

PROFESSIONAL PORTABLE MULTITRACK RECORDER

SONOSAX MINIR82

User Manual

Soft revision 2.2.954

Audio Equipment Manufacturer

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QUICK START

Powering

External PSU: use only the optional SONOSAX power supply.

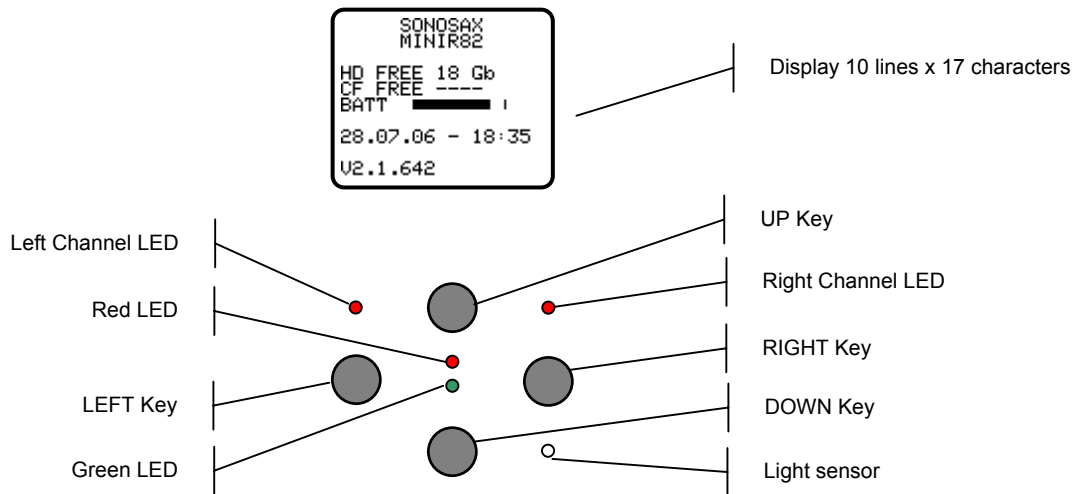
Batteries: use only rechargeable NiMh batteries. Standard dry cell batteries cannot power the **MINIR82** as it may leads to unpredictable powering off. Insert batteries as shown in the picture below.



External Batteries: to power the MINIR82 with external batteries (over 9V) an optional external 9V to 18V DC/DC converter is available:
ordering ref: SX 008490

DC power cord: an optional 2 meters (6 feet) power cord with DC connector is available to power the MINIR from a suitable external DC source (5V to 9VDC)
ordering ref: V980010

User Interface



Powering On the unit

To power On the unit press simultaneously the UP and DOWN keys. A start up screen is posted for aprox. 2 seconds and show following informations:

- The remaining free space on the hard disc and on the Compact Flash card (if present)
- A power indication of either the batteries or the external PSU by means of a bargraph
- Current Date and Time l'heure
- The Firmware revision

Note: it can take a while until the remaining available free space is displayed

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 playing
- PLAY PAUSE
the Green LED flashes, indicating that the loaded Take is actually paused.
- PLAY 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

Main screen display and Keys

The main working page (TRACKS MONITORING) displays the Peak Meters of the 8 tracks. 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 configurable reference (-9 , -12 , -18 , and -20dB) can be displayed (see configuration menu)

Convention for Screen display and function Keys

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 Left key is used to "Select" and the Right 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 achieve the action.

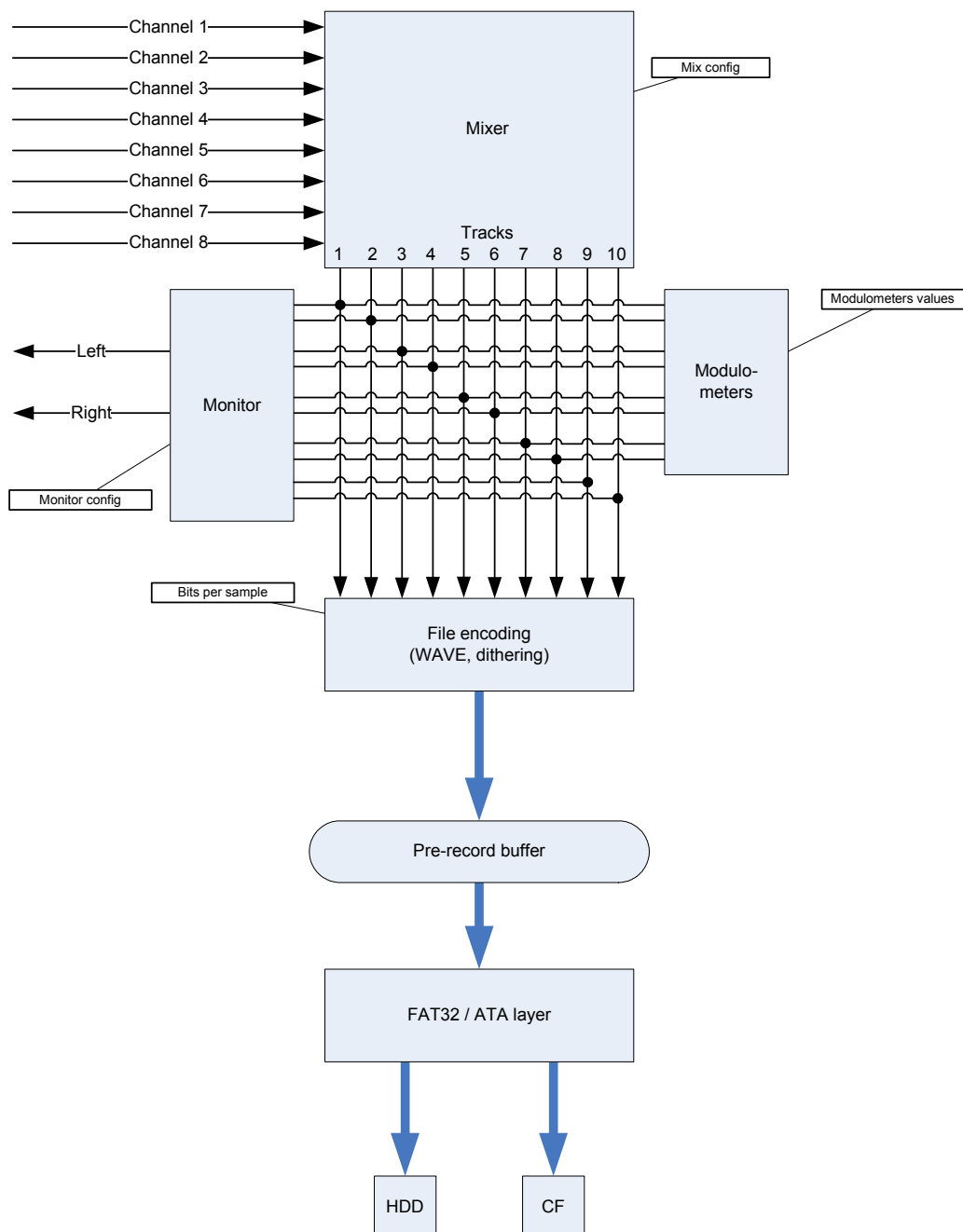
Architecture - Audio path

Le MINIR82 dispose de 8 canaux d'entrées. Ces canaux ont pour origine :

- 1, 2 : either AES1 or Input MIC/LINE 1 & 2
- 3, 4 : either AES2 or Input LINE 3 & 4
- 5, 6 : only AES3
- 7, 8 : only AES4

