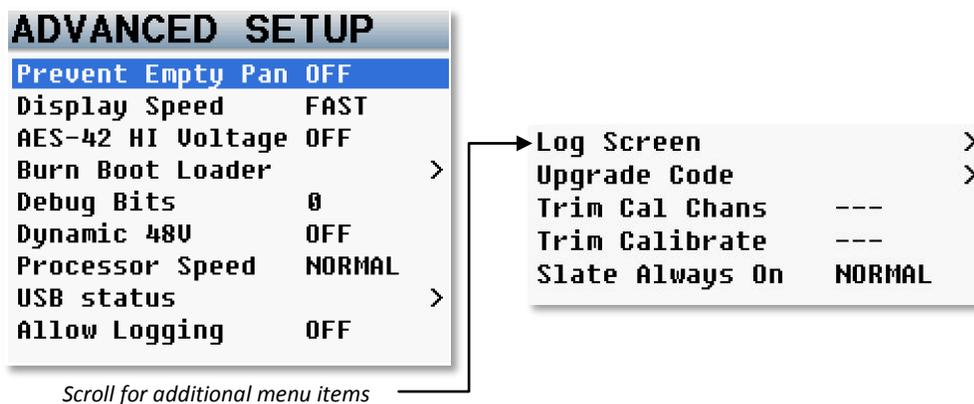
**NOTE:** It is recommended to keep the tone level set at -20dB

**AES 42**

Turns on power for AES-42 microphones

AES-42 POWER ON

Advanced Setup



**Prevent Empty Pan**

When set to **ON**, the blank option while in ENG pan mode is removed, leaving only the **L, C, R** option.

**Display Speed button**

This should be set to **FAST**.

Currently the display is updated every frame. If you are using a lot of effects and cross points and/or are running at 96 kHz and find that the user interface is getting hard to use. The **SLOW** setting will slow down the refresh rate.

The display will automatically go into **SLOW** when mirroring or when the unit needs more horsepower for recording many tracks

**AES -42 Hi voltage**

Used with certain digital microphones, it turns on the high voltage phantom power supply.

**Burn Boot loader**

The boot loader is part of the software that helps boot up Nomad. Generally, you wouldn't need to update this. If the boot loader needs to be updated there will be a note released with the software to do so. The boot loader software is already contained within Nomads software.



**Debug Bits**

This is a factory setting and should stay set to **0**.

### Dynamic 48V

This adjusts how Nomad supply's 48 volt phantom power to analog microphones.

- **OFF** – 48V behavior is normal (48-volt power is always available).
- **Power Save** – the 48V supply is only turned on when one or more input channel have 48V turned on. So if you aren't running any phantom powered microphones and don't have phantom power turned on in any of the inputs Nomad will shut off the internal phantom power supply.
- **Auto Kill** – turns off 48V when Nomad is running on a low voltage power source (below 10V) to prevent possible damage to the 48V supply.

### Processor Speed

This adjusts the speed of the processor to allow for faster mirroring.

- **Normal** - This is the typical setting that would be used.
- **Fast 1**- This will increase mirroring speed to help when using MP3 recording.
- **Fast 2** - This is currently the same setting as Fast 1.

**NOTE:** You can leave the processor speed set to **Fast 1** - though if you experience any crashing or odd behavior set the processor speed to **Normal**.

### USB Status

This page will display if the USB drive is ready for mirroring.

### Allow Logging

Allows for Nomad to log warning and error messages. The logged messages are displayed on the log screen.

### Log Screen

This is where Nomad displays the logged errors and warnings. This is used to diagnose your Nomad.

### Upgrade Code

This page is used to enter in a factory code to upgrade Nomad.

To enter the upgrade code you must do so directly use the alpha / numeric multi-function keys.

**WARNING:** Randomly entering in code numbers can cause your Nomad to lock up, permanently. It will need to be sent in for service.

### Trim Calibration Channels / Trim Calibrate

These settings are used to calibrate the analog input trims. Calibrating the input trims will make the 6 XLR trims accurate within +/- 1dB of each other. This is useful in setting up stereo mics.

**NOTE:** Once the trims are calibrated there should not be a need to ever re-calibrate. Nomad's with a serial number higher than 10688 will already be calibrated at the factory. So it is unlikely that it will ever need to be re-calibrated.

### Slate Always On

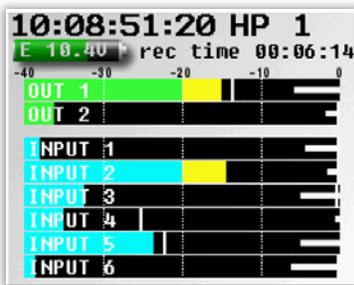
- **Normal** - This is the typical setting that would be used. With this setting pressing and holding the slate key will activate the slate mic.
- **Forced** - When you activate the slate mic this setting locks the slate mic in the on position. Note a power cycle will deactivate the mic.

### Nomad Input Trim Calibration

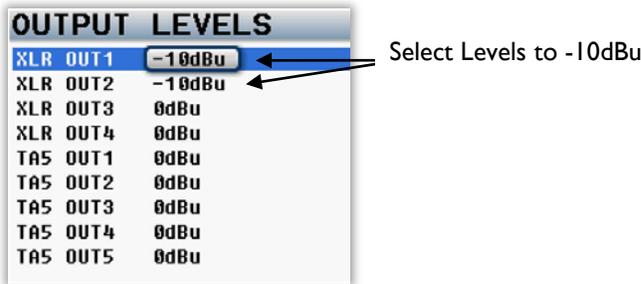
Software version 6.01 and higher adds an Input Trim Calibration for Nomad’s 6 XLR inputs. This will allow the input trims to be more accurate and align with each other.

**Caution:** If this procedure is not followed exactly it could make the input trims not function correctly and you may not be able to recover normal trim operations and your Nomad will need to be sent back to the factory to be re-calibrated which will not be covered under warranty. Please follow the instructions and do not perform this operation if you are in the middle of a job. If you do run into an issue when calibrating you can reinstall software version 5.16.

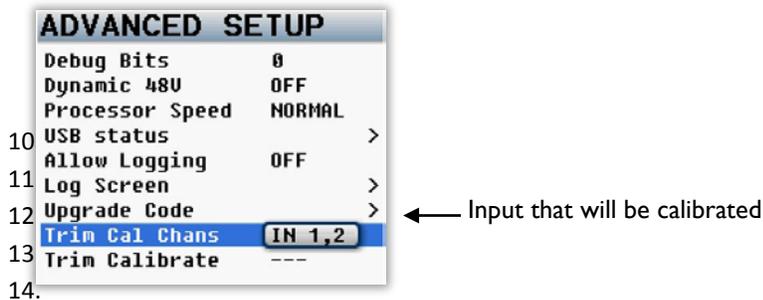
1. Install software version 6.01 or higher on Nomad.
2. Perform a Factory Restore and re-start Nomad.
3. Let Nomad stay powered-up for at least 15 minutes to warm up the input gain circuitry.
4. Select the home screen that contains 2 output meters followed by 6 input meters. If Nomad is not displaying this screen while calibrating the process will fail.



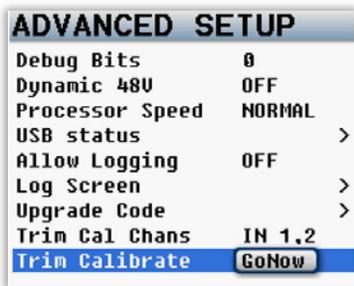
5. Connect a cable from XLR Output 1 to XLR Input 1 and a cable from XLR Output 2 to Input 2. This will cause feedback which is normal.
6. Make sure that Nomad's tone generator is set to -20dB then turn on TONE by holding the TONE button.
7. Adjust XLR Outputs 1 and 2 to -10dBu in the **OUTPUT LEVELS** menu.



