USER MANUAL

Published October 2015

Software Version Nomad 7.20

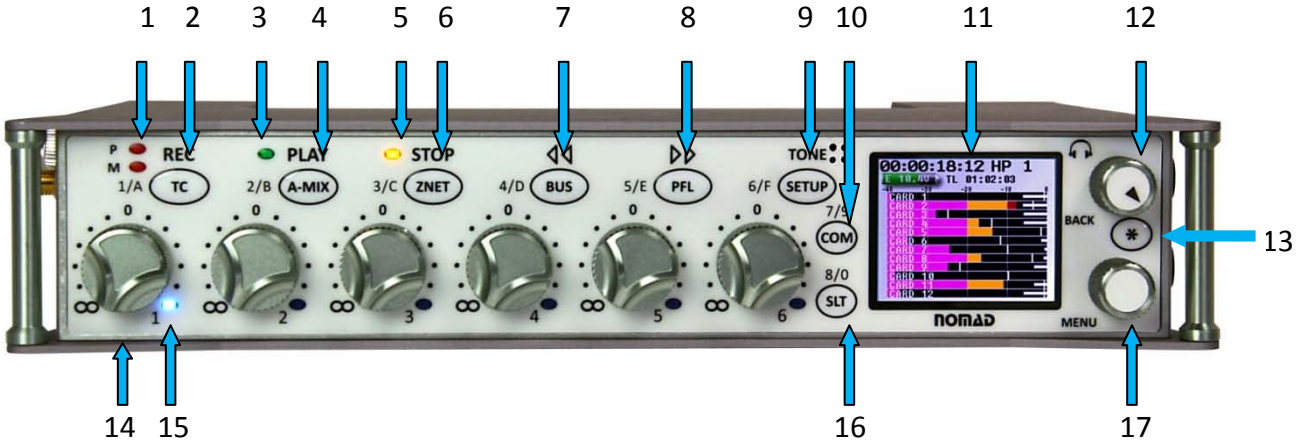
ZAXCOM.COM

Zaxcom Nomad

Sound bag audio redefined

Know Your Nomad

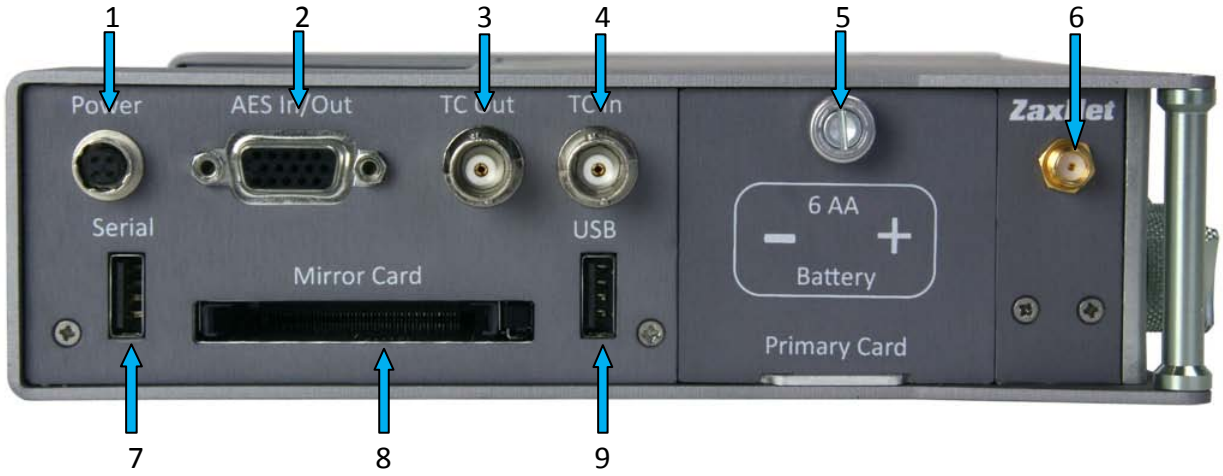
Front Panel



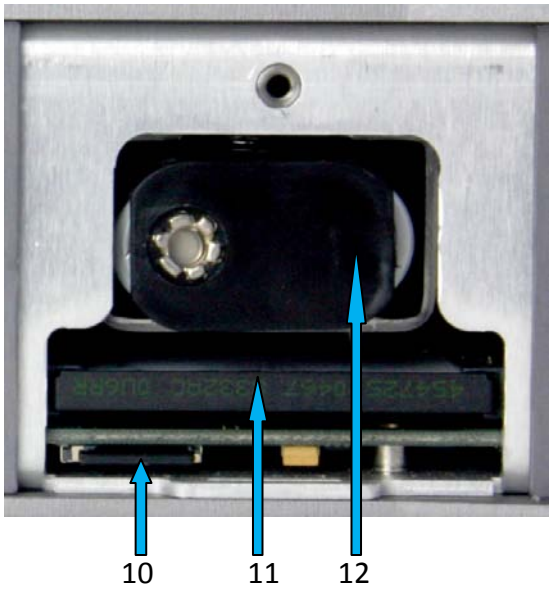
1. **Primary/Mirror Record LEDs**
   Indicates Nomad is in record mode and which card is being written to (Primary Card, Mirror Card). The mirror LED is intentionally dimmer than the primary LED
2. **TC / REC / 1 / A – multi-function key**
   - In shifted mode
     - A quick press opens the time code slate - additional presses will open the time code menus.
     - Pressed and hold for one second, puts Nomad into record.
   - In unshifted mode
     - A quick press will put the unit into record.
   - 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 Nomad is playing back.
4. **A-MIX / Play / 2 / B – multi-function key**
   - In shifted mode
     - When Auto-Mix is engaged, and MP3 support is off, pressing will access the Auto-Mix menu
     - When Auto-Mix is off and MP3 support is off pressing will access the Meta-Data page.
     - Pressed and held for one second, puts the unit into playback mode.
   - In unshifted mode
     - A quick press will put Nomad into playback.
   - 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 MP3 support is turned on and recording press it to toggle for MP3 marking.
5. **STOP LED**
   Indicates Nomad is in stop mode and Nomad is neither recording nor playing back.
6. **ZNET / STOP / 3 /C – multi-function key**
   - In shifted mode
     - A quick press will open up the ZaxNet adjust menu.
     - Pressed and held for one second, will stop recording or stop playback.
   - In unshifted mode
     - A quick press will stop recording or 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 menu.
   - 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 metadata menu or track naming menu will open the list of presets.
9. **SETUP / TONE / 6 / F – multi-function key**
   - Pressing it opens the analog input setup page.
   - Pressed and hold for one second, toggles the 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 auto-pan is enabled pressing it will change the pan assignment.
    - When a number is needed in a data entry field or need to select a channel number:
      - 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, Nomad will start 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 fader, hardware trim knob or a ZaxNet control knob.
15. **Auto-Trim™ LED (of 6 total)**
    Indicates which fader is active for AutoTrim and Auto PAN.
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 number:
      - 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.
      Note - 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



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. You can damage the unit's power supply and require it to be sent in for maintenance and will not be covered under the warrantee.
2. **AES Input / Output connector (DE-15F)**
   Nomad has four AES input pairs and three 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.
   The DB-15 connector can be wired with separate XLR-3 style inputs / outputs four inputs and three outputs. Each is a stereo pair - 1/2, 3/4, 5/6, 7/8.
3. **Time Code Output connector (BNC)**
4. **Time Code Input connector (BNC)**
5. **Internal Battery Door**
   The Silver knob rotates clockwise to lock the battery compartment door.
   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.
6. **ZaxNet RF connector (SMA-F)**
7. **Serial connector**
   Connection for Zaxcom FP8 fader panel or Mix 8 control panel.
8. **Compact Flash Card Mirror Media Slot**
9. **USB port** *Nomad 8 and 12 only*
   Used for recording to USB drives or attaching a USB keyboard (Nomad 8 and 12 only).



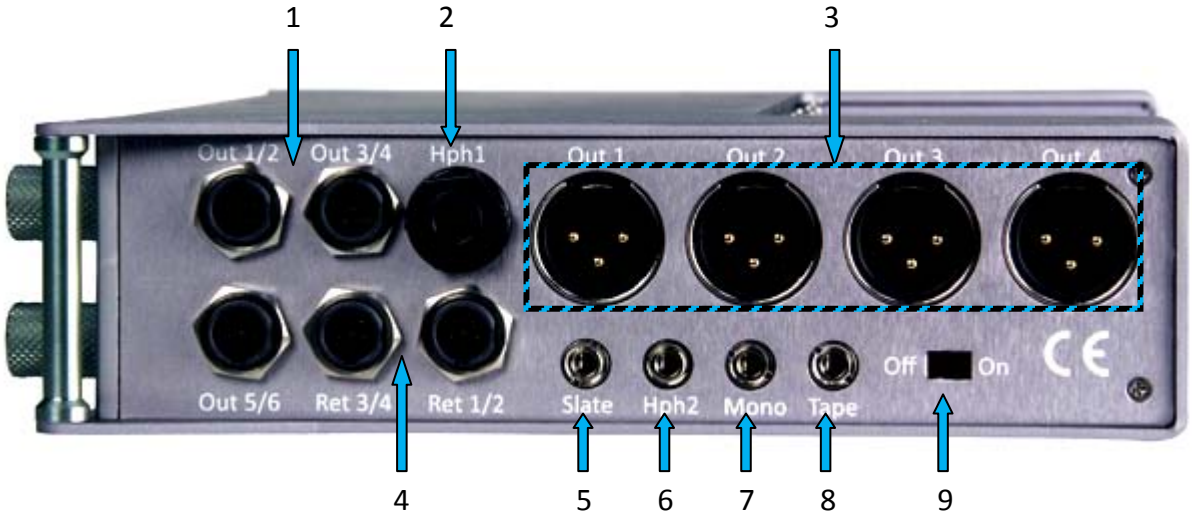
Battery Compartment Area (behind the door view)

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

10. **Micro SD Media Slot -** For factory use.
11. **Compact Flash Card Primary Media Slot**
12. **Internal Battery Compartment**

NOTE: Insert the battery carrier correctly. If you insert with the contacts reversed it will do no harm to the unit, 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)**
   These inputs 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 microphone
6. **Headphone #2 (1/8" (3.5mm) TRS jack)**
7. **Mono Output (1/8" (3.5mm) TRS jack)**
8. **Tape Output (1/8" (3.5mm) TRS jack)**
9. **Power Switch**

Back Side

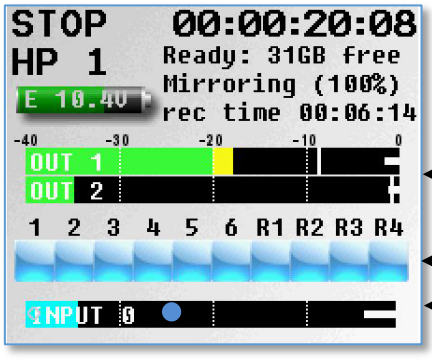
1. **Mic/Line-level Inputs 1 – 6 (XLR-3F)**

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 is an input
- Green is an output bus
- Purple is a recorded track

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

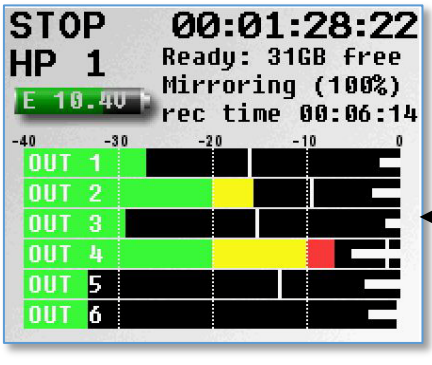


Output busses 1 and 2

Quick Pan Matrix

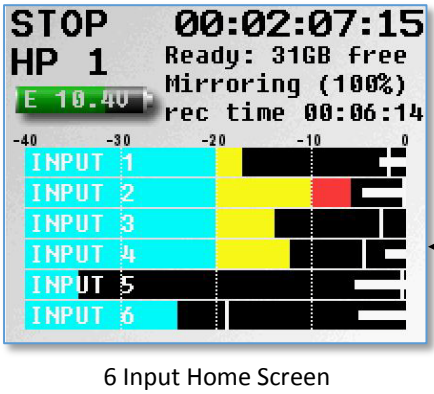
AutoTrim Meter / Virtual Faders for mixing Inputs 7 through 10 (see ENG/EFP Bag operations)

ENG Home Screen



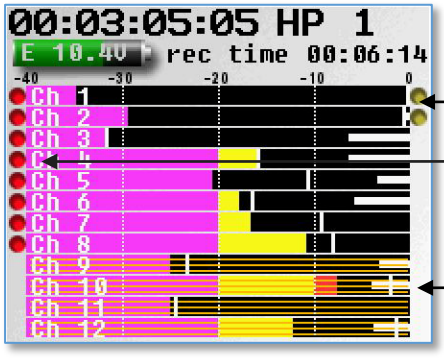
6 Output Busses

Output Bus Home Screen



Input signal from XLR Inputs

6 Input Home Screen

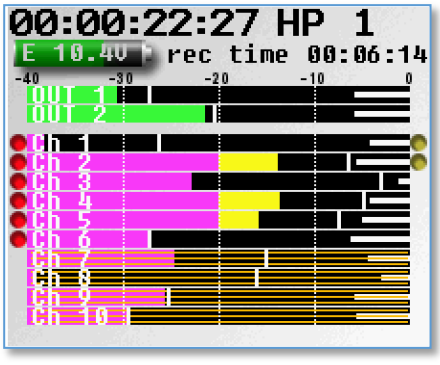


Yellow ISO Attenuation Enabled

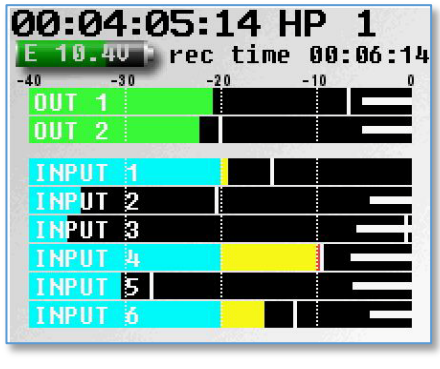
Red Record Enabled Indicators - shows which tracks will be recorded

Yellow Strike Through – Represents that these tracks will not be recorded

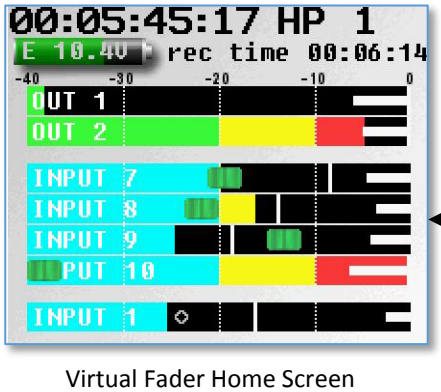
Card Track Home Screen



Card Tracks with Output Buses 1 and 2

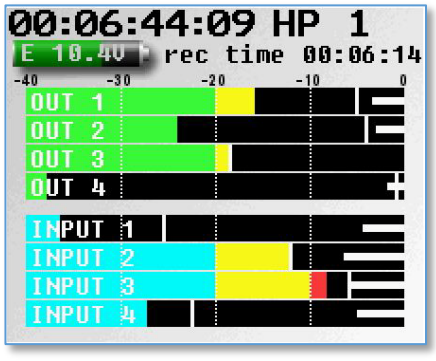


Output Bus with Inputs

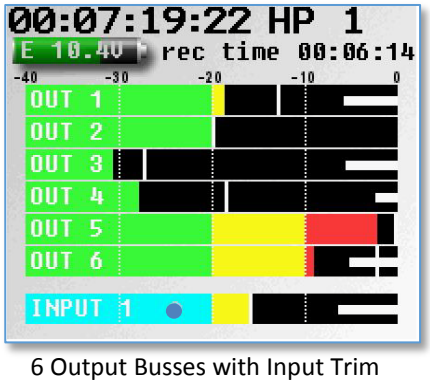


Line level inputs 7 through 10 with virtual fader control

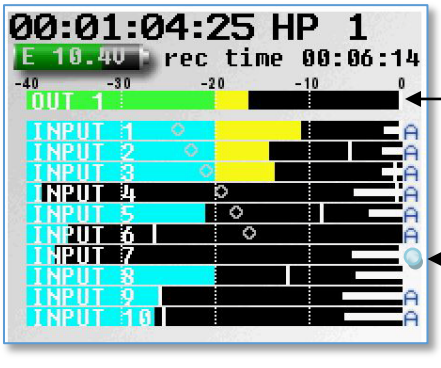
Virtual Fader Home Screen



4 Out / 4 In



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”

