

**PROFESSIONAL PORTABLE
MULTITRACK RECORDER**

**SONOSAX
MINIR82**

USER INTERFACE

Firmware version 4.2

Audio equipment manufacturer

SONOSAX SAS S.A.
Ch. de la Naz 38
1052 Le Mont s/Lausanne
Switzerland

Tél: +41 21 651 0101
Fax: +41 21 651 0109

Web: www.sonosax.ch / www.sonosax.com
Email: sonosax@sonosax.ch

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1. INTRODUCTION

This manual describes the user interface, the operating instructions and all functionalities related to the Firmware version 4.2

2. POWERING THE UNIT

External PSU: use only the optional SONOSAX power supply.

Batteries: use only rechargeable NiMh batteries; standard dry cell batteries can not safely power the MINIR82. Insert batteries as shown in the picture below.



External DC supply: The MINIR82 can also be supplied from an external suitable DC source from 5 to 9 V. A 2-meter long cable with the DC plug is available, part number V980010. For use with high capacity 12V battery, a 9V to 18V DC/DC converter is available.

Powering On

Press simultaneously the UP and DOWN keys to turn ON the MINIR82

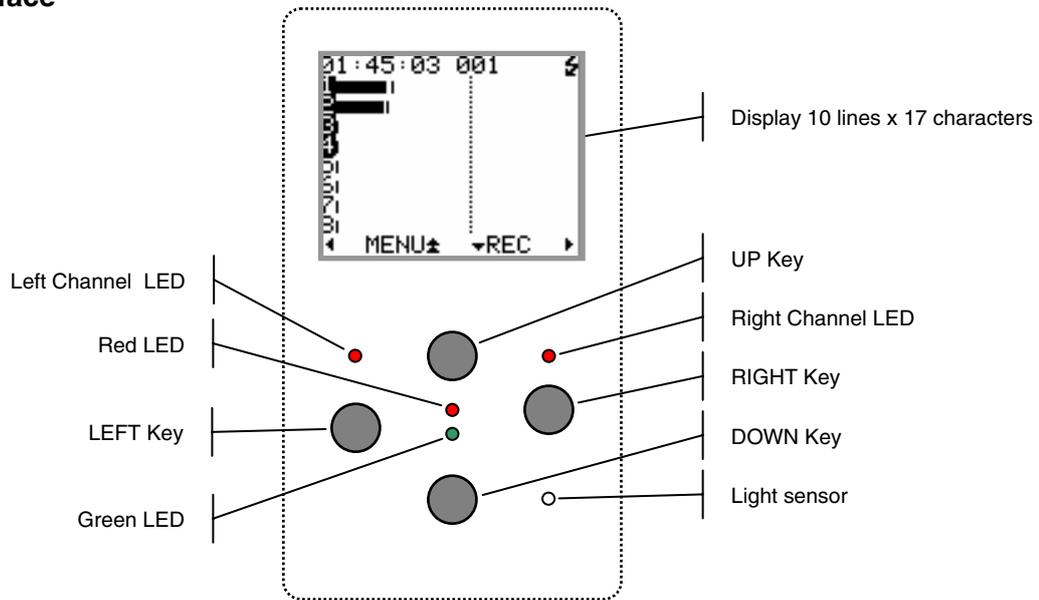
A boot up screen is displayed for approx. 2 seconds and shows the following information:

- The remaining free available space on the hard disc and on the Compact Flash card
- A power indication of either the batteries or the external PSU by means of a bar graph
- Date and Time
- The firmware version

```
SONOSAX
MINIR
HD      █          |
CF      ---
POWER  ██████████
08.05.2012  11:20
V4.2.0444
```

3. PRINCIPLE OF OPERATION

User Interface



Principle of operation

Status

The MINIR82 status is shown by means of the green or red "status" led's and the screen display. The following status scenarios are possible:

- RECORD READY the Red LED is flashing, the MINIR82 is ready to start recording
- RECORDING the Red LED lights On steady, confirming that a recording is in progress.
- PLAYING the Green LED lights On steady, a take is being played
- PLAYER PAUSE the Green LED flashes, the Take being played is paused at current location.
- PLAYER STOP a Take is loaded ready to be played, no LED lights on nor flashes

Clipping LEDs

The "Left Channel" and "Right Channel" Led's shows two particular statuses that are either:

- Limiters: either the Left or the Right LED lights On independently when the Microphone Input signal reaches a level of 2.5dB before clipping, thus activating the Limiter.
- Clipping: the Input signal is too high on the microphone A/D Converter, both Left and Right LED's light On together

On screen Display and Keys

The main working page (Tracks Monitoring) displays the 8 Peak Meters.

The meter range starts at -72dBFs and goes up to 0dBFs in 1dB steps from -72dB up to -24dB and in 0.5dB steps from -23.5dB up to 0dB.

A reference line at -9, -12, -18, or -20 dB can be displayed on screen (see configuration's menu)

The bottom line of the display shows the functions of the Keys. Conventionally, the UP and DOWN keys are used to change the parameters, the Right key is used to "Select" and the Left Key to "Cancel".

A single Arrow symbol denotes that an action is achieved by briefly pushing the key.

A double Arrow symbol means that the key must be pushed longer to validate the action.

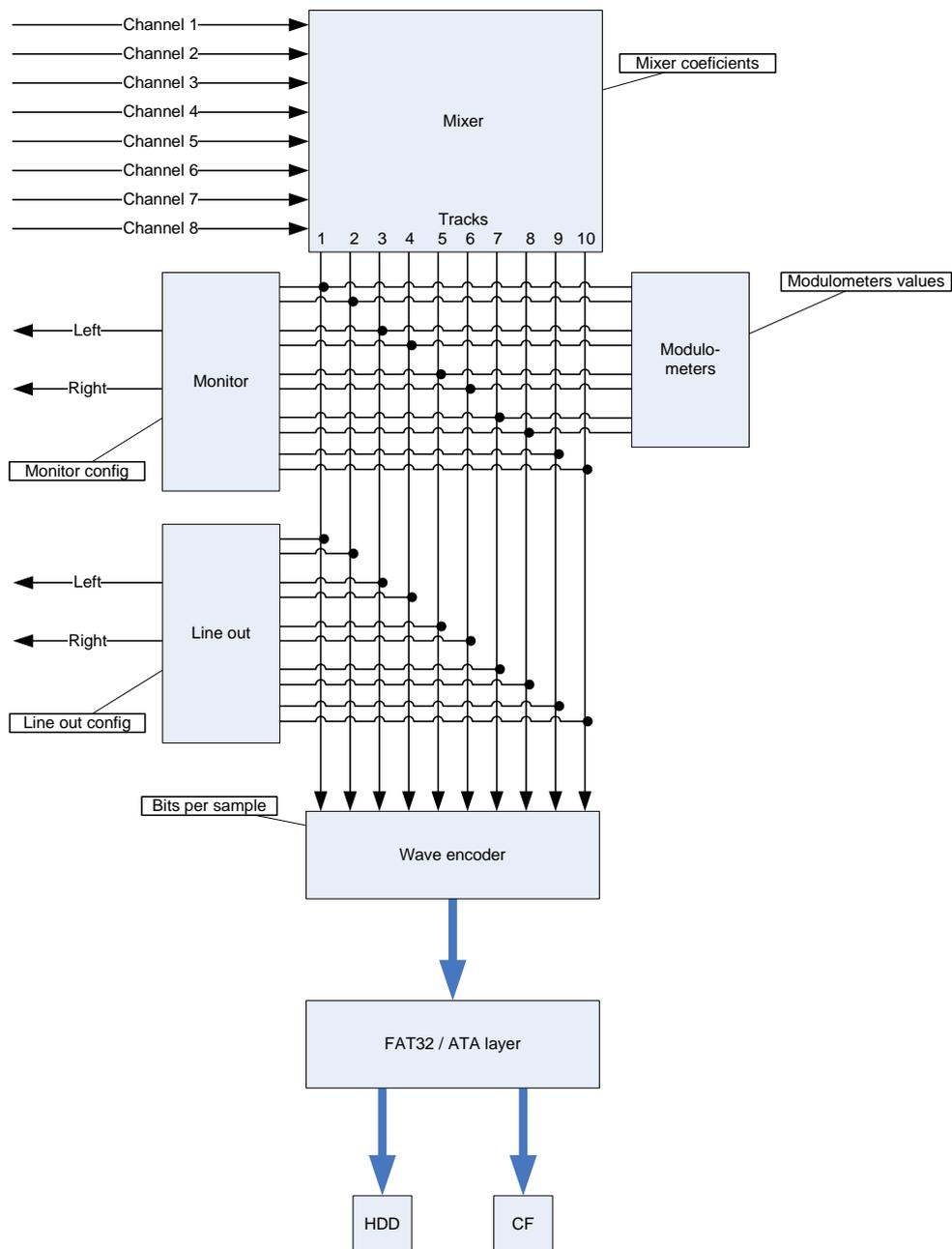
3.1.1 ARCHITECTURE - AUDIO PATH

The MINIR82 offers 12 physical Input channels, up to 8 of these input channels can be used at the same time. These 8 input channels are configured per pair:

- 1, 2: Microphone input or AES 1
- 3, 4: Line input or AES 2
- 5, 6: AES 3
- 7, 8: AES 4

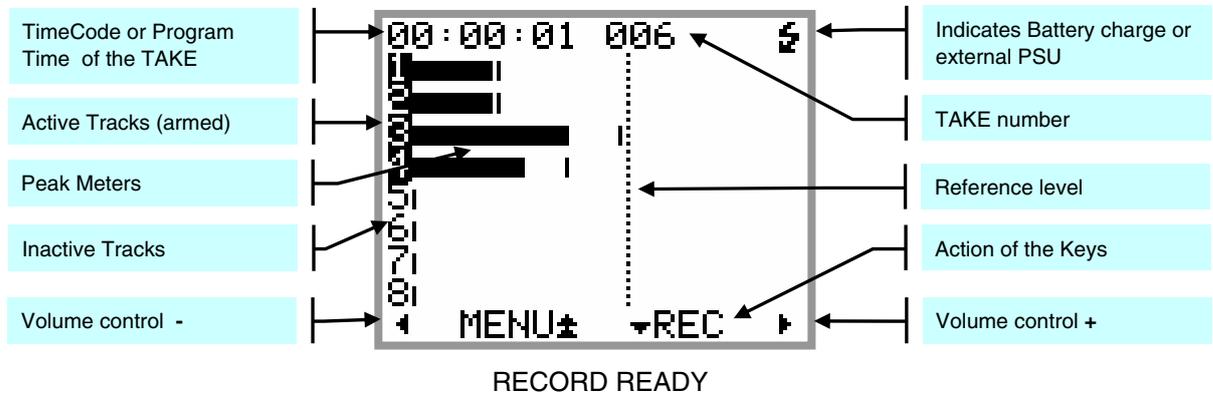
The routing Matrix allows routing and mixing any input channel to any of the 10 tracks. The first 8 tracks are dedicated for the hard disc (HD) and the 2 additional tracks for the Compact Flash card (CF).

The Monitoring can be configured by the user to listen any combination of these 10 tracks. However, the display shows only the meters of the 8 hard disk tracks



3.2 RECORDER MODE

The [TRACK MONITORING] page is the main page displayed by the MINIR82 while in Recorder mode. The numbering from 1 to 8 is always displayed and corresponds to the tracks recorded on the hard disk. The number of each active track (assigned in the matrix) appears in reverse video.