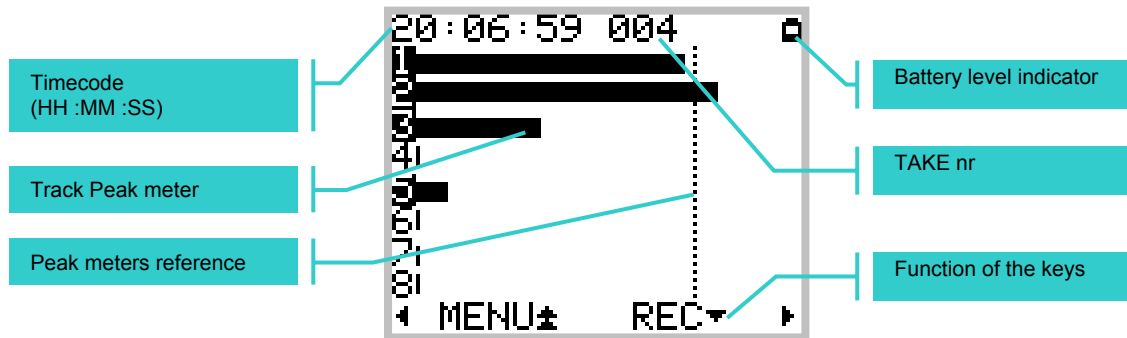
The routing Matrix allows to route and mix any of the input channels to any of the 10 tracks. The first 8 tracks are dedicated to the hard disc (HD) and the 2 additional tracks are dedicated to the Compact Flash card (CF).

For Monitoring purposes, you can configure and listen to any combination of these 10 tracks. However, the display shows only the Peak meters of the 8 hard disc tracks



TRACKS MONITORING

The TRACK MONITORING is the screen displayed by default on the MINIR82. The track numbering from 1 to 8 is always displayed and is related to the HD tracks. The number of each active track in use (routed in the matrix) is posted in reverse video.



Note: The Peak meter reference can be set in the "Configuration" menu

Actions or functions of the keys are described as below:

Key	Short pressure	Long pressure
LEFT	Reduce the headphone volume by 1dB	Keep pressing to continuously reduce the volume down to min
RIGHT	Increase the headphone volume by 1dB	Keep pressing to continuously increase the volume up to max
UP	Enter Solo Monitoring page	Enter contextual Menu page
DOWN, while Record Ready	Start Recording	
DOWN, while Recording	Add an Index **	Stop Recording
DOWN, in Stop	Start Playing	
DOWN, while Playing	Pauses at current position	Stop playing
DOWN, in Pause	Play from current position	Switch to Stop mode
LEFT & RIGHT	Lock/Unlock keypad	

**** Index = New TAKE**

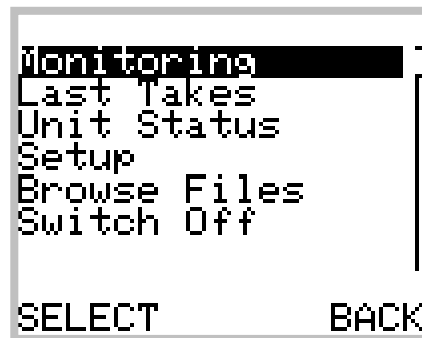
A brief pressure on the DOWN key while Recording will automatically create a new [TAKE]. This new Take nr is incremented by 1.

The audio files of this new Take are cut at the sample level (precision of one sample). Takes can then be seamlessly re-assembled in an editing software with the help of the TimeCode

Pressing the LEFT or the RIGHT key will post a temporary screen showing the headphone level by means of a bar graph. The headphone level is adjustable in 1dB steps from -30dB to +18dB



CONTEXTUAL MENUS



The Contextual Menu allows a quick navigation between the different pages and configurations menu of the MINIR82. The Contextual Menu can only be accessed from the Track Monitoring Page (not while in Solo Monitoring Mode) by a long Pressure on the UP Key

Key	Short pressure	Long pressure
LEFT	Confirm the selection	
RIGHT	Return from the menu to the Tracks Monitoring page	
UP	Scroll the selection upward	
DOWN	Scroll the selection downward	

The possible choices in the Contextual Menu depend on the current "Status" of the MINIR82 as described below::

While in Status "Recording"

- Monitoring
- Unit Status

While in Status "Playing"

- Last Takes
- Monitoring
- Unit Status
- *Delete Take*

While in Status "Record Ready"

- Monitoring
- Last Takes
- Unit Status
- Setup
- Browse Files
- Switch Off

While in Status "Stop"

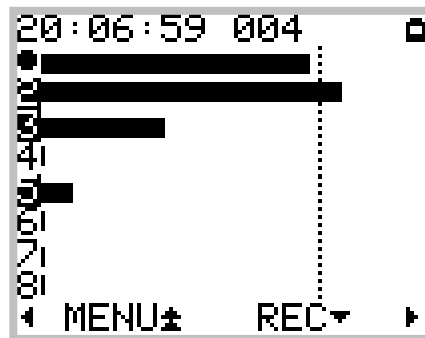
- Last Takes
- Exit Player Mode
- Monitoring
- Unit Status
- Browse Files
- Delete Take
- Switch Off

SOLO MONITORING

The "Solo Monitoring" page is accessed from the "TRACK MONITORING" page by briefly pressing the UP Key. It allows you to Monitor in mono any individual track or a specific pair of tracks. The displayed page is visually almost identical to the "TRACK MONITORING" page except that a round dot replaces the selected track being soloed.

The track selection sequence is as follow: 1, 2, 1+2, 3, 4, 3+4, 5, 6, 5+6, 7, 8, 7+8.
 The UP key moves the selection upward; the DOWN key moves the selection downward
 The Solo Monitoring is only possible with active (armed) tracks

Key	Short pressure	Long pressure
LEFT	Reduce the headphone volume by 1dB	Keep pressing to continuously reduce the volume down to min
RIGHT	Increase the headphone volume by 1dB	Keep pressing to continuously increase the volume up to max
UP	Select the previous track or pair of tracks	Return to the Tracks Monitoring page
DOWN	Select the next track or pair of tracks	
LEFT & RIGHT	Lock/Unlock keypad	



The example above shows a configuration of 4 active (or armed) tracks: 1, 2, 3, and 5. Track 1 being currently selected for Solo Monitoring.

In this particular case, the selection sequence for the Solo is: 1, 2, 1+2, 3, 5

Monitoring

This Monitoring page allows you to mix the 10 tracks of the MINIR82 for its headphone output. The configuration of the monitoring is done by means of a specific menu as shown below.

```

MONITORING
HD 1-2 STEREO
HD 3-4 REV STEREO
HD 5-6 ---
HD 7-8 MS
CF 1-2 ---

SELECT      DONE
    
```

The Monitoring is always configured per pair of tracks (10 tracks = 5 pairs of tracks)
 The table below shows the available choices and their respective monitoring results on the stereo headphone output for the pair of tracks 1 and 2.

Type	Result on Left Channel	Result on Right Channel
---	---	---
MONO	1 + 2	1 + 2
STEREO	1	2
REV STEREO	2	1
MS	1 + 2	1 - 2
MONO L	1 + 2	---
MONO R	---	1 + 2

The table below describes the functions of the Keys:

Key	Short pressure	Long pressure
LEFT	Change the Monitoring type	
RIGHT	Save the modifications and return to the previous Menu	
UP	Move the selector upward	
DOWN	Move the selector downward	

Note: If a pair of tracks is not activated (or not armed) the only possible value is "No Monitoring"

Last Takes

This screen allows you to rapidly access a list of the Last Takes having been recorded in a reverse order; the very last Take is at the top of the list.