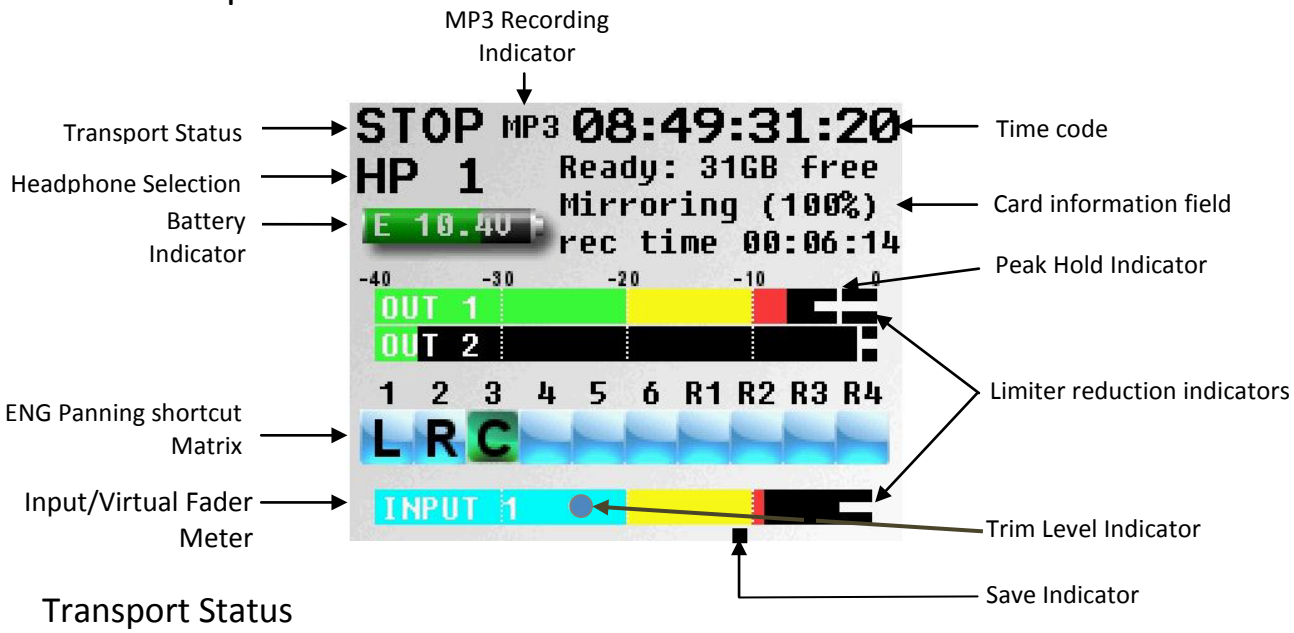
Auto-Mix Meter Screen

Store/Recall a Home Screen Configurations

You can “park” two home screens for a quick recall of two home screens.

- 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

Shows the mode of recorder **RECORD**, **PLAY** or **STOP**.

MP3 Indicator

Displays if your recorded files are being marked to be written as an MP3 file.

Time Code

Shows the current time code.

Headphone Selection

Displays which headphone matrix is being monitored. You can custom name your headphone set up - see headphone naming in the ENG menu.

- If 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 multi-function key corresponding to input 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. Nomad will always automatically switch to the higher voltage source first.

Save Indicator

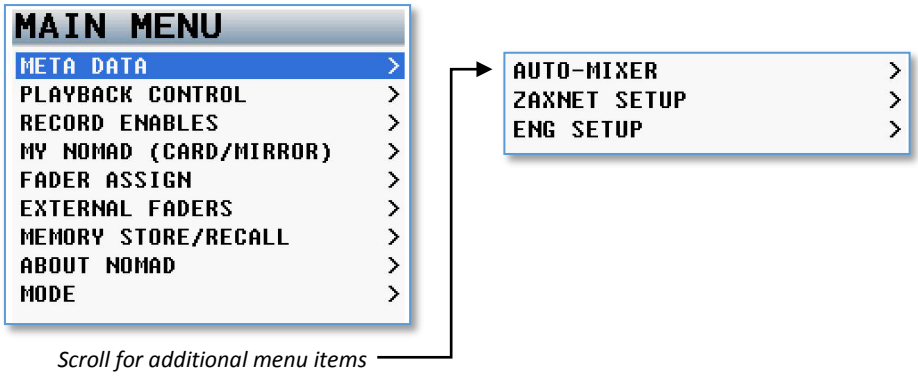
A moving pixel on bottom of screen moving right to left indicates that the Nomad is saving a parameter setting to its memory. If you power down while the pixel is moving the settings will not be saved.

Card Information Field

- Top Line - Displays available mirror card space.
- Second Line - Mirror file progress displays what percentage of mirroring is done.
- 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)

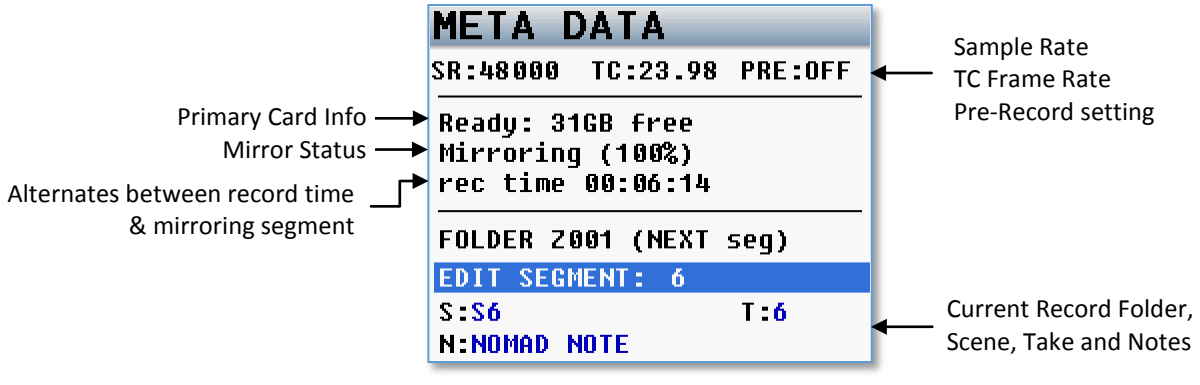
Main Menu

To access the main menu press the MENU Knob. If you are in the ENG home screen and you have the virtual fader mode turned on, you will have to press and hold the menu knob for 1.5 seconds to enter the main menu. Selecting any item in the main menu will take you to the sub menus for each item.



Metadata Page

This menu displays and allows you to adjust the metadata.



To adjust the metadata using the MENU Knob select and highlight one of the data fields then press the MENU Knob.

Metadata can be edited and changed before Nomad starts recording a file or even while Nomad is recording. If you are in continuous mirror mode and changes are made after stop is pressed the file will need to be re-mirrored for the changes in the metadata to be reflected in the mirror file.

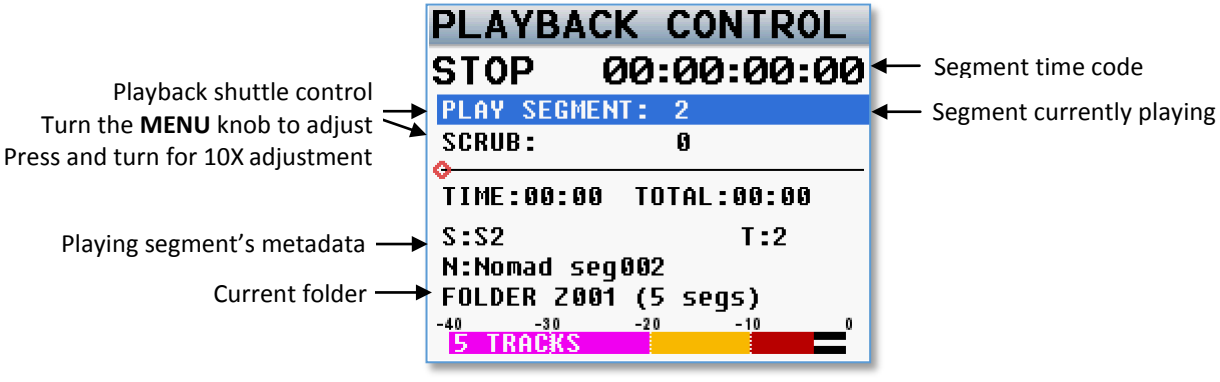
Nomad also features a preset list of notes you can create and recall from.

To select and enter from the preset list of notes

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 Menu

This menu allows you to controls playback of recorded files.



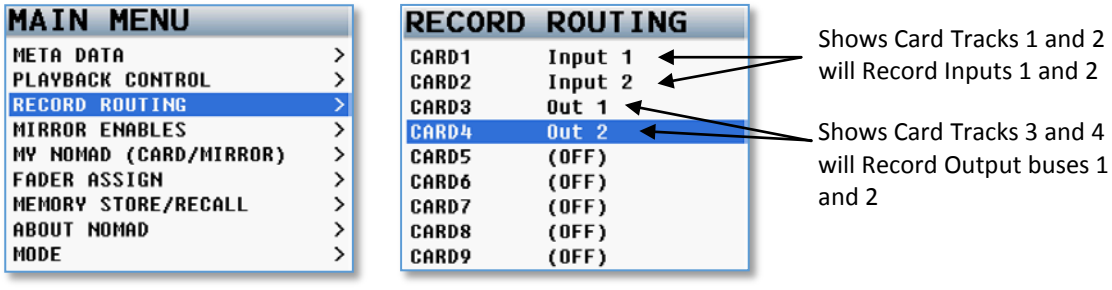
While in this menu, the STOP key and PLAY key function immediately, even if the transport keys are set to shifted mode.

Primary Card Record Routing - *Nomad Lite Only*

The primary card 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. All ISO tracks are recorded pre-fade only and all output busses are recorded post-fade

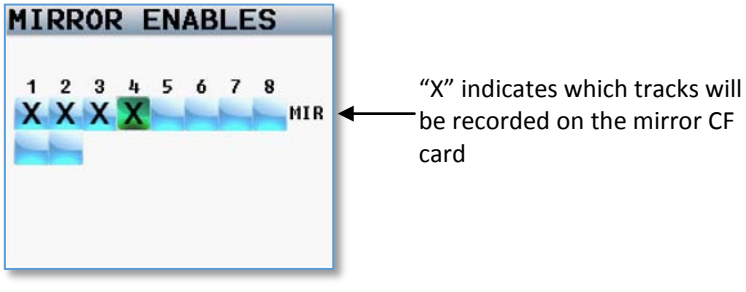
In Nomad Lite's record routing menu you select and highlight which card track you want to record on then scroll through and choose what source you want to assign and record on that channel. You can choose between all 10 analog inputs or any of your 6 output busses.

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



Mirror Record Enables - *Nomad Lite Only*

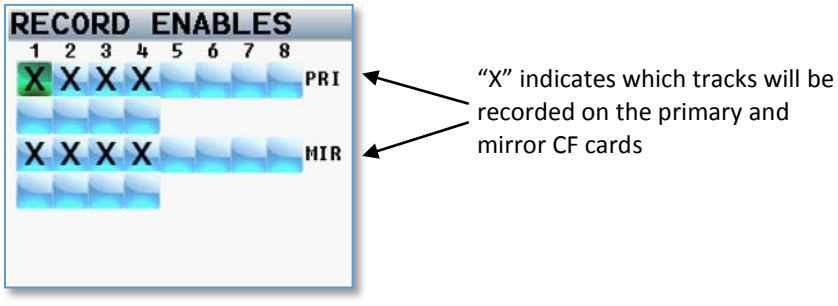
This matrix allows you to select which of the primary tracks are copied on Nomad Lite's mirror compact flash card.



It is not necessary to remove record enable cross points from the mirror matrix. If a primary card track is set to off in the record routing menu nothing will be recorded on the primary card and therefore nothing will be written to the mirror card. This allows you to leave all of the mirror tracks enabled and it makes it unnecessary to change the tracks being mirrored every time you change the record routing.

Primary Card Record Routing – *Nomad 10 and 12*

This matrix allows you to select which tracks are enabled and recorded on the primary and mirror compact flash cards.



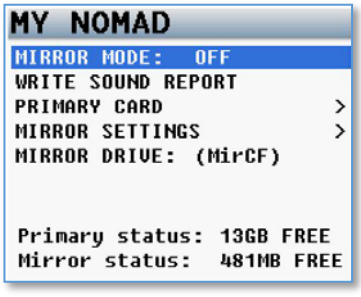
It is not necessary to remove record enable cross points from the mirror matrix. If a primary card track is not enabled nothing will be recorded on the primary card and therefore nothing will be written to the mirror card. This allows you to leave all of the mirror tracks enabled and it makes it unnecessary to change the tracks being mirrored every time you change the record routing.

NOTE: If the sample-rate is set to 88.2 kHz or 96 kHz, only eight primary and mirror tracks can be selected and recorded.

My Nomad Menu

The My Nomad menu sets the parameters of the primary recording and mirroring functions of Nomad.

Please note that Nomad will automatically create a new file when the file size reaches 2GB. This will be a seamless transmission with no loss of audio. The take number will add the letter a letter for each time Nomad creates a new file. So for example if the first take is over 2GB the take numbers would be Take1 and Take 1a.



Mirror Mode Options

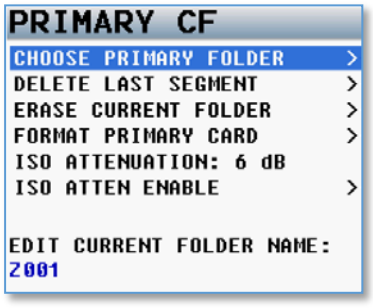
- **OFF -** Nomad will not mirror any files.
- **ON -** Nomad will only start to mirror a file once the unit has gone into stop mode.
- **CONTINUOUS -** When Nomad is recording, the audio is copied to the mirror card immediately after it is written to the primary card. Depending on the track count, the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

If you are finding that continuous 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 on 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.

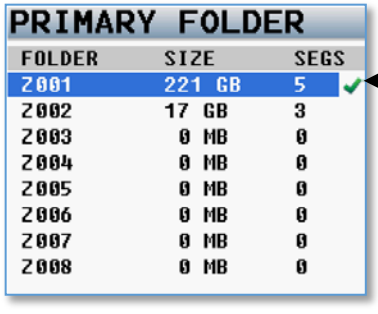
Write Sound Report

When selected, Nomad will create a sound report of the recorded files and write it on the mirror CF card. The sound report contains the metadata information for what was entered. To write a sound report mirror mode must be set to OFF.

Primary Compact Flash Card Menu



Choose Primary Folder



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 files are recorded into individual folders. This menu lets you choose which folder the files will be recorded to. To select a folder press scroll the MENU knob to highlight the folder then press the MENU knob. At that point the green check will indicate the folder that will be recorded to.
After selecting a folder that folder can be renamed to help identify its contents.
To name the folder hit the back button to return to the primary CF menu then scroll down to the Edit Current Folder Name then press MENU Knob to change the name of the folder. The folder name needs to be nineteen characters or less, and cannot contain spaces or symbols.