8. Insure the tone level shows up on the input meters
9. From the **ENG** menu select the **Advanced Setup** menu and choose **IN 1, 2** in the **Trim Cal Chans** menu.



10. In the **Trim Calibrate** menu select **Go Now**.

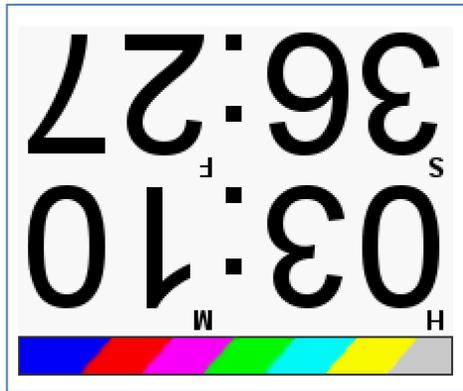


11. Press the **STAR KEY**.
12. The **Go Now** text will change to "---" indicating the Calibration has started.
13. Quickly press **BACK** (HP) knob to get back to the home screen (the one containing 2 outs and 6 input meters).
14. Let Nomad sit for about 2 to 4 minutes. You should see levels on the input meters creeping up every second as it calibrates the input trim level.
15. You will see "Calibration Complete" message and tone will shut off when the process is done.
16. Cycle power, turn on tone and check to insure the trims work. With Nomad output level still set at -10dBu and the trim set zero the input meter should show the tone at -30dB (plus or minus 1dB).
17. Move the cables to connect Output 1 to XLR input 3 and Output 2 to XLR Input 4.
18. Go to the **Advanced Menu** choose **IN 3, 4** selection in the **TRIM CAL CHANS** menu and repeat the process 10 through 16.
19. Go to the **Advanced Menu** choose **IN 5, 6** and repeat steps 10 through 16.

When done, if tone is inputted at -20dB (with the output levels set to 0dBu) and the Trim set to 0, the input meters should read close to -20dB.

## Pressing the Timecode Key

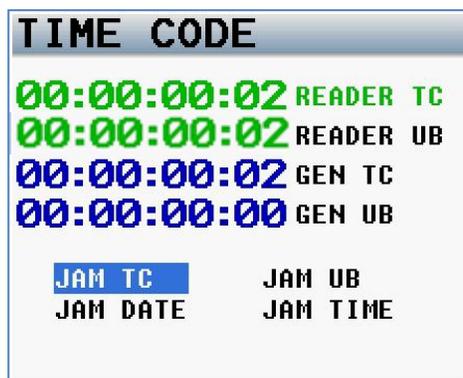
### Timecode Slate



Pressing the **TC** key once brings you to, an inverted visual timecode slate. Pressing the **MENU** knob will freeze the display and cause a 1-frame long beep tone in the audio on any bus that is selected for tone output.

This is used to provide sync for the camera to match picture and sound.

### Timecode Jam



Pressing **TC** a second time brings you here.

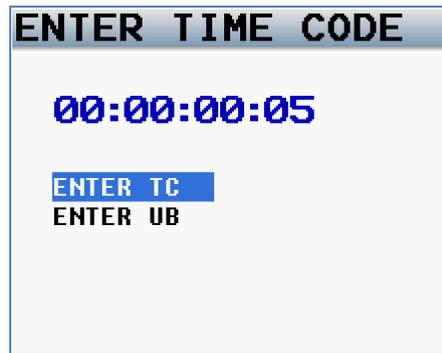
This page displays Nomad’s TC reader, which is receiving timecode and user-bits from a source that is connected to the **TC IN BNC**.

Also displayed is the current running timecode of its internal TC generator, as well as the local user-bits.

**NOTE:** Nomad contains a battery backed real-time clock. This clock is used to maintain running timecode. It is advised to change the battery every 2 years. The battery that maintains the timecode and clock is a CR2320 3V coin cell battery.

- **JAM TC** – Jams Nomad’s TC from an external source, such as a camera or a master TC unit.
- **JAM UB** – Jams Nomad’s user-bits from another source, such as a camera or a master TC unit.
- **JAM DATE** – Nomad’s user-bits are created from Nomad’s internal date.
- **JAM TIME** – TC created from Nomad’s internal clock.

## Enter Timecode



### Manually Entering Timecode

1. Press the **MENU** knob to highlight the TC.
2. Rotate the **MENU** knob to select the desired entry position.
3. Press the numeric function keys to enter a numeric value.
4. Leave the last two digits as **00**.
5. Once you enter the last digit, the TC is entered immediately and jammed.

**NOTE:** If you don't enter the entire eight digits, press the **MENU** knob to force the jam.

### Manually Entering User-bit

1. Each character position can take a hex number (**0 – 9, A – F**).
2. To enter A – F, double click the number keys 1 – 6.
3. Once you enter the last digit, the user-bits are entered immediately.

## Timecode Setup

TIME CODE SETUP	
TC MODE	FREE-RUN
TC FRAME RATE	23.98
TC DISPLAYED	GENERATOR
TC OUTPUT	GENERATOR
INCREMENT UBITS	OFF
UB DATE STYLE	US MMDDYY

### TC Mode

- **FREE-RUN** – Timecode runs continuously.
- **REC-RUN** – Timecode will start to run when you begin to record.
- **CJAM** – Timecode and user-bits are continuously updated from a connected external source.
- **CJAM TC** – Timecode only is continuously updated from a connected source
- **CJAM UB** – User-bits only are continuously updated from a connected source

### TC Frame Rate

This sets Nomad’s timecode frame-rate.

Nomad supports all standard SMPTE frame-rates:

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

### TC Displayed

This sets what timecode that Nomad displays

- **GENERATOR** – TC displayed is from Nomad’s internal TC generator.
- **CARD** – TC displayed from the file being recorded or played back.
  - While in Playback – TC at the current point in the Take.
  - While in Record – TC being recorded during the Take, as it happens.

### TC Output

This sets what timecode is sent from the TC output connector. If you need to send running timecode to another device, set it to **Generator**. If you want to control another timecode device with an Auto-Load capability, set it to **Card**.

- **GENERATOR** – TC comes from the internal generator.
- **CARD** – TC comes from the file being recorded or played-back.
  - While in Playback – TC at the current point in the Take.
  - While in Record – TC being recorded during the Take, as it happens.

### Increment UBits

If set to **ON** the user-bits will increment with each take.

### UB Date Style

This is used to set how the date is displayed within the user-bits if you chose to assign the date as the user-bits. You can choose European or US styles

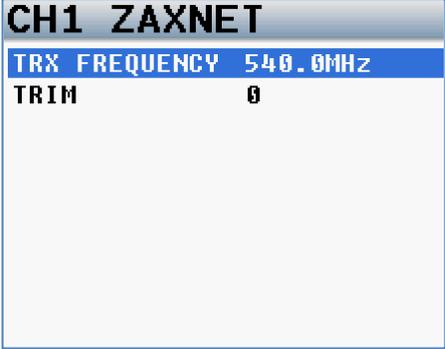
UB DATE STYLE **EU DDMMYY**

UB DATE STYLE **US MMDDYY**

## Pressing the A-Mix Key

- When Auto-Mix is enabled pressing the key will display the Auto-Mix menu (providing MP3 is not enabled).
- When Auto-Mix is off pressing will take you to the Meta Data menu.

## Pressing the ZaxNet Key



CH1 ZAXNET	
TRX FREQUENCY	540.0MHz
TRIM	0

When you are in this menu, if you press a multi-function channel key you will change which ZaxNet transmitter's parameters you adjust.