The first line displays the date (YY/MM/DD) and the time of the selected Take
Each TAKE is presented with following forms:

XX YYYYYYYY-ZZZ

Where XX is the media source where the TAKE is stored (HD or CF)
 YYYYYYYY is the scene name
 ZZZ is the TAKE number.

By selecting a TAKE, the MINIR82 loads it to it's memory. Depending of the media source and the TAKE length, it may take a certain time before the TAKE becomes ready for the Playback.

```
06/03/10 10:51
HD  SCENE001-007
CF  SCENE001-007
HD  SCENE001-006
HD  SCENE001-005
HD  SCENE001-004
SELECT      BACK
```

Key	Short pressure	Long pressure
LEFT	Load the selected TAKE	
RIGHT	Back to the Contextual Menu	
UP	Move the selector upward	
DOWN	Move the selector downward	

Player mode

This screen displays the selected TAKE



Key	Short pressure	Long pressure
LEFT	Reduce the headphone volume by 1dB	Keep pressing to continuously reduce the volume down to min
RIGHT	Increase the headphone volume by 1dB	Keep pressing to continuously increase the volume up to max
UP	Activates the Solo Monitoring	Return to MENU
UP in SOLO mode	Select previous solo track	Return to TRACKS MONITORING
DOWN	PLAY	
DOWN in Solo mode	Select next solo track	
DOWN in Play mode	PAUSE	STOP
LEFT + RIGHT	Lock/Unlock keypad	

SEARCH Mode

The SEARCH mode can only be activated while in PLAY mode => PAUSE
 The LEFT and RIGHT Keys allow to Fast Forward or Fast Rewind within the TAKE.

in SEARCH mode => FORWARD

- >> Play at 2x the play speed, with monitoring
- >>> Forward in steps of 5% of the TAKE length, no monitoring

in SEARCH mode => REWIND

- <<< Rewind in steps of 5% of the TAKE length, no monitoring

Key	Short pressure	Long pressure
LEFT	<<< Fast Rewind (no monitoring)	
RIGHT	>> 2x Play speed (with monitoring)	
RIGHT	>>> Fast Forward (no monitoring)	
DOWN	PAUSE	STOP
DOWN in Search Mode	Return to monitoring screen	
DOWN in mode solo	Select next solo track	
UP	Active mode écoute solo	Retour au MENU
HAUT en mode solo	Change le track du solo monitor	Retour au TRACKS MONITORING
LEFT + RIGHT	Lock/Unlock keypad	



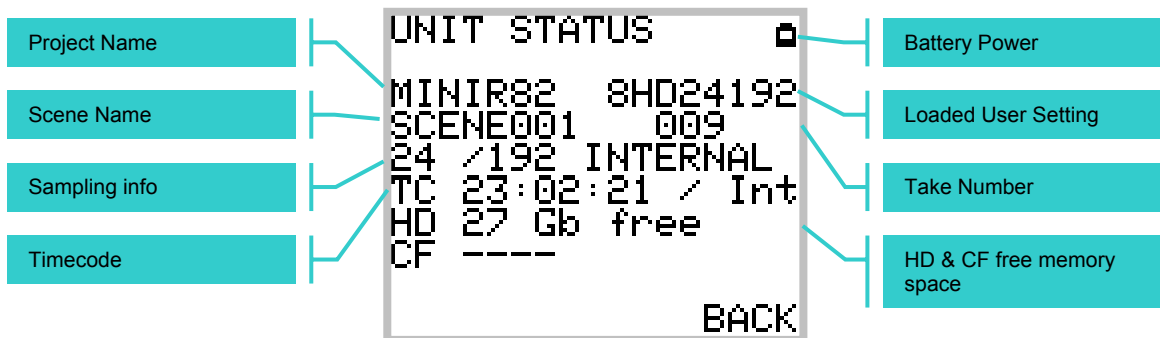
Fast Rewind « <<< »



Fast Forward « >>> »

Unit Status

This page displays the major parameters of the MINIR82



The displayed parameters are:

- Line 1: Battery power indicator (fuel gauge)
- Line 3: Project Name – Loaded User Setting (displayed only if the configuration has been loaded and not been modified)
- Line 4: Scene Name - Take number
- Line 5: Sampling rate (24/16) / Sampling frequency, synchronisation source (INTERNAL, AES, WCK IN)
or video stream type: PAL/25, NTSC/29.97, 1080/23.97, 1080/24, 1080/25, 1080/29.97, 1080/30, 720p/24, 720p/25, 720p/29.97, 720p/30, 720p/50, 720p/59.94, 720p/60, 295M-P/25 or Video Err.
- Line 6: Time Code value and its format: Int (Internal), 24, 25, 29 (29.97 Non Drop), 29D (29.97 Drop), 30 (30 Non Drop) or 30D (30 Drop). If the Time Code cannot be read (unknown format) the Time Code value becomes: -- :- :--
- Line 7: Remaining available free space on the Hard Disc
- Line 8: Remaining available free space on the Compact Flash card

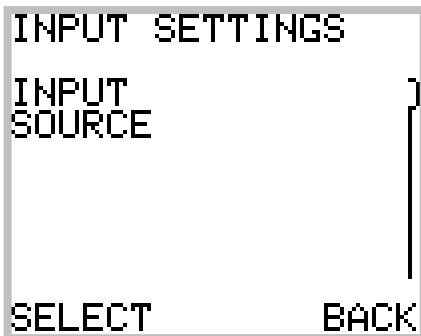
Key	Short pressure	Long pressure
LEFT		
RIGHT	Return to CONTEXTUEL MENU	
UP		
DOWN		

Setup (configuration menus)

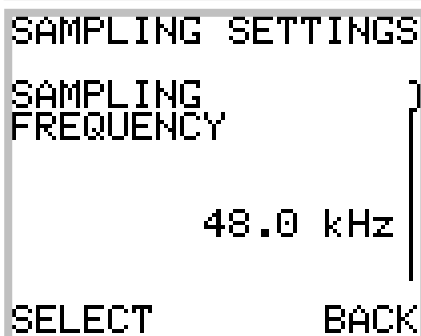
The Configuration Menus are posted by calling the Contextual Menu and by selecting "Setup" in the list. The menus are sorted in headings (rubrics), and grouped in a logical order. The navigation from heading to heading is done by the UP and DOWN keys. On the right of the screen, a scroll bar indicates the position in the list of the available headings.

Press the LEFT key (SELECT) to enter the sub-heading or the RIGHT key (EXIT, BACK) to return to the preceding screen.

The tree structure of the menus imposes the use of sub-menus until the parameter which one wishes to modify is reached.

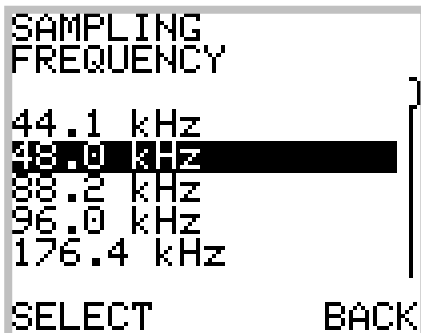


A menu with no parameter shown, posts one heading per screen. This allows to classify the various selectable parameters.



A menu showing parameters corresponds to the end of the tree structure; thus it posts the current value of the parameter that can be modified.

By pressing on SELECT in a menu with parameter, the user can change its value. One distinguishes several manners of carrying out this change.



The menu with a list shows the possible choices of a parameter. The selection is posted in reverse video.



The text-editing menu.

The text to be modified is displayed between brackets which shows the limits of the text size (max. 8 characters). Two arrows point the selected character.

The UP and DOWN allow you to modify the selected character.

Keep pressing to scroll the characters.

