



## FIRMWARE RELEASE NOTES

VERSION 2.0 PUBLIC BETA

DEC, 2021

### NEW AND IMPROVED FEATURES

- Improvement: The front panel now has various double-tap functions:
  - Double-tapping EDIT edits the previous block.
  - Double-tapping HOME enters the layout grid.
  - Double-tapping STORE prompts immediately.
  - In the Home or Layout menus, double-tapping the A-E push-knobs does the following:
    - A enters the Amp 1 menu;
    - B enters the Drive 1 menu (think "Boost")
    - C enters the Cab 1 menu.
    - D enters the Delay 1 menu.
    - E enters the Reverb 1 menu (think "rEverb")
- New Amp model: "FAS Buttery"
- New Delay Block Types: Worn Tape, Zephyr, and Diffused Delay.
- New Drive Block Types: "Valve Screamer VS9" and "Maxoff 808" including a new diode SPICE model "1S1588T" This is the Toshiba version of the 1S1588 and is reportedly the diode used in the "best sounding" TS-808s.
- New "Types" in the Plex Delay, Megatap, and Multitap Delay provide instant access to exciting effect settings without the need to adjust or understand advanced parameters. Special thanks to Leon Todd, Simeon Harris and Cooper Carter for some of the new effect type contributions.
- New Megatap features including feedback, diffusion, and more. Maximum number of taps is now 64 on the FM9. See the Fractal Audio Blocks Guide for details.
- New LFO in the filter section of the Plex Delay block allows creative modulation effects. See the Blocks Guide for details.
- New pitch shifting capability inside the Reverb Block. This can be used to create "Shimmer Reverbs" more easily than using separate Pitch and Reverb blocks (and with less CPU usage). Several new types are included to demonstrate the capability. See the Blocks Guide for details.
- New "Modern Gate" type in the Gate/Expander Block. This type is similar to the Classic Gate except the gate opens in a constant linear-in-dB manner. This naturally makes the attack slower as the gate first opens and can be used for both traditional gating and for special effects like audio swells.
- New "S-Taper" option in the Volume Block allows new and improved "Auto-Swell" sounds.
- New "Max Loop Time" parameter to Looper. This sets the maximum recording time. This allows a loop time to be set precisely in advance of recording.
- New Diffuser Modulation in the Multitap Delay.
- New 'MUTE' options for OUTPUT 1 MODE and OUTPUT 2 MODE cause only processed audio to be muted. USB audio will still be routed to and heard at a muted output, enabling certain applications when using a DAW with input monitoring.

- Changed Looper behavior so that if recording and time reaches the maximum recording time the mode changes to that specified by Record 2nd Press (for the first pass of a new recording.)
- Overhauled the Compressor Block in line with the latest Axe-Fx updates:
  - Improved Auto-Makeup gain behavior.
  - Added Input Level switch. When set to INSTRUMENT the detector is optimized for guitar-level signals, i.e., before an amp block. When set to LINE the detector is optimized for post-amp level signals.
  - The Pedal, Optical, Tube, Analog, JFET and Dynamicomp types have been completely redone resulting in improved performance. These types now inherently perform automatic makeup gain.
  - Auto Attack/Release has been removed from the Pedal and Dynamicomp types as it is no longer applicable.
  - Added Emphasis frequency to the sidechain.
  - NOTE: Due to all these changes the behavior and output volume of the Compressor block may be different. It is recommended to audition any presets using the Compressor block and adjust as required.
- New option "ALL" for "Spillover" in SETUP: Global Settings: Config. In addition to Delay and Reverb, this includes Plex Delay, Multitap-Delay, Megatap Delay, and Ten-Tap Delay blocks, allowing spillover when switching presets. See your Owner's Manual for more on spillover.
- Added global Speaker Impedance Curve. When set to DEFAULT the speaker impedance curve used when selecting an amp model is the default curve for that amp model, otherwise it is the selected curve. NOTE: this does not affect existing presets. The selected curve is used only when selecting a new amp model. Also added several new Impedance Curves; thank you to [Dr. Bonkers Soundlab](#) for these.
- Added "RCB Boost" to Amp block Boost types.
- Improved Tape preamp types in Cabinet block.
- Improved accuracy of Drive block Drive control for low settings.
- Improved accuracy of Master Volume in Amp block for low settings.
- Improvement: Pitch Block and Pitch Follower use new pitch detection based on Axe-FX III
- Improvement: Push-knob functions in the Block Edit have been simplified to a single page.
- Improvement: Scene changes where the channel is changed for two Amp Blocks are now as fast as those where only one amp block channel changes.
- Improved Amp block cathode follower algorithm. Algorithm now uses higher order solution of nonlinear ODE for more accurate low frequency response.
- Improved Amp block power amp algorithm. New algorithm more accurately models dynamic changes in speaker impedance resulting in more "complexity".
- Improved Stack/Hold in Delay block so that "texture" is applied to audio when Stack/Hold is on.

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## FOOT CONTROLLER CHANGES

- FC: New FC Function: "Scene Level & Save" increments or decrements the current SCENE LEVEL for selected output(s) and saves the preset.
- FC: Improvement: The FC functions "Amp Level + Save" and "