### TRX Frequency

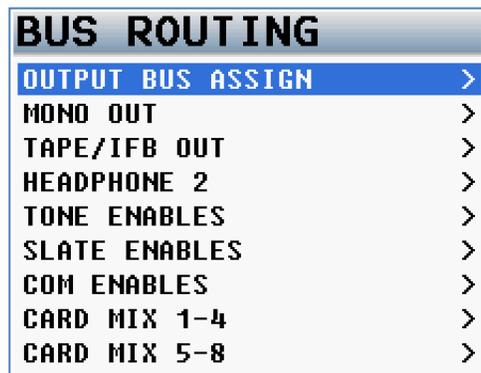
Sets and changes the frequency of the Zaxcom wireless transmitter that is routed to this channel.

### Trim

This adjusts the corresponding transmitter's input gain.

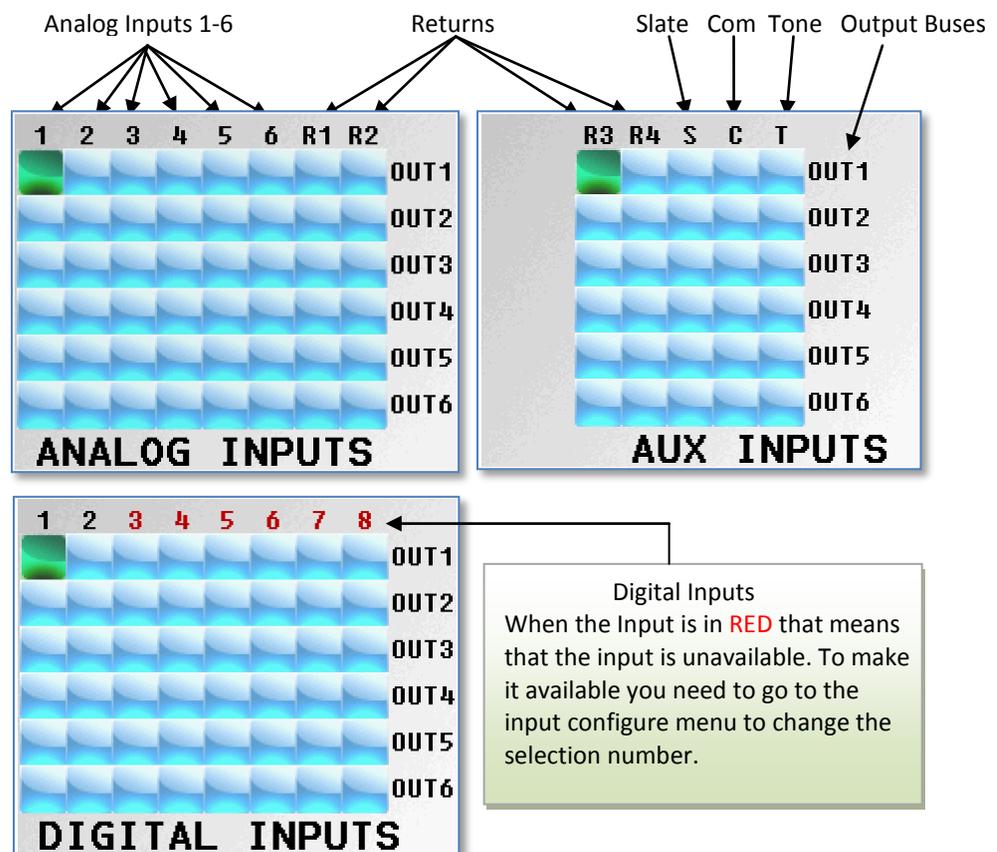
**NOTE:** The ZaxNet channel number corresponds to Unit number set in each transmitter.

# Pressing the Bus Key.



## Output Bus Assign Busses

These matrixes assign your Analog and Digital inputs to your output buses



To move between the matrixes, press the **BUS** key.

The top line of the three pages indicates the following sources:

- Analog Inputs 1-6
- R1, R2, R3, R4 = TA5 Inputs (Camera Returns / Line input 7-10)
- Digital Inputs 1-8
- S = Slate
- C = Com
- T =Tone

**Setting a Crosspoint**

Rotate the **MENU** knob to scroll through the matrix. Stop in the matrix, at the intersection of the input channel and output channel, where you want to send that specific input. Press the **MENU** knob to cycle through the available cross points, which are:

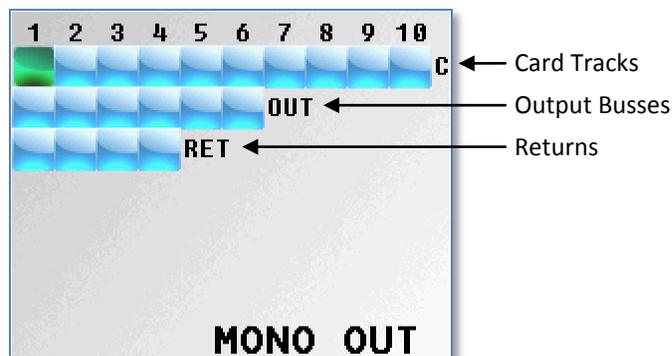
- **X** – post-fader
- **P** – pre-fader
- **X̄** – post-fader, phase inverted
- **P̄** – pre-fader, phase inverted



**NOTE:** To add the optional phase invert items to the list, while in this matrix press the **STAR** key. Then by pressing the **MENU** knob, you will now be able to cycle through the selections with phase invert. Power cycling the unit will reset it to NO INVERSION mode but keep your phase invert choice.

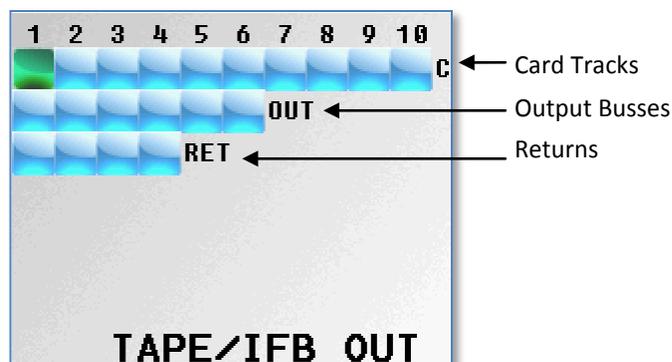
**Mono Out Matrix**

This Matrix sets what audio is routed to the Mono out connector.



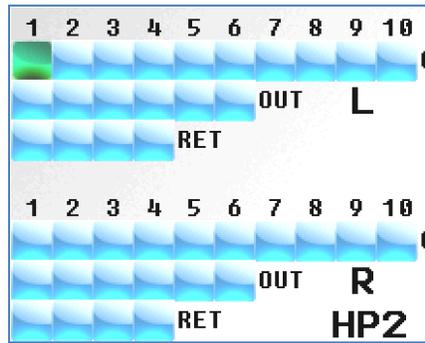
**Tape/IFB Out**

This Matrix sets what audio is routed to the Tape out connector. The Tape out matrix also routes what audio is sent to the IFB feed. The IFB feed can be received by a Zaxcom ERX receiver.



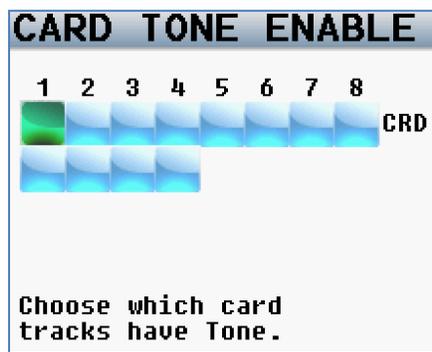
### Headphone-2

This matrix sets what audio is routed to the Headphone-2 connector.



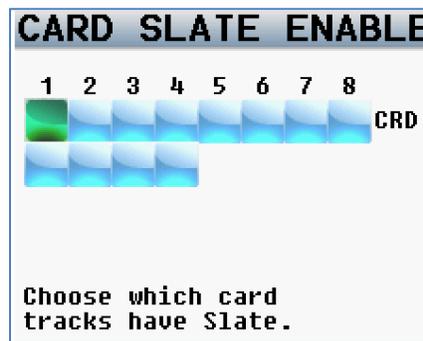
### Card TrackTone Enable

This matrix assigns **TONE** to the record tracks.