LEFT and RIGHT keys move the cursor to select the character.

A long pressure on LEFT saves the text and returns to the preceding menu. A long pressure on RIGHT cancels the edition and returns to the preceding menu.

Tree structure of the menus

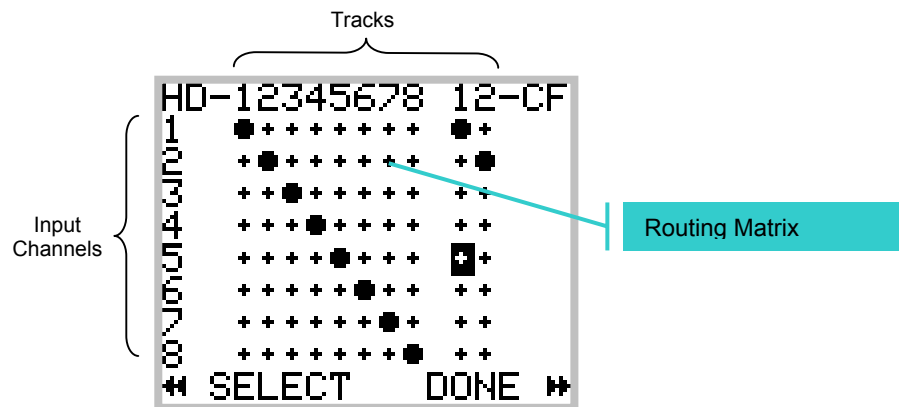
The grayed menus are those where the parameters are visible.

Level 1	Level 2	Level 3	Changeable values	
ROUTING SETTINGS	ROUTING	Specific Menu (cross matrix)		
	MIXING LEVEL		NONE, ATT1.5, ATT3, ATT6	
RECORD SETTINGS	PROJECT NAME		Text editor	
	SCENE NAME		Text editor	
	FILE FORMAT		MONO, STEREO	
	SAMPLING SETTINGS	SAMPLING FREQUENCY		44.1, 48, 88.2, 96, 176.4, 192 kHz
		SAMPLING UP/DOWN		Nominal, UP o/oo, DOWN o/oo
		SAMPLING RATE		24 bits, 16 bits dither, 16 bits
	PRE-RECORD TIME		1, 2, 5, 10, 20 sec	
PRE-INDEX DELAY		0, 1, 2, 3, 5 sec		
SYNC MODE		OFF, WDCKIN, VIDEO IN		
INPUT SETTINGS	INPUT SOURCE	MIC/LINE 1-2	AES, MIC/LINE	
		LINE 3-4	AES, LINE	
	MIC LOW FREQ CUT	MIC/LINE 1	OFF, ON	
		MIC/LINE 2	OFF, ON	
LINE IN LEVEL		+15, +6, 0, -10 dBu		
TIMECODE SETTINGS	INPUT SOURCE		EXTERNAL JAM SYNC, EXTERNAL NO JAM, INTERNAL	
	INPUT FORMAT		AUTODETECT, 24, 25, 29.97 NON-DROP, 29.97 DROP, 30 NON-DROP, 30 DROP	
	RUNNING MODE		FREE RUN, RECORD RUN	
	SET MANUAL			
	SET FROM TIME			
MODULOMETERS SETTINGS	REFERENCE		NONE, -9, -12, 18, -20 dB	
	HOLD TIME		NONE, 5 sec, 10 sec, 2 min, INFINITE	
USER SETTINGS	Menu spécifique			
MISC	DATE	Specific Menu to set up Date		
	TIME	Specific Menu to set up Time		
	SYSTEM INFO	Post the software and hardware révisions and battery voltage		
	USER INTERFACE CHECK	Allows to check the screen, the LEDs and the Keys		
	FACTORY SETTINGS	Re-initialized all current parameters		

Explanation of each menu is given in the following pages.

SETUP > ROUTING SETTINGS > ROUTING

The configuration of the routing is carried out by means of a specific menu as describes below:



The round dot sets a connection between the Inputs (Input channels) and the Tracks. In the figure above, a routing 1: 1 is established between the Inputs and the hard disc Tracks

The table below summarizes the actions of the keys:

Key	Short pressure	Long pressure
LEFT	Move the selection to the Left	Confirm the routing modification (active/inactive)
RIGHT	Move the selection to the Right	Save the configuration and returns to the preceding menu
UP	Move the selection upward	
DOWN	Move the selection downward	

Notes:

- it is not possible to leave this menu without saving the configuration
- The unused TRACKS (no dot on the crossing) are automatically deactivated.

SETUP > ROUTING SETTINGS > MIXING LEVEL

Le menu MIXING LEVEL permet de définir l'atténuation à apporter selon le routage choisi afin d'éviter la saturation numérique. Quatre choix sont possibles :

- NONE
- ATT1.5
- ATT3
- ATT6

The table below summarizes the attenuations carried out according the nr of assigned tracks

Number of Input channels assigned to the same Track	NONE [dB]	ATT1.5 [dB]	ATT3 [dB]	ATT6 [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 > RECORD SETTINGS > PROJECT NAME

This menu allows you to specify the Project Name. This one is used with several aims:

- Name of the directory where the Takes will be stored.
- Archiving of the Project Name in each WAVE file (sub-chunk BWF and iXML)

The format of the Project Name is as follows:

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

SETUP > RECORD SETTINGS > SCENE NAME

This menu allows you to specify the Scene Name. This one is used with several aims:

- Partially Name the directory where the audio files of the Takes will be stored
- Archiving of the Scene Name in each WAVE file (sub-chunk BWF and iXML)

The format of the Scene Name is as follows:

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

SETUP > RECORD SETTINGS > FILE FORMAT

The File format offers two choices :

- MONO
- STEREO

If MONO is selected, each track is recorded in a separated file, in mono.

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

If the Routing defines incomplete pairs of tracks (for example tracks 1, 3, 4 and 7) each insulated track is recorded in a stereo file and uses a half of the file size.

SETUP > RECORD SETTINGS > SAMPLING SETTINGS > SAMPLING FREQUENCY

This menu let choose the sampling frequency. Choices are : 44.1, 48, 88.2, 96, 176.4,192 kHz
The selected value is **overwritten** when the MINIR82 uses the AES Inputs, as in this case the MINIR82 will lock on the incoming AES sample frequency.

SETUP > RECORD SETTINGS > SAMPLING SETTINGS > SAMPLING UP / DOWN

The Pull-Up / Pull-Down correction for the NTSC worldcan be set in this MENU. The possible values are NOMINAL (use of the nominal sampling value), UP ‰ (positive correction of one per thousand) and DOWN ‰ (negative correction of one per thousand).

SETUP > RECORD SETTINGS > SAMPLING SETTINGS > SAMPLING RATE

This menu sets the number of bits per sample (sampling rate) stored in WAVE files. The possible values are 24 bits, 16 bits dither and 16 bits. The dithering is of the triangular type.