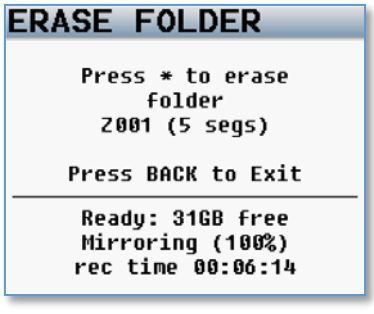
The audio on the primary card is recorded as a Zaxcom MARF file. The advantage of MARF is that if there is any power loss while recording there will not be any loss of recorded audio, as is common with all other portable recording systems.
In the event of a power loss while recording: at power-up, Nomad will automatically close 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***. All MARF files can be converted to either a BWAV or MP3 files.

Delete Last Primary Segment

This menu allows you to delete the last recorded segment by pressing star key

Erase Current Primary Folder

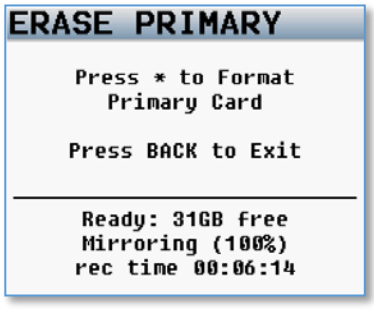
This menu allows you to delete an entire folder from the compact flash card.



WARNING: If you have already mirrored a folder and do not want to erase the folder from the mirror card, remove the mirror card before erasing. If you do not, the folder will be erased from both the primary and mirror card.

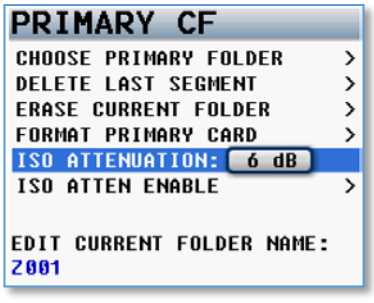
Format Primary Card

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.



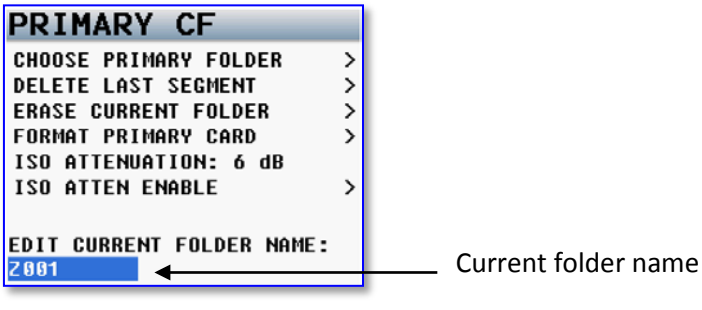
ISO Attenuation allows ISO record tracks to be attenuated by a user selectable fixed amount of 6, 12, 18 or 24 dB. This allows audio to be recorded, even if its dynamic range would normally be too large. This gain reduction is stored in the metadata of the WAV file so post production can restore the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

ISO Attenuation Enable

This matrix allows you to select which card record tracks will be attenuate when the ISO attenuation has been turned on.

Edit Current Folder Name

Each record folder can be named to identify its contents. When naming a folder you can use up to 19 characters for each folder name.

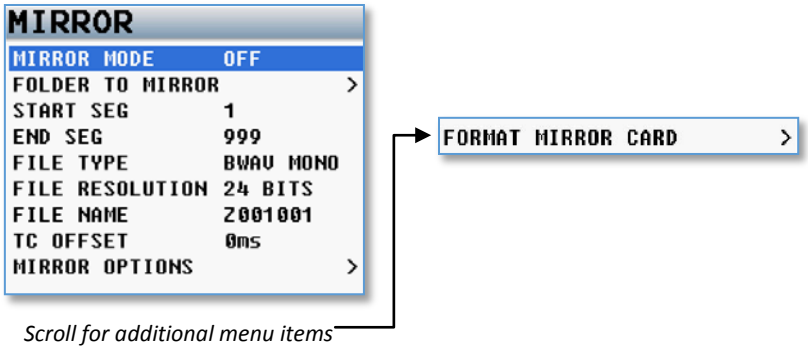


Edit Folder Name

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 menu.
3. Name the folder keeping in mind that the folder name needs to be seven characters or less, and cannot contain spaces or symbols.

Mirror Settings Menu

The mirror menu controls the copying of the audio files from primary compact flash card to the mirror compact flash card. The mirror compact flash card is formatted as FAT32, is fully compatible with all Mac & PC platforms and is generally used as a deliverable format to post since the mirrored files will be recorded as BWAV files.

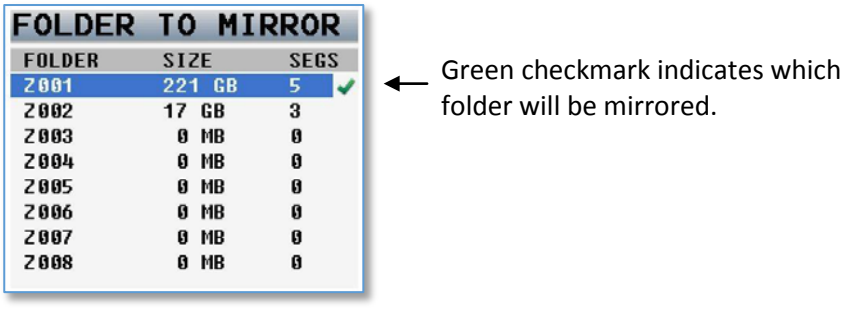


Mirror Mode

- **OFF:** Nomad will not mirror any files.
- **ON:** Nomad will only start to mirror a file 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.

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.



Start Segment

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

End Segment

This sets the last segment that Nomad will mirror or re-mirror.

File Type Select

This sets the file format type Nomad will mirror the audio as.

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

A BWAV 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, Nomad will produce 2 files, one representing track 1 and the other representing track 2.
A BWAV POLY file creates one file for that take; even if the take was recorded has multiple tracks. So with a POLY file if a take is only 1 track the file would be 1 track. If the take was 2 tracks, it would still be one file with both tracks. This is often referred to as being "2 tracks wide". Similarly, if 6 tracks were recorded it would still be only one file, 6 tracks wide.

File Resolution Select

This sets the bit depth that Nomad will mirror files at. You can choose 16 bit or 24 bit.

File Naming Protocol

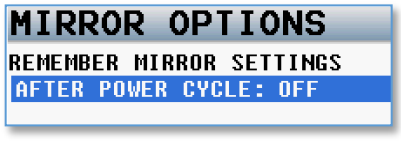
This sets the way your individual files are named.

- **Z001001** - Creates a file name in the format of - **Folder Name** and **Segment Number**.
  This is the default file naming protocol where the file name consists of the Folder Name (Z001 or whatever name you create) followed by the Segment Number (for example 045) so for example a file name would be Z001045.WAV (folder name / file number) that would be followed by Z001046WAV.
- **1 T2 Z001** - Creates a file name in the format of - **Scene**, **Take**, **Folder Name** and **Segment Number**.
  For example if you record scene “1”, Take “2” in folder “Z001” and the segment number is “45”, the file name will be “1_T2_Z001045.WAV”. Warning when using this naming option do not create a scene or take with any characters other than letters or numbers.
- **1 T2** - Creates a file name in the format of – **Scene** and **Take** separated by and underscore.
  For example if you record scene “1”, Take “2” in folder “Z001” and the segment number is “45”, the file name will be “1_T2.WAV”. Warning when using this naming option avoid creating duplicate file names within a folder, if duplicate file names are created the files will not mirror properly.
- **1T2**- Creates a file name in the format of - **Scene** and **Take** with no separation.
  For example if you record Scene is “1”, Take “2” in folder “Z001” and the segment number is “45”, the file name will be “1T2.WAV”. Warning when using this naming option avoid creating duplicate file names within a folder, if duplicate file names are created the files will not mirror properly.

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

Mirror Options

This setting allows Nomad to stay in the last mirror mode setting before being been powered off. If this option is set to OFF, any time Nomad is powered down it changes the mirror mode to OFF and when powering back up you will need to turn mirroring back on regardless what your mirror setting was set to. Even 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.



Time Code Offset

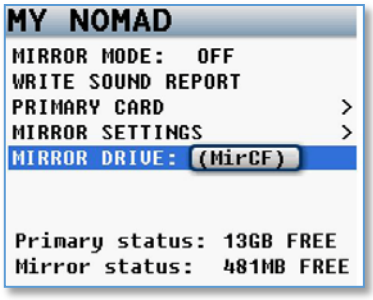
This menu is used to create a time code offset for the mirror files. You can create an offset from -500ms to +500ms in 1ms increments

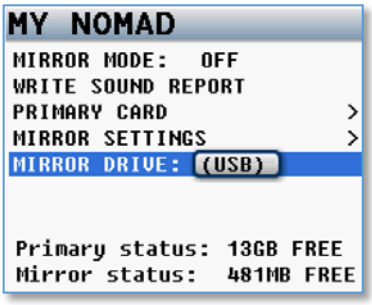
Format Mirror Card

This menu is used to format the mirror compact flash card. Nomad will format the card as a FAT32 format.

Mirror Drive Select - Nomad 12 Only

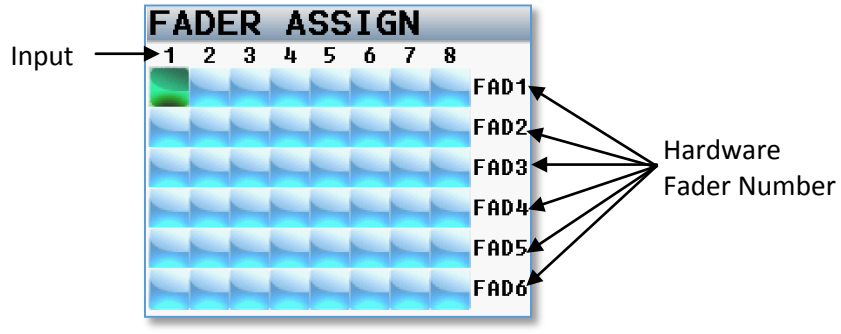
This menu selects if Nomad will mirror to a compact flash card or USB drive. If set to mirror to the compact flash card Nomad will mirror to the internal mirror card. If set to mirror to the USB Nomad will mirror to a drive plugged into the USB port on the side of Nomad





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 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 in any order or combination.



Setting a Cross point

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

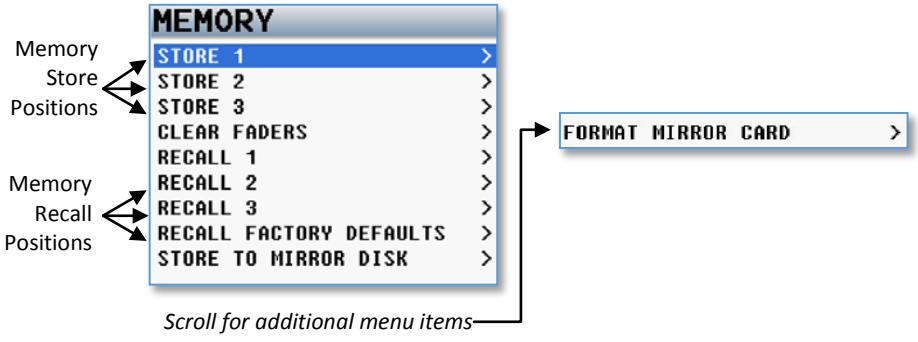
- Blank - no connection.
- **A** - Assign an analog input to a fader.
- **D** - Assign a digital input to a fader.
- **T** - Trim the fader knob will work as a hardware trim knob. Please note that to access the trim mode you will need to press the STAR key when in this matrix. That will add the "T" to the cycle
- **Z** - Assigns the fader to control the gain of a Zaxcom wireless transmitter. Please note that a Z can only be assigned when ZaxNet is in transmit mode.

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.

External Fader Assign

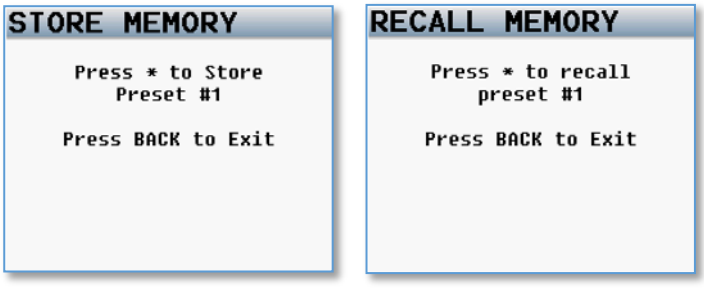
The external fader assign controls which inputs are assigned to each individual potentiometer on the Nomad FP8. Each potentiometer are user assignable as an analog or digital fader, a TRX transmitter gain controller or an input trim controller. Any combination of assignments can be made. For more information please see the Nomad FP8 manual.

Memory Menu



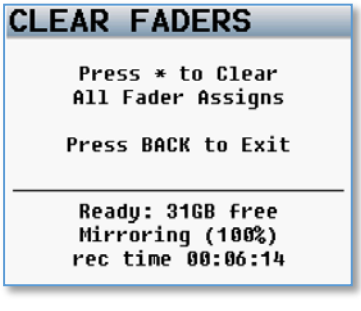
Store / Recall Memory

From the store and recall positions, 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. Note if you do a factory restore, all of the saved memories will be erased.



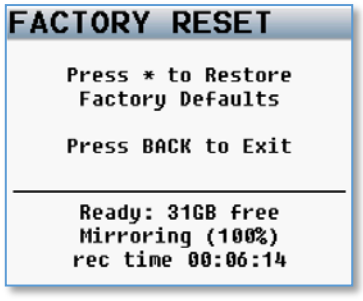
Clear Fader Assigns

This menu clears all of the current fader assign settings.



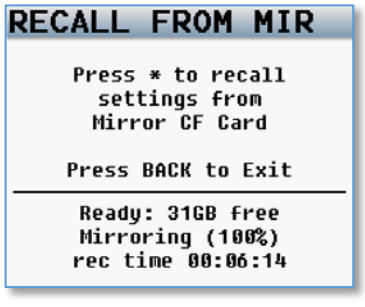
Factory Reset to Default Settings

This menu resets all the parameters back to factory default. If a factory reset is done, 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. It is advised to do a factory reset when updating software or if your Nomad is exhibiting odd behavior.



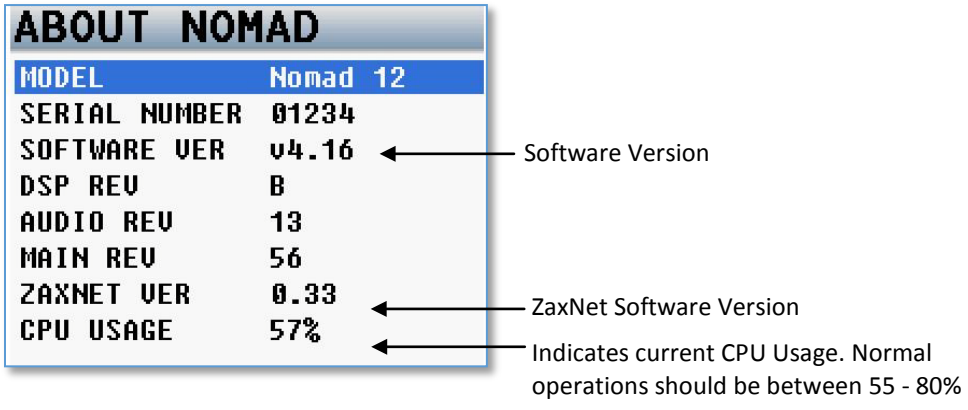
Store / Recall using Mirror Card

Nomad 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.