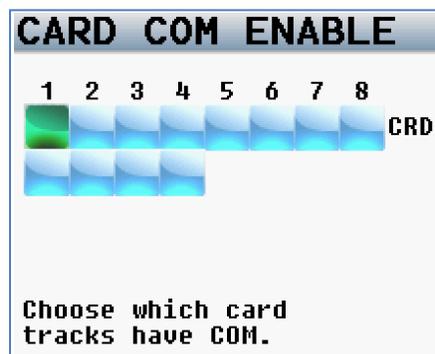
### Card Track Slate Enables

This matrix assigns the **SLATE** to the record tracks.



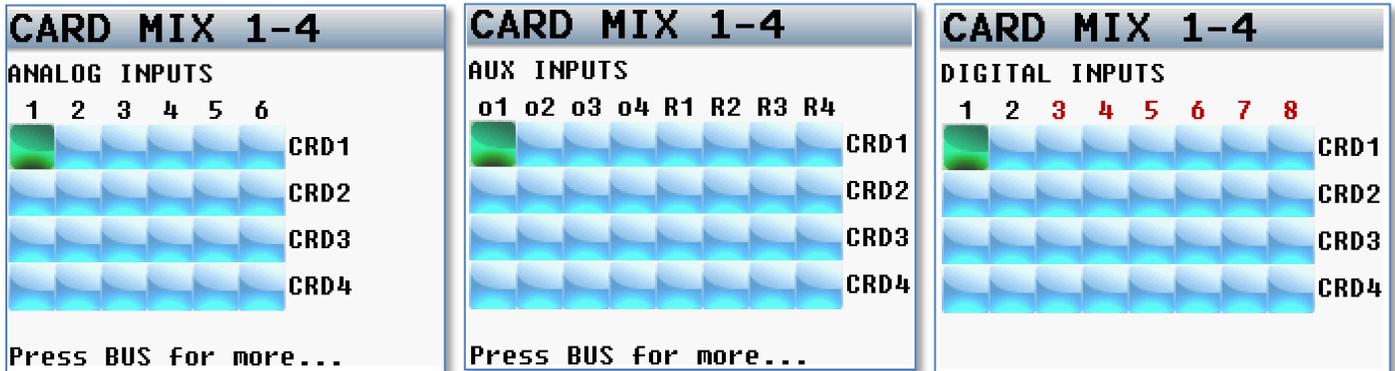
### Card Tracks Com Enables

This matrix assigns the **COM** microphone routing to the record tracks.



**Card Routing – Nomad 10 and 12 Only**

This controls which inputs are routed to which output buses on Nomad 10 and 12.  
 (For Nomad Lite, see [Record Routing page – Nomad Lite](#))



To toggle to the next matrix, press the **BUS** key.

The top line of the three pages indicates the following sources:

- Analog Inputs 1-6
- Aux Inputs
  - o1, o2, o3, o4 – Output Buses 1-4
  - R1, R2, R3, R4 – TA5 Inputs (Camera Returns / Line input 7-10)
- Digital Inputs 1-8 – the **RED** in the top line mean that those digital inputs can't be assigned because they are not available. To make the inputs available click [Input Configure page](#)

Bus routing is fully cross-faded so the selection may be changed while in Record mode.

**Setting a Crosspoint**

Rotate the **MENU** knob to scroll through the matrix. Stop at the intersection of the input channel and output channel, where you want to send that specific input. Press the **MENU** knob to cycle through the available cross points, which are:

- **X** – post-fader
- **P** – pre-fader
- **X̄** – post-fader, phase inverted
- **P̄** – pre-fader, phase inverted



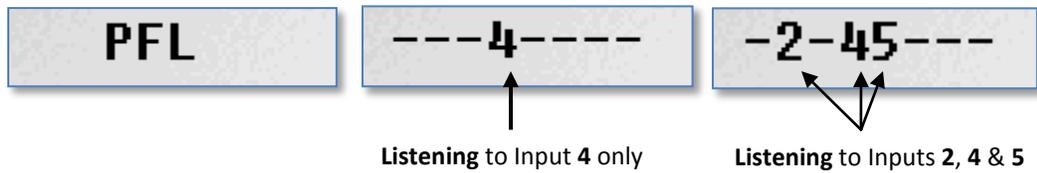
**NOTE:** To add the optional phase invert items to the list, while in the matrix press the **STAR** key. Then by pressing the **MENU** knob, you will be able to cycle through the selections with phase invert.  
 Power cycling the unit will reset it to NO INVERSION mode but keep your phase invert choice.

## Pressing the PFL key

### Pre Fader Listening

Pressing the **PFL** key puts Nomad into Pre Fader Listen mode. Once the **PFL** key is pressed, the name in the Headphone Monitor field is replaced with **PFL** alternating with the selected channel number(s) that are being monitored.

To change the feed press the channel number keys you want to listen to. If you press and hold a second key that channel is added to the PFL:



To go back to normal listening press the **HEADPHONE** knob.

**NOTE:** Nomad will remember the last PFL selection. So if when you return to PFL mode the channel(s) you exited on will be the channel(s) that will come back on when you hit the **PFL** key.

## Pressing the Setup key

### Analog Input Setup

Pressing the **Setup** key will take you to the analog **Setup page** where you can adjust the parameters of the 10 analog inputs.

While in this page, pressing any of the multi-function keys will jump to the **Setup page** of the corresponding input channels one through ten.

### Adjustable Parameters

- **Input Trim**
- **Input Type** – Mic Level or Line Level
- **Input Compressor** – Turns on the input compressor and sets link group
- **48 Volt Phantom Power** – On or Off
- **Input Delay** – Variable from .0MS to 100MS in .0MS increments
- **Mix 8 Trim** – Choose between Normal and ZaxNet
  - **Normal** – The trim knobs on the mix 8 adjust the input trim of the nomad or the digital trim if the mix8 mode is set to digital.
  - **ZaxNet** – The trim knobs control the TRX gain remotely (TRX with the unit code set to 001 is knob 1; TRX with unit code 002 is knob 2 etc). The unit code is entered in the Zaxcom wireless transmitter via the **Extended Menu**.
- **High Pass Filter** – Turning on the HPF turns on a fixed frequency hardware cut. Adjusting the frequency adjusts a software filter that is adjustable between 40Hz to 230Hz
- **Two Variable Notch Filters**
- **Phase Invert**

### Input Compressor Linking

When using a stereo or surround microphone the input compressors (limiters) should be LINKED to insure that the spatial integrity of the signal is maintained.

Your choices are: **OFF**, **ON**, **GroupA**, **GroupB** and **GroupC**. This allows you to have up to three different groupings.

For example, a stereo microphone on inputs 1 and 2 would have their limiters set to Group A. If the signal on input 1 needs limiting, the limiters on both 1 and 2 will activate together rather than just the limiter on channel 1.

Main Headphone Setup

**Allows** you to monitor ZaxNet Frequencies directly  
 NOTE: You can only choose one ZaxNet Frequency at a time.  
 (click [IFB RX Channel Setup page](#) )

**Check** the Enable box to include this monitor configuration while cycling through the HP selections.

Setting up your main Headphone

There are 12 individual Headphone matrices available to store a monitor configuration consisting of any combination of the following:

- Card tracks (C)
- Output Buses (OUT)
- Camera Returns (RET)
- ZaxNet Wireless (ZNET) (not available in Nomad Lite)

To set up your headphone selects:

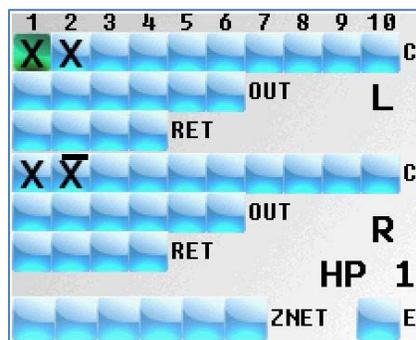
1. To access the headphone setup matrix - simultaneously press **MENU** knob and **HEADPHONE** knob.
2. While in the matrix, scroll the **MENU** knob to highlight the cross-point you want to choose.  
 (L selections are sent to the Left ear and R selections are sent to the Right ear)
3. Press the **MENU** knob to put an **X** in the matrix.
4. Select the **E** to enable that setup to be active when toggling through while listening.
5. Press the **Headphone** knob to advance to the next matrix.
6. To exit, press and hold the **HEADPHONE** knob.
7. You can also add a custom name to each setup. Go to the **ENG Setup page** and select **MONITOR NAME**

**NOTE:** To add the optional phase invert - press the **STAR** key. Then by pressing the **MENU** knob, you will be able to cycle through the selections with phase invert.