SETUP > RECORD SETTINGS > PRE-RECORD TIME

The Pre-Record time can be set from 1 second up to 20 seconds. The definite value may not always be possible because of the physical limitation of the built-in memory and the selected configuration. The pre-record time depends on the following factors:

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

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

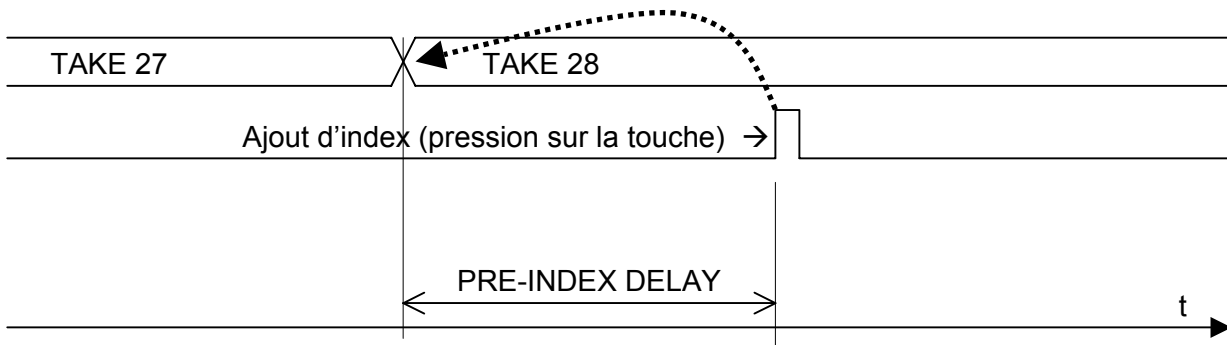
16 bits	Tracks count									
fs	1	2	3	4	5	6	7	8	9	10
44100	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	18.5	16.6
48000	20.0	20.0	20.0	20.0	20.0	20.0	20.0	19.1	17.0	15.3
88200	20.0	20.0	20.0	20.0	16.6	13.9	11.9	10.4	9.2	8.3
96000	20.0	20.0	20.0	19.1	15.3	12.7	10.9	9.6	8.5	7.6
176400	20.0	20.0	13.9	10.4	8.3	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 UP/DOWN correction is not taken into account (negligible).

SETUP > RECORD SETTINGS > PRE-INDEX DELAY

The pre-index delay is the time of anticipation when adding an index. It proposes the following values: 0, 1, 2, 4 and 5 seconds. The graph below shows what corresponds to this time:



The pre-delay index is not absolute; the software does its best to cut the Take to nearest desired time (best effort).

However, no data is lost during the addition of the index !

SETUP > RECORD SETTINGS > SYNC MODE

The synchronization mode of the MINIR82 can be chosen in this menu. By synchronization, one means the use of an external clock on a given signal. This section does not treat the use of timecode.

The mode of synchronization used by the MINIR82 is posted in the menu "Unit Status". Different modes are explained below with the various parameters and their validity:

OFF

Internal Generator

The MINIR82 has an very stable internal clock generator, capable of generating all the audio frequencies (44.1, 48, 88.2, 96, 176.4 and 192 Khz) within 1ppm. This generator is used only when no other clock is available.

Sampling frequency: active
Sampling up/down: active
Sampling rate: active

Synchronisation on AES input

The MINIR82 is automatically locked on the **incoming AES clock of the channels 5-6**

Sampling frequency: inactive
Sampling up/down: inactive
Sampling rate: active

WCK IN

Synchronisation WCK IN

WCK IN must be set in the menu SYNC MODE to use the Word Clock connected on the SYNC IN. This mode is not used if a valid AES signal is present.

Sampling frequency: inactive
Sampling up/down: inactive
Sampling rate: active

VIDEO IN

Synchronisation Video IN

VIDEO IN must be set in the menu SYNC MODE to use the Clock of a Video feed. This mode is not used if a valid AES signal is present.

Sampling frequency: active
Sampling up/down: inactive
Sampling rate: active

SETUP > INPUT SETTINGS > INPUT SOURCE

This menu lets choose which Input source will be applied to the channels 1-2 and 3-4.
For the channels 1-2, the possible sources are:

- AES
- MIC/LINE

For the channels 3-4, the possible sources are:

- AES
- LINE

SETUP > INPUT SETTINGS > MIC LOW FREQ CUT

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

SETUP > INPUT SETTINGS > LINE IN LEVEL

When channels 3-4 are configured as LINE, the input level can be adapted to properly match with the A/D Converter. The selected value shows the analogue Line Level that reaches 0dBFs
Possible choices are:

- - 10 dBu => 0dBFs
- 0 dBu => 0dBFs
- +6 dBu => 0dBFs
- +15 dBu => 0dBFs

SETUP > TIMECODE SETTINGS > INPUT SOURCE

The Time Code source can be chosen as per following choices:

- External Jam Sync
- External No Jam
- Internal

SETUP > TIMECODE SETTINGS > INPUT FORMAT

The MINIR82 is able to automatically detect the Time Code format connected on the T.C. input. However, in order to be sure to use the correct format, it is possible to specify it. In this case, the detection of a format different from that specified will give an alarm. The formats choices are:

- Autodetect
- 24
- 25
- 29.97 Non Drop
- 29.97 Drop
- 30 Non Drop
- 30 Drop

SETUP > TIMECODE SETTINGS > RUNNING MODE

Two possible choices:

- FREE RUN
- RECORD RUN

In FREE RUN, mode, the Time Code is absolute and linear. It runs continuously and never stops. In RECORD RUN, mode, the Time Code is running only while Recording.

SETUP > TIMECODE SETTINGS > SET MANUAL

This menu lets adjust the Time Code manually.

SETUP > TIMECODE SETTINGS > SET FROM TIME

This menu will adjust the Time Code exactly to the time of the real time clock of the MINIR82.

SETUP > MODULOMETERS SETTINGS > REFERENCE

This menu allows to set and display a level reference on the screen of the modulometers (Track Monitoring).

The reference choices are:

- NONE
- - 9 dB
- -12 dB
- -18 dB
- -20 dB

SETUP > MODULOMETERS SETTINGS > HOLD TIME

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

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

SETUP > USER SETTINGS

The "User Settings" menu allows to save, load or update a complete configuration setting to/ from an ASCII file..

CREATE NEW...

Allows you to create a new configuration file based on the current (active) configuration of the MINIR82.

The setting name is formatted is as follow:

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

RECALL SELECTED

Loads the selected configuration file. **Caution:** this operation will crush the current configuration!!

DELETE SELECTED

Delete the selected configuration file.

OVERWRITE SELECTED

Overwrite an existing configuration by the current configuration of the MINIR82

SETUP > MISC > DATE

Set the Date of the internal Real Time Clock (format is DD.MM.YYYY)

SETUP > MISC > TIME

Set the Time of the internal Real Time Clock (format HH:MM:SS).

SETUP > MISC > SYSTEM INFO

This menu shows all the hardware and software characteristics of the MINIR82

DSP software version, version of display's microcontroller (PIC), and CPLD interface
Battery voltage
Hardware version of the AES receivers.

SETUP > MISC > USER INTERFACE CHECK

This menu allows you to check the LCD display, the LEDs and the function keys.

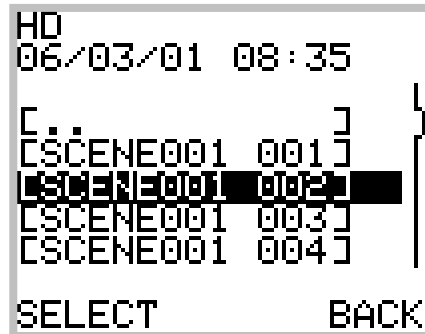
SETUP > MISC > FACTORY SETTINGS

This menu allows you to re-initialize the MINIR82 in its basic configuration (factory default).

Caution: this operation crushes the currently loaded configuration. It does not modify the audio data on the discs nor the user settings.

Browse Files

The file browser uses a specific menu:



The directory [.] allows you to go back one step in the tree structure.
The action of the LEFT key (SELECT) depends of the context :

- within a Take directory, the selected Take is loaded.
- Within a directory (e.g. a Project), its contents is listed.
- If a firmware release is posted, the update starts after a request for confirmation
- In all the other cases, an error message is posted (see below).