Record Ready: the red led is flashing

Key	Short pressure	Long pressure
LEFT	Reduce the volume by step of 1 dB	Reduce the volume continuously
RIGHT	Increase the volume by step of 1 dB	Increase the volume continuously
UP	Call the SOLO MONITORING page	Call the main contextual menu
DOWN	Start Recording	

While Recording: the red led lights steady

Key	Short pressure	Long pressure
LEFT	Reduce the volume by step of 1 dB	Reduce the volume continuously
RIGHT	Increase the volume by step of 1 dB	Increase the volume continuously
UP	Call the SOLO MONITORING page	Call the main contextual menu
DOWN	Add an INDEX**	STOP Recording

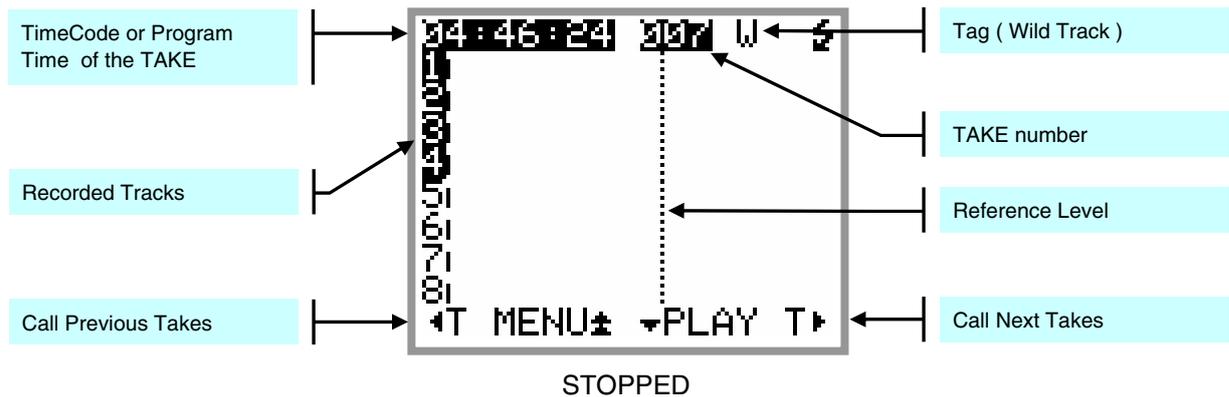
** **INDEX** = New TAKE: pressing the DOWN key briefly while recording will create a new Take; the Take number is automatically incremented by 1.

3.3 PLAYER MODE

When a TAKE is loaded either from the [LAST TAKE] menu or from the [BROWSE FILE] menu, the MINIR82 switches to PLAYER mode and automatically reconfigure the system with the same parameters as set during the recording of that particular Take; Routing - Monitoring etc.

The main screen of the Player is very similar as this of the Recorder. Due to space limitation the bottom line does not always displays the action of the Keys; posted information's depend on the status such as Playing - Paused or Stopped; however calling additional functionalities such as the [SOLO MONITORING], the [HEADPHONE VOLUME] or the [CONTEXTUAL MENU] is made as when in Recorder mode.

While Stopped: when the Player is stopped, a pressure to the Left or the Right key calls a new screen allowing a quick search of previous or next takes stored in the same folder (such as the folder of the current working days). The [BROWSE FILE] menu must be used to load a Take stored in a different folder.

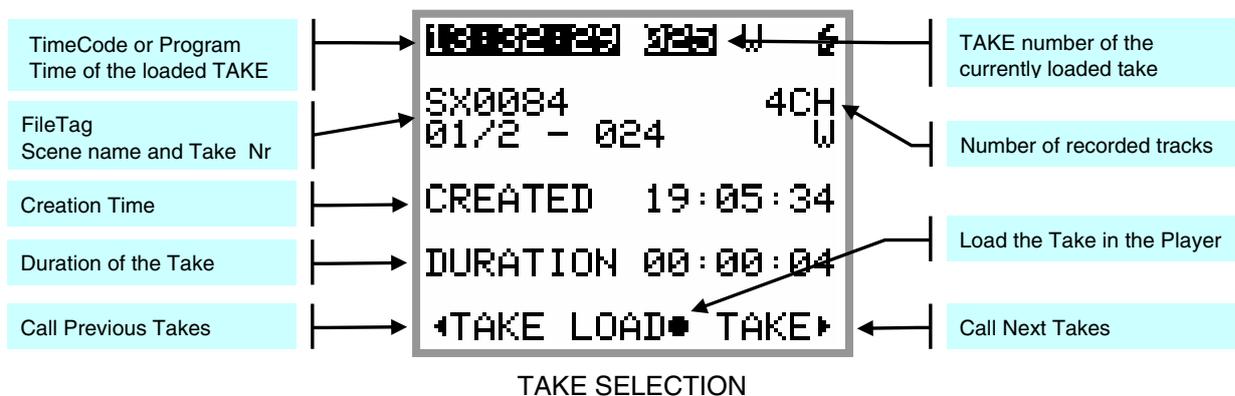


Key	Short pressure	Long pressure
LEFT	Call the TAKE Selection Menu	-----
RIGHT	Call the TAKE Selection Menu	-----
UP	-----	Call the contextual menu
DOWN	Start Playing	

Searching through the stored Takes does not load the Take in the Player until it is confirmed by pressing the UP key [LOAD].

The first line displays in reverse video the Time Code or the Program Time and Take nr of the Take which is loaded in the Player; all other information's posted on the screen are related to the previous or next Takes.

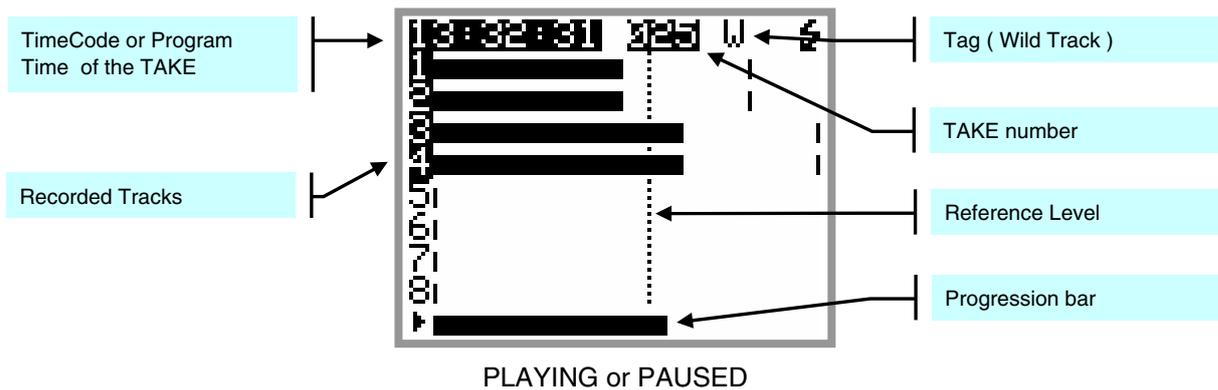
When the selection corresponds to the Take which is currently loaded in the Player, the FileTag, the Scene name and the Take Nr are posted in reverse video.



Key	Short pressure	Long pressure
LEFT	Scroll toward Previous Takes	
RIGHT	Scroll toward Next Takes	
UP	Load the Take in the Player	
DOWN	PLAY the currently loaded file	

While Playing: the green Led lights steady, a progression bar is displayed at the bottom of the screen; the left edge represents the beginning of the Take, the right edge represents the end of the Take.

Key	Short pressure	Long pressure
LEFT	Reduce the headphone volume in 1dB steps	Reduce the volume continuously down to minimum
RIGHT	Increase the headphone volume in 1dB steps	Increase the volume continuously up to maximum
UP	Call [SOLO MONITORING] page	Call the contextual menu
DOWN	PAUSE at current location	STOP playing, the cursor jump back to the start of the take

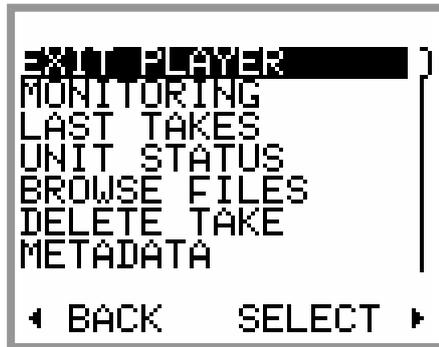


While Paused: the green Led is flashing. The Left & Right Keys are used for searching within the loaded Take in Fast Forward or Fast Rewind mode. The progression bar helps locating a specific position.

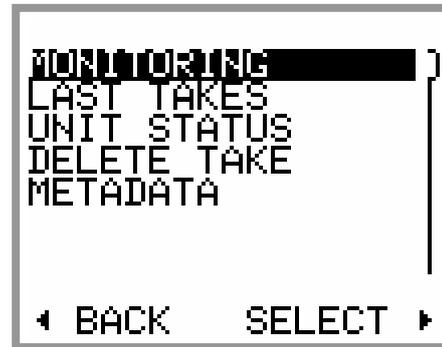
Key	Short pressure	Long pressure
LEFT	-----	Rewind at twice the play speed
RIGHT	-----	Forward at twice the play speed
UP	-----	Call the contextual menu
DOWN	Start Playing	Stop playing, the cursor jump back to the start of the take

3.3.1 Contextual menu in Player mode

When the MINIR82 is in Player mode, the contextual menu differs from the main menu while in Recorder mode and offers following sub-menus:



PLAYER STOPPED



PLAYING or PAUSED

Key	Short pressure	Long pressure
LEFT	Return to previous page	-----
RIGHT	Enter the selected sub-menu	-----
UP	Scroll the selection upward	-----
DOWN	Scroll the selection downward	-----

- EXIT PLAYER:** exits Player mode and returns to main [TRACK MONITORING] screen in Recorder mode
- MONITORING:** change the monitoring configuration for the [PHONES] output. These changes affect only the current playback and do not change the configuration of the Record mode
- LAST TAKES:** accesses the directory of the last Takes
- UNIT STATUS:** shows the configuration parameters of the take which is loaded in the player as they were set during the recording of that take. See also [UNIT STATUS] in the next chapter.
- BROWSE FILES:** accesses to the browser to search and playback recorded takes, see specific chapter
- DELETE TAKE:** the audio file(s) of the take is moved to the [TRASH] bin of the media from which the take was loaded in the player (either the Hard disk or the CF Card)
- METADATA:** display and edit the metadata of the loaded Take; see specific chapter
- SWITCH OFF:** turns OFF the unit.

3.4 ADJUSTING THE HEADPHONE LEVEL

In Recorder mode or while Playing a Take, pressing the LEFT or RIGHT Key temporarily displays a screen to show and adjust the headphone volume by means of a bar graph. The headphone volume is adjustable in 1 dB step from -30 dB to +18 dB.

While this screen is displayed, pressing the UP Key will lock the volume setting. Recall the screen and press the UP Key again to unlock the volume setting.