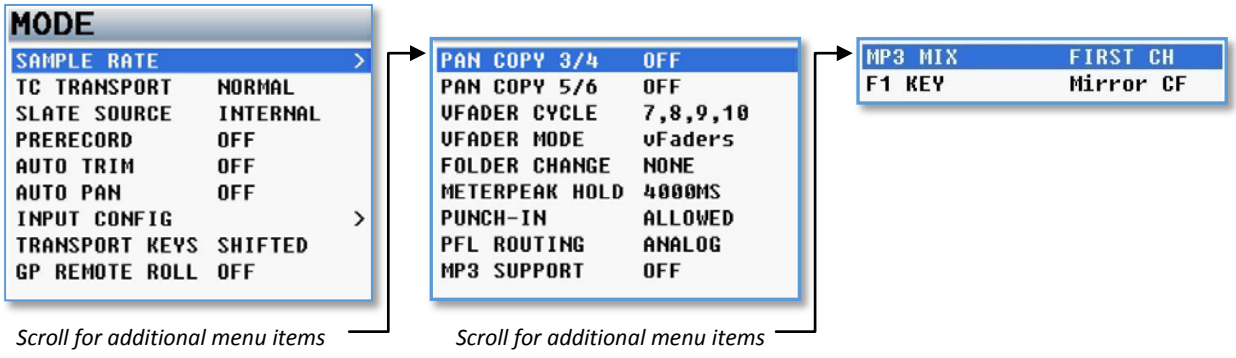


About Nomad Menu

This menu provides information about your Nomad

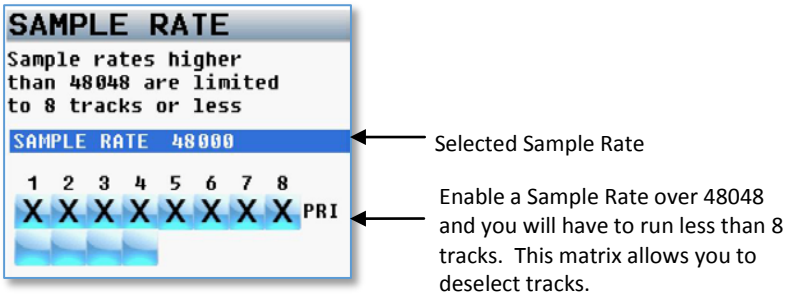


Mode Menu



Sample Rate Select

Nomad can record the following sample-rates: 44100, 47952, 48000, 48048, 88200, 96000**.** If recording sample rates of 48048 or higher you are limited to 8 tracks or less. In the sample rate select menu you can enable / un-enable record tracks.



TC Transport

Time code transport 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 time code coming from an external source.

Slate Source Select

Selects if internal slate microphone located on the front panel of Nomad, or an external slate microphone that is connected to the external slate microphone input jack on the side of Nomad - will be used when the SLT key is pressed.

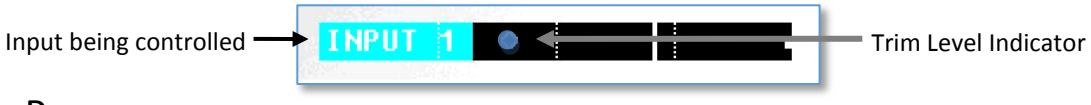
Prerecord

Prerecord allows Nomad to 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, any audio coming from the input is always being processed. When prerecord is enabled, the processed audio signal duration that is selected is held in the buffer until you press the REC key. At that time, all stored audio in the buffer is included the current take. Using prerecord does not use up any additional battery power.

The prerecord buffer is dumped after any of the following settings are changed: sample-rate, time code, user-bits, frame-rate or track count. After these parameters are changed the buffer will start to re-build. Note that prerecord is only available when the sample is set to 48048 or lower.

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 in the mode menu and you adjust a fader the blue LED next to that fader will illuminate indicating the input routed to that fader will be trimmed when you rotate the menu knob. When you adjust another fader, the trim function will move to that input.

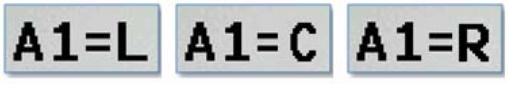


AutoPan

AutoPan is a feature that causes the COM key act as a pan knob. When AutoPan is turned on in the mode menu and you adjust a fader the blue LED next to that fader will illuminate indicating the input routed to that fader will be panned when the COM key is pressed. AutoPan is active from any meter screen.

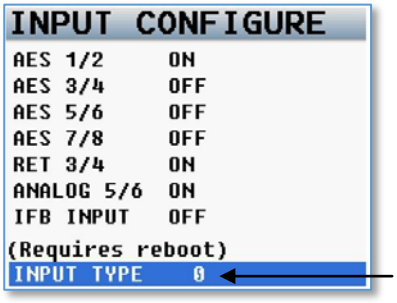
When pressing the COM key the panning for the illuminated channel will cycle from left to center to right to blank - unless “Prevent Empty Pan” is turned ON then the blank option will not be cycled through.

As you pan with AutoPan the headphone display will temporally show which input is panned to which position.



Analog input 1 panned Left, Center, Right

Input Configure Set



The Input Configuration menu is used to select between AES inputs and other Nomad resources such as ZaxNet, returns 3 and 4 and analog input 5 and 6. Put simply, for Nomad's processors to handle the additional AES channels, other input sources or ZaxNet may need to be deactivated.
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 you want to use ZaxNet IFB, then the Input configuration must be changed.
Fifteen selections are provided to give you various combinations of AES inputs, return 3/4 and analog input 5/6 and IFB.
If you are using ZaxNet you must set your input configuration to 8 or higher.
If the Input Configuration is changed, you will need to re-boot Nomad.

INPUT TYPE	AES INPUT 1/2	AES INPUT 3/4	AES INPUT 5/6	AES INPUT 7/8	RETURN 3/4	ANALOG IN 5/6	ZaxNet ENABLE
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

There are two ways that the multi-function keys can be set to control the way Nomad will go into record, stop and playback.

Shifted Mode

If the transport key is set to shifted mode and you press the TC, A-MIX or ZNET key, the menu associated with those keys will open. When set to shifted mode to go into record, playback or stop, you would need shift those keys. To shift press the MENU knob while simultaneously pressing the REC, PLAY or STOP key. While in shifted mode it is still possible to directly go into record, play and stop with a single key press by pressing and holding the transport key for 1.5 seconds.

Unshifted Mode

If the transport key is set to unshifted mode and you press the REC, PLAY or STOP keys Nomad will go into record, playback or stop. In unshifted mode to display the TC, A-MIX or ZNET menus, it is necessary to press the MENU knob while pressing the TC, A-MIX or ZNET key.

GP Remote Roll Enable

Turning on the remote roll will allow 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 on Nomad - not to the USB port.
For pin configuration please see the connector assignments in the back of this manual. Note that the GPI remote roll cannot be used at the same time as Mix 8 / 12 or FP8 fader panel.

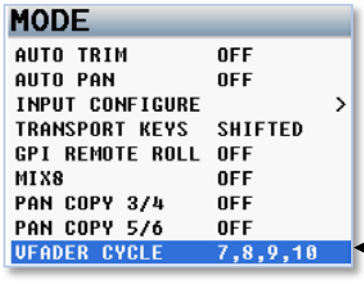
Pan Copy

If you are using the ENG Home screen pan matrix to assign inputs to output buses 1 and 2 creating a left and right out assign - pan copy gives you the option to have output buses 3 / 4 and or buses 5 / 6 follow the same pan selection. So the inputs that are assigned to busses 1 and 2 will automatically be assigned to the busses that are being pan copied. This is useful if you are feeding the same two bus source to multiple cameras.

VFader Cycle

Virtual fader will allow you to mix all 10 channels right from the ENG Meter 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
- Input 7 ONLY
- Inputs 7, 8
- Inputs 7, 8, 9
- Inputs 7, 8, 9, 10

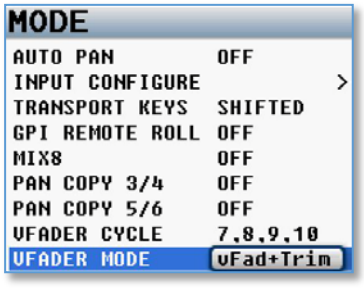


Shows which inputs will be active when the Virtual Fader is activated

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

VFader mode lets you choose to control the fader only or alternate between fader and trim controls for the inputs that you chose to be active in the VFADER CYCLE.



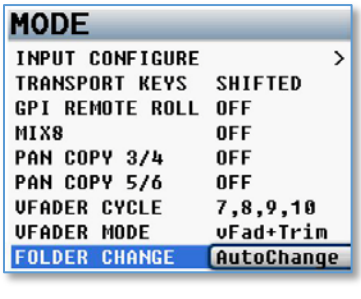
When the virtual fader is active the bottom meter on the ENG Meter Screen will display what you will be controlling. Either fader only or fader and trim for an input channel can be selected.

Virtual fader mode is only active while in the ENG meter Screen.
To control inputs 7 - 10

- Press the MENU knob and the bottom meter on the ENG meter screen will display what input you will be controlling with the MENU knob.
- If the fader icon is displayed the MENU knob will adjust the mix for that input.
- If the blue trim icon is displayed the MENU knob will control the input trim of that input.

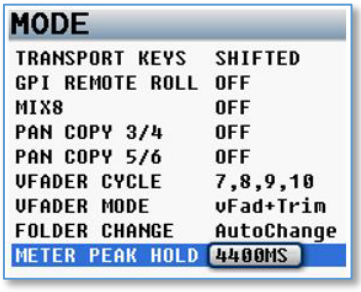
Folder Change

Folder change allows Nomad to automatically change the mirror folder to follow the selected primary folder. If AutoChange is selected and you change the primary folder the mirror folder will change to the same folder.



Meter Peak Hold Set

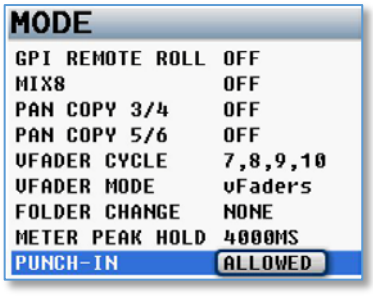
Meter peak hold sets the duration the peak indicator (white vertical bar within the meter) is held after the audio hits that peak. The range is 400MS – 8000MS with a step value of 200MS.



Punch-In

Punch in allows you to turn on the ability to start a new segment while recording. If punch-in is ALLOWED, you can create a new file while recording by pressing (or press holding) the REC key (depending if you are in shifted or un-shifted mode). If it is DISABLED, you cannot manually create a new file while recording.

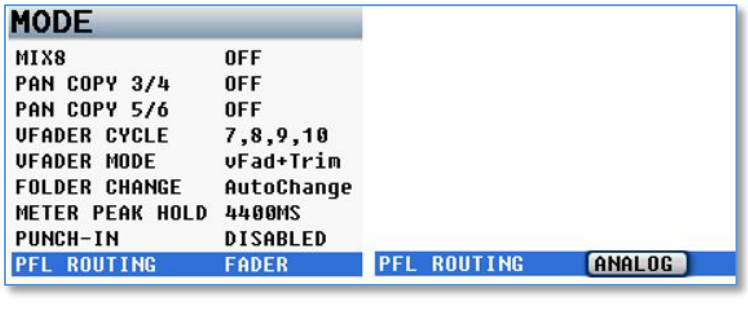
If you turn on the Rec/Stop warning option in the ENG Home screen, there will be an audible beep when a new file is created. The beep is heard in the main headphones only and is not sent to the record tracks or output busses. Note regardless of this setting Nomad will create a new file when the current file reaches 2GB.



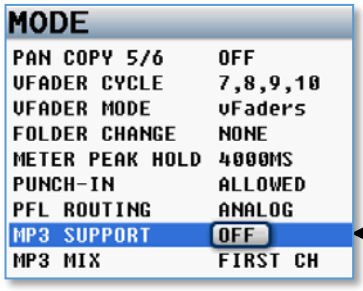
PFL Routing

PFL routing assigns what will be listened to when the PFL key is pushed.

- FADER - the PFL is listening to whatever that fader is set to control in the fader assign matrix including AES inputs.
- ANALOG – the PFL is listening to the corresponding analog input. So for example analog input 1 will be PFL 1 and analog input will be PFL 2.



MP3 Support



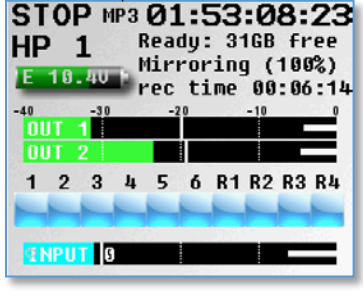
MP3 Support needs to be turned on when formatting your primary card, and recording to create MP3 Files. You can choose to create 64, 96 or 128Kbps files.

To record MP3 files you will first need to 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 (700Mb) loop onto the card. This loop will hold up to 24 hours of MP3 audio (at 64kbps). After the loop has been filled the MP3 will restart from the beginning and write over the oldest audio.
If you turn MP3 support 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.

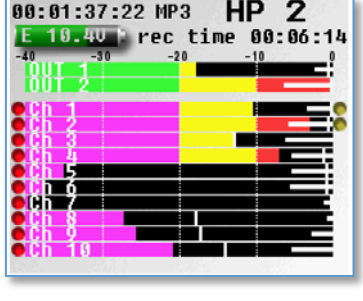
After the primary card is formatted with MP3 support turned on leave MP3 support on as you are recording. When MP3 support is on MP3 files will be written to the MP3 folder on the primary card. As you are recording you will need to make sure the file is marked. All marked files can be mirrored as an MP3 later.

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

MP3 Indicator



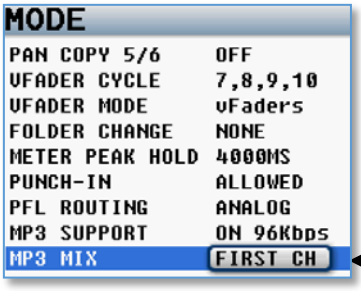
MP3 Indicator



If MP3 support is on in the 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 by going to the metadata menu and select the file you want to create an MP3 of and toggle the STAR key, you will see "MP3" for that file.

Then when you are done, to transfer the MP3 file from the primary card to a USB device or mirror compact flash card. Go to My Nomad > Mirror Settings > File Type and select MP3. Then when you turn mirror mode to on Nomad will start writing the MP3 files to the selected mirror drive. The file transfer is quick - a 30 minute file will transfer in about 8 seconds.

MP3 Mix



Select which record tracks you want to mirror as an MP3

Nomad will record up to two card tracks into the MP3 folder. In the MP3 mix menu you will select which record tracks you want Nomad to create MP3 files of.

To select which record tracks will record as an MP3 choose one of the following options:

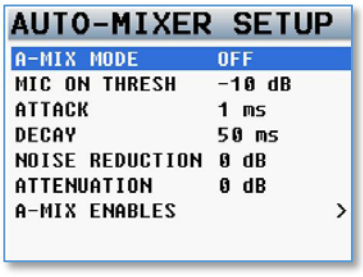
- **FIRST CH** – Selects the first record enabled track.
- **LAST CH** – Selects the last record enabled track.
- **FIRST TWO** – Selects the first two record enabled tracks.
- **LAST TWO** –Selects the last two record enabled tracks.

This allows you to 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.

If 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 are recording to primary tracks 1, 4, 6, 8, 10 and you 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 – *Not available in Nomad Lite*



A-Mix Mode

Enables Nomads Auto-Mixer and sets if the Auto-Mixer will work 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 effect on the Auto-Mix 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. In post-fade mode you can pull a microphone out of the mix by lowering the fader and will keeping pre-fade iso tracks un affected.