Selecting [.] at the root level of a disc (e.g. the root of the HD) allows you to swap to the other disc (e.g. the root of the CF). This is achieved by means of a selection menu.

When a file is not recognized or cannot be interpreted, the following message is posted:



Hard disk HD and CompactFlash format

The hard disk can be splitted into 2 partitions :

- [CONFIG], size = aprox 50 to 100Mb, format is FAT32
- [AUDIO] , size = all remaining space, format is FAT32

This it allws to re-format the [AUDIO] partition without loosing the Users Settings and the configurations.

Before using a CompactFlash with the MINIR82 it must be formatted FAT32.

Notes:

- while creating a volume, you must select "Primary Partition"
- Quick Format is enough
- MAC OS X, can not format a drive with 2 partitions. In this case all CONFIG and AUDIO Folders and Files are in the same volume. The MS-DOS file system must be choosen.
- Always format your CF card before using it with the MINIR82
- Some CF Cards are much faster than others. Please contact you SONOSAX distributor for more information

How to format FAT32 with MAC OSX:

1. *Open the Disk Utility, and select the drive to be formatted*
2. *Click on "Erase", then choose the MS-DOS File system in the menu "Volume Format"*
3. *Type a name for this drive, e.g. MINIR82 (max 8 characters)*

HD and CF Organization

The first partition [CONFIG] is structured as follow :

[CONFIG]

- CONFIG.DAT
Binary file, it contains all information of the current configuration. This file is loaded while powering on the MINIR82; it is overwritten with the current (active) configuration and settings while powering off. This file is not modifiable by the user..
- [SETTINGS]
Directory containing the (.TXT) files of the saved configurations (saved User Settings), which can be reloaded on the "User Setting" menu. These files can be modified and even created with an ASCII editor such as the Windows Notepad.

The second, [AUDIO] is structured as follow :

(The CF has the same structure except that it doesn't have a Trash

[AUDIO]

- [PROJECT NAME]
Project Folder (8 characters)
 - [SCENE_NAME]
Scene Folder (8 characters)
 - [SCENE_NAME.TAKE_NUMBER]
The Folder name and the Scene name (8 characters) followed by the TAKE nr (3 characters)
This folder contains all the BWF (.WAV) files of a Take and the configuration (.INI) file. This is an ASCII file that contain the exact configuration of the MINIR82 at the time the Take was recorded. It is used to reconfigure the MINIR82 to Playback this Take. This file shall not altered.
- [TRASH]
trash directory
This folder contains all "deleted" Takes, except those from the CF

Notes :

- The BWF and INI files have a unique identifier name. These names always start with an X on the HD and XC on the CF Card. They are incremented by 1 in an hexadecimal form each a new Take is created.
- This counter is resetted and the naming restart at zero only is the drive is reformatted or if the CONFIG.DAT file is deleted.

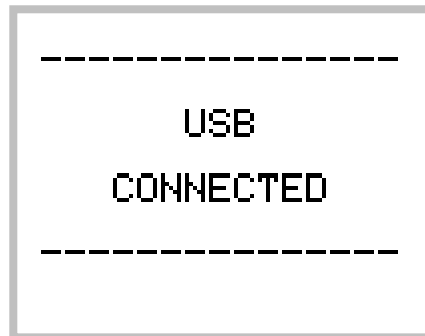
USB

The MINIR82 is equipped with a USB 2.0 port (USB 1 is not supported).

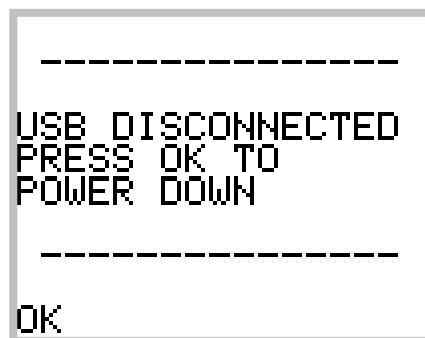
The MINIR82 allows connection to a computer for file transfer to a computer (PC or Mac) only when it is in one of the following menus::

- TRACKS MONITORING
- SOLO MONITORING
- Unit Status

The MINIR82 posts the following screen when the USB connection is active:



When disconnecting the USB cable, the MINIR82 forces the user to turn it off.



It is then necessary to press the LEFT key to switch off the MINIR82.

Important notes for MAC OSX users:

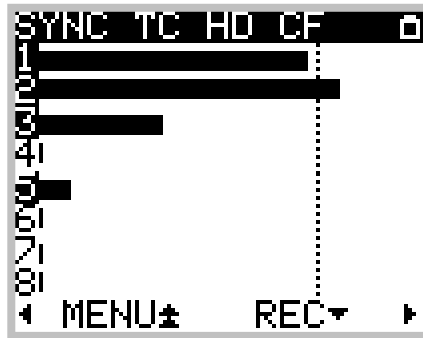
When deleting files stored on the Hard disk and/or on the CF, **do not forget to empty the Trash Bin** on your desktop **before** you disconnect the USB port. Otherwise, the disk space of the deleted files is not released and can not be re-allocated. Reconnecting the USB a second time does'nt solve the problem. It is very likely that your MINIR82 will then indicate a free available space "HD FREE" lower than the value given by the computer.

In this case it is then necessary to reformat your hard drive.

Alarms

Certain situations require that the user has to be warned on a particular point. When this occurs, the MINIR82 intermittently flashes a warning concerning the detected problem and a beep tone is heard in the headphone. The beep tone will disappear as soon as any key is depressed. However the warning keeps flashing in the display.

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



The Alarm AES occurs when one of the following conditions is checked:

- One or more Tracks is assigned from an AES input, but no valid AES signal is present.
- Input channels 5 % 6 are not assigned (AES 5-6 => SYNC)

The Alarm SYNC occurs when one of the following conditions is checked:

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

The Alarm TC occurs when one of the following conditions is checked:

- The TimeCode is set to Free Run - External Jam Sync, a TC signal is present but the format selected in the MINIR82 does not match with the detected format.
- The TimeCode is set on Free Run - External No Jam, but no TC signal is present
- The TimeCode is set on Free Run - 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 when one of the following conditions is checked:

- The remaining Free space on a disk is less than 100Mb.
- A recording is in progress and the size of the files tend to reach the maximal size of 4Gb. The Alarm will then turn On about 100MB before the limit of 4Gb is reached

The Alarm POWER occurs when one of the following conditions is checked:

- The power voltage is soon too low to maintain the MINIR82 running.

Up-Date procedure

The file name of the new software is : Vxxxxx.BIN

1. Connect your MINIR82 to the USB2 port of your computer (Mac or PC).
2. **For PC Compatible:** using the Windows Explorer, copy the Software file to the «AUDIO» root partition of your MINIR82.
3. **For MacOS:** the 2 partitions of your MINIR82 hard disk - CONFIG and AUDIO – will be posted on your desktop within a couple of seconds. If not, you must mount them by using the MacOS Disk Utility: select the volume (s) in the list, then choose « File => Mount »
4. The Software file can also be installed using the CompactFlash Card instead of the AUDIO partition.
5. Disconnect the USB2 cable and power off the MINIR82 as indicated on its display.
6. Power On the MINIR82, go into the « MENU » then choose « Browse Files ». The file name of the new Software appears on the screen at the bottom of the root of the AUDIO partition. If not, scroll down using the cursor by pressing the « DOWN Key ». If you have copied it on the CompactFlash Card, go into the CF trough « [...] », then choose « COMPACT FLASH ».
7. Select the Software file (ex. V22954.BIN), and press on « SELECT ». The screen will indicate the current « Running Version : (ex. 2.1.634) » and the new version to be installed « File Version : (V2.2.954) ». To proceed with the Up-Date, simply press on OK to confirm, or « CANCEL » to abort.
8. Once the up-date procedure has started, a progression bar appears on the screen. Wait until the end is confirmed and then press « OK »

Due to incompatibility between the different software versions, it is necessary to "Quick" Reformat your "CONFIG" and "AUDIO" partitions. Never attempt to keep the old CONFIG.DAT file as this could lead to malfunctions or even crashes of your MINIR82.

