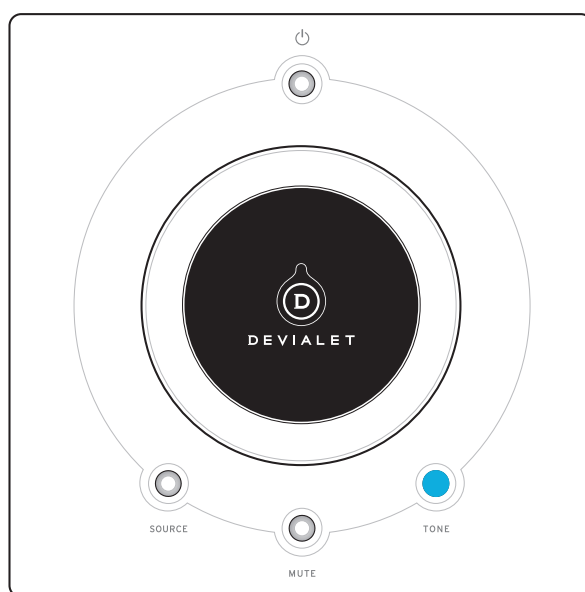# Firmware 8.1.0 Manual

8.1.0
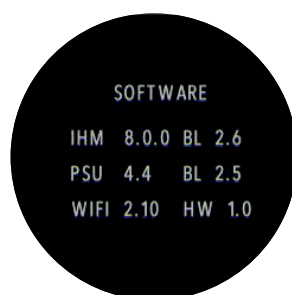
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Firmware 8.1.0 **Manual**

Follow these steps to update the internal firmware of your Devialet Expert system.

To begin, verify if your Devialet needs to be updated. To check your current firmware version:

• Press the bottom right button on your Devialet Remote (hold for 2 seconds). The Devialet screen will display the Information Menu.

• Press the bottom right button (short press). The software information will be displayed. «IHM» indicates the current firmware version (i.e.: 8.0.0).

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To update to the latest firmware version:

• Visit the Devialet website at www.devialet.com
• Go to the « Expert » section on the site and click on « Login » at the top right of the page
• Enter your e-mail and password and click on « Sign in »

Once logged into My Account, you'll find the latest version of the firmware under the first tab: « My Software »
• Click on «Download »

A compressed file (.zip) including all the firmware files will start downloading.
• Remove the SD-Card from the Devialet. Make sure the SD-Card is not in « locked » position
• Insert the SD-Card in your computer and empty it
• Unzip the file to a folder
• Open the folder
• Copy / paste all the files you have just unzipped to the root directory of the SD-Card
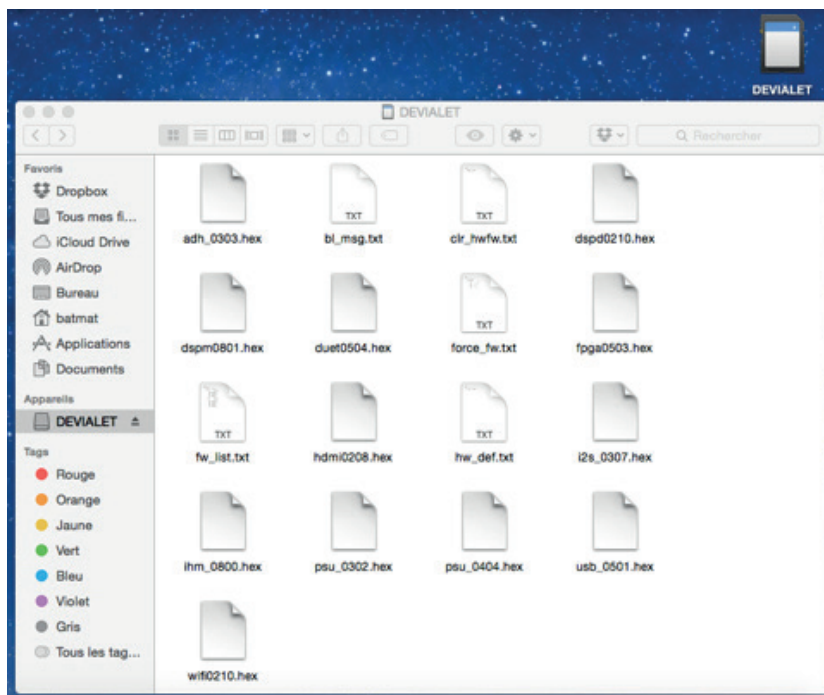
IMPORTANT
You should have 17 files on the SD-Card (excluding this .pdf guide), all in the root direcory of your SD-Card and not in any folder.