Power cycling the unit will reset it to NO INVERSION mode but keep your phase invert choice.

Headphone matrix setup to decode MS stereo:

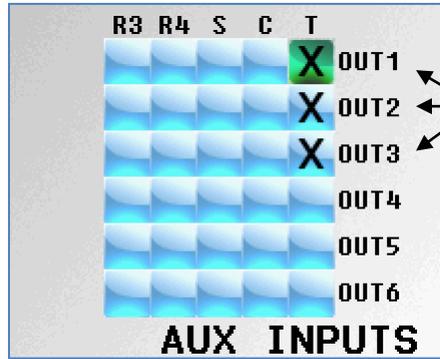
The following is the proper setting for M-S headphone decoding. This example uses card track 1 as the Mid and card track 2 as the Side:



### Setting Up and Engaging Tone

#### Assigning Tone to Output Busses

To assign tone to an output bus, press the **Bus** key and go to the **ANALOG ASSGN MATRIX** to select which output bus will receive tone when tone is engaged.

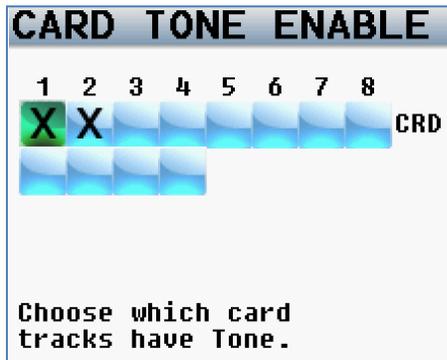


Shows that Output Busses 1, 2 and 3 will output Tone when Tone is engaged.

**NOTE:** Only the busses with tone routed to it will output the slate tone when the Visual Timecode Slate tone is activated

#### Assigning Tone to Card Tracks

To assign tone to card tracks, press the **Bus** key and go to the **TONE ENABLE MATRIX** to select which card tracks will receive tone when tone is engaged.

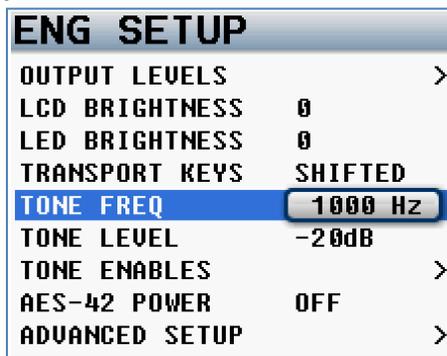


Shows that Card Tracks 1 and 2 will record Tone when Tone is engaged.

#### Engaging Tone

To toggle tone generation On/Off, press and hold the **SETUP** key for approximately one second.

Tone level and frequency can be adjusted in the **ENG SETUP** menu.

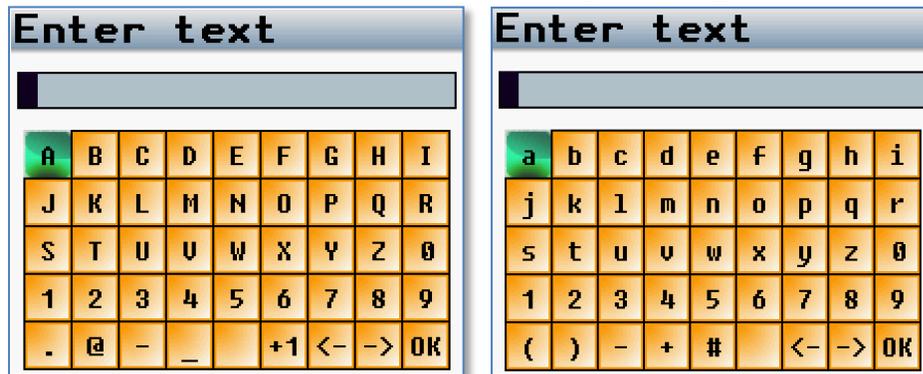


← Adjusts Tone Frequency

← Adjusts Tone Level

Enter Text

This menu allows alphanumeric data entry for all parameters that require data input.



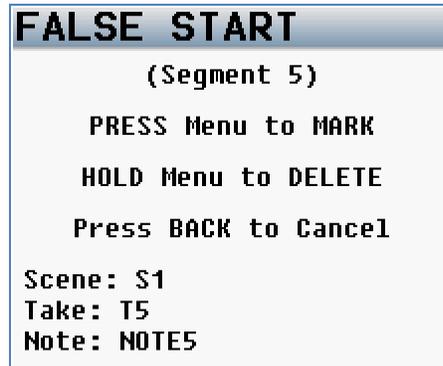
- To enter a character, turn the **MENU** knob until the character is highlighted and then press the **MENU** knob to select it.
- Rotate the **MENU** knob will cause the highlight to move right and left (this will also wrap around to the next line).
- Press and rotate the **MENU** knob will cause the highlight to move up and down.
- Press the **MENU** knob for 1 second to toggle between Upper and Lower case letters.
- After you are finished to enter the data press and hold the **HEADPHONE** knob for 1 Second or click the **OK** button.

**NOTE:** If you are inputting the **SCENE** or **TAKE** metadata, you can press the **+1** to increment the displayed value.

## False Start

Pressing the **ZNET** key can mark a Take as a False Start or just delete it.

After you press **STOP**, if you press and hold the **ZNET** key for 1 second, the **False Start** page will be displayed.



## ZaxNet Quick Start Guide for TRX Transmitter Control

1. From Nomad:
  - a. In the **Main Menu**, select **ZaxNet Setup**.
  - b. Scroll down and select **Input Configure**. To be able to use ZaxNet, make sure that **Input Type** is set to **8** or higher.
  - c. Power cycle Nomad.
  - d. Return to the **ZaxNet Setup menu**.
  - e. Make sure **IFB Mode** is set to **TX** or **TX+RX**.
  - f. Set **TX Channel** to the frequency you'll be using.

**Tip:** There are several smart phone apps, which will show you what Wi-Fi frequencies are being used in your area. This can be useful in selecting an open frequency.