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 ramps up to full level when a speaker starts to talk. The microphone will engage immediately regardless of the attack setting.

- 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 noise floor is attenuated when no one is talking.

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

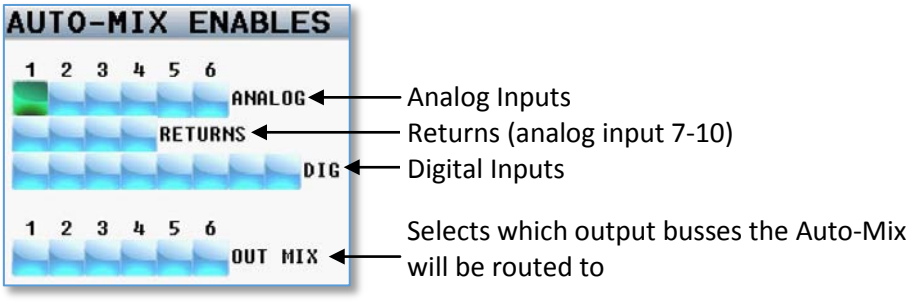
Attenuation

Sets how much each microphone is attenuated when a person stops talking.
When a person stops talking that microphone is not closed but the microphone is actually attenuated. That level of attenuation is adjustable here. In some environments it may be more palatable to hear some or most of the ambient microphone noise all the time rather than hear the noise mute and then re-appear when someone talks. Regardless of this setting the last active microphone will always remain open. If you want the microphone to close you can set the lower the attenuation.

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

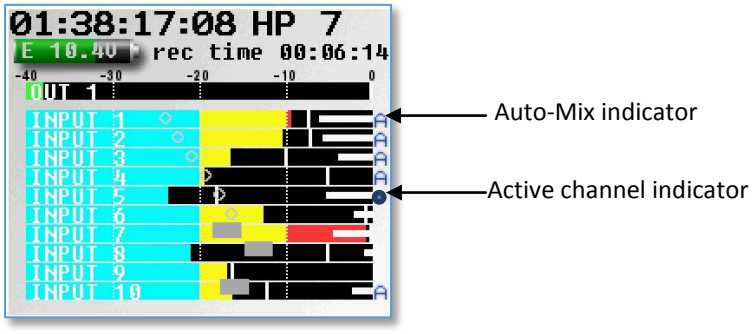
Auto-Mix Enables

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 on the meter screen. This matrix also lets you select which output buses the Auto-Mix will be sent to.



When assigning Auto-Mix to an output mix bus that bus should not have any thing assigned to it. If something is assigned to an output bus with the Auto-Mixer the assigned audio will be mixed into the Auto-Mix essentially defeating the Auto-Mixer. To verify that nothing is assigned go to the output bus assign matrix and make sure that nothing is assigned to that bus.

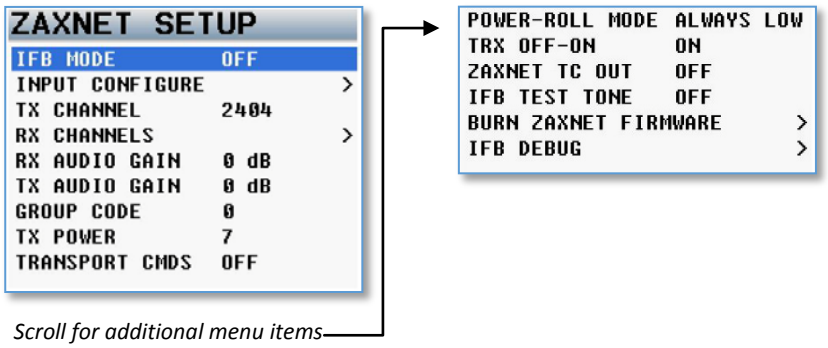
Using the Auto-Mixer



- The Auto-Mixer menu can be accesses from the main menu. After the Auto-Mixer is enabled you can the 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 multiple microphones are opened at the same time Nomad will display a blue dot for each active input.
- 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 fader are being used the Menu knob must be held for 1 second in order to access the main menu.
- You will want to make sure all bus routing is cleared for bus that the Auto-Mixer is routed to. This will prevent unwanted audio from mixing into the bus.

Please note that 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 will open the microphone as well.

ZaxNet Setup Menu



IFB Mode

- OFF - ZaxNet is off.
- RX - The ZaxNet transceiver is set to receive mode. You will be able to receive audio and time code from a ZaxNet transmitter.
- TX - The ZaxNet transceiver is set to transmit mode. You will be able to transmit audio, time code and wireless transmitter commands right from your Nomad. Please note if you set the IFB mode to TX, be sure to attach a ZaxNet antenna. If you do not, RF can potentially leak into the microphone preamps.
- TX+RX - ZaxNet 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 or a camera mounted QRX via ZaxNet and you select that preset ZaxNet will go into receive mode (RX) mode to allow you to monitor it until you deselect it.

Input Configure

To use ZaxNet you will need to set the INPUT CONFIGURE to 8 or higher to enable ZaxNet. See: Input Configure page 36.

TX Channel

This is the frequency that Nomad will use to transmit IFB audio, time code and ZaxNet commands on. The ZaxNet frequency range is from 2.403 to 2.475 GHz. All ERX receivers and TRX transmitters will need to be set on this frequency.

RX Channel

This menu is where you can set the ZaxNet IFB receive channel frequencies for monitoring. You can chose and monitor up to six ZaxNet frequencies.

When monitoring - the channel numbers will correspond with the 6 headphone selects in the HP setup matrix.
So for example “RX FREQ 1” will be the 1st box in the “ZNET” select in the matrix and “RX FREQ 2” will be the 2nd box.

RX Audio Gain

RX audio gain adjusts the audio level of the signal being received from a QRX IFB.

TX Audio Gain

TX audio gain adjusts the audio level of the transmit IFB audio that will be sent to the ERX receivers.

Group Code

Group code sets which Group ID number the ZaxNet in Nomad will control. ZaxNet uses group codes to allow you to control a specific "group" of transmitters that have the same group code. For example, setting a Group Code to 1 allows Nomad 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

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

Transport Commands

If set to slaved, Zaxcom wireless transmitters that are being controlled by ZaxNet will start/stop recording each time Nomad starts/stops recording.

Power-Roll Mode

Power roll allows the transmitters that are being controlled via ZaxNet to increase its output power level when Nomad goes into record and decrease to a lower power setting when you stop recording. By decreasing the power level when you are not recording allows you to conserve the battery on the transmitter. To use Power-Roll the TRX transmitter Power-Roll setting must be set to "Deva Trigger"

- ALWAYS LOW - The transmitter will always run at the low power setting.
- DYNAMIC - The transmitter will run at low power between takes and automatically 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

TRX off-on controls the power status for the TRX wireless transmitters power:

- ON – The transmitter is fully ON.
- WAKE UP – Wakes up any TRX transmitter that has its power up mode set to "Remote Standby".
- LOW (OFF) – disables the RF power amplifier, RF board and mic preamp. The will cut the power consumption and extend the battery life of the TRX transmitters.

ZaxNet TC Out

ZaxNet time code out allows ZaxNet commands to be embedded in the time code stream of Nomad's time code output. If ZaxNet time code out is turned on you will be able to remote control TRX transmitter from Nomad's ZaxNet menus using the ZaxNet transmitter in a TRX900CL, IFB100/200 or a QIFB instead of using the ZaxNet transmitter that is built-in to Nomad. To accomplish this you will need to wire the time code out of the Nomad to the time code in on the ZaxNet transmitter. Then the remote commands will be sent to the TRX transmitter via an external ZaxNet transmitter.

IFB Test Tone

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

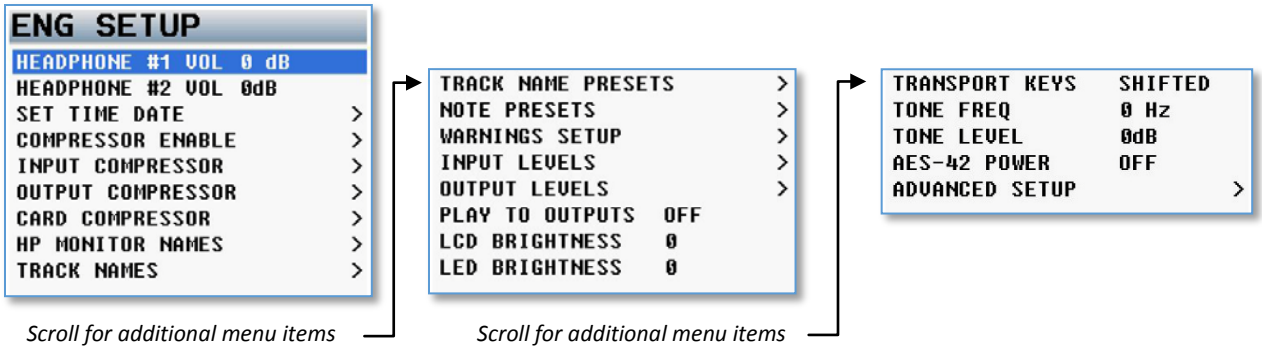
Burn ZaxNet Software

This menu allows you to install and updates the ZaxNet software.
The ZaxNet software is embedded within the Nomad software so no additional software will need to be downloaded. If the ZaxNet software needs to be updated there will be a note in the release notes of the Nomad software.

IFB Debug

This page is used for factory testing of the IFB.

ENG Setup



Headphone 1 Volume

Nomad allows you add up to 12dB of digital gain to the headphone 1 amplifier. This setting will adjust the amount of digital gain that will be added. The recommended setting is 12dB.

Headphone 2 Volume

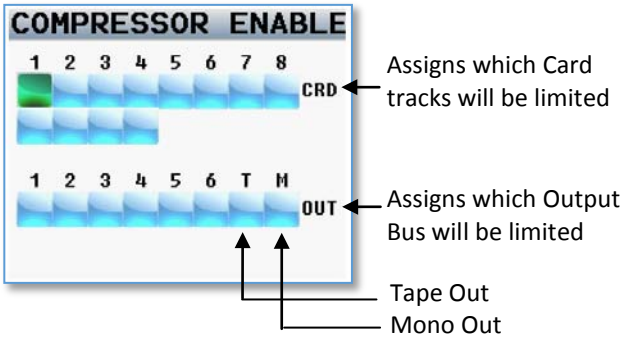
This menu is where you adjust the level of the headphone number 2.

Set Time and Date

From the time and date menu is where you set Nomads internal clock and calendar.
Nomads' time can be used as time of day time code and date can be used as user-bits. Nomads date and time is maintained by 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.

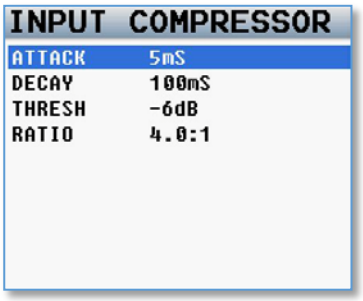
Compressor Enable

The compressor matrix sets which card tracks, output busses, and if the tape out or mono out will have compressor / limiters enabled. Placing an X in the matrix will enable the compressor to that card track, output bus and or tape and mono out



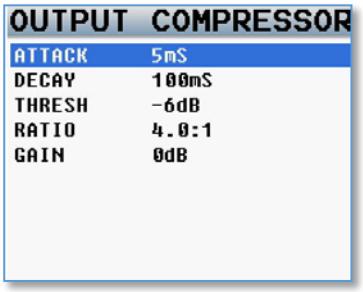
Input Compressor Parameter Adjust

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



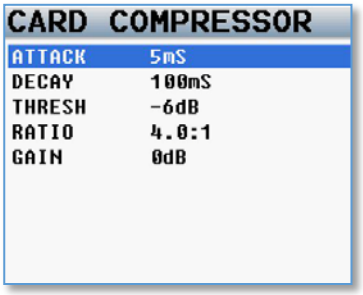
Output Compressor Parameter Adjust

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. The parameter for the output compressors allows you to add makeup gain.



Card Compressor Parameters

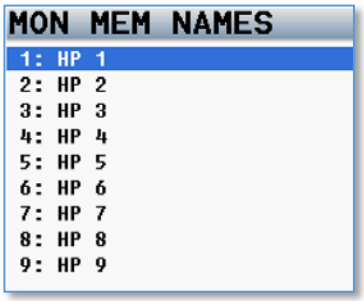
This menu sets the parameters for the card compressor settings. The card compressor settings are global, meaning that the settings adjusted here will be the same for all card tracks. The parameter for the output compressors allows you to add makeup gain.



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 keyboard that will allow you to enter text. Once you are finished entering in the headphone name press and hold the menu knob.

If you create a headphone name labeled “PLAY” when you go into playback mode Nomad will automatically jump to this preset, when hit press stop Nomad will automatically return to the last preset you were listening to.



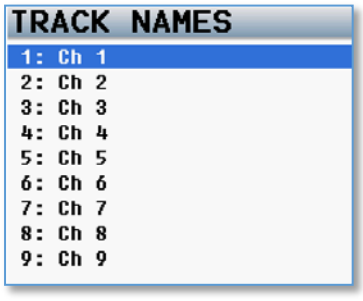
Track Names

This menu allows for the naming of the 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 keyboard menu which will allow to manual type the name.

Or if you press the PFL key the preset list of track names will open and you can choose from the list of preset names to enter.

To select from the list of Track Preset Names:

1. In the track name menu highlight the track you want to name by rotating the menu knob.
2. Press the PFL key.
3. Scroll to the name preset you want enter.
4. Press the menu knob.



Track Name Preset Edit

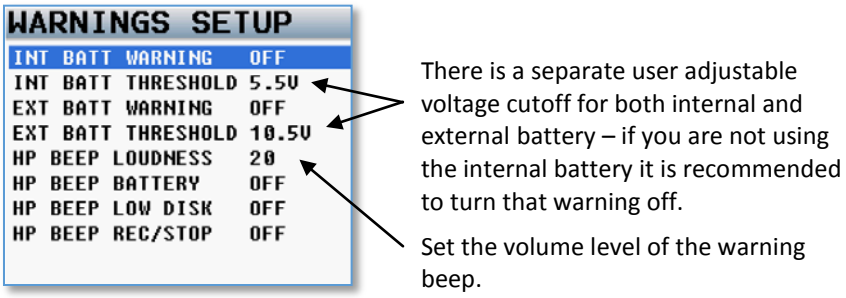
This menu allows you to create a preset list of track names. There are 20 track name presets available. The existing names can be edited and new track names can be created. Each track name can be up to 22 characters long.

Note Presets Edit

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

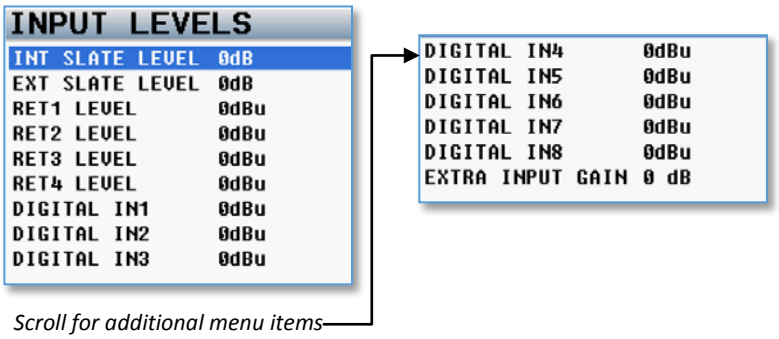
Warnings Setup

The warning setup menu manages the audible alerts that are sent to the main headphones. These warnings will also be displayed on the LCD screen. Once one of the warnings is displayed, press the headphone knob to acknowledge and dismiss the warning.