IMPORTANT NOTES :

- The « SETTINGS » folder containing all your « USER SETTINGS » can be saved before reformatting your hard disk and then copied back onto the "CONFIG" partition.
- The CONFIG partition, should contain nothing else but the CONFIG.DAT file generated by MINIR82 and the « SETTINGS » folder.
- After the software Up-Date, the audio WAV files as well as the «PROJECT» and «SCENE» folders can not be copied back onto the AUDIO partition. The MINIR82 can no longer manage them as with the preceeding software.
- Please carefully note that when the CONFIG partition has been reformatted or when the CONFIG.DAT file is erased, then the WAV file numbering will be re-initialised such as X00000_x.WAV or X00000xx.WAV
- When receiving your MINIR82 from the factory, the hard disk is shared into 2 partitions: one of aprox 50MB called « CONFIG » and the other of aprox 29MB called « AUDIO ». If you are using a MAC running either MacOSX or Windows for MAC. it is highly recomanded to remove the partitionning in order to have only one "Volume", because the MacOS "Disk Utility" does not allow to format multiple MS-DOS (FAT32) partitions.

Treatment of the errors

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

Power issue

When the supply voltage becomes too weak, the MINIR82 proceeds to a safe shut down. If a recording is in progress, it is stopped properly.

Note: please remember not to use dry cell batteries but only NiMh rechargeable batteries

Insufficient disc space

If the remaining free space in a disc is not sufficient, the recording in progress is stopped. When two discs are used (HD + CF), the recording is stopped if one of the two discs does not have enough free space.

Maximum file size

The FAT32 file system limits the size of the files to 4 GB. If the recording in progress reaches this limit, the MINIR82 adds an index (create a new TAKE) and continues to record in the new file. (no data will be lost !!).

Disc too fragmented

During the power-up, the MINIR82 checks the fragmentation of the discs. In case of severe fragmentation the recording is not allowed, an error message informs the user of the problem. It is then advisable to re-format the disc (while having saved the existing data before!).

CF Card Hot-plugging

The MINIR82 doesn't support the Hot Plugging of the CF In case a CF card is inserted or removed, a message will be posted to warn the user

Real Time Clock (RTC)

During the power-up, the MINIR82 checks if the Date and the Time of the system are coherent. If it is not the case, a menu forces the user to define 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 uninterrupted when NiMh batteries are removed or external DC supply is not present. However it will maintain Date and Time for a period of approximately 2 hours. It is therefore advised to leave well-charged batteries in their compartment.

Recommendations

Due to the architecture of the MINIR82 and its operating software we suggest following recommendations:

Copy of Takes

It is strongly advised to copy (transfer) the Takes carried out by the MINIR82 to the hard disc of a computer. The opposite is however not possible: the MINIR82 will not be able to read an audio file copied to its disc from a computer.

Defragmentation

Never attempt to defragment the discs used by the MINIR82. For performance reasons, Recording the Takes is carried out by interlacing the various files, which make it up. These files must remain interlaced so that the playback of the Takes remains possible. In the event of too severe fragmentation of a disc, it should be re-formatted (the fast formatting is enough).

Note: please remember to back-up your file before reformatting a disc!

Deleting files

Deleting a file is possible, but it must always be carried out by Take (suppression of the Take directory only). The suppression of a project is completely possible too.

Formatting

The MINIR82 works only with the FAT32 file system. The setting of the clusters size can be left in the default value.

Use of the hard disc

The hard disc of the MINIR82 is accessible via the USB interface. In a general way, the hard disc must be used for the audio recording. However, it is completely possible for the user to lay out of the disc space with an aim other than that of the audio recording. It is on the other hand important that this use does not compromise the fragmentation of the disc.

Appendix

Exemple of a USER SETTING file

"USER0000.TXT", located in the « SETTINGS » folder can be modified with a text editor

```
# Sonosax MINIR82
# -----

# Format: max 8 alphanumeric chars
Project name = TESTMIC

# Format: max 8 alphanumeric chars
Scene name = GAIN0DB

# Values: +15 dBu, +6 dBu, 0 dBu, -10 dBu
Line in level = +15 dBu

# Values: 1 sec, 2 sec, 5 sec, 10 sec, 20 sec
Pre-Record Time = 1 sec

# Values: 0 sec, 1 sec, 2 sec, 3 sec, 5 sec
Pre-Index Delay = 0 sec

# Values: 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz
Sampling Frequency = 176.4 kHz

# Values: 24, 16D, 16
Sampling Rate [bits] = 24

# Values: Nominal, Up 1 o/oo, Down 1 o/oo
Sampling Up/Down = Nominal

# Values: Mono, Stereo
File format = Mono

# Values: OFF, External WCK, Video In
Synchro mode = OFF

# Values: AES, MIC
Input source 1-2 = MIC

# Values: AES, LINE
Input source 3-4 = LINE

# Routing configuration
# Values: CH1, CH2, CH3, CH4, CH5, CH6, CH7, CH8
# To use multiple values, use ','
Routing HD Track 1 = CH1
Routing HD Track 2 = CH2
Routing HD Track 3 =
Routing HD Track 4 =
Routing HD Track 5 =
Routing HD Track 6 =
Routing HD Track 7 =
Routing HD Track 8 =
Routing CF Track 1 = CH1
Routing CF Track 2 = CH2

# Values: NONE, ATT1.5, ATT3, ATT6
Mixing level = NONE

# Monitor configuration
# Values: DISABLED, MONO, STEREO, MS, REVERSE STEREO, MONO L, MONO R
Monitor HD Tracks 1-2 = STEREO
Monitor HD Tracks 3-4 = DISABLED
Monitor HD Tracks 5-6 = DISABLED
Monitor HD Tracks 7-8 = DISABLED
Monitor CF Tracks 1-2 = DISABLED

# Values: +18..-30 [dB]
Headphones Level = 0

# Values: NONE, -9 dB, -12 dB, -18 dB, -20 dB
Modulometers Reference = -9 dB

# Values: NONE, 3 sec, 10 sec, 2 min, Infinite
Modulometers Hold Time = NONE

# Values: OFF, ON
Mic Low Freq Cut 1 = OFF
Mic Low Freq Cut 2 = OFF

# Values: Ext Jam Sync, Ext No Jam, Internal
Timecode Input Source = Ext Jam Sync

# Values: Autodetect, 24, 25, 29.97 Non Drop, 29.97 Drop, 30 Non Drop, 30 Drop
Timecode Input Format = Autodetect

# Values: Free Run, Record Run
Timecode Running Mode = Free Run
```

X000001.INI (exemple of file)