- g. Scroll down to **Group Code** and pick a number. Unless you're using multiple Zaxcom IFB transmitters, you can just leave this set to 1.
    - h. Set **IFB Jam mode** to **Auto Load**.
    - i. Set **Transport CMDS** to **Slaved**.
2. Turn on your Zaxcom transmitter while holding down the **MENU** key to access the **Extended Menu**.
  - a. Press the **MENU** key to get to the **IFB Frequency page**. Make sure that the 2.4 GHz frequency on the transmitter is the same as the one that you selected in Nomad's **ZaxNet Setup**.
  - b. Press the **MENU** key to go to the **TC Jam Mode**. Make sure that it's set to **Auto-Load**.
  - c. Press the **MENU** key to go to the **TC Source**. Set it to **IFB (RF)** so that it is receiving TC wirelessly from Nomad.
  - d. Press the **MENU** key to go to the **Remote Control Group ID**. Make sure that the Group ID number on the Zaxcom transmitter matches the number that was chosen in the **ZaxNet Setup**.
  - e. Press the **MENU** key to enter the **Remote Control Unit ID**. This number will correspond to the ZaxNet input on Nomad. For example, 001 on the Remote control Id will correspond to input 1 on the Nomad, 002 will correspond to input 2 on the Nomad, etc.
  - f. Press the **MENU** key until you get to the **Allow IFB Remote Control**. This should be set to **ON**.
  - g. Power cycle the transmitter to save your settings.
3. If you'd like to assign a Nomad fader to control the transmitter gain:
  - a. Go to the **Main Menu** and select **Fader Assign**.
  - b. When you see the matrix press the **Star** key.
  - c. In the routing matrix, select the appropriate box and press the **MENU** knob until it displays a **Z**. The **Z** cross point tells the fader to control the transmitter's gain via ZaxNet.
4. The transmitter should now be receiving timecode from the Nomad, go into record mode when you hit record on the Nomad, and you should be able to control the gain and change the frequency of the transmitter.

## ZaxNet Quick Start Guide for QRX Audio Receive Operations

1. In Nomad:
  - a. In the **Main Menu**, select **ZaxNet Setup**.
  - b. Scroll down and select **Input Configure**. Make sure that the input configure is set to **8** or higher. Press the **Back** key and return to the **ZaxNet Setup menu**.
  - c. Power cycle your Nomad
  - d. Return to the **ZaxNet Setup menu** and select **IFB Mode**. Make sure that it is set to **RX** or **TX+RX**.
  - e. Scroll down to **RX Channels** and select **Freq1** and choose which frequency you'd like to receive.

**Tip:** There are several smart phone apps, which will scan what Wi-Fi frequencies are being used in your area. This can be useful in selecting an open frequency.

2. In the QRX:
  - a. Go to the **IFB Extended Menu**.
  - b. Set the **IFB TX** frequency to the same frequency that you set Nomad to.
  - c. Insure the **IFB Mode** is set to **TX**.
3. In Nomad
  - a. Go to the **Headphone-1 Setup matrix** and put a cross point in the corresponding ZNET matrix. To listen to Freq1 you will select the fist box, Freq2 the second, etc.
  - b. Now when you select that HP matrix you will be monitoring the audio being sent from that QRX. If you have your **IFB Mode** set to **TX+RX**, Nomad will temporarily stop transmitting over ZaxNet and receive signal while you are in the HP select. When you leave that HP select, Nomad will start transmitting again.

## ZaxNet Quick Start Guide for ERX IFB Audio Receive Operations

1. In Nomad:
  - a. In the **Main Menu**, select **ZaxNet Setup**.
  - b. Scroll down and select **Input Configure**. Make sure that the input configure is set to **8** or higher. Press the **Back** and return to the **ZaxNet Setup menu**.
  - c. Power cycle your Nomad
  - d. Return to the **ZaxNet Setup menu** and select **IFB Mode**. Make sure that it is set to **TX** or **TX+RX**.
  - e. Scroll down and select your transmit channel and choose which frequency you'd like to receive.

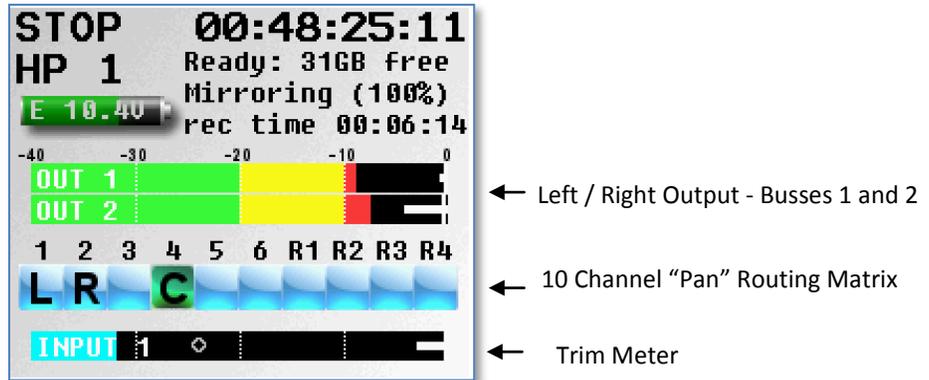
**Tip:** There are several smart phone apps, which will scan what Wi-Fi frequencies are being used in your area. This can be useful in selecting an open frequency.

- f. Scroll down to **Group Code** and choose a number. Unless you're using multiple Zaxcom IFB transmitters, you can just leave this set to 1.
2. In the ERX:
  - a. Turn it on while holding the **MENU** key. This will take you to the **Extended Menu**.
  - b. Advance to the **TC Frame Rate** and set it to the same frame-rate as Nomad.
  - c. Advance to the **IFB Frequency** and set it to the IFB frequency you selected in Nomad.
  - d. If the ERX is receiving a good signal, you should see two bars, displaying the signal strength, on the right hand side of the screen.
  - e. Advance to the **Group ID** and set it to the code entered into Nomad.
  - f. Advance to the **Timecode Output Enable menu**, if it is to be used:
    - as an IFB feed for someone, leave it set to **OFF**.
    - as a timecode feed, with or without audio, to a camera, select the appropriate choice depending on what you want to send and how your cable is wired.
  - g. If the camera has trouble receiving timecode, advance to the **TC OUTPUT LEVEL** and adjust the voltage until the camera recognizes the timecode.
3. In Nomad go to the **BUS Routing menu**, select **Tape/IFB Out** and select what you'd like to send to the ERX. You can use any combination of card tracks, outputs or returns.

### ENG /EFP Bag Operation

This Mode was created to aid in mixing and recording when you are involved in a “run and gun” situation.

This mode makes panning and mixing all 10 inputs easily accessible right from the **ENG Home screen**.



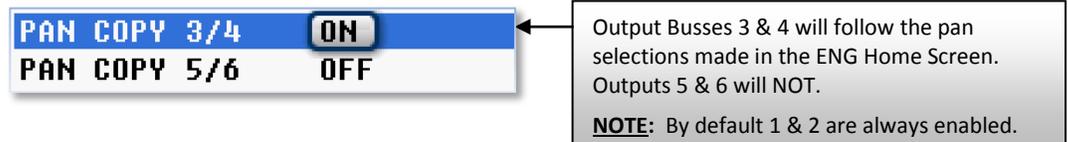
In the ENG Home page you will see:

- 10-channel routing matrix where you can “pan” inputs 1-10. You can pan to **L** (left), **R** (right) or **C** (center).
- Output busses 1 and 2 (Left / Right).
- Input meter that follows the AutoTrim™ function.

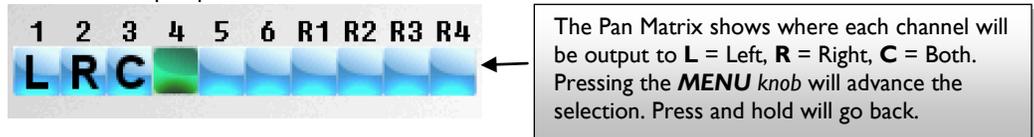
### ENG Panning

Pan routing matrix is essentially a shortcut to the **Output Bus Assign** matrix – it will route post-fade analog inputs to a pair of outputs busses. When you make a change in the **Pan Routing Matrix**, it actually adjusts the routing in the **Output Bus Assign** matrix.

If you are feeding more than one camera, you may want to add additional “pairs” to follow the routing. This means that bus 3 & 4 and 5 & 6 can also be routed to follow the “pan routing” done on this home screen. To do so, go to the **MODE menu** and enable the appropriate **PAN COPY**.



Once enabled in the **ENG Home Screen**, press the **BUS** key to enter the PAN routing selections (the pan matrix will be highlighted). Rotate the **MENU** knob to select the input you want to PAN. Pressing the **MENU** knob will cycle the assignment as **L**, **C** and **R** to each input pair that was selected.