Input Levels Adjust

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 and external slate microphone levels. The levels are independently adjustable in 1 dB steps from –20dBu to 30dBu. Please note that it is normal for the internal slate 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

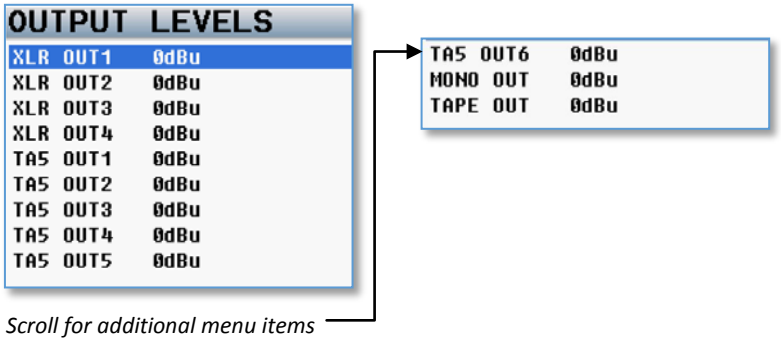
This allows you to adjust the levels of your digital inputs. They are continuously adjustable in 1 dB steps from -20dBu to 30dBu.

Extra Input Gain

This allows you to add 10dB of digital gain to your inputs giving you and additional 10dB of input gain for microphones that need it. The extra input gain is global, meaning that it is applied to all XLR inputs.

Output Levels Adjust

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 outputs. Both the mono and tape outputs are continuously adjustable in 1 dB steps from -12dBu to 21dBu.

LCD Brightness

This menu is where the brightness of the LCD Screen is adjusted. Nomad allows you to adjust the screen brightness to 11.

LED Brightness

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

Transport Keys

There are two ways that the multi-function keys can be set to control the way Nomad will go into record, stop and playback. Please note this menu has the same functionality of the transport key menu that is in in the mode menu.

Shifted Mode

If the transport key is set to shifted mode and you press the TC, A-MIX or ZNET key, the menu associated with those keys will open. When set to shifted mode to go into record, playback or stop, you would need shift those keys. To shift press the MENU knob while simultaneously pressing the REC, PLAY or STOP key. While in shifted mode it is still possible to directly go into record, play and stop with a single key press by pressing and holding the transport key for 1.5 seconds.

Unshifted Mode

If the transport key is set to unshifted mode and you press the REC, PLAY or STOP keys Nomad will go into record, playback or stop. In unshifted mode to display the TC, A-MIX or ZNET menus, it is necessary to press the MENU knob while pressing the TC, A-MIX or ZNET key.

Tone Frequency Adjust

This menu adjusts the frequency of the reference tone. The range is 20 to 20,000 Hz.

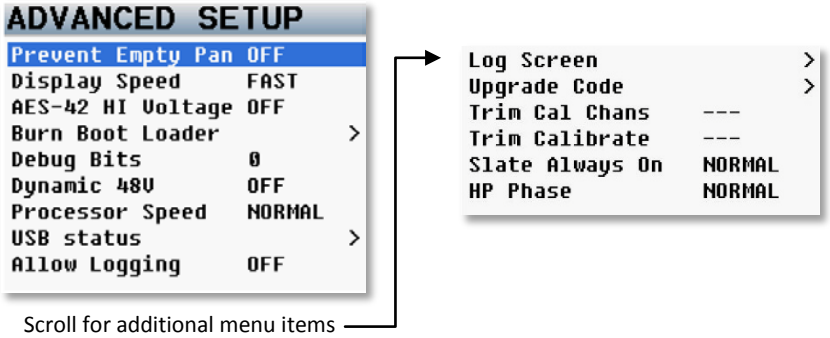
Tone Level

This menu adjusts the output level of reference tone. The range is -90 to 0dB.
Please not it is recommended for most applications to keep the tone level set at -20dB

AES 42 Enable

This menu allows you to turn on power for AES-42 microphones

Advanced Setup



Prevent Empty Pan

When set to on, the blank (no assign) option while cycling through the ENG pan mode or when using AutoPan is removed, leaving only the L, C, R option.

Display Speed

The display speed should normally be set to FAST. When set to fast the display is updated every frame. Though if you are using a lot of effects and cross points and/or are recording at 96 kHz and find that the user interface is getting hard to use, change the display speed to SLOW to slow down the refresh rate.
The display speed will automatically go into SLOW when mirroring or when the unit needs more horsepower for recording.

AES -42 Hi voltage

This setting turns on the AES-42 high voltage phantom power supply for AES microphones that need it.

Burn Boot loader

The boot loader is part of the software that helps boot up Nomad. Generally, you will not need to update the boot loader. 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 diagnostic setting and should stay set to 0.

Dynamic 48V

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

- **OFF** – 48 volt behavior is normal and 48 volt power is always available.
- **Power Save** – The 48 volt 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 the 48 volt power supply when Nomad is running on a low voltage power source (below 10V) to prevent possible damage to the 48V supply.

Processor Speed

This will adjust the speed of Nomads processor to allow for faster mirroring.

- **Normal** - is the typical setting that would be used.
- **Fast 1** - will increase mirroring speed. You can leave the processor speed set to fast 1 – though if you experience any crashing or odd behavior change the processor speed to normal.
- **Fast 2** - This is currently the same setting at Fast 1.

USB Status

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

Allow Logging

Allow logging will turn on the logging feature which will allow Nomad to log warning and error messages which then can be used by the factory to diagnose your Nomad. The logged messages are displayed on the log screen. If logging is not turned on then Nomad will not log the errors.

Log Screen

This is where Nomad displays the logged errors and warnings.

Upgrade Code

This page is used to enter in a factory generated code to upgrade Nomad.
To enter the upgrade code you must directly enter in the code by using the alpha / numeric multi-function keys. Warning by randomly entering in code numbers can cause your Nomad to lock up.

Trim Calibration Channels / Trim Calibrate

Trim calibration is 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 microphones. Once the trims are calibrated there should not be a need to ever re-calibrate.
Please note that Nomad's with a serial number higher than 10688 have already been calibrated at the factory. So it is unlikely that it will ever need to be re-calibrated.
See the end of the chapter for step by step calibration directions.

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.

Headphone Phase

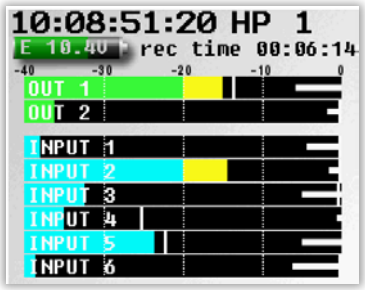
Headphone phase allows you to reverse the phase of the main headphone output.

Nomad Input Trim Calibration

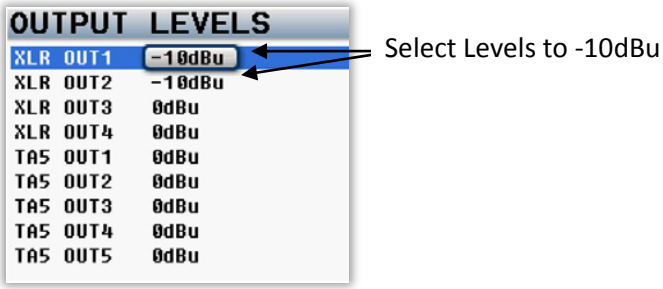
Software version 6.01 and higher adds an Input Trim Calibration for Nomad's 6 XLR inputs. This will allow the input trims to be more accurate and align with each other. Nomads with serial numbers 10688 and higher have already been pre-calibrated at the factory.

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

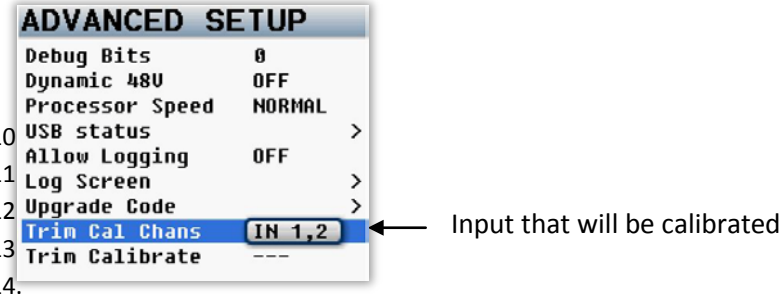
1. Install software version 6.01 or higher on Nomad.
2. Perform a Factory Restore and re-start Nomad.
3. Let Nomad stay powered-up for at least 15 minutes to warm up the input gain circuitry.
4. Select the home screen that contains 2 output meters followed by 6 input meters. If Nomad is not displaying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

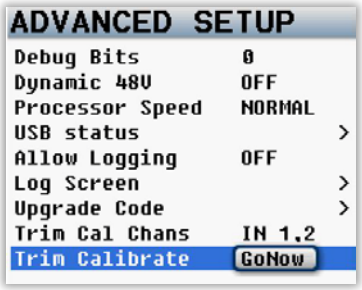


8. Insure the tone level shows up on the input meters
9. From the ENG menu select the Advanced Setup menu and choose IN 1, 2 in the Trim Cal Chans menu.



10
11
12
13
14.

10. In the Trim Calibrate menu select Go Now.

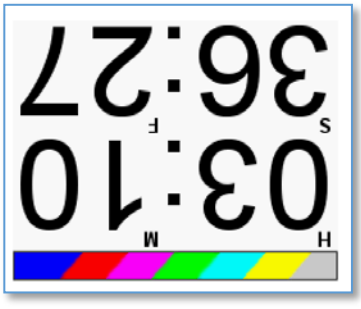


11. Press the STAR KEY.
12. The Go Now text will change to "---" indicating the Calibration has started.
13. Quickly press BACK (HP) knob to get back to the home screen (the one containing 2 outs and 6 input meters).
14. Let Nomad sit for about 2 to 4 minutes. You should see levels on the input meters 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 Time Code Key

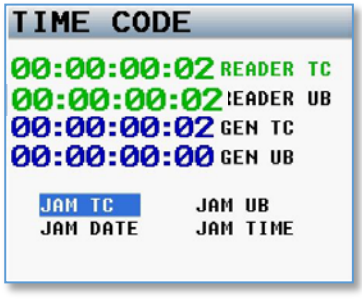
Time Code Slate



Pressing the TC Key once brings you to, an inverted visual time code slate.
When the time code slated is displayed and you press the MENU knob, the time code will freeze the and send a 1-frame beep tone to any bus that has tone routed to an output.
This is used to provide a visual sync for the camera to match picture and sound.

Time Code Jam

Pressing the TC Key a second time brings you here.



This page displays Nomads time code reader, which is receiving time code and user-bits from a source that is connected to the time code in on the BNC connector.
Also displayed is the current running time code of Nomads internal time code generator, as well as the user-bits.
From this page you can jam the time code and user-bits from a connected time code source or jam time code and user-bits from Nomads internal calendar and clock.

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

- **JAM TC** – Jams Nomads TC from an external source, such as a camera or a master TC unit.
- **JAM UB** – Jams Nomads user-bits from an external source, such as a camera or a master TC unit.
- **JAM DATE** – Nomads user-bits are created from Nomads internal calendar.
- **JAM TIME** – TC is created from Nomads internal clock.

Enter Time Code

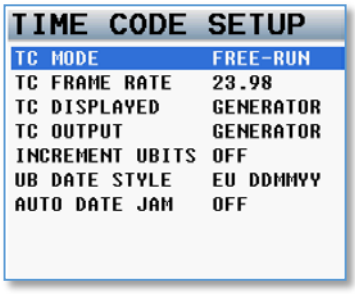
Manually entering time code

1. Press the MENU knob to highlight ENTER TC.
2. Rotate the MENU knob to select the desired position.
3. Press the numeric function keys to enter a numeric value.
4. Once you enter the last digit, the time code is entered immediately and jammed.

Manually entering user-bits

1. Press the MENU knob to highlight ENTER UB.
2. Rotate the MENU knob to select the desired position.
3. Each character position can take a hex number (0 – 9, A – F).
4. To enter A - F, double click the number keys 1 - 6.
5. Once you enter the last digit, the user-bits are entered immediately.

Time Code Setup Menu



TC Mode

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

TC Frame Rate

This is where Nomad's time code frame-rate is set.
Nomad supports all standard SMPTE frame-rates: 23.98, 24, 25, 29.97, 29.97DF, 30, 30DF

TC Displayed

This sets what time code Nomad will display on the LCD screen.

- **GENERATOR** – Nomad displays time code from the internal time code generator.
- **CARD** – Nomad displays the time code from the file that is being recorded or playing back.

TC Output

This sets what time code is sent from the time code output connector. If you need to send running time code to another device, set it to generator. If you want to control another time code device with an Auto-Load capability, set it to card.

- **GENERATOR** – Nomad outputs time code from the internal time code generator.
- **CARD** – Nomad outputs time code comes from the file that is being recorded or playing back.

Increment UBits

If incremental user-bits is set to on the user-bits will automatically increment with each take.

UB Date Style

If you chose to assign the date as the user-bits the UB date style determines how the date is displayed within the user-bits. You can choose European or US.

Auto Date Jam

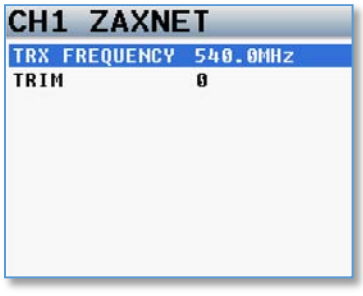
If the auto date jam is set to on Nomad will automatically jam the user bits to the internal date upon boot up. If this is set to off the user bits will stay as previously set.

Pressing the A-MIX Key

- When Auto-Mix is enabled pressing A-MIX will display the Auto-Mix menu (providing MP3 is not enabled). See the Auto-Mixer section of this manual for Auto-Mix operations.
  When Auto-Mix is off pressing A-MIX will take you to the Metadata menu.

Pressing the Z-Net Key

ZaxNet transmitter control



Pressing the Z-Net Key will take you into the ZaxNet transmitter control menu. Then if you press one of the multi-function keys (1 through 8) you will choose which ZaxNet transmitter's parameters you can adjust. The channel number will represent the unit code on the TRX transmitter that you want to control. So for example channel 1 will control a TRX transmitter with a unit code set to 1 and channel 2 will control a TRX with a unit code set to 2.

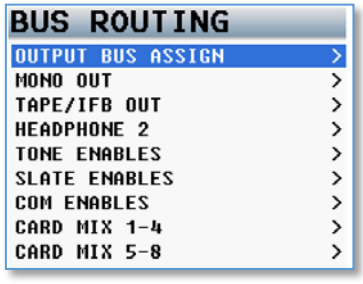
TRX Frequency

This is where the frequency of the Zaxcom TRX wireless transmitter can be change from. Rotating the MENU knob will change the frequency. After you stop on a new frequency it will take about 2 seconds for the TRX to change its frequency to match.

Trim

This is where the input gain of the corresponding Zaxcom TRX wireless transmitter can be change from. Rotating the MENU knob to the left will decrease the gain. Rotating the Menu knob to the right will increase the gain.

Pressing the Bus Key

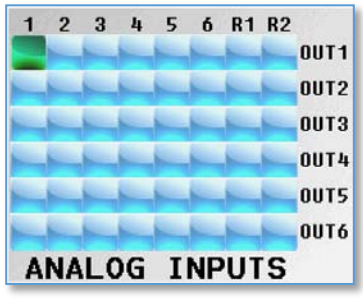


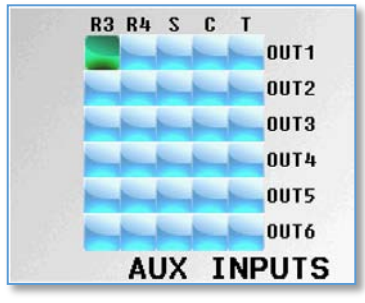
Output Bus Assign Busses

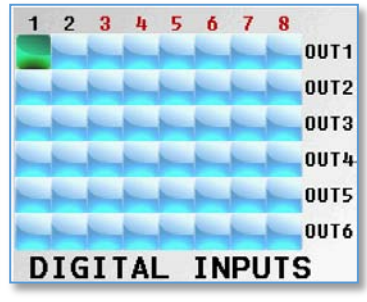
The output bus matrix lets you assign your analog and digital inputs to your output buses.
To move between the matrixes, press the BUS Key.