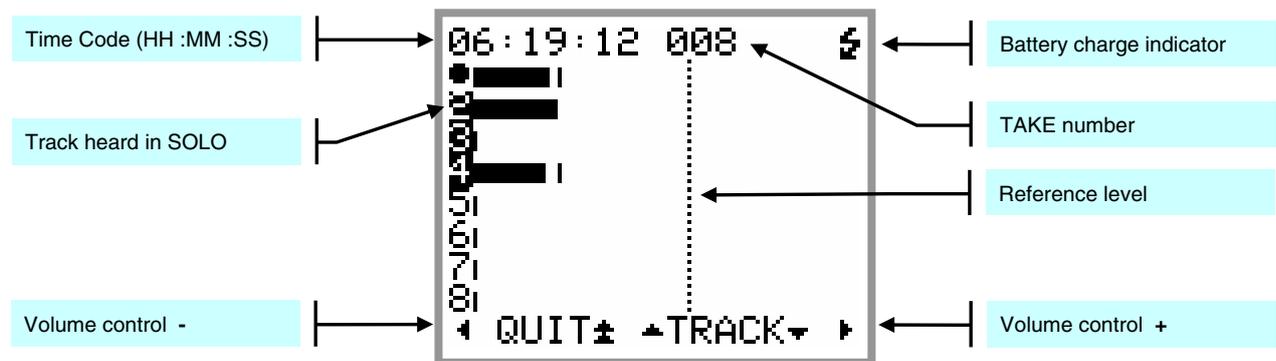


3.5 SOLO MONITORING

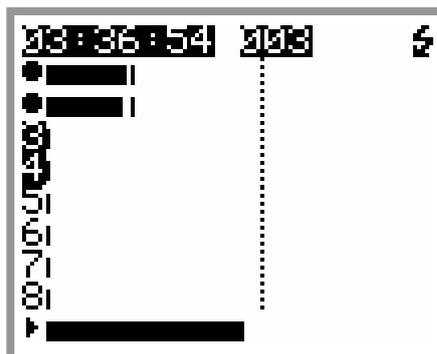
The [SOLO MONITORING] page can only be accessed from the main [TRACK MONITORING] page while in Recorder mode or while Playing a Take by briefly pressing the UP key, it allows listening to individual track or pair of tracks.

The sequence of track's selection is: 1, 2, 1+2, 3, 4, 3+4, 5, 6, 5+6, 7, 8, 7+8.

Keys	Short pressure	Long pressure
LEFT	Reduce the volume by step of 1 dB	Reduce the volume continuously
RIGHT	Increase the volume by step of 1 dB	Increase the volume continuously
UP	Select the previous track	---
DOWN	Select the next track	---

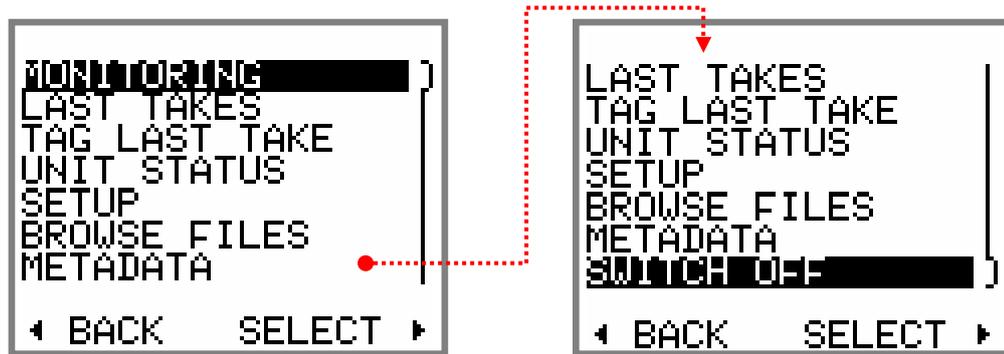


NOTE: while Playing a Take, the bottom line shows a progression bar instead of the action of the keys however the [SOLO MONITORING] page remain accessible by pushing the UP Key.



4. CONTEXTUAL MENU

The Contextual Menu is used to access to the sub-menus and configuration pages of the MINIR82. It can be called only from the main [TRACKS MONITORING] by a long pressure on the UP key.



Keys	Short pressure	Long pressure
LEFT	Return to previous page	
RIGHT	Select and enter the sub-menu	
UP	Scroll the selection upward	
DOWN	Scroll the selection downward	

The available menus depend on the current "Status" of the MINIR82 as described below:

While Recording:

- MONITORING
- UNIT STATUS
- TAG LAST TAKE

While Playing or in Pause:

- MONITORING
- UNIT STATUS
- DELETE TAKE
- METADATA

While in Record Ready:

- MONITORING
- LAST TAKES
- TAG LAST TAKE
- UNIT STATUS
- SETUP
- BROWSE FILES
- METADATA
- SWITCH OFF

While in Stop:

- EXIT PLAYER
- MONITORING
- LAST TAKES
- UNIT STATUS
- BROWSE FILES
- DELETE TAKE
- METADATA
- SWITCH OFF

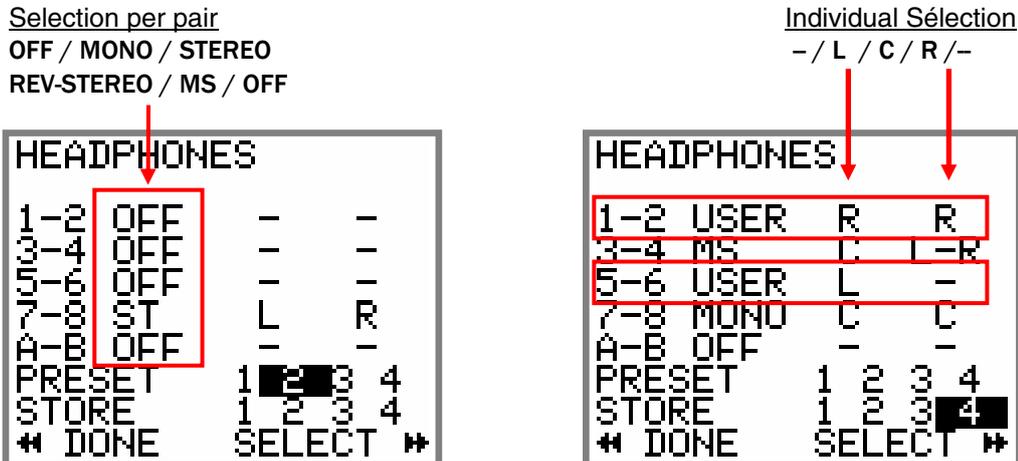
4.1 MONITORING

The [MONITORING] page is used to select, route and mix the 10 tracks of the MINIR82 to its headphone output. The pair [A-B] represents the two tracks of the CF Card.

The monitoring is configured either by selecting a pair of tracks or by selecting each track individually by moving the cursor. The selected field is shown in reversed video.

Pressing briefly on a key will move the cursor to select the field.

A long pressure on the RIGHT key scrolls the monitoring mode of the selected field.



Actions of the keys:

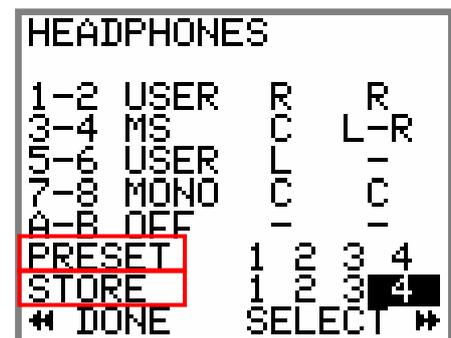
Keys	Short pressure	Long pressure
LEFT	Move the selector to the left	Keep the current configuration and return to the main menu
RIGHT	Move the selector to the right	Select the monitoring mode
UP	Move the selector to the upward	
DOWN	Move the selector to downward	

4.1.1 Saving the configurations [PRESET]

Up to 4 different monitoring configurations can be stored and recalled at any time. Any configuration is possible and is freely defined by the user.

To recall a configuration, select a [PRESET] 1 to 4 and press long on the RIGHT key

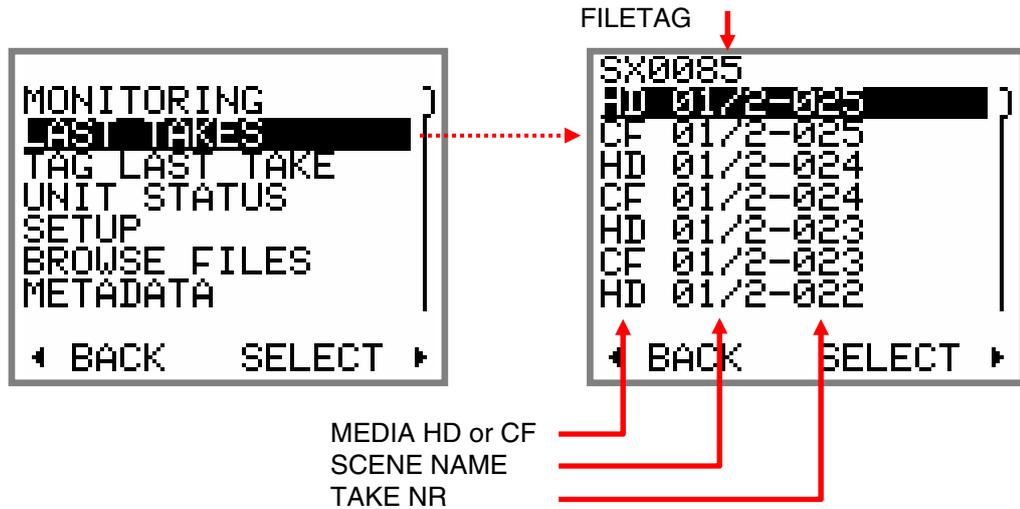
To store the displayed configuration; select any [STORE] 1 to 4 and press long on RIGHT key



NOTE: the active [PRESET] is posted in a black square. The black square disappears if the current (displayed) configuration does not correspond to a stored [PRESET], or if the configuration is modified.

4.2 LAST TAKE

The [LAST TAKES] page offers a quick access to the last recorded takes. The takes are displayed in reverse order, the last recorded take being displayed on the top of the list



The first line displays the "FILETAG"; it is the unique identifier related to the audio file name.

Keys	Short pressure	Long pressure
LEFT	Return to the main contextual menu	
RIGHT		Load the Take into the Player
UP	Move the selector to the upward	
DOWN	Move the selector to downward	

4.3 TAG LAST TAKE

This menu offers a quick access to tag the last recorder take either as False Start or to mark the audio file by editing its Metadata. From the main contextual menu enter the [TAG LAST TAKES] sub-menu then choose one of the following option and confirm the action with [SELECT] or cancel the action and return to the previous menu by pressing [BACK]:

- FALSE START** Tag the last recorded take as "False Start" and move the audio files to the [TRASH] bin. The Take nr will be decremented by one so that the next take will be tagged with the correct Take Nr. The audio file is notified with the suffix "F" when browsing the [TRASH] directory.
- NO GOOD** Tag the metadata of the last recorded take as "No Good", mostly used to warn the post-production that the recorded audio is to be rejected although the video take having the same take nr might be good. The audio files remain in the current working day directory, the Take nr is kept and the audio file is notified with the suffix "F" in the [BROWSE FILE] menu.
- CIRCLED** Tag the metadata of the last recorded take as "Circle" to notify the post production that the recorded audio files are to be chosen although the video take having the same take nr might be rejected. The audio files remain in the current working day directory, the take nr is kept and the audio file is notified with the suffix "C" in the [BROWSE FILE] menu
- WILD TRACK** Tag the metadata of the last recorded take as "Wild Track" to notify the post production that the audio file are not related or not "In Sync" to a specific video take, usually used for ambiances or atmo's. The audio file is notified with the suffix "W" in the [BROWSE FILE] menu. **NOTE:** selecting "Wild Track" while recording will keep the "Wild Track Tag" active for the following takes; selecting this Tag while stopped affects the last recorded take only.