Located in each « TAKE » folder, it gives the configuration at the time the take was recorded.

```
# Sonosax MINIR82          Configuration file
# -----

# Format: max 8 alphanumeric chars
Project name = TESTMIC

# Format: max 8 alphanumeric chars
Scene name = GAIN0DB

# Values: +15 dBu, +6 dBu, 0 dBu, -10 dBu
Line in level = +15 dBu

# Values: 1 sec, 2 sec, 5 sec, 10 sec, 20 sec
Pre-Record Time = 1 sec

# Values: 0 sec, 1 sec, 2 sec, 3 sec, 5 sec
Pre-Index Delay = 0 sec

# Values: 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz
Sampling Frequency = 176.4 kHz

# Values: 24, 16D, 16
Sampling Rate [bits] = 24

# Values: Nominal, Up 1 o/oo, Down 1 o/oo
Sampling Up/Down = Nominal

# Values: Mono, Stereo
File format = Mono

# Values: OFF, External WCK, Video In
Synchro mode = OFF

# Values: AES, MIC
Input source 1-2 = MIC

# Values: AES, LINE
Input source 3-4 = LINE

# Routing configuration
# Values: CH1, CH2, CH3, CH4, CH5, CH6, CH7, CH8
# To use multiple values, use ','
Routing HD Track 1 = CH1
Routing HD Track 2 = CH2
Routing HD Track 3 =
Routing HD Track 4 =
Routing HD Track 5 =
Routing HD Track 6 =
Routing HD Track 7 =
Routing HD Track 8 =
Routing CF Track 1 = CH1
Routing CF Track 2 = CH2

# Values: NONE, ATT1.5, ATT3, ATT6
Mixing level = NONE

# Monitor configuration
# Values: DISABLED, MONO, STEREO, MS, REVERSE STEREO, MONO L, MONO R
Monitor HD Tracks 1-2 = STEREO
Monitor HD Tracks 3-4 = DISABLED
Monitor HD Tracks 5-6 = DISABLED
Monitor HD Tracks 7-8 = DISABLED
Monitor CF Tracks 1-2 = DISABLED

# Values: +18..-30 [dB]
Headphones Level = 0

# Values: NONE, -9 dB, -12 dB, -18 dB, -20 dB
Modulometers Reference = -9 dB

# Values: NONE, 3 sec, 10 sec, 2 min, Infinite
Modulometers Hold Time = NONE

# Values: OFF, ON
Mic Low Freq Cut 1 = OFF
Mic Low Freq Cut 2 = OFF

# Values: Ext Jam Sync, Ext No Jam, Internal
Timecode Input Source = Ext Jam Sync

# Values: Autodetect, 24, 25, 29.97 Non Drop, 29.97 Drop, 30 Non Drop, 30 Drop
Timecode Input Format = Autodetect

# Values: Free Run, Record Run
Timecode Running Mode = Free Run
```

MINIR82 and STREC82 partition organization on the HD and the CF Card

MINIR82 V2.2.954 and STREC82 V2.2.422

The only accepted characters for the PROJET, SCENE and SETTINGS names are: 0->9, A->Z and " _ " underscore.
 Characters in Lower case are automatically converted to Upper-case. A Space character is automatically converted to an Underscore.

On a Hard Disk with 1 partition: (FAT32)

E:\	[HDD NAME]	name of the disk (choice of name is free)
CONFIG.DAT	[CONFIG.DAT]	machine configuration file (binary)
SETTINGS\ NEW1.TXT NEW2.TXT	[SETTINGS FOLDER] [SETTING FILES NAME]	directory for the User Settings files User Settings files (can be modified with a text editor)
MINIR82\ SCENE001\ SCENE001.001\ X00002_1.WAV X00002_2.WAV X00002_x.WAV X00002_8.WAV X00002.INI	[PROJET FOLDER NAME] [SCENE FOLDER NAME] [SCENE NAME.TAKE NUMBER] [BWF FILES] X 00002 _1 [RECORD SETTING FILE]	Directory for a Project (8 characters) Directory for the Scenes (8 characters) Directory for the Takes files (3 digits, automatic incrementation) = SONOSAX = unique indentifier (hexadecimal) = MONO channel 1 configuration of the unit at the time the take was recorded (do not alter)
SCENE001.002\ X00003_x.WAV X00003.INI		
SCENE001.003\ X0000412.WAV X0000434.WAV X0000456.WAV X0000478.WAV X00004.INI	[BWF FILES] X 00002 12	= SONOSAX = unique indentifier (hexadecimal) = STEREO channels 1 and 2
SCENE001.004\ X00005xx.WAV X00005.INI		
TRASH\ X00002_1.WAV X00002_x.WAV X00002_8.WAV X00002.INI	[TAKE DELETED FOLDER] [TAKE DELETED FILES]	Directory of deleted Takes (Trash bin) BWF and INI files of the deleted Takes

On a Hard Disk with 2 partition: (2x FAT32 for PC only, MAC OSX can not manage nor create 2x FAT32 partitions)

```

E:\                                     [HDD NAME] (CONFIG)                volume name, CONFIG by default, partition between 50 to 100MB
CONFIG.DAT                             [CONFIG.DAT]                       machine configuration file (binary)
SETTINGS\                               [SETTINGS FOLDER]                 directory for the User Settings files
    NEW1.TXT                             [SETTING FILE NAME]              User Settings files (can be modified with a text editor)
    NEW2.TXT
---
F:\                                     [HDD NAME] (AUDIO)                volume name, AUDIO by default
MINIR82\                                [PROJET NAME]                    Directory for a Project (8 characters)
    SCENE001\                             [SCENE NAME]                    Directory for the Scenes (8 characters)
        SCENE001.001\                   [SCENE NAME.TAKE NUMBER]        Directory for the Takes files (3 digits, automatic incrementation)
            X00002_1.WAV                 [BWF FILES]      X                    = SONOSAX
            X00002_2.WAV                 00002                    = unique indentifier (hexadecimal)
            X00002_x.WAV                 _1                       = MONO channel 1
            X00002_8.WAV
            X00002.INI                   [RECORD SETTING FILE]          configuration of the unit at the time the take was recorded ( do not alter )
        SCENE001.002\                   X00003_x.WAV
            X00003.INI
        SCENE001.003\                   X0000412.WAV                [BWF FILES]      X                    = SONOSAX
            X0000434.WAV                 00002                    = unique indentifier (hexadecimal)
            X0000456.WAV                 12                       = STEREO channels 1 and 2
            X0000478.WAV
            X00004.INI
        SCENE001.004\                   X00005xx.WAV
            X00005.INI
TRASH\                                  [TAKE DELETED FOLDER]           Directory of deleted Takes (Trash bin)
    X00002_1.WAV                         [TAKE DELETED FILES]          BWF and INI files of the deleted Takes
    X00002_2.WAV
    X00002_x.WAV
    X00002_8.WAV
    X00002.INI

```

On the CompactFlash CF: (FAT32) (no Trash Bin, \TRASH)

G:\		[HDD NAME]		name of the disk (choice of name is free)
MINIR82\		[PROJET FOLDER NAME]		Directory for a Project (8 characters)
SCENE001\		[SCENE FOLDER NAME]		Directory for the Scenes (8 characters)
SCENE001.001\		[SCENE NAME.TAKE NUMBER]		Directory for the Takes files (3 digits, automatic incrementation)
	XC0002_1.WAV	[BWF FILES]	XC	= SONOSAX on CF card
	XC0002_2.WAV		0002	= unique indentifier (hexadecimal)
	XC0002_x.WAV		_1	= MONO channel 1
	XC0002_8.WAV			
	XC0002.INI	[RECORD SETTING FILE]		configuration of the unit at the time the take was recorded (do not alter)
SCENE001.002\	XC0003_x.WAV			
	XC0003.INI			
SCENE001.003\		[BWF FILES]	XC	= SONOSAX sur CF carte flash
	XC000412.WAV		0002	= unique indentifier (hexadecimal)
	XC000434.WAV		12	= STEREO channels 1 and 2
	XC000456.WAV			
	XC000478.WAV			
	XC0004.INI			
SCENE001.004\	XC0005xx.WAV			
	XC0005.INI			