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 – when the digital input is in RED
- **S** = Slate
- **C** = Com
- **T** =Tone







Please note that when the Input is in RED that means that the input is unavailable. To make it available you need to go to the input configure menu to change the selection number.

Setting a Cross-Point

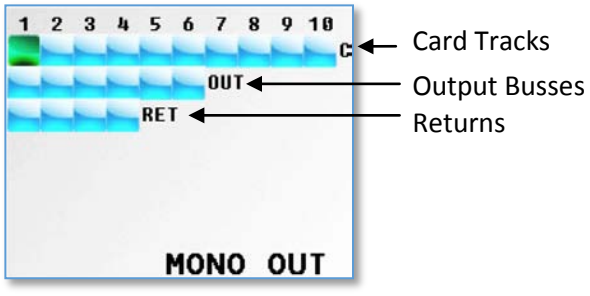
Rotate the MENU knob to scroll through the matrix. Stop in the matrix, at the intersection of the input channel and output bus, where you want to send that specific input. Press the MENU knob to cycle through the available cross points, which are:

- X – The input will be sent to the output bus post-fader.
- P – The input will be sent to the output bus pre-fader.
- $\overline{X}$ – The input will be sent to the output bus post-fader with phase inverted.
- $\overline{P}$ – The input will be sent to the output bus pre-fader with phase inverted.

To add the optional phase invert, while you are 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 will keep your phase invert choice.

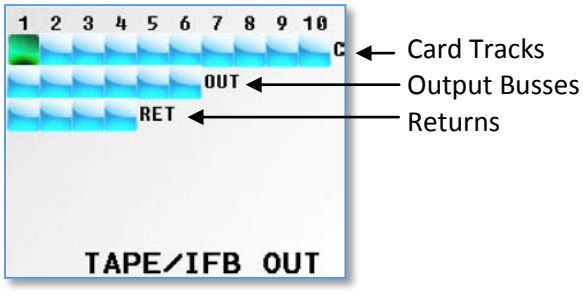
Mono Out Matrix

This matrix lets you set what audio is routed to the mono out connector.



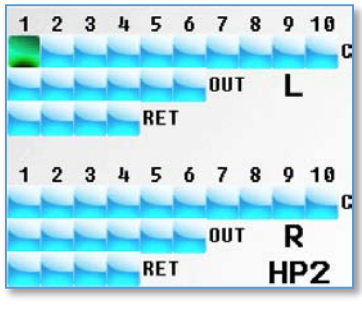
Tape/IFB Out

This Matrix lets you set 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.



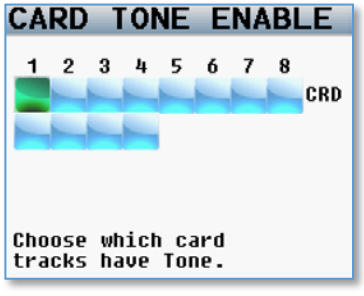
Headphone-2

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



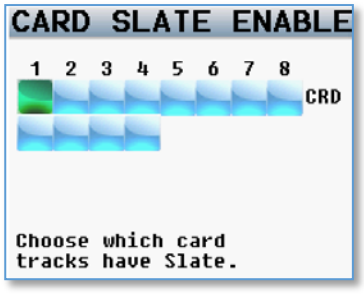
Card TrackTone Enable

This matrix lets you assign which card tracks have tone assigned to it.



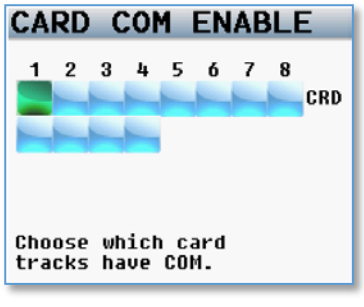
Card Track Slate Enables

This matrix lets you assign which card tracks have the slate microphone assigned to it.



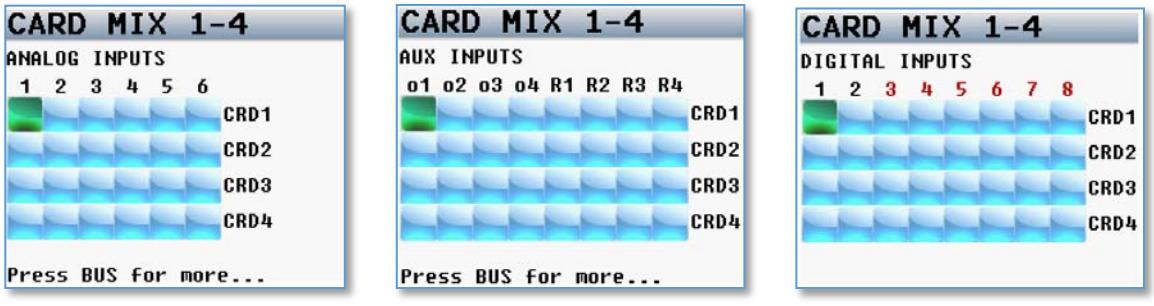
Card Tracks Com Enables

This matrix lets you assign which card tracks have the com microphone assigned to it.



Card Routing – Nomad 10 and 12 Only

These matrices allow you to route the analog inputs, digital inputs, returns and output busses to the card tracks on Nomad 10 and 12. The card mix matrices are broken down as 1-4, 5-8 and 9-12 to additional groups of card tracks can be accessed from the bus menu. For Nomad Lite routing please see page 30.



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
- 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 adjust the input configure in the mode menu.

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

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 bus, where you want to send that specific input. Press the MENU knob to cycle through the available cross points, which are:

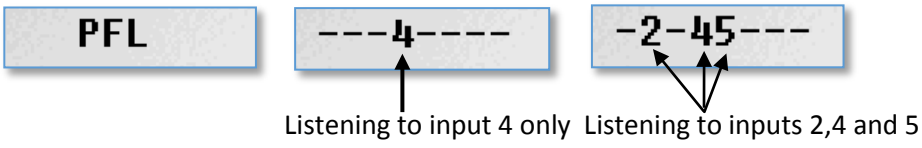
- X – The input will be sent to the output bus post-fader.
- P – The input will be sent to the output bus pre-fader.
- $\overline{X}$ – The input will be sent to the output bus post-fader with phase inverted.
- $\overline{P}$ – The input will be sent to the output bus pre-fader with phase inverted.

To add the optional phase invert, while you are 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.

Pressing the PFL Key

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 what is being listened to press the input number keys you want to listen to. If you press and hold a second key that channel is added to the PFL:



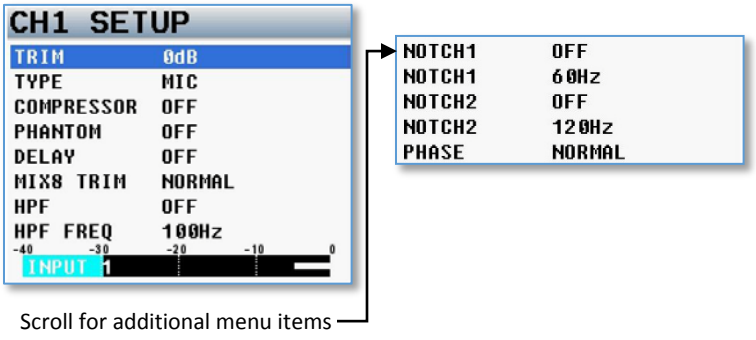
Listening to input 4 only Listening to inputs 2,4 and 5

To go back to normal listening press the HEADPHONE knob.
Nomad will remember the last PFL selection. SO when you return to PFL mode the channel(s) you exited on will be the channels(s) that will come back when you hit the PFL key.

Pressing the Setup key

Analog Setup Menu

Pressing the setup Key will take you to the analog setup menu where you can adjust the parameters of the 10 analog inputs. After pressing the setup key pressing one of the multi-function keys will jump to the setup menu of the corresponding input - channel 1 through 10.



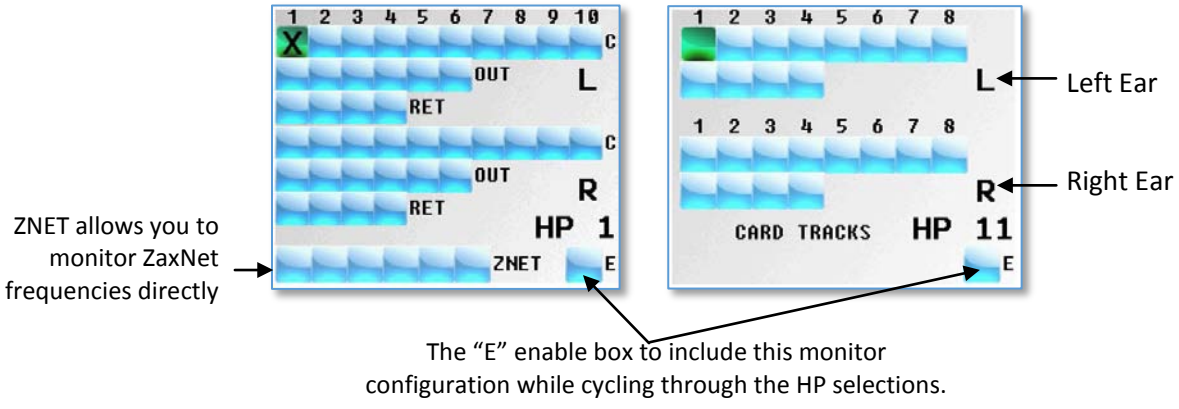
Adjustable Parameters

- **Input Trim –** Adjusts the input trim.
- **Input Type –** Selectable between mic level and line level.
- **Input Compressor –** Turns on the input compressor and set compressor groups.
- **48 Volt Phantom Power –** Turns on or off phantom power.
- **Input Delay –** Adjust the input audio delay and is variable from .0MS to 100MS in .1MS increments.
- **Mix 8 Trim –** Choose between Normal and ZaxNet
  - **Normal –** The trim knobs on the mix 8 adjust the input trim.
  - **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.).
- **High Pass Filter –** Turning on the HPF turns on a fixed frequency hardware filter. Adjusting the frequency adjusts a software filter that is adjustable between 40Hz to 230Hz.
- **Two Variable Notch Filters –** Notch filters with independent adjustable frequencies.
- **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. Nomad allows you to create three separate compressor groups. For example, a stereo microphone on inputs 1 and 2 may have their limiters set to Group A. So if the signal on input 1 needs compressing, the compressor on both 1 and 2 will activate together rather than just channel 1.

Main Headphone Setup



Nomad has 12 individual headphone matrices available to store user configurable headphone setups. You can set up each matrix with any combination of the following:

- Card tracks (C)
- Output Buses (OUT)
- Camera Returns (RET)
- ZaxNet Wireless (ZNET) (not available in Nomad Lite)
  Please note that you can only choose one ZNET choice per headphone matrix. Each box represents the RX channel that was setup the ZaxNet set up menu. So for example frequency 1 set up in the ZaxNet setup menu would be the first box and frequency 2 would be the second box.

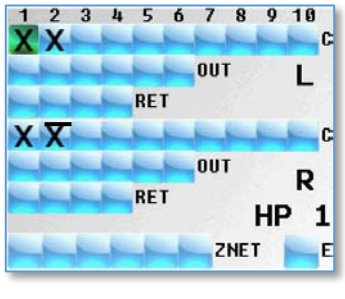
To set up your headphone selects

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 cycling through this set up as you are listening.
5. Press the headphone knob to advance to the next matrix.
6. To exit, press and hold the headphone knob.
7. You can add a custom name to each setup matrix for easy identification. To add a name go to the monitor name menu in ENG menu.

To easily monitor your recorded tracks simply set up a matrix and name it PLAY. Then when you press play from Nomad this matrix will automatically be routed to your main headphones so you can monitor your recorded tracks. Then when you press stop Nomad will automatically jump to the matrix that was being monitored.

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:

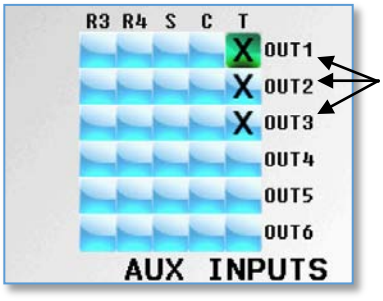


To add the optional phase invert - press the STAR key when in the headphone setup matrix. Then by pressing the MENU knob, you will be able to select phase invert. Phase invert will be shown with an X and a line above it.

Setting Up and Engaging Tone

Assigning Tone to Output Busses

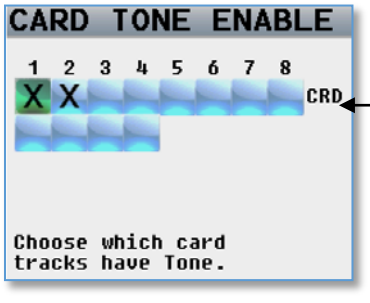
To assign tone to an output bus, press the BUS Key and go to the analog assign matrix to select which output bus will receive tone when tone is engaged. Please note that only the busses with tone routed to it will output the slate tone when the visual time code slate tone is activated.



Shows that output busses 1, 2 and 3 will output tone when tone is engaged.

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.



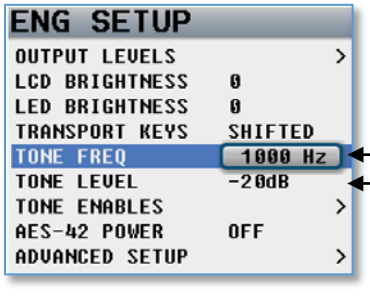
Shows that card tracks 1 and 2 will record tone when tone is engaged.

Engaging tone

To toggle tone generation on/off, press and hold the SETUP Key for 1.5 seconds.

Adjusting the tone frequency and level

Tone level and frequency can be adjusted in the ENG setup menu. It is advised to keep the tone level at -20dB for most operations.

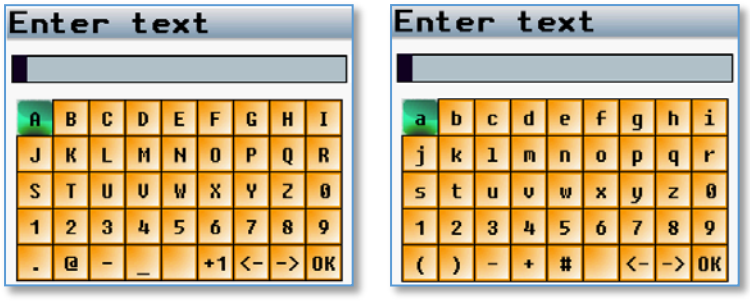


Adjusts Tone Frequency

Adjusts Tone Level

Entering Text

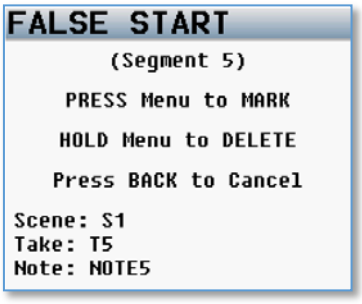
This menu allows alphanumeric data entry for all parameters that require data input. This screen will appear when you select an item that requires text.



