

## SONOSAX SX-R4 FIRMWARE 4.0 INFORMATION

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### Overview

This document describes the installation procedure of the new firmware 4.0 and explain some features and functionality for the SONOSAX SX-R4 recorder. These technical notes can be considered as a quick start guide for those who are already familiar with previous firmware version of the SX-R4 recorder; however it does not replace the user manual.


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# Upgrading firmware from 3.x to 4.0

## Before you begin


The new firmware is available for free download on SX-R4 support page on [Sonosax website](#). Please carefully read throughout this entire document before proceeding with the upgrade. It gives a clear understanding of what is changed in the new version.

WARNING	
	Backup all files stored on the HD and on your CF Card before starting the upgrade procedure.


Upgrading from version 3.x to version 4.0 requires to reformat the internal hard disk and all you CF Cards. Make sure you have backed-up all you files before proceeding.

NOTE	
	User Settings created with version 3.1 or earlier are no longer compatible with version 4.0.

## Upgrade procedure

WARNING	
	The recorder must be powered with fully charged batteries AND external power to ensure no power loss during the firmware update procedure.

1. Download the firmware file from the Sonosax website and copy it to the internal hard drive of your recorder. Then disconnect the recorder from the computer.
2. From the Main menu, enter the Browse file menu, locate the new Firmware file and select the file.
3. A message will be prompted asking you to confirm the update procedure. Press OK to continue and wait until full completion.
4. Once completed, a message is prompted, asking you to reboot the recorder.
5. When booting the recorder for the first time with firmware 4.0, you must format your internal Hard Disk using exclusively the internal disk format utility: SETUP / SYSTEM SETTINGS / HARD DRIVE then long press to UP.
6. Load the factory default settings: SETUP / SYSTEM SETTINGS / FACTORY SETTINGS select YES
7. Your recorder is now ready for use

NOTE	
	After update, a 'HD' or 'CF' error message will be posted. This warning is normal: format your drive as mentioned on point #5.

## Display firmware revision

To display firmware revision with firmware 4.0, enter setup menu:  
SETUP / SYSTEM SETTINGS / SYSTEM INFO  
The firmware revision is displayed under DSP REVISION .

## Firmware 4.0 improvements and changes

### ***WAV file names and filetag***

A new audio file name format have been developed to better conform with alternative products and to ease transfer and file handling during post-production. The new file name is formatted as below:

IDNNNNTT.WAV

IDNNNN sequence is a unique identifier - called filetag - automatically incremented at each take. TT is a track identification code.

- ID are two uppercase alphabetic letters that users can freely define in the system setup menu. It allows to identify which files was recorded on which recorder when multiple recorders are used simultaneously on a production.
- NNNN are 4 decimal digits, incremented at each take. This number is different for each take and has no particular signification.
- TT are 2 characters that identify the track format recorded in the audio file.
  - For monophonic files, the format is '\_N', where '\_' denotes Mono file and 'N' the track number.
  - For stereo files, the format is 'NM', where 'N' is the odd track number and 'M' the even track number.
  - For polyphonic files, the format is 'SN', where 'S' denotes a Polyphonic file and 'N' the track count.

The NNNN number is incremented by 1 at the start of each new Take. If the number exceed 9999, it starts at 0001 again but ID is incremented to the next alphabetic value. Factory default sets ID to 'SX' and NNNN to 0001.

### ***Working day***

The version 4.0 is based on a structure storing the audio files by [PROJECT] then by [WORKING DAYS]. The working day is a 8 digits tag that has the following format:

YYYYMMDD

Where:

- YYYY is the year
- MM is the month (1 to 12)
- DD is the day (1 to 31)

The working day changes automatically when passing midnight, using the value of the internal real-time clock of the recorder. If the date of day has changed when powering on the recorder, the firmware ask to confirm the new working day; thus allowing to keep the current working day if a production works crosses midnight.

The working day is used for two main purposes:

1. Sets a folder name, to store all files of the day
2. Uses the shooting day as reference, in conjunction with the timecode. For this purpose, the working day information's correspond to the TAPE field in the BWF and iXML metadata.



## Monitoring

The [MONITORING] menu have been completely reworked in firmware version 4.0.

The configuration of the monitoring is no longer linked with the configuration of the tracks in the routing matrix. Thus, changing the configuration of the track does not affect the monitoring settings. Monitoring a disabled track is simply ignored.

The monitoring configuration is no longer limited to pairs of tracks; now each track can also be routed individually to the left or right channels of the headphone. Thus, the system offers to monitor the track either

- per pair of tracks [OFF, MONO, STEREO, MS], when a stereo or M/S microphone is used
- or individually: [OFF, LEFT, CENTER, RIGHT]

Simply move the cursor (joystick Left-Right-Up-Down) to select a pair or an individual track, then push on the center to scroll the values.

In addition, the version 4.0 provides with four monitoring presets; users can freely store and recall his own monitoring configurations.

## Timecode


For the NTSC world, the timecode format is no longer linked with the pull-up / pull-down (+/- 0.1%) of the sampling frequency. This was a limitation in previous firmware and now user can freely configure according to post-production requirements.

Timecode software has been reworked, now keeping a perfect accuracy when switching between player mode and recorder mode.

## False start

This function does the following:

1. Stop the current recording (if a recording is in progress)
2. Move the audio files of the HD and of the CF Card to the [TRASH] folder.
3. Tag the files as [FALSE\_START] in the metadata (iXML).
4. Reset the take number to previous number (if false start was issued from record or ready state)

NOTE	
	The menu previously named [FALSE TAKE] is renamed [FALSE START].

## Headphone level lock

User can lock/unlock the setting of the headphones level: call the volume setting screen by pressing the joystick Left or Right, then push Up while headphones level page is displayed.

## Quick selection of Previous/Next Takes in the Player

While in Player mode - playback being stopped - users can quickly select and load the previous or next recorded Take by pressing the joystick to Left (previous) or Right (next). All Take information's are displayed until user choose to load the Take by pressing Center. Currently loaded take is displayed in reverse video.