If you set **Prevent Empty Pan** to **ON** in the **Advanced** menu you remove the blank option, leaving only **L**, **C**, **R**.

**AutoTrim™**

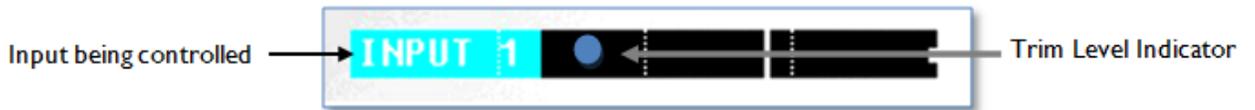
AutoTrim™ eliminates the need for a separate hardware trim knob for each analog input. AutoTrim™ mode can be enabled in **Mode** page.



When Auto Trim is enabled and a fader is “touched”, two things come into play:

- The blue LED next to the fader illuminates to indicate that channel is active for AutoTrim™.
- The **MENU** knob functions as the input trim for that channel. Turning the **MENU** knob adjusts the trim level for that input and indicates it with a trim indicated displayed in the meter.

**Trim Meter**



**NOTE:** The trim indicator’s position does not relate to a specific value. It is used for relative adjustment only.

**Virtual Fader**

Nomad has 6 hardware faders and 10 inputs. To mix inputs 7-10 from the **ENG Home screen** you need to activate the **VFader Mode** in the **Mode Menu**.

Virtual fader will allow you to mix all 10 channels right from the ENG meter screen. And the **MENU** knob will become the hardware fader for those inputs.

**To Operate:**

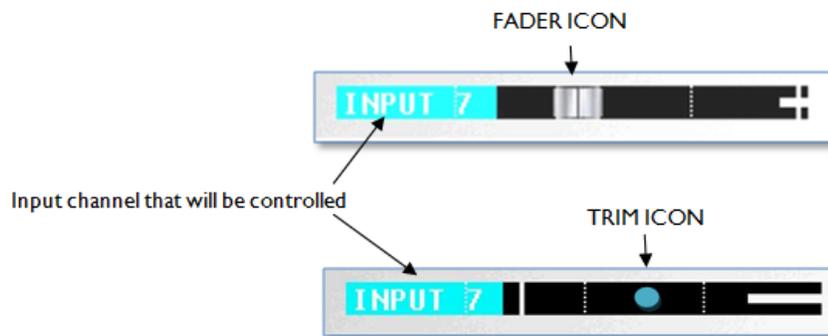
- Go to the **Mode Menu** and select “VFader Cycle” and set it for which inputs you want to be able to control.



- In the **Mode Menu** select “VFader Mode” to choose to be able to adjust Faders only or Faders and Trim



- While in the **ENG Home screen**, press the **MENU** knob and the bottom meter on the screen displays which input you will control with the **MENU** knob.
- If the Fader Icon is displayed the **MENU** knob will adjust the mix of that input.
- If the Blue Trim Icon is displayed the **MENU** knob will control the trim of that input.
- Pressing the **MENU** knob will cycle through the choices that you have selected.



## Media Recommendations

### Compact Flash Cards

Currently there aren't any cards that we are aware of that don't work with Nomad. Though we recommend SanDisk and Transcend cards, it is not necessary to use cards with "double write speed" features. Any cards, 4 – 64 GB, should be fine. Also 133X cards are fine - a faster card will not make Nomad write any faster - the only advantage of a faster card is faster downloads. Do not use cards from questionable manufacturers or buy from questionable sources. Counterfeit cards do exist and can be unreliable and cause crashing.

If you are planning to record at 96 kHz, choose a card that claims 10 MB per second SUSTAINED write speed (MAX write speed does NOT count).

Once you have the cards in hand, even if it is a brand/size that you have used in the past, test the cards ability to keep up with the recording process before you take it out in the field. If the unit kicks out of record or causes a crash it is most likely a result of bad media.

## Syncing Nomad to a Denecke Slate

The LTC stream out of the Nomad has a "jitter" in the TC 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 you set the slate to "Auto Set" (position 5). In addition, if you use "Auto Set" you will experience a TC drift.

You don't need to replace your slates. The Denecke Slate and Nomad can sync perfectly.

When setting the slate to receive timecode at 29.97 or 23.976, **do not use** the auto set. Just simply set the rotary dial to the corresponding TC frame rate. When you sync the slate you will see "Sync Err" message in the slate. Simply ignore it. The slate will accept the sync and the slate and Nomad will stay in perfect sync with each other.

## Nomad 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 & Tape Output Connectors (1/8" TRS)

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

**NOTE:** Since the ring connector is not being used, you can also use a TS plug.

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

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

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

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

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

### Power Connector (Hirose-4 Connector)

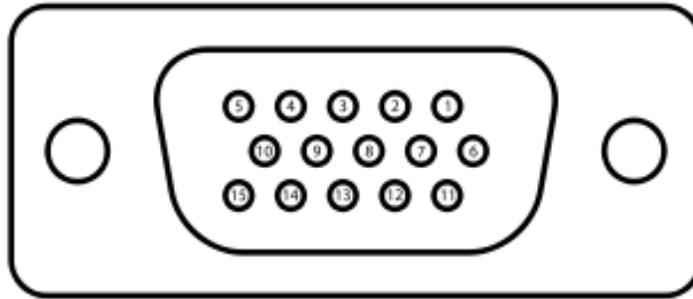
- Pin 1 – Ground ( - )
- Pin 2 – Not Connected
- Pin 3 – Not Connected
- Pin 4 – DC ( + )

### GPI Remote Roll (USB Type A)

- Pin 1 – Not Connected
  - Pin 2 – Not Connected
  - Pin 3 – Connect to one leg of the toggle switch
  - Pin 4 – Connect to the other leg of the toggle switch
- (When the toggle switch is closed the circuit will be completed)

**AES Digital Input / Output Connectors (DB-15)**

Nomad uses a mini DB-15 (AKA: DE-15) connector for the AES (digital) input and output connectors.



Top row pins: 5, 4, 3, 2, 1  
 Middle row pins: 10, 9, 8, 7, 6  
 Bottom row pins: 15, 14, 13, 12, 11

DB -15 Pin Number	IN / OUT	AES PAIRS	Connects to XLR Pin
1	IN	3 / 4	2 (+)
2	IN	1 / 2	2 (+)
3	OUT	5 / 6	2 (+)
4	IN	7 / 8	2 (+)
5	IN	5 / 6	2 (+)
6	OUT	1 / 2	3 (--)
7	OUT	1 / 2	2 (+)
8	GROUND	GROUND	1
9	OUT	3 / 4	3 (--)
10	OUT	3 / 4	2 (+)
11	IN	3 / 4	3 (--)
12	IN	1 / 2	3 (--)
13	OUT	5 / 6	3 (--)
14	IN	7 / 8	3 (--)
15	IN	5 / 6	3 (--)

## Updating Firmware

Each Nomad 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>

### Upgrading the Firmware

1. Format a Compact Flash card using a PC or Mac.
2. Using a PC or Mac download the new software (**NomadProgFile\_vX.XX.bin**) and copy it to the card.
3. Insure that a set of fully charged batteries are installed or a stable power supply is connected.
4. With Nomad powered down, insert the CF card containing the .bin file into the mirror slot. Make sure only one .bin file is on the card.
5. Press and hold the **STAR** key while turning on Nomad.
6. Once the "Preparing to burn ROM" line is displayed, you can release the **STAR** key.
7. After the "SUCCESS" line is displayed, cycle the power.
8. Verify that Nomad is running the version you just installed in the **About Nomad page**.
9. After updating the software, it is generally advised to perform a Restore to Factory Defaults.

**NOTE:** With some updates, it is required to do a Restore to Factory Defaults – if that is the case, you will be informed to do so in the release notes supplied with the firmware.