- To enter a character, turn the MENU knob until the character is highlighted and then press the MENU knob to select the character.
- Rotating the MENU Knob will cause the highlighted box to move right and left (this will also wrap around to the next line).
- Pressing and rotating the MENU knob will cause the highlighted box to move up and down.
- Press and hold the MENU knob for 1 second to toggle between upper and lower case letters.
- If you are inputting scene or take metadata you can select +1 to increment the value by 1.
- To enter the text press and hold the headphone knob for 1 second or click on OK.

False Start

Pressing and holding the STOP Key for 1 second you press stop will open the false start page. From this page you can mark a take as a false start or just delete the file.



ZaxNet Quick Start Guide

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 the TX channel to the frequency you'll be using to send command on.
   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 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 receive frequency page. Make sure that the 2.4 GHz frequency on the TRX transmitter is the same as the one that you selected in Nomad's ZaxNet setup menu.
   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 the TRX 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 TRX transmitter matches the number that was chosen in the ZaxNet setup menu.
   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 unit code 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 time code 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.

QRX IFB audio receive

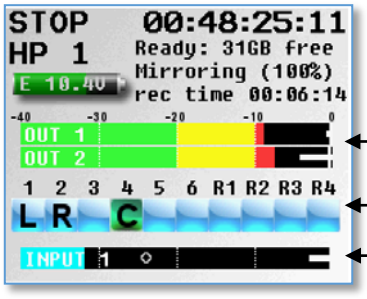
1. From Nomad:
   a. In the main menu, select ZaxNet Setup.
   b. Scroll down and select input configure. To be able to use ZaxNet, make sure that input type is set to 8 or higher.
   c. Power cycle Nomad.
   d. Return to the ZaxNet setup menu.
   e. Make sure IFB Mode is set to RX or TX+RX.
   f. Scroll down to RX channels and select Freq 1 and choose which frequency you want to receive audio on.
   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.
2. From the QRX:
   a. Go to the IFB extended menu.
   b. Set the IFB to TX and set the TX frequency to the same frequency that you set Nomad to.
3. From Nomad
   a. Go to the headphone setup matrix and put a cross point in the corresponding ZNET matrix. To listen to Freq 1 you will select the first box, Freq 2 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 that headphone matrix. When you leave that headphone matrix, Nomad will start transmitting again.

ERX IFB audio receive

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 to send command on.
      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.
2. At the ERX:
   a. Power up while holding the MENU key to get into 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 time code output enable menu, if it is to be used:
      - as an IFB audio feed for, leave it set to OFF.
      - as a time code 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 time code, advance to the TC OUTPUT LEVEL and adjust the voltage until the camera recognizes the time code.
3. In Nomad go to the BUS routing menu, select Tape/IFB out and select what audio you would like to send to the ERX. You can use any combination of card tracks, outputs or returns.

ENG /EFP Bag Operation

ENG mode was created to aid in mixing and recording when you are involved in a “run and gun” situation.
In ENG mode you can pan and mix all 10 inputs right from the ENG Home screen.



Busses 1 and 2 -Left / Right Output

Panning matrix

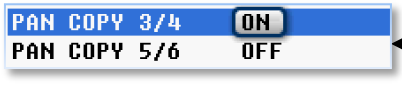
Input trim

In the ENG Home page you will see:

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

ENG Panning

The pan routing matrix is essentially a shortcut to the output bus assign matrix. From this matrix you can route post-fade analog inputs to a pair of outputs busses. When you make a change in the ENG 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 buses 3 & 4 and 5 & 6 can also be routed to follow the pan routing done on this home screen. To add pairs, go to the MODE menu and enable the appropriate pan copy.



Output Busses 3 & 4 will follow the pan selections made in the ENG Home Screen. Outputs 5 & 6 will NOT. Please note that by default 1 & 2 are always enabled.

Once panning is enabled in the ENG home screen, press the BUS Key to enter and highlight the PAN routing matrix. Then 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 ENG menu you remove the blank option, leaving only L, C, R.

The pan matrix shows where each channel will be outputted to the L=left, R = right, C= both. Pressing the MENU knob will advance the selection – pressing and hold will go back.

AutoTrim

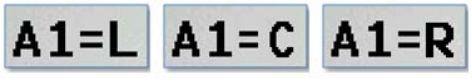
AutoTrim eliminates the need for a separate hardware trim knob for each analog input. AutoTrim mode can be enabled in Mode page.
When AutoTrim is enabled and a fader is “touched”, two things come into play:

- 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.

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

AutoPan

AutoPan is a feature that causes the COM key act as a pan knob. When AutoPan is turned on in the mode menu and you adjust a fader the blue LED next to that fader will illuminate indicating the input routed to that fader will be panned when the COM key is pressed. AutoPan is active from any meter screen.
When pressing the COM key the panning for the illuminated channel will cycle from left to center to right to blank - unless “Prevent Empty Pan” is turned ON then the blank option will not be cycled through.
As you pan with AutoPan the headphone display will temporally show which input is panned to which position.



Analog input 1 panned Left, Center, Right

Virtual Fader

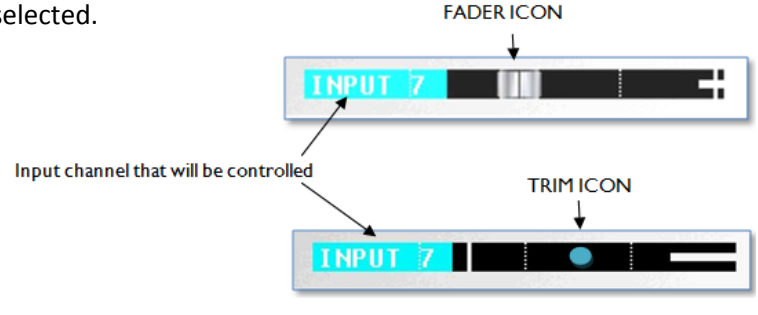
Nomad has 6 hardware faders and 10 inputs. To mix inputs 7-10 from the ENG home screen you need to activate the VFader mode in the mode menu. The virtual fader will allow you to mix all 10 channels right from the ENG meter screen using the MENU Knob as the hardware fader for those inputs.

Operating virtual faders

- 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 if you will be to be adjusting faders only or faders and trim.

- While in the ENG home screen, press the MENU Knob then 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 inputs you have chosen and the selected modes that you have selected.



USB Keyboard support

A USB keyboard plugged into Nomad can be used to start and stop recording, navigate menus, select and adjust menu items, enter metadata and adjust input trim.

System Requirements

The USB keyboard operates on the Linux processor that is installed in Nomads 8 and 12 only.
To use a USB keyboard the Nomad will need to be running software version 6.56 or higher.
The Linux processor needs to be running software dated Dec 21.
To check your Linux software version go into the ENG Menu > Advanced Setup > USB Status. On the USB status page you should see “USB Option Is Ready” and the software date should be Dec 21.
If any of these conditions are not met you should contact Zaxcom.

Attaching a USB Keyboard

With Nomad powered down plug a USB keyboard into the USB port then power up your nomad as normal. Approximately 30 seconds after boot-up Nomad will identify the attached keyboard and “Found Keyboard” will flash once on the meter screen. If the keyboard is not found you may need to power cycle your Nomad.

Using the Keyboard

After the keyboard is identified you can begin navigation and control. The list of keyboard shortcuts are identified in the below list. Some shortcuts have two key options - this is for smaller keyboard that may have limited keys.

Locking the Keyboard

There is an option to lock the keyboard to prevent accidental key presses when you are not using the keyboard.
To lock the keyboard simultaneously press CTRL+ALT+DELETE or simultaneously press CTRL+ALT+L
To unlock the keyboard simultaneously press CTRL+ALT+DELETE or simultaneously press CTRL+ALT+U
After you lock or unlock the keyboard you will briefly see “Keyboard Locked” or “Keyboard Unlocked” flash on the home screen. After the keyboard status is displayed you will not see this until you change the lock status again.

Keyboard Shortcuts

Menu Access			
Main Menu	ALT+M	ENTER	Press ↑↓ keys to navigate through menus and then press ENTER to select a menu item.
Headphone Matrix	ALT+H	H	To toggle through additional matrices press **>** to advance **or <** to go back.
Time Code Menu	F1	T	A single press opens the visual slate additional presses advances to time code menus.
AutoMix Menu	F2	A	Note: If AutoMix is set to off this short cut will take you to the Meta Data page.
ZaxNet Menu	F3	Z	Then press the number keys (1 thru 0) to jump to the specific transmitter setup.
Bus Routing Menu	F4	B	Then to navigate through the bus sub menus use the ↑↓ keys.
Set Up Menu	F6	S	To access specific setup pages press the use number keys (1 thru 0).
Record Enable Matrix	ALT+E		Access the record enable matrix.

Edit Metadata			
Scene	F7	ALT+S	Then use the USB keyboard to enter scene information and press enter when done.
Take	F8	ALT+T	Then use the USB keyboard to enter take information and press enter when done.
Note	F9	ALT+N	Then use the USB keyboard to enter note information and press enter when done.
Track name menu	F10	ALT+K	Then use the USB keyboard to enter track information and press enter when done.

Transport Control			
Record	CTRL+R		Starts recording.
Stop	CTRL+S		Stops recording or playback.
Play	CTRL+P		Starts playback.
Playback Scrub FF	]		Fast forward scrub while playing back.
Playback Scrub REW	[		Reverse scrub while playing back.
Jump To Next File	.		Jumps to the next file while playing back.
Jump To Previous File	,		Jumps to the previous file while playing back.

AutoPan			
AutoPan forward	CTRL+ +		Pans the highlighted input forward Left - Center - Right
AutoPan reverse	CTRL+ -		Pans the highlighted input reverse Right - Center - Left

Pre Fader Listen			
PFL mode	F5	P	Then select the input to listen to by pressing the number keys 1 through 8.
PFL Nomad faders	CTRL+		Pressing CTRL + a number key will toggle through inputs assigned to the Nomad faders.
PFL FP8 faders	ALT+		Pressing ALT + the number key will toggle through the inputs for the FP8 faders.
			If you hold ALT or CTRL key while pressing number keys adds additional PFL selections.

General Navigation			
Select a menu item	ENTER		Selects a highlighted item.
Go home	HOME		Jumps directly to the home meter screen.
Back	ESC		Jump back one menu.
Navigate in a menu			
Up	↑	→	These keys move the cursor up as well as increase a numeric value.
Down	↓	←	These keys move the cursor down as well as decrease a numeric value.
End	END		Jumps to the last item of the menu.
Toggle meter screens	PG UP	PG DN	Pressing SHIFT+8 to access the star key will also toggle meter screens.
Toggle HP matrices	**<**	**>**	These keys toggle through the headphone matrices

Additional			
Enable Tone	CTRL+T		Toggles tone on and off.
Enable Slate	CTRL+L		Push and hold to turn on slate mic.
Enable Com	CTRL+C		Push and hold to turn on com mic.
Trim Adjust	↑ ↓		Adjusts the input trim of the highlighted input.
MP3 Mark	CTRL+F1		When MP3 is enabled this will toggle marking the file to create an MP3 of the file.

Compact Flash Cards

Currently we recommend using SanDisk or Transcend compact flash cards. Any size card 4 to 128GB will be fine. For normal operation it is not necessary to used fast speed cards as it will not make Nomad write any faster.

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

If planning to record at 96 kHz, choose a card that claims 10 MB per second sustained write speed maximum write speed does not count.

It is recommended to test the cards before use, even if it is a brand/size that has used in the past. To test the cards simply preform a record test for 15 to 20 minutes, If Nomad stops recording 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 time code signal at 29.97 fps and 23.976 fps. This can result in the Denecke TS-C or the TS-3 slates identifying the wrong code, if you set the slate to "Auto Set" (position 5). In addition, if you use "Auto Set" you will experience a time code drift.
You don't need to replace your slates. The Denecke slate and Nomad can sync perfectly.
When setting the slate to receive time code at 29.97 or 23.976, do not use the auto set mode. Just simply set the rotary dial to the corresponding time code frame rate. When 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 or 1/8"TS)

Tip - +
Ring - N/C
Sleeve – Ground

Slate Microphone Input Connector (1/8" TRS)

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

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

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

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

Power Connector (Hirose-4 Connector)

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

GPI Remote Roll (USB Type A)

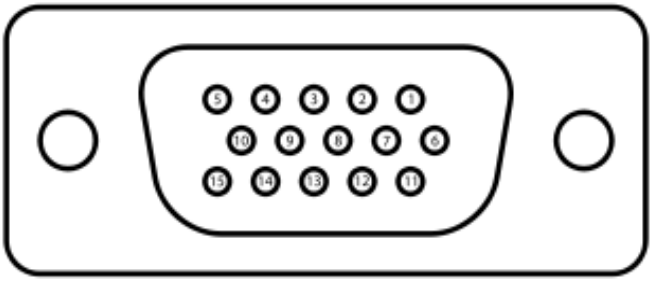
Pin 1 – Not Connected
Pin 2 – Not Connected
Pin 3 – Connect to one leg of the toggle switch
Pin 4 – Connect to the other leg of the toggle switch
(When the toggle switch is closed the circuit will be completed)

USB to Mix 8 (USB Type A to DB9M)

USB - DB9M
Pin 1 - Pin 1
Pin 2 - Pin 9
Pin 3 - Pin 8
Pin 4 - Pin 6
Case - Pin 5 (Shield)

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 named (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 menu.
9. After updating the software, it is generally advised to perform a Restore to Factory Defaults.

Nomad Specifications

Hardware

Analog Inputs

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

Digital Inputs (not available in Nomad-Lite)

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

Analog Outputs

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

Digital Outputs (not available in Nomad-4)

Channel Count	6 (3 AES pairs)
Connector	1 x mini DB-15 (DE-15) shared w/digital inputs
Source	Mix/Direct (selectable)

Headphones

Connector #1	1/4" stereo jack
Connector #2	1/8" (3.5mm) stereo jack
Dynamic Range	115 dB
Impedance	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)
Time code	
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)

Time code 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

Miscellaneous

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

Input Limiter	**(A x 10, D x 8)**
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
Input Notch Filter	**(A x 10, D x 8)**
Bands	2
Freq Range	20 Hz to 18 kHz
Q	9.9 (hardcoded)
Track Limiter	**1 set of settings across all tracks**
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
Input Highpass Filter	**(A x 10, D x 8)**
Freq. Range	Off or 40 to 240 Hz
Input Delay	**(A x 10, D x 8)**
Time Range	0 to 100 ms
Output Limiter	**1 set of settings across 6 outputs**
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)

Time code Reader / Generator

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

Product Support

Register your product with Zaxcom:	***http://zaxcom.com/support/product-registration/***
Download the latest **Firmware** from:	***http://zaxcom.com/support/updates/***
Download the latest **User Manuals** from:	***http://zaxcom.com/support/updates/***
Submit Technical Questions at:	***http://www.zaxcom.com/submit-a-technical-question***
Submit information for **Repair Services** at:	***http://www.zaxcom.com/support/repairs***
Join the **Zaxcom User Forum** at:	***http://www.zaxcom.com/forum/forum.php***
Join the **Zaxcom Face Book User Group** at:	***https://www.facebook.com/groups/682199065139938/***

Zaxcom Warranty Policy and Limitations

Zaxcom Inc. values your business and always attempts to provide you with the very best service.

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

Warranty Policy

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

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

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

Troubleshooting & Repair Services

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

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

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

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

Warranty Limitations

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

Limitation of Remedies

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

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

Limitation of Damages

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

No Consequential or Other Damages

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

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

Your Use of the Product

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

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

Additional Limitations on Warranty

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

FCC Notice:

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. The equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: • Reorient or relocate the receiving antenna • Increase the separation between the equipment and receiver • Connect the equipment into an outlet on a circuit different from that which the receiver is connected • Consult the dealer or an experienced radio/TV technician for help. Changes or modifications to this equipment not expressly approved by Zaxcom, Inc. could void the user's authority to operate it.