Firmware 8.1.0 **Manual**

• Eject the SD-Card from your computer
• Insert the SD-Card in your Devialet
• Unplug / Plug the power supply. Or, if you are in standby mode (Product display off), long press (5 seconds) the front button to reset the Devialet.

LOADING
FIRMWARE 8.1.0

UPGRADE 8.1.0
SUCCESSFUL

PLEASE PRESS
FRONT BUTTON

The upgrade should start automatically without pressing any button. When the upgrading process is complete, the display will indicate «Upgrade successful, please press front button » Your Devialet will be operable with the latest firmware and ready to play music.

You can empty your SD-Card as you no longer need the upgrade files on it.
Go to Le Configurateur and enjoy unlimited set-up possibilities

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Bug fixes on the 8.1.0 Firmware version:

• Fix of potential issue with certain SAM V2 profiles at high level
• Fix of potential phono EQ issue of companion units in some 'dual-mono' configurations
• Fix of potential preamplified output issue in variable volume mode configurations
• Fix of potential DPM issue in some configurations
• Tone control now fully compatible with SAM V2
• ICM mode can now be independently turned on/off on each input

Features available on the 8.1.0 Firmware version:

Advanced Parameters menu
Make a short press on the remote's tone button (with the factory configuration) or, depending on your remote's configuration, make a long press on the remote's bottom middle button to enter this menu.
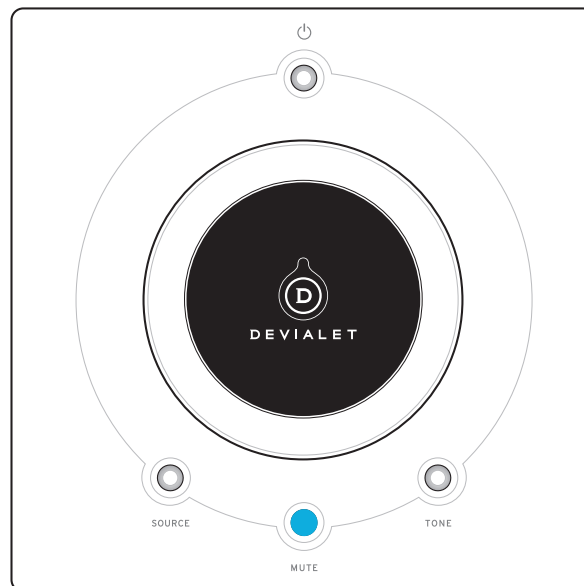
Adjustments and ON-OFF toggles are made using the volume knob.
Make a short press to cycle the following screens (source button = previous, tone button = next)
Make a long press on the same buttons to exit.

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Left/Right Balance adjustment from -100% (full stereo incoming content sent to left channel only) to +100% (full stereo incoming content sent to right channel only). Setting is made remixing stereo incoming content into mono (by default) to perform music independent adjustment. 0% setting bypasses this stage.

Low frequencies adjustment from -18dB cut to +18dB boost using a low-shelf filter structure.
Cut-off frequency can be set using Le configurateur.
0.0 dB setting (by default) bypasses this filter.