## Product Support

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

## Nomad Specifications

### Hardware

#### Analog Inputs

<b>Channel Count</b>	
<b>Mic / Line</b>	6
<b>Line only</b>	4 (camera return or line level inputs)
<b>Connector</b>	
<b>Mic / Line</b>	XLR-3F
<b>Line only</b>	TA-5F
<b>Input Range</b>	
<b>Mic-level</b>	-56 dBu to -26 dBu
<b>Line-level</b>	-10 dBu to +8 dBu
<b>Phantom Power</b>	48 VDC, 40 mA total combined (mic input only)
<b>Impedance</b>	
<b>Mic-Level</b>	1.0 k ohms
<b>Line-Level</b>	10 k ohms
<b>ADC Bit-depth</b>	24
<b>ADC Dynamic Range</b>	
<b>W/O Compressor</b>	135 dB
<b>With Compressor</b>	115 dB
<b>Clipping Level</b>	+28 dBu
<b>Frequency Response</b>	50 Hz to 22 kHz (48 kHz sampling-rate)
<b>THD + Noise</b>	0.0015%
<b>Ext Slate Mic</b>	
<b>Connector</b>	1/8" (3.5mm) stereo jack
<b>Input Range</b>	-56 dBu to -26 dBu

#### Digital Inputs (not available in Nomad-Lite)

<b>Channel Count</b>	8 (3 x AES-3 pair, 1 x AES-42 pair)
<b>Connector</b>	1 x mini DB-15 (DE-15) shared w/digital outputs
<b>Sample-rate Converters</b>	4 pairs

#### Analog Outputs

<b>Channel Count</b>	4 x balanced XLR-3M 6 x balanced (3 x TA-5M)
<b>Tape/Mono</b>	2 x unbalanced 1/8" (3.5 mm) stereo
<b>Output Level</b>	0 dBu, -10dBu, -35dBu at -20 dBFS
<b>Clipping Level</b>	+20 dBu
<b>DAC Bit-depth</b>	24
<b>DAC Dynamic Range</b>	115 dB
<b>Impedance</b>	30 ohms
<b>Source</b>	Mix/Direct (selectable)

#### Digital Outputs (not available in Nomad-4)

<b>Channel Count</b>	8 (4 AES pairs)
<b>Connector</b>	1 x mini DB-15 (DE-15) shared w/digital inputs
<b>Source</b>	Mix/Direct (selectable)

#### Headphones

<b>Connector #1</b>	1/4" stereo jack
<b>Connector #2</b>	1/8" (3.5mm) stereo jack
<b>Dynamic Range</b>	115 dB
<b>Impedance</b>	100 ohms (optimal)

## Other Connectors

External Storage	1 x USB 2.0 (Nomad-8 & 12 only)
External Storage Power	5 watts
Serial/RS-422	1 x 4-pin USB style (Zaxcom proprietary)
Timecode	
Input	1 x BNC
Output	1 x BNC
External Power	1 x Hirose 4 pin
External Slate Mic	1 x 1/8" (3.5mm) stereo jack
IFB RF	1 x SMA-F

## Recording

Internal Storage	2 x Compact Flash
External	USB (Nomad 8 and 12 only)

## Timecode Reader / Generator

Clock Accuracy	1.54 PPM (1 frame out in 6 hours)
Input Voltage Range	1 – 4 VPP
Output Voltage	2 VPP

## Power

Internal	6 x AA (7 – 9 VDC, 1 – 3 hours of use {NiMH})
External	10 to 18 VDC (1/2 A @ 12 VDC)

## ZaxNet RF Interface (*not available in Nomad-Lite*)

Function	Transmit or Receive
RF Power Output	50 mW
RF Modulation	Digital Spread Spectrum
RF Frequency Range	2.403 – 2.475 GHz
RF Frequency Step	0.001 GHz (1 MHz)
RF Bandwidth	1 MHz
Channel Separation	2 MHz
Emission Designator	180KV2E
FCC Part	CFR Title 47, Part 18

## Misc

Display	Full color, sunlight readable LCD
Internal Slate Mic	Yes
Compatible w/Mix-8	Yes
Compatible w/Mix-12	Partial

## Physical

Operating Temp Range	-10 to +120F
Size (H x W x D)	2.0" x 9.9" x 7.0" (50.8mm x 251.5mm x 177.9mm)
Weight (w/batteries)	3.8 lbs (1.72 kg)

## Software

### Internal Mixer

Mixer Cross-points	16 in / 16 out (pre-fader, post-fader, phase inversion)
Internal Processing	32-bit floating point DSP

### Effects

<b>Input Limiter</b>	<b>(A x 10, D x 8)</b>
Type	Soft Knee
Attack	1 to 100 ms
Decay	0 to 100 ms
Threshold	-20 to 0 dB
Ratio	1.0:1 to 20.0:1
<b>Input Notch Filter</b>	<b>(A x 10, D x 8)</b>
Bands	2
Freq Range	20 Hz to 18 kHz
Q	9.9 (hardcoded)
<b>Track Limiter</b>	<b>1 set of settings across all tracks</b>
Attack	1 to 100 ms
Decay	0 to 100 ms
Threshold	-20 to 0 dB
Ratio	1.0:1 to 20.0:1
Make-up Gain	-12 to +12 dB
<b>Input Highpass Filter</b>	<b>(A x 10, D x 8)</b>
Freq. Range	Off or 40 to 240 Hz
<b>Input Delay</b>	<b>(A x 10, D x 8)</b>
Time Range	0 to 100 ms
<b>Output Limiter</b>	<b>1 set of settings across 6 outputs</b>
Attack	1 to 100 ms
Decay	0 to 100 ms
Threshold	-20 to 0 dB
Ratio	1.0:1 to 4.0:1
Make-up Gain	-12 to +12 dB

### Recording

Track Count	Model Dependent 10 or 12
Bit-depth	
Primary	24
Mirror	16 / 24
Sampling-rates (kHz)	44.1, 47.952, 48, 48.048, 88.2, 96
Card Format	
Primary CF	MARF (Mobile Audio Recording Format) II
Mirror CF	FAT32
Ext. USB Device	FAT32
File Formats	
Primary CF Slot	.ZAX
Mirror CF Slot	BWF-M, BWF-P
Ext. USB Device	BWF-M, MP3
Dual Disk Recording	Yes
Pre-record Duration	0 to 10 seconds (48.048 kHz and below)

### Timecode Reader / Generator

Timecode Type	SMPTE
Timecode Frame-rates	23.98, 24, 25, 29.97NDF, 29.97DF, 30NDF, 30DF

# Zaxcom Warranty Policy and Limitations

No limited warranty is provided by Zaxcom unless your Zaxcom Nomad ("Product") was purchased from an authorized distributor or authorized reseller. Distributors may sell Products to resellers who then sell Products 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 Products, including any implied warranties of merchantability, fitness for a particular purpose or non-infringement. In the United States, some laws do not allow the exclusion of the implied warranties.

## Troubleshooting & Repair Services

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

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

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

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

## Warranty Limitations

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

### Limitation of Remedies

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

Zaxcom may elect which remedy or combination of remedies to provide in its sole discretion. Zaxcom shall have a reasonable time after determining that a defective Product exists to repair or replace a defective Product. Zaxcom's replacement Product under its limited warranty will be manufactured from new and serviceable used parts. Zaxcom's warranty applies to repaired or replaced Products 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 Products, the installation of replacement Products, and any inspection, testing or redesign caused by any defect or by the repair or replacement of Products arising from a defect in any Product.

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

### Your Use of the Product

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

- The Product was stolen.
- The asserted defect:
  1. Is not present,
  2. Cannot reasonably be fixed because of damage occurring when the Product is in the possession of someone other than Zaxcom, or
  3. Is attributable to misuse, water damage, 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.
- Non Zaxcom supplied parts and/or modifications were installed.

### Additional Limitations on Warranty

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