4.4 UNIT STATUS

This menu displays all the main current settings of the MINIR82, spread on 4 pages. Press the UP or DOWN keys to scroll the pages; press LEFT key to return to the main contextual menu

<pre> SYSTEM INFO POWER EXTERNAL HD FREE 17 GB HD HH:MM 008:37 CF FREE 2.0 GB CF HH:MM 002:00 ◀ BACK ▶PAGES▶ </pre>	<table border="1"> <tr> <td>POWER</td> <td>Fuel gauge of the batteries in Volts and as bar-graph; post EXTERNAL if powered from an external power supply</td> </tr> <tr> <td>HD FREE</td> <td>Remaining disk space on the hard disk</td> </tr> <tr> <td>HD HH :MM</td> <td>Remaining recording time on the hard disk.</td> </tr> <tr> <td>CF FREE</td> <td>Remaining disk space on the CF card</td> </tr> <tr> <td>CF HH :MM</td> <td>Remaining recording time on the CF card</td> </tr> </table>	POWER	Fuel gauge of the batteries in Volts and as bar-graph; post EXTERNAL if powered from an external power supply	HD FREE	Remaining disk space on the hard disk	HD HH :MM	Remaining recording time on the hard disk.	CF FREE	Remaining disk space on the CF card	CF HH :MM	Remaining recording time on the CF card
POWER	Fuel gauge of the batteries in Volts and as bar-graph; post EXTERNAL if powered from an external power supply										
HD FREE	Remaining disk space on the hard disk										
HD HH :MM	Remaining recording time on the hard disk.										
CF FREE	Remaining disk space on the CF card										
CF HH :MM	Remaining recording time on the CF card										

NOTE: the remaining recording time depends on the configuration such as sampling rate and nr of tracks

<pre> AUDIO CONFIG SYNC INTERNAL FS 48k BPS 24 BITS UP/DOWN NOMINAL FILE POLYPHON MIRROR ON ◀ BACK ▶PAGES▶ </pre>	<table border="1"> <tr> <td>SYNC</td> <td>Audio synchronisation such as: AES, internal, word clock or video.</td> </tr> <tr> <td>FS</td> <td>Sampling frequency 44.1k, 48k, 88.2k, 96k, 176.4k, 192kHz.</td> </tr> <tr> <td>BIT DEPTH</td> <td>Numbers of bits per sample (quantization): 24 bits, 16D bits (dithering), 16 bits.</td> </tr> <tr> <td>UP/DOWN</td> <td>Nominal, NTSC Correction +/- 0,1% or C Mode</td> </tr> <tr> <td>WAV FILE</td> <td>File Format: MONO, STEREO, POLYPHONIC</td> </tr> <tr> <td>MIRROR</td> <td>Mirroring status on the CF Card: OFF, ON.</td> </tr> </table>	SYNC	Audio synchronisation such as: AES, internal, word clock or video.	FS	Sampling frequency 44.1k, 48k, 88.2k, 96k, 176.4k, 192kHz.	BIT DEPTH	Numbers of bits per sample (quantization): 24 bits, 16D bits (dithering), 16 bits.	UP/DOWN	Nominal, NTSC Correction +/- 0,1% or C Mode	WAV FILE	File Format: MONO, STEREO, POLYPHONIC	MIRROR	Mirroring status on the CF Card: OFF, ON.
SYNC	Audio synchronisation such as: AES, internal, word clock or video.												
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BIT DEPTH	Numbers of bits per sample (quantization): 24 bits, 16D bits (dithering), 16 bits.												
UP/DOWN	Nominal, NTSC Correction +/- 0,1% or C Mode												
WAV FILE	File Format: MONO, STEREO, POLYPHONIC												
MIRROR	Mirroring status on the CF Card: OFF, ON.												

<pre> TIMECODE TIME 15:14:43 FORMAT 23.976 SOURCE EXT JAM MODE FREE RUN PRG TIME 00:01:07 ◀ BACK ▶PAGES▶ </pre>	<table border="1"> <tr> <td>TIME</td> <td>Current value of the Time Code (hours: minutes: seconds)</td> </tr> <tr> <td>FORMAT</td> <td>Time Code format, generated or received: 23.976, 24, 25, 29.97ND, 29.97D, 30ND, 30D, AUTO, INTERNAL, UNKNOWN.</td> </tr> <tr> <td>SOURCE</td> <td>Source of the time code signal: EXT JAM SYNC, EXT NO JAM, INTERNAL, INTERNAL OUTPUT.</td> </tr> <tr> <td>MODE</td> <td>REC RUN, FREE RUN</td> </tr> <tr> <td>ELAPSED</td> <td>Elapsed time from the beginning of the Take</td> </tr> </table>	TIME	Current value of the Time Code (hours: minutes: seconds)	FORMAT	Time Code format, generated or received: 23.976, 24, 25, 29.97ND, 29.97D, 30ND, 30D, AUTO, INTERNAL, UNKNOWN.	SOURCE	Source of the time code signal: EXT JAM SYNC, EXT NO JAM, INTERNAL, INTERNAL OUTPUT.	MODE	REC RUN, FREE RUN	ELAPSED	Elapsed time from the beginning of the Take
TIME	Current value of the Time Code (hours: minutes: seconds)										
FORMAT	Time Code format, generated or received: 23.976, 24, 25, 29.97ND, 29.97D, 30ND, 30D, AUTO, INTERNAL, UNKNOWN.										
SOURCE	Source of the time code signal: EXT JAM SYNC, EXT NO JAM, INTERNAL, INTERNAL OUTPUT.										
MODE	REC RUN, FREE RUN										
ELAPSED	Elapsed time from the beginning of the Take										

<pre> METADATA FILETAG SX0086 PROJECT ABTYC SCENE 01/2 TAKE 026 TAPE 20110810 ◀ BACK ▶PAGES▶ </pre>	<table border="1"> <tr> <td>FILETAG</td> <td>unique identifier (prefix of the file name)</td> </tr> <tr> <td>PROJECT</td> <td>Project name</td> </tr> <tr> <td>SCENE</td> <td>Scene name</td> </tr> <tr> <td>TAKE</td> <td>Take number</td> </tr> <tr> <td>TAPE</td> <td>Tape ID = Working day</td> </tr> </table>	FILETAG	unique identifier (prefix of the file name)	PROJECT	Project name	SCENE	Scene name	TAKE	Take number	TAPE	Tape ID = Working day
FILETAG	unique identifier (prefix of the file name)										
PROJECT	Project name										
SCENE	Scene name										
TAKE	Take number										
TAPE	Tape ID = Working day										

4.5 SETUP (CONFIGURATION'S MENUS)

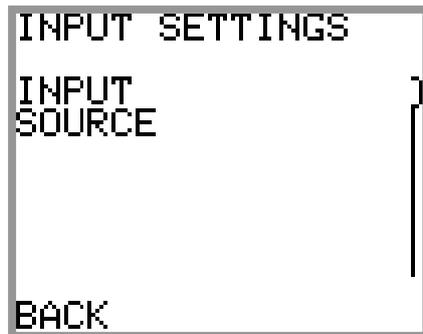
The [SETUP] menu contains "sub-menus" (or headings) sorted in a logical order; these sub-menu are used to configure the MINIR82 as per user's requirements.

Scroll the sub-menu by pushing the UP or DOWN key; a scroll bar on the right side of the screen shows the position in the list.

Press on the RIGHT key [SELECT] enter the sub-menu accessing the editable parameters.

Press on the LEFT key [BACK] returns to the previous menu.

Navigating in the menus is done as per the examples below

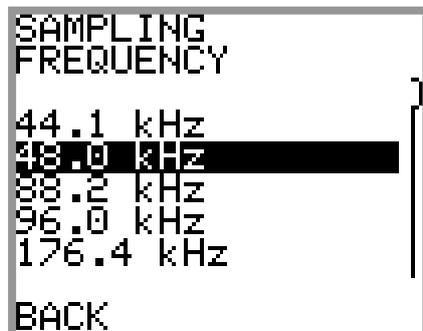


A menu with no parameter displays one heading per screen. Thus, it scrolls the available sub-menus



A sub-menu with a displayed parameter is at the end of the menu tree, it indicates the current value of the parameter that can be edited.

While in a menu with parameter, press the Right key to choose the value of that parameter.



A menu with a list shows the available values of a parameters. The selection is posted in reverse video



The text-editing menu.

The text to edit is displayed between brackets that show the limits of the text size.

Two arrows indicate the selected character. Briefly press on LEFT or RIGHT to select a character. Briefly press on UP or DOWN to scroll the characters. Keep pressing to scroll the characters rapidly.

Pressing long on the RIGHT saves the text and return to the previous page. Pressing long to the LEFT cancels the editing and return to the previous menu.

4.5.1 MENU's Tree Structure

The greyed menus are those where parameters are visible.

Level 1	Level 2	Level 3	Changeable values
ROUTING SETTINGS	ROUTING TABLE	Routing matrix	
	MIXING LEVEL		NONE , ATT1.5, ATT3, ATT6
	MIRRORING		OFF , ON
RECORD SETTINGS	BIT PER SAMPLE		16 bits, 16 bits dither, 24 bits
	SAMPLING FREQUENCY		44.1, 48 , 88.2, 96, 176.4, 192 kHz
	SAMPLING UP/DOWN		Nominal , UP 0,1%, DOWN 0,1%, C Mode
	AUDIO SYNC MODE		Internal , Word Clock In, Video In
	FILE FORMAT		Mono , Stereo, Polyphonic
	PRE-RECORD TIME		None, 1, 2 , 5, 10, 20 seconds
INPUT SETTINGS	INPUT SOURCE	MIC/LINE 1-2	MIC/LINE , AES
		LINE 3-4	LINE , AES
	MIC LOW FREQ CUT	MIC/LINE 1	ON , OFF
		MIC/LINE 2	ON , OFF
LINE IN LEVEL		+15 , +6, 0, -10dBu	
TIMECODE SETTINGS	SOURCE		EXTERNAL JAM SYNC , EXTERNAL NO JAM, INTERNAL, OUTPUT
	FORMAT		23.976, 24, 25, 29.97 ND, 29.97 D, 30N D, 30 D, AUTO
	RUNNING MODE		FREE RUN , RECORD RUN
	SET MANUAL		Editing of the TC value manually
	SET FROM TIME		Grab the time of the real time clock
USER SETTINGS	List available user setting	Specific menu to create, recall, delete or overwrite user settings	
SYSTEM SETTINGS	HARD DRIVE	Specific menu to format or mount the HD and empty the trash	
	CF CARD	Specific menu to format or mount the CF and empty the trash	
	REFERENCE LEVEL		None, -20dB , -18dB, -12dB, -9dB
	MODULOMETERS HOLD TIME		None, 3 sec , 10 sec, 2 min, Infinite
	TIME DISPLAY		Time Code, Program Time, Time Code RV, Program Time RV
	AUTO POWER DOWN		OFF , 5 min, 10 min, 15 min, 30 min
	HEADPHONE REC TONE		OFF , ON
	SYSTEM DATE	Specific menu to edit the date of the Real Time Clock	
	SYSTEM TIME	Specific menu to edit the time of the Real Time Clock	
	FILETAG	Specific menu to edit the prefix of the FileTag (2 characters)	
	SYSTEM INFO	Display main system information such as firmware version etc	
FACTORY SETTINGS	Resets all settings to factory default values	NO, YES	