High frequencies adjustment from -18dB cut to +18dB boost using a high-shelf filter structure.
Cut-off frequency can be set using Le configurateur.
0.0 dB setting (by default) bypasses this filter.
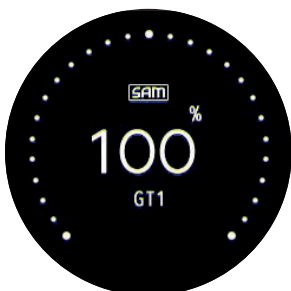
If a SAM profile is loaded, Low frequency extension:
0%: speaker natural bandwidth 100%: speaker bandwidth augmented thanks to SAM (by default)

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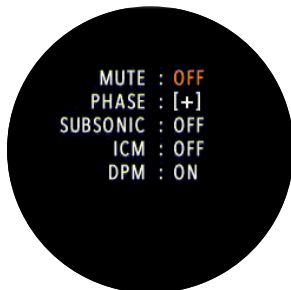
- MUTE: mutes the outputs selected in Le configurateur. ON means no audio.
- PHASE: Allows to invert the output signal. [+] means 0° phase shift, [-] means +180° phase shift
- SUBSONIC: Allows to activate the subsonic filter, high-pass 20Hz first order filter. ON means output is filtered, OFF means output is flat.
- ICM: Allows to activate the Intelligent Cinema Mode
- DPM: Allows to activate the Dynamic Power Management mode
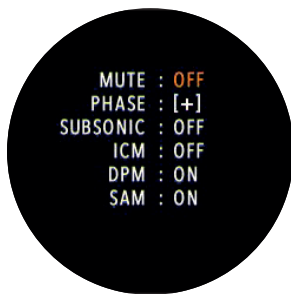
If a SAM profile is loaded, toggles SAM ON or OFF.

If a stereo preamplified output is configured, toggles it ON or OFF.

If a mono subwoofer output is configured, toggles between:
- 2.0: Subwoofer output turned OFF
- 2.1: Subwoofer output turned ON

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Firmware 8.1.0 **Manual**

You need to redo a configuration in order to use SAM with the 8.1.0 firmware. Otherwise the following message will appear:

PLEASE REDO
CONFIG ON OUR WEBSITE

OLD SAM
CONFIG FILE

Le configurateur does not allow you to use SAM with the 8.0.0 firmware anymore. If you are still on firmware 8.0.0, please upgrade to the 8.1.0.

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RAM PHONO STAGE ® On any phono input, the RAM menu becomes also available in the advanced parameters menu. As many settings are available, changes are applied after 2 seconds of inactivity.

On le 200, le 400, le 250, le 800 and le D-Premier:

Available 'Channels' modes:
· Stereo (by default) (stereo incoming content unchanged)
· Mono (stereo incoming content remixed into mono)
· Left (left incoming channel remixed on both output channels)
· Right (right incoming channel remixed on both output channels)

Available equalization curves:

· RIAA1953	· DECCA
· RIAA 1976	· OISEAU LYRE
· NAB	· TELEFUNKEN
· RCA	· CAPITOL
· COLUMBIA	· MGM
· EMI	· ESOTERIC
· AES	· NONE

Phono stage sensitivity range:
· 0.10mV to 1.00mV (in 0.01mV steps), preferred for MC
· 1.00mV to 15.00mV (in 0.1mV steps), preferred for MM
(NB: 0.1mV = 100uV)

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Cartridge load resistance adjustment:

• High	• 37 Ω
• 460 Ω	• 30 Ω
• 200 Ω	• 25 Ω
• 140 Ω	• 22 Ω
• 100 Ω	• 14 Ω
• 85 Ω	• 12 Ω
• 70 Ω	• 10 Ω
• 60 Ω	

Cartridge load capacitance adjustment:

• 0 pF	• 400 pF
• 100 pF	• 500 pF
• 200 pF	• 600 pF
• 300 pF	• 700 pF

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On le 120:

CHANNELS STEREO
EQ CURVE RIAA 1976
MAX LEVEL 5.00 MV

Available modes:

· Stereo
· Mono
· Left
· Right

CHANNELS STEREO
EQ CURVE RIAA 1976
MAX LEVEL 5.00 MV

Available equalization curves:

· RIAA1953
· RIAA 1976
· NAB
· RCA
· COLUMBIA
· EMI
· AES

· DECCA
· OISEAU LYRE
· TELEFUNKEN
· CAPITOL
· MGM
· ESOTERIC
· NONE

CHANNELS STEREO
EQ CURVE RIAA 1976
MAX LEVEL 5.00 MV

Phono stage sensitivity range:

· 0.10mV to 1.00mV (in 0.01mV steps), preferred for MC
· 1.00mV to 15.00mV (in 0.1mV steps), preferred for MM
(NB: 0.1mV = 100uV)

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MAT DSD ENGINE ® The DSD sound format (Direct Stream Digital) was released in 1999 with the introduction of the SACD (Super Audio Compact Disc).