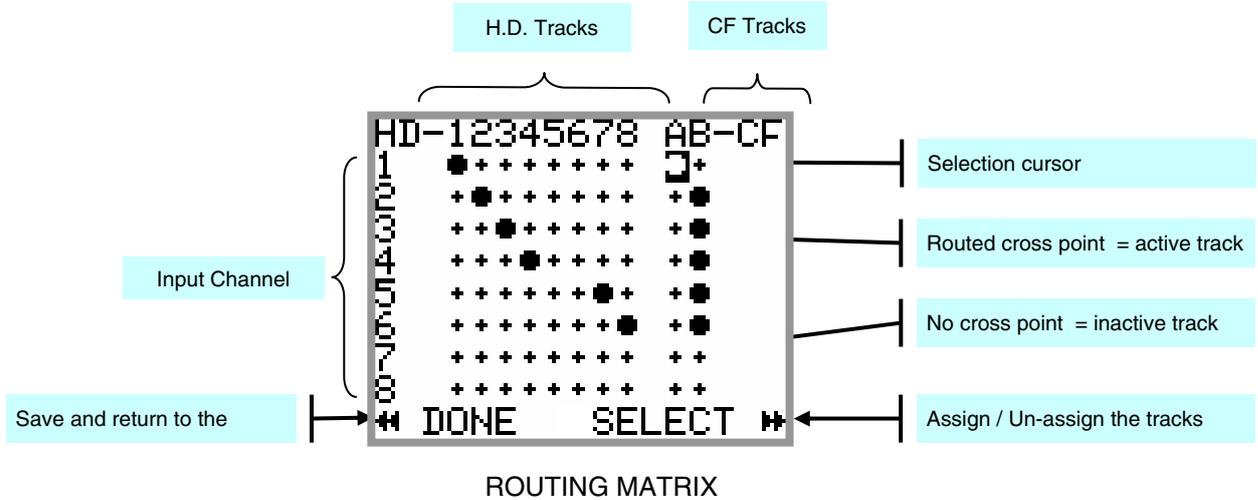
Explanation's of each menu is detailed in the following chapters.

NOTE: values mentioned in bold are the default values of the [FACTORY SETTINGS]

4.5.2 ROUTING SETTING

SETUP > ROUTING SETTINGS > ROUTING TABLE

The routing, or channel assignment to the tracks, is done by means of a specific matrix as shown below:



The round dot assigns the inputs channels to the tracks. Any combination is possible, thus any input channel can be routed to any track or to multiple tracks and multiple channels can be routed on the same track (mixing).

The figure above shows a 1x1 routing between inputs and tracks 1 to 4. Inputs 5 and 6 are routed to tracks 7 and 8. In addition, input channels are also individually routed to the tracks of the CF card.

Keys	Short pressure	Long pressure
LEFT	Move the selection cursor to the Left	Return to the previous menu
RIGHT	Move the selection cursor to the Right	Activate/Deactivate the assignment
UP	Move the selection cursor upward	
DOWN	Move the selection cursor downward	

NOTES: The configuration is automatically saved when leaving this menu
The un-assigned Tracks (no dot on the crossing) are automatically deactivated.

SETUP > ROUTING SETTINGS > MIXING LEVEL

The [MIXING LEVEL] menu defines the attenuation to be applied to each channel when summing (mixing) multiple input channels onto the same track; the attenuation is computed to avoid a digital clipping. Four possibilities are offered and the choice depends on the phase coincidence of the sources.

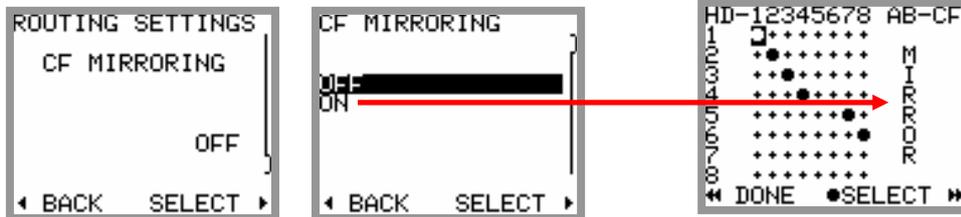
- NONE no attenuation at all
- ATT1.5 mainly used if the sources have no phase coincidence
- ATT3 recommended for phase coincident sources such as stereo or M/S microphone
- ATT6 only used if the sources are absolutely in phase

The table below summarizes the exact attenuations computed and applied according to the number of input channels assigned to the same track.

Number of input channels assigned to the same track	NONE [in dB]	ATT1.5 [in dB]	ATT3 [in dB]	ATT6 [in dB]
1	0	0	0	0
2	0	1.8	3.3	6
3	0	2.5	5	10.1
4	0	3.3	6	12
5	0	3.3	7.2	14.5
6	0	4.1	7.2	14.5
7	0	4.1	8.5	18.1
8	0	5	8.5	18.1

SETUP > ROUTING SETTINGS > MIRRORING

When the [MIRRORING] function is activated, the routing and the eventual mixing level of the input channels onto the hard disk tracks is identically replicated on the Compact Flash card. The tracks are recorded simultaneously on the hard drive and on the CF card providing that the performances of the CF card permits. When the Mirroring is activated, the two tracks of the CF card no longer appear in the routing matrix and are replaced by the word MIRROR.



NOTE 1: Several series of tests with CF cards offering good performances helped to validate the recording of up to 8 channels at 96kHz/24bit. If the performances of the CF card does not allow mirroring, an alarm "CF" will flash on the screen. The recording on the CF card will be aborted but will continue on the HD.

NOTE 2: If the storage capacity of the CF card is reached during the recording, the CF card will stop recording but the recording will continue on the hard disk.

4.5.3 RECORD SETTINGS

SETUP > RECORD SETTINGS > BIT PER SAMPLE

This menu sets the sample's quantization (number of bits per sample) stored in WAVE files. Although the A/D converters of the MINIR82 exclusively convert in 24 bits mode, the DSP can re-quantize the recorded samples by the following values:

- 24 bits: original value as quantified by the A/D converter
- 16 bits Dithering: reduction to 16bits per sample with triangular dithering
- 16 bits: reduction by truncation of the original quantization

SETUP > RECORD SETTINGS > SAMPLING FREQUENCY

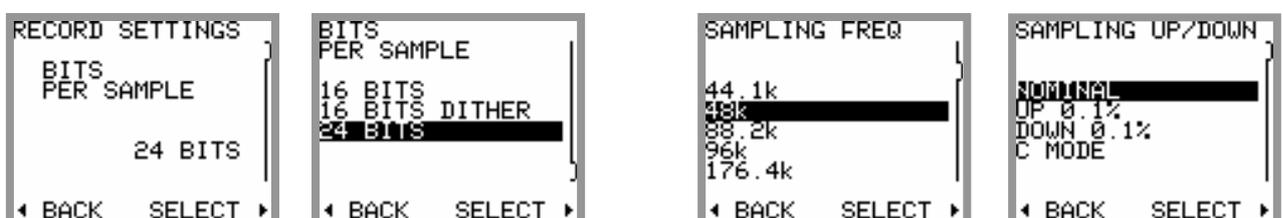
This menu sets the sampling frequency. Choices are: 44.1, 48, 88.2, 96, 176.4 and 192 kHz.

If an AES input is assigned, the MINIR82 will automatically lock on sampling frequency of the incoming AES signal, thus the selected sampling frequency will be overwritten. The sampling frequency of the incoming AES signal can be checked in the [UNIT STATUS].

SETUP > RECORD SETTINGS > SAMPLING UP / DOWN

The sampling frequency can be set either at its nominal value or pulled Up or Down for the NTSC world; when the sampling Up or Down is chosen, the nominal sampling frequency is either increased respectively decreased by 0,1% (or one per thousand). The symbol " %+ " or " %- " is then displayed on the upper right corner of the main screen.

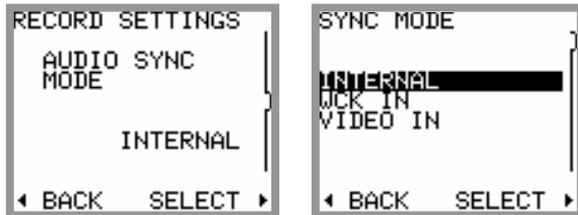
C Mode is a special "compensated" mode faking the pull Up/Down; the recording is performed at nominal sampling rate and the stamped value indicates 48000 which is the true number of samples per second; however the Time Code is compensated (or cheated) so that the Time is stamped as if the digitization was done at 48048 (the Time Stamp is computed by counting the number of samples since midnight)



SETUP > RECORD SETTINGS > AUDIO SYNC MODE

Audio synchronization means locking the sampling frequency on a given signal, either internal or external. The synchronization mode is shown in the Unit Status menu.

The different synchronization modes and the validity of the parameters are explained below:



INTERNAL

The MINIR82 locks on its internal clock generator, which generates all sampling frequencies (44.1, 48, 88.2, 96, 176.4 and 192 KHz). This generator is used only when no other clock is available.

- Sampling frequency: active
- Sampling up/down: active
- Bit per sample: active

Synchronisation on AES input:

The MINIR82 will automatically lock on the **incoming AES clock of the channels 5-6**

- Sampling frequency: inactive
- Sampling up/down: inactive
- Bit per sample: active

WCK IN

WCK IN must be selected to lock the MINIR82 on an external word clock applied to the SYNC IN connector. This mode is overwritten when an input AES is routed.

- Sampling frequency: inactive
- Sampling up/down: inactive
- Bit per sample: active

VIDEO IN

VIDEO IN must be selected to lock the MINIR82 on an external clock derived from a video signal applied to the SYNC IN connector. This mode accepts all video formats, including the bi and tri sync level systems.

This mode is overwritten when an input AES is routed.

- Sampling frequency: active
- Sampling up/down: inactive
- Bit per sample: active

SETUP > RECORD SETTINGS > FILE FORMAT

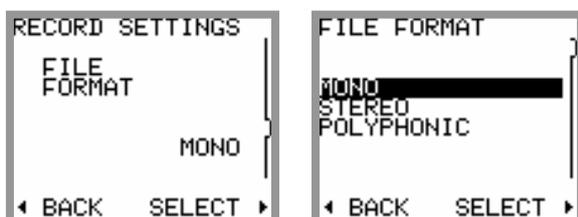
The recorded audio tracks can be stored in three different file formats:

- MONO
- STEREO
- POLYPHONIC

When MONO is selected, each track is recorded in a separate mono file.

When STEREO is selected, the system records each pair of tracks in a single stereo file. The pairs are always 1+2, 3+4, 5+6 and 7+8.

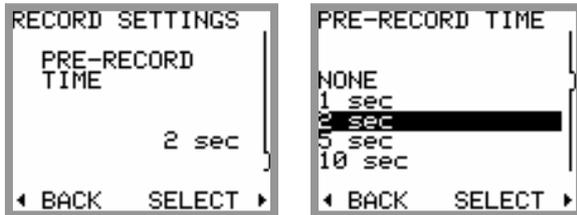
If POLYPHONIC mode is selected, all active tracks are recorded in a single file. This mode requires to enable the MIRRORING regardless of whether the Compact Flash card is present or not



SETUP > RECORD SETTINGS > PRE-RECORD TIME

The Pre-Record time can be set from zero up to 20 seconds. The selected value may not always be possible due to the physical limitation of the built-in memory. The Pre-Record time depends on following factors:

- Number of Tracks being assigned
- Sampling frequency
- Sample Rate and Pull UP/ Pull DOWN correction



When the required pre-record time is not possible, the MINIR82 will perform on "best effort" basis to provide with the maximum possible. The table below shows the maximum values of the pre-record time [seconds]:

16 bits		Tracks count									
fs	1	2	3	4	5	6	7	8	9	10	
44100	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	18.5	16.6	
48000	20.0	20.0	20.0	20.0	20.0	20.0	20.0	19.1	17.0	15.3	
88200	20.0	20.0	20.0	20.0	16.6	13.9	11.9	10.4	9.2	8.3	
96000	20.0	20.0	20.0	19.1	15.3	12.7	10.9	9.6	8.5	7.6	
176400	20.0	20.0	13.9	10.4	8.3	6.9	5.9	5.2	4.6	4.2	
192000	20.0	19.1	12.7	9.6	7.6	6.4	5.5	4.8	4.2	3.8	

24 bits		Tracks count									
fs	1	2	3	4	5	6	7	8	9	10	
44100	20.0	20.0	20.0	20.0	20.0	18.5	15.9	13.9	12.3	11.1	
48000	20.0	20.0	20.0	20.0	20.0	17.0	14.6	12.7	11.3	10.2	
88200	20.0	20.0	18.5	13.9	11.1	9.2	7.9	6.9	6.2	5.5	
96000	20.0	20.0	17.0	12.7	10.2	8.5	7.3	6.4	5.7	5.1	
176400	20.0	13.9	9.2	6.9	5.5	4.6	4.0	3.5	3.1	2.8	
192000	20.0	12.7	8.5	6.4	5.1	4.2	3.6	3.2	2.8	2.5	

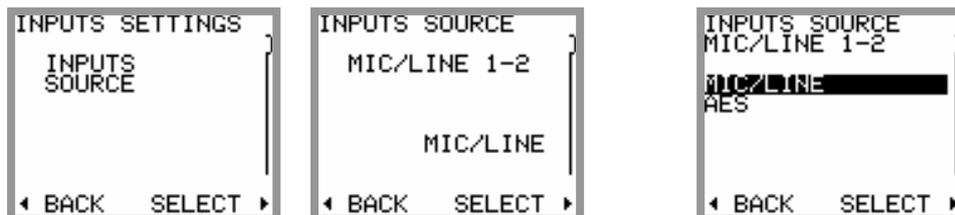
In these tables, the Pull Up/Pull Down correction is not taken into account (negligible).

4.5.4 INPUTS SETTINGS

SETUP > INPUTS SETTINGS > INPUTS SOURCE

This menu is used to select which of the analogue or the digital source of channels 1-2 and 3-4 is assigned to the routing matrix; the selection is always made for a per pair of channels

- Input channels 1 & 2: MIC/LINE 1 & 2 or AES 1
- Input channels 3 & 4: LINE 3 & 4 or AES 2



SETUP > INPUTS SETTINGS > MIC LOW FREQ CUT

When channels 1-2 are configured as MIC/LINE INPUT, a low-pass filter can be activated for each channel individually by this menu.

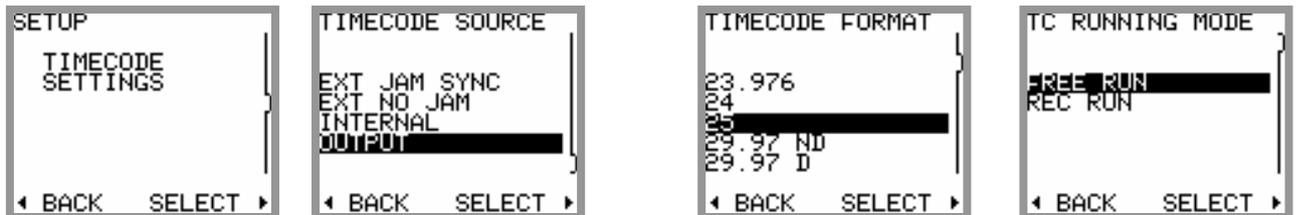
SETUP > INPUTS SETTINGS > LINE IN LEVEL

The sensitivity of LINE INPUT 3 – 4 can be set so that the input level can reach 0dBFs on the A/D converter, e.g. if +15 is selected then a line level of 15dBu will reach 0dBFs. Choices are:

- +15 dBu / + 6 dBu / 0 dBu / -10 dBu

4.5.5 TIME CODE SETTINGS

The MINIR82 can either receive or generate a Time Code at any of the conventional formats; the following sub-menus are used to set the required Time Code parameters.



SETUP > TIMECODE > SOURCE

This menu sets the source of the Time Code; it can be taken either from its own internal Time Code generator or from an external generator connected on the mini-jack as described below.

- External Jam Sync the TC is jammed on an external source
- External No Jam the TC is read continuously
- Internal the TC is internally generated but its output on the mini-jack is disabled
- Output the TC is internally generated and is available on the mini-jack connector

NOTE: while selecting [OUTPUT], a frame rate other than [AUTO] (states for auto detect) must be selected in the menu [TIME CODE FORMAT]. If [AUTO] is selected, a warning is posted on the screen and a bip tone is heard.

NOTE: if [OUTPUT] is selected in PLAYER mode, the Time Code of the played file is outputted

SETUP > TIMECODE > FORMAT

When [EXT JAM SYNC] or [EXT NO JAM] is selected, the MINIR82 detects automatically the format (also called Frame Rate) of the incoming Time Code; however specifying a format allows to check the validity and the accuracy of the incoming Time Code, in this case an incoming Time Code having a format different from that specified or not within the standard tolerances will trigger an alarm.

The available Time Code formats are:

- 23.976 - 24 - 25 - 29.97 Non Drop - 29.97 Drop - 30 Non Drop - 30 Drop - AUTO

SETUP > TIMECODE > RUNNING MODE

Two possible choices:

- FREE RUN the Time Code is absolute and linear. It runs continuously and never stops
- RECORD RUN Time Code is generated only while recording

SETUP > TIMECODE > SET MANUAL

This menu is used to set the Time Code value manually.

SETUP > TIMECODE > SET FROM TIME

The value of the Time Code is grabbed from the real time clock of the MINIR82 (system time).



4.5.6 USER SETTINGS

The [USER SETTINGS] menu allows saving, loading or updating a complete configuration to/from an ASCII file. When entering the menu, the first line offers creating and naming a new "User Setting":



SETUP > USER SETTINGS > CREATE NEW

Create a new User Setting file based on the current (active) configuration of the MINIR82; the system ask you to type a name for this new setting. The file name must be formatted as explain below

- 8 characters maximum; alphanumeric characters, space and underscore only (A..Z, 0..9, _)

Then confirm with [OK] to save the new settings file and return to the previous menu or select [CANCEL] to exit without saving.

The menu displays a list of all existing "User Settings" sorted in alphabetic order; use the Joystick to scroll the list then press Centre or Right to select a setting, a new page is displayed offering 3 possible actions

SETUP > USER SETTINGS > SELECT > RECALL SELECTED

Load the selected setting and reconfigure the MINIR82 accordingly. Caution: this operation will crush the current configuration!

SETUP > USER SETTINGS > SELECT > DELETE SELECTED

Permanently delete the selected configuration file. Caution: this operation is irreversible!

SETUP > USER SETTINGS > SELECT > OVERWRITE SELECTED

Overwrite an existing (saved) user setting by the current configuration of the MINIR82.

Caution: this operation is irreversible!

NOTE: a user setting can also be recalled from the menu [BROWSE FILE] with the following sequence: [BROWSE FILE] > [HD] > [SETTINGS] then select one of the listed user setting.

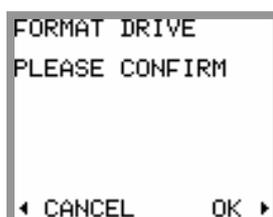
4.5.7 SYSTEM SETTINGS

This menu is used to set general system parameters, to manage the recording media and to display some system information's such as hardware and software revision

SETUP > SYSTEM SETTINGS > HARD DRIVE or CF Card

This page displays information's related to the Hard disk drive such as total capacity, remaining free space and posts eventual drive errors. This page also offers three possible actions:

- **FORMAT DRIVE** to reformat the hard disk; this action is irreversible and will erase all audio file stored on the hard disk. The User Settings are temporarily saved on the flash memory and restored on the HD after the formatting procedure
- **EMPTY TRASH** clear all audio files temporarily stored in the trash bin to free disk space if more storage capacity is required. This action is irreversible
- **MOUNT** used to mount the drive if for any reasons it does not appears during the booting sequence



SETUP > SYSTEM SETTINGS > REFERENCE LEVEL

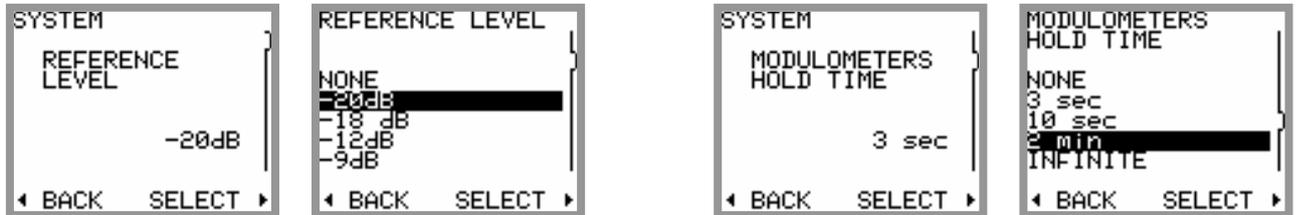
To display a vertical line corresponding to a desired reference level on [TRACK MONITORING] page. This reference is useful to give a clear indication of the dynamic headroom, the available values are:

- NONE / - 9 dBFS / -12 dBFS / -18 dBFS / -20 dBFS

SETUP > SYSTEM SETTINGS > MODULOMETERS HOLD TIME

The "Hold Time" function detects the absolute peak level of each recorded track and keeps it posted for:

- NONE / 3 seconds / 10 seconds / 2 minutes / INFINITE



SETUP > SYSTEM SETTINGS > TIME DISPLAY

The "Time Display" selects which information is displayed on screen

- Time Code / Program Time / Time Code RV/ Program Time RV

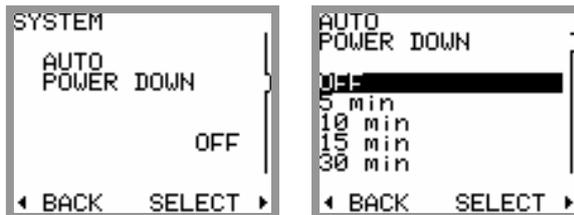
Time code displays the actual time of the TC; program Time shows the elapsed time from the start of the take. RV states for Reversed Video, it improves reading in direct sun light.



SETUP > SYSTEM SETTINGS > AUTO POWER DOWN

To preserve battery life, it is possible to turn off the MINIR82 automatically if no action has been detected after a given time. This menu lets choose the "Time Out" value before the MINIR82 shut down automatically:

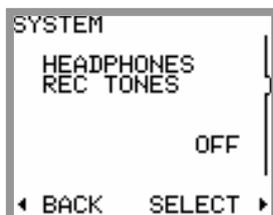
- OFF / 5 minutes / 10 minutes / 15 minutes / 30 minutes



SETUP > SYSTEM SETTINGS > HEADPHONE REC TONES

Start recording, adding an index and stop recording can be witnessed in the headphones with a confidence beep tone. Start recording and add index is signalled by a single 1kHz beep tone; stop recording is signalled by a two tone's double beep, 2kHz-1kHz.

- Select ON to activate the beep tone; select OFF to cancel the beep tone.



SETUP > SYSTEM SETTINGS > SYSTEM DATE

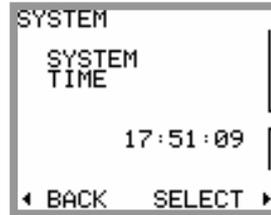
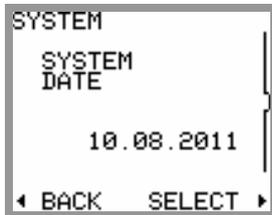
Set the Date of the internal real time clock of the MINIR82 (format DD.MM.YYYY).

Move the cursor to the Left or the Right to select the field to edit, Up or Down to scroll the values, then confirm with [OK] to save the date and return to the previous menu or select [CANCEL] to exit without saving

SETUP > SYSTEM SETTINGS > SYSTEM TIME

Set the Time of the internal real time clock of the MINIR82 (format HH.MM.SS).

Move the cursor to the Left or the Right to select the field to edit, Up or Down to scroll the values, then confirm with [OK] to save the date and return to the previous menu or select [CANCEL] to exit without saving



SETUP > SYSTEM SETTINGS > FILETAG

The [FILETAG] is the identifier of the audio files name; it is automatically generated.

The first 2 characters can be modified by the user; which might be useful to clearly identify the recorder when multiple recorders are used during the same production.

The last 4 digits are automatically incremented by 1 at each following take. When the numbering reaches 999 the alphabetic prefix will also be incremented to the next value (SX → SY).



SETUP > SYSTEM SETTINGS > SYSTEM INFO

Display the hardware status and the firmware revisions of the MINIR82.

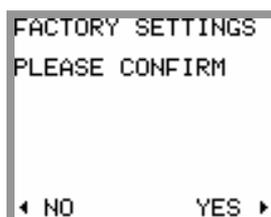
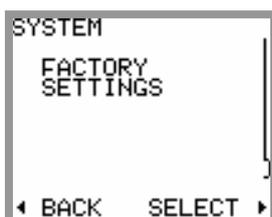


SETUP > SYSTEM SETTINGS > FACTORY SETTINGS

Re-initialize the MINIR82 in its basic configuration (factory default setting).

Select [YES] to load the factory default settings and return to the main [TRACK MONITORING] page or select [BACK] to return to the previous menu.

Caution: this operation crushes the current configuration of the MINIR82; however it has absolutely no effect on the recorded audio files or on the stored user settings.



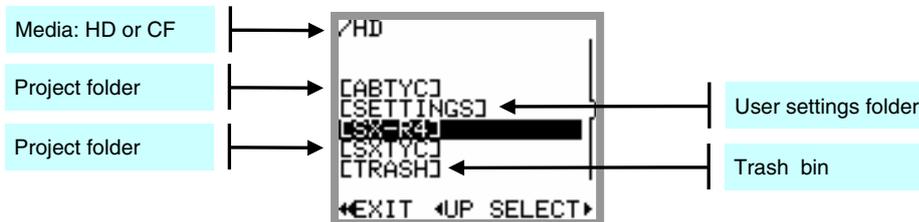
4.6 BROWSE FILES

The file browser is used to search the takes stored on the hard disk or on the CF card. Selecting the media [HD] or [CF] is done at the upper level of the the browser. Choose a media and press [SELECT] to reach the root level of the selected media or press [EXIT] to return to the contextual menu.

Main Menu → Media Selection → Project Folders → Working Day's → Takes

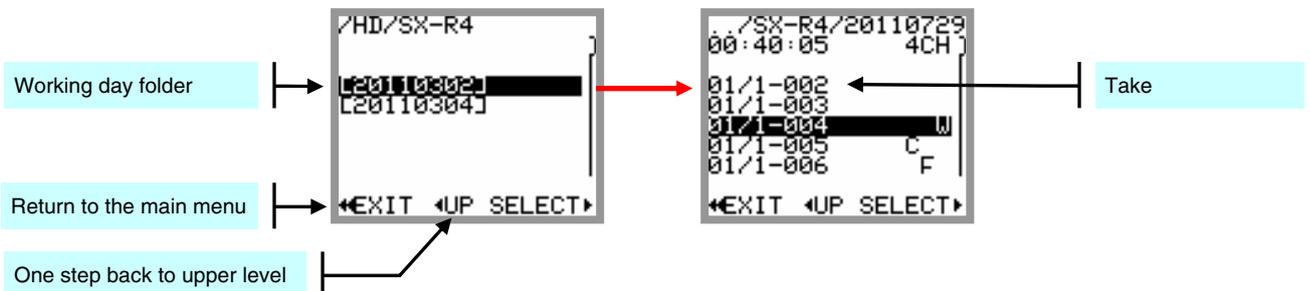


The root level of the media lists all the [PROJECT] directories sorted in alphabetic order, including the [TRASH] bin. The root level of the hard disk drive also contains the "user settings" directories [SETTINGS]; thus user settings can be loaded directly from this folder.



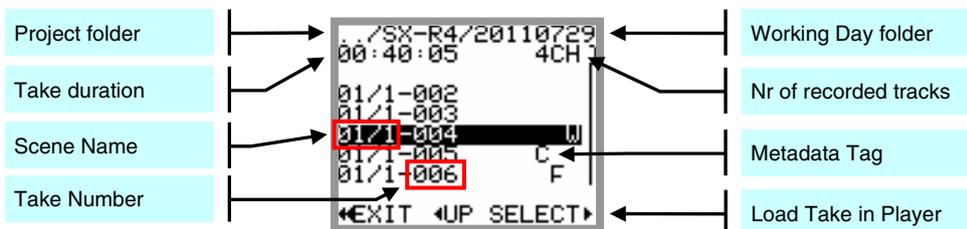
Scroll Up or Down to choose a [PROJECT] and press [SELECT], a new screen lists the related [WORKING DAY] folders sorted in chronological order; the working day folders contain the takes.

[EXIT] returns to the contextual menu; [UP] steps back to an upper level of the tree structure.



The [WORKING DAY] folders lists all recorded takes, identified by their [SCENE] name and and their [TAKE NR] the takes are sorted by their unique identifier - the [FILETAG] – which does not appears on screen.

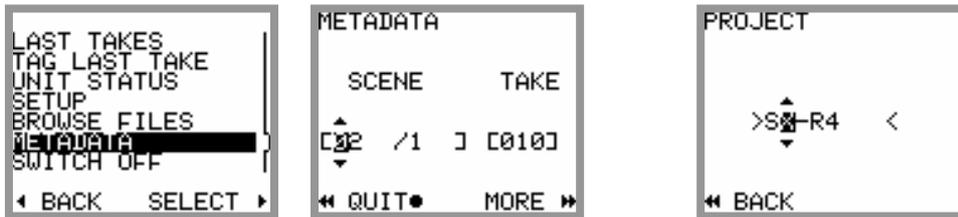
Scroll Up or Down to choose a Take and press [SELECT] to load the Take in the Player



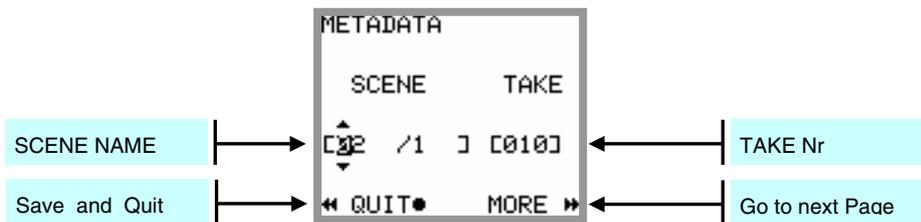
NOTE: once a Take has been selected and loaded in the Player, re-entering the browser later goes automatically to the last selected [WORKING DAY] folders.

4.7 METADATA

The audio files recorded with the MINIR82 embeds metadata in both BWF and iXML format. Some metadata can be either pre-settled when the MINIR82 is in Recorder mode or edited post-recording when the unit is in Player mode. In both modes, editing the metadata is spread over two pages.



The first page shows two editable fields: the [SCENE] name which can contain up to 8 characters and the [TAKE NR] which is fixed to 3 digits.



The brackets show the limits of the field size and two arrows indicate the selected character or field. Press the Joystick Left or Right to select a character or a field then press Up or Down to scroll the characters or the take number. Keep pressing to scroll rapidly. Editing the [SCENE] name and the [TAKE NR] is made in an identical manner in both Recorder mode and Player mode.

Selecting [QUIT] saves the changes and returns to the previous menu, select [MORE] for the second page;



The second page is used to edit additional metadata; the choice of editable metadata depends on the status of the MINIR82 (Recorder mode or Player mode), press Up or Down to scroll the editable metadata:

RECORDER mode: only two parameters can be edited while in Record Ready:

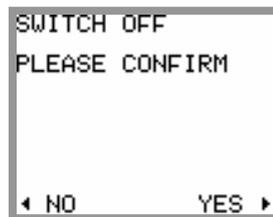
- PROJECT** the [PROJECT] name can contain up to 8 characters, the editing is done in the same manner as the [SCENE] name. Setting a new Project name will create a new directory at the root level of the hard disk and of the CF Card, all subsequently recorded files are then stored in the "working day's" subdirectory(ies) that belong to the particular project
- WILD TRACK** when enabled, all subsequently recorded files will be tagged as "Wild Track"; a symbol "W" is posted in the upper right corner on the screen [TRACK MONITORING], warning the user that the wild track tag is enabled. Recorded audio files are notified with the suffix "W" in the [BROWSE FILE] menu.

PLAYER mode: editing the metadata of a recorded take implies that the take is loaded in the player.

- **PROJECT** in player mode, editing the **[PROJECT]** name of an existing audio file will only modify the content of the metadata but does not create a new directory.
- **WILD TRACK** Tag the recorded file as "Wild Track"; when loaded in the player a symbol "W" is posted in the upper right corner of the **[TRACK MONITORING]** Wild Track audio files are notified with the suffix "W" in the **[BROWSE FILE]** menu.
- **CIRCLED** Tag the recorded file as "Circled", the audio file is notified with the suffix "C" in the **[BROWSE FILE]** menu
- **NO GOOD** Tag the recorded file as "No Good", the audio file remains in its original folder and is notified with the suffix "F" in the **[BROWSE FILE]** menu.
- **FALSE START** Unlike editing the file from the **[TAG LAST TAKE]** menu, tagging the audio file from the Player only edits the metadata but does not move audio files to the **[TRASH]** bin and does not modify the Take Nr.
The audio file is notified with the suffix "F" in the **[BROWSE FILE]** menu.

4.8 SWITCH OFF

Turning OFF the MINIR82 is done by software; the **[SWITCH OFF]** command is located at the bottom of the contextual menu. Select the command and then confirm with **[YES]** to turn Off the unit.



5. MANAGING THE MINIR82

5.1.1 Formatting the Hard Disk and CompactFlash card

Formatting the internal Hard disk and the CF Card is recommended before starting a new production. Internal Hard Disk and CF Card must be FAT23 formatted with the same cluster size. If a media is formatted with a different cluster size that required, the MINIR82 will post an alarm such as "Disk error".

Therefore use exclusively the formatting utility tool in the [SYSTEM SETTINGS] menu to reformat your media.

5.1.2 Disk fragmentation

During heavy use of the recorder, it may become necessary to recover some free disk space by deleting audio files [DELETE TAKE] and then emptying the trash bin [EMPTY TRASH] or by deleting files when connected to a computer.

This may lead to severe fragmentation of the free space on the hard drive or on the CF card which may prevent the recording of new Takes. In this case an alarm HD or CF is posted to warn you of the problem. It is then necessary to back-up all your files and to reformat the disk using the MINIR82 format utility tool.

WARNING: IN ANY CASE, DO NOT DEFRAGMENT THE INTERNAL HARD DISK OR THE CF CARD USING A DISC DEFRAGMENTATION UTILITY OR THE MINIR82 WILL NO LONGER BE ABLE TO PLAY THE RECORDED AUDIO FILES.

Important notes for MAC OS X users:

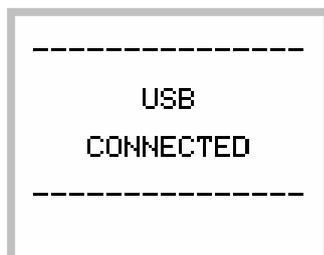
When deleting files stored on the Hard disk and/or on the CF, **do not forget to empty the Trash Bin** on your desktop **before** disconnecting the USB port. Otherwise, the disk space will not be recovered.

Reconnecting the USB a second time doesn't solve the problem. It is very likely that your MINIR82 will then indicates a free available space lower than the value given by the computer. In this case it will be necessary to save all your files and to reformat your hard drive using the formatting utility tool of the MINIR82.

5.1.3 USB 2.0 connection

The MINIR82 is equipped with a USB 2.0 port (USB 1 is not supported). Connecting the MINIR82 to a computer for file transfer (PC or Mac) is only possible when the MINIR82 displays one of the following menus:

- TRACKS MONITORING
- SOLO MONITORING
- Unit Status



WARNING: use only certified "USB 2 High Speed" cable. The data rate transmission is so high that using a non certified cable may lead to unpredictable malfunctions such as Disk not recognized, MINIR82 nor mounting on your desktop, Windows error code 10 etc.

Notice concerning the CF Cards

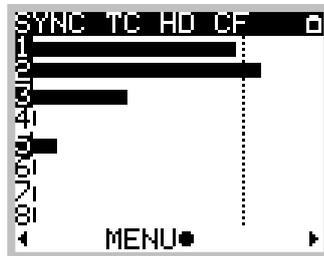
If a CompactFlash card is in the MINIR82 when connecting to a computer, it is possible that neither the hard drive nor CompactFlash card appear on the desktop computer, or that the procedure takes several minutes. This is directly related to the physical structure (hardware) of the CompactFlash card.

In this case it is necessary to remove the card of the MINIR82 and to connect it directly to the computer via a card adapter. The hard disk drive of the MINIR82 will then mount on the computer's desktop within seconds.

5.1.4 Alarms

When the MINIR82 detects a problem it will warn the user by posting an alarm flashing on the screen and in sending a beep tone in the headphone output. The beep tone will be cancelled as soon as any key is depressed. However the warning keeps flashing in the display until the problem is solved.

One distinguishes 5 kinds of alarms, whose causes are explained below:



The Alarm **AES** occurs under one of the following conditions:

- One or more Tracks is assigned from an AES input, but no valid AES signal is present.
- Input channels 7 & 8 are not assigned
- The incoming sampling frequency on the AES signal is out of tolerance (+/- 0,2%)

The Alarm **SYNC** occurs under one of the following conditions:

- the MINIR82 is set to WCK IN but no valid WordClock signal is present
- the MINIR82 is set to VIDEO IN but no valid Video signal is present

The Alarm **TC** occurs under one of the following conditions:

- The Timecode is set to Internal Output but the format is set to Autodetect
- The Timecode is set on External No Jam, but no TC signal is present
- The Timecode is set on External No Jam, a TC signal is present but the format selected in the MINIR82 does not match with the detected format.

The Alarm **HD** or **CF** occurs under one of the following conditions:

- The remaining Free space on a disk is less than 100Mb.
- The disk is too fragmented
- The CompactFlash Card bit rate is too low, recording on this media has been suspended
- The FAT32 partition cannot be initialized

The Alarm **POWER** occurs when the power voltage is soon too low to maintain the MINIR82 running.

5.1.5 Errors handling

This section addresses the possible errors and problems that may occur while using the MINIR82.

Power failure

When the supply voltage becomes too weak, the MINIR82 proceeds to a safe shut down. If a recording is in progress, it stops recording, closes the audio files and shut down.

NOTE: please remember not to use dry cell batteries but only NiMh or NiCd rechargeable batteries

Insufficient disk space

If the remaining free space in a disk is not sufficient, the recording in progress is stopped. When two discs are used (HD + CF), the recording continues only on the media providing with sufficient free space

Maximum file size

The FAT32 file system limits the size of the files to 4Gb. If the recording in progress reaches this limit, the MINIR82 adds an index (creating a new TAKE) and continues to record in the new file.

Real Time Clock (RTC)

When powering up, the MINIR82 checks that system's Date and Time of are coherent. If it fails, a menu forces the user to set them. While setting the date, an error message can occur if the date format is not valid.

NOTE: the MINIR82 does not have an internal back-up battery to keep the RTC running; it will maintain date and time for a period of approx 1h. It is therefore advised to leave well-charged batteries in their compartment to keep the RTC running continuously.

5.1.6 Software up-date procedure

Up date from the MINIR82 internal hard drive

1. Download the appropriate version from the website: www.sonosax.ch/software_download.html
the file name of the Firmware will be such as: m42444.bin
2. Connect the MINIR82 to the USB2 port of your computer and **backup all your files** stored on you hard disk and on your CF Cards.
3. Copy the new Firmware file to the root directory of the hard drive of the MINIR82, and disconnect the MINIR82 from the computer.
4. From the Main menu, enter the [**BROWSE FILES**] menu, locate the new Firmware file in the root directory of the hard disk drive and select the file.
5. A message will be prompted asking you to confirm the up-date procedure. Press OK to confirm.
A progression bar will appear indicating that the up-date is in progress.
PLEASE WAIT UNTILL FULL COMPLETION,
NEVER TURN OFF THE UNIT DURING AN UP-DATE PROCEDURE.
6. Once completed, a message will be posted asking you to reboot the recorder.
7. Reformat the hard disk of the MINIR82 using exclusively the formatting:
SETUP / SYSTEM SETTINGS / HARD DRIVE / then long press to UP
8. Load the Factory default settings:
SETUP / SYSTEM SETTINGS / FACTORY SETTINGS select YES
9. Your MINIR82 is now ready for use with its new Firmware

Up dating the MINIR82 from a CF Card

Using a CF Card Up to up-date the MINIR82 is also possible:

1. Download the Firmware file as previously indicated under point nr 1.
2. Connect the CF Card to the computer using a card adapter and then copy the Firmware file to the root directory of the CF card.
3. Remove the CF card from the computer and insert the card in the MINIR82.
4. From the Main menu, enter the [**BROWSE FILES**] menu and select the CF Card. Locate the new Firmware file in the root directory of the CF card and select the file.
5. Then proceed as previously mentioned from point 5 to point 9 to complete the up-date procedure.

6. APPENDIX

Example of a USER SETTING file

```
# Sonosax MINIR82 User Settings File
# NOTE: Modify/remove parameter to automate configuration

[SYSTEM]
REFERENCE LEVEL = -20dB
MIXING LEVEL = NONE

[METADATA]
# Project name: max 8 chars, allowed chars: ABCDEFGHIJKLMNOPQRSTUVWXYZ-_ 0123456789
# PROJECT = ABTYC
# Scene name: max 8 chars, allowed chars: ABCDEFGHIJKLMNOPQRSTUVWXYZ-_/#() 0123456789
# SCENE = 01/2
# Take number: range: 1 .. 999
# TAKE = 26

[DIGITAL RECORDER]
# 44.1k, 48k, 88.2k, 96k, 176.4k, 192k
INTERNAL SAMPLING FREQUENCY = 48k
# 16 BITS, 16 BITS DITHER, 24 BITS
BITS PER SAMPLE = 24 BITS
# NOMINAL, UP 0.1%, DOWN 0.1%
SAMPLING PULL UP/DOWN = NOMINAL
# INTERNAL, WCK IN, VIDEO IN
AUDIO SYNC = INTERNAL
# MONO, STEREO, POLYPHONIC
AUDIO FILE FORMAT = MONO
# NONE, 1 sec, 2 sec, 5 sec, 10 sec, 20 sec
PRE-RECORD TIME = 2 sec
# Routing table [12345678] <-- Input channels (1: assigned, 0: not assigned)
HD TRACK 1 MIX = 10000000
HD TRACK 2 MIX = 01000000
HD TRACK 3 MIX = 00100000
HD TRACK 4 MIX = 00010000
HD TRACK 5 MIX = 00000000
HD TRACK 6 MIX = 00000000
HD TRACK 7 MIX = 00001000
HD TRACK 8 MIX = 00000100
CF TRACK A MIX = 10000000
CF TRACK B MIX = 01111100
CF MIRRORING = OFF

[TIMECODE]
# 23.976, 24, 25, 29.97 ND, 29.97 D, 30 ND, 30 D, AUTO, UNKNOWN
TC FORMAT = 25
# EXT JAM SYNC, EXT NO JAM, INTERNAL, OUTPUT
TC SOURCE = OUTPUT
# FREE RUN, REC RUN
RUNNING MODE = FREE RUN

[HEADPHONES]
CONFIG = LEFT(0, 0, +1, +1, +1, 0, +1, +1, 0, 0), RIGHT(+1, +1, +1, -1, 0, 0, +1, +1, 0, 0)
REC TONES = OFF
# Headphones level [dB], range [-30..+18]
MONITOR LEVEL = 0
LOCK = OFF

[INPUTS]
# ANALOG, AES
INPUTS 1-2 RECORD SOURCE = ANALOG
INPUTS 3-4 RECORD SOURCE = ANALOG
```

Organization on the HD and the CF Card

The following figure shows an example of how files are stored on the hard disk (HD) for a two days shooting session. Compact Flash (CF) content follows the same architecture.

[HD]	
├── [SETTINGS]	User Settings directory
│ ├── MONO_2CH.INI	User setting
│ ├── POLY_8CH.INI	User setting
│ └── AES_4CH.INI	User setting
├── [PROJECT1]	Project name
│ ├── [20110525]	Working day May 25th 2011
│ │ ├── SX0001S5.WAV	Audio file #1 (polyphonic 5 tracks)
│ │ └── SX0003S5.WAV	Audio file #3 (polyphonic 5 tracks)
│ ├── [20110526]	Working day May 26th 2011
│ │ ├── SX0004_7.WAV	Audio file #4 (mono track #7)
│ │ ├── SX0004_6.WAV	Audio file #4 (mono track #8)
│ │ └── SX0006S8.WAV	Audio file #6 (polyphonic 8 tracks)
├── [TRASH]	Trash folder
│ └── [PROJECT1]	Deleted files from project
│ ├── [20110525]	Deleted files from day May 25th 2011
│ │ └── SX0002S5.WAV	Audio file #2 (false start)
│ ├── [20110526]	Deleted files from day May 26th 2011
│ │ └── SX0005S8.WAV	Audio file #5 (false start)

The information contained in this manual is subject to change without notice.

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Phone: +41 21 651 0101, Fax: +41 21 651 0109, Email: sonosax@sonosax.ch Web: www.sonosax.ch