In the « computer audio » era, it has now become much more accessible. Considered by many industry leaders as the most analog sounding of digital formats, DSD has gained a solid reputation over time and has quickly become a reference format for the most demanding of audiophiles.

The conventional PCM format of audio CDs encodes music on 16 bits (65536 levels), 44100 times per second, whereas DSD format encodes music on 1 bit (using only 2 levels: 0 or 1) but much more frequently: 2.8224 million times per second (DSD64 or DSD 1x), 5.6448 million times per second (DSD128 or DSD 2x) and even 11.2896 times per second (DSD256 or DSD 4x). The raw bitrate of an audio DSD stream is higher than that of an audio CD and equivalent to a High Definition PCM stream.

Thus, from a bandwidth point of view, it is technically feasible to carry an audio DSD stream over a High Definition capable PCM digital input. The entire Expert range is now compatible with the DoP protocol (DSD over PCM). This new feature is available through the USB input but also on the digital XLR input (AES/EBU), the TOSLINK optical input and all coaxial digital inputs (S/PDIF). A completely unique feature.

MAT® DSD Core technology converts the DSD format into Expert internal native PCM 40 bits / 384 kHz format thanks to an optimized algorithm, limiting the amount of computational operations on the audio stream. Using only 15 bit perfect additions (no multiplication, no storage), the MAT® algorithm performs a 128 taps, linear phase FIR (Finite Impulse Response) digital filter ensuring the conversion of the DSD format into internal native PCM format with truly outstanding performances.

DSD Quickstart guide click here

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SAM PROCESSING ®   Introduced in 2014 to every model in the Devialet Expert range, SAM® Processing precisely adapts the signal to the characteristics of your speaker model.

In 2015, SAM® continues to evolve and improve with the introduction of SAM® V2, which now supports the most complex speakers designs.

These include:
• The modeling of loudspeakers with up to 4 bass drivers, including passive radiators.
• Distinct modeling of both left and right loudspeakers, for an integral optimization of a stereo system.
• Improvement of loudspeaker protection at high pressure levels.
• Increase of the maximal acoustic pressure of low frequencies.
• Improvement of the group delay at high acoustic pressure, better presentation and soundstage all over the spectrum: lows, mids & highs.
• Optimization of the algorithm, reducing the overall amount of computational operations.
• Even more precision and 50% less CPU load: a promise of future evolutions.
• SAM® V2 introduces compatibility with the parameters generated by SAM Lab®.

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Intelligent Cinema Mode:

What it does:
• Listening comfort is improved: the user does not have to constantly change the listening volume when switching from very loud scenes to very quiet ones.
• The output sound level is maintained between two predefined min. and max. levels depending on the average listening level.
• The original dynamics of the signal are reduced only if they compromise the listening experience.

How it is done:
• The level of the incoming signal is monitored in real time and constantly analyzed. The analysis allows to determine the optimal volume gain to obtain the best listening experience while maintaining the dynamics of the signal.
• During a very quiet, almost inaudible scene (as compared to the average listening sound level), the sound level is raised by a defined and limited amount.

What it is not:
• No EQ: ICM is flat in frequency

Dynamic Power Management:

The amplifier's input signal level and the current volume gain allow us to determine at any moment the maximum voltage to be applied to the speakers.

For example, with a volume gain at -20dB, the maximum voltage to be applied to the speakers is ten times inferior to the maximum voltage the amplifier can deliver.

The amplifier's electrical consumption, and as a consequence its heating, is directly linked to the maximum internal power supply voltage (which is superior to the maximum voltage required by the speakers) produced by the internal power supply of the amplifier.

In order to further increase the amplifier efficiency, the value of the maximum internal voltage is adjusted according to the maximum voltage required by the speakers.

Therefore, this supply voltage management allows to maintain the quality of the voltage applied to the speaker and to save energy at the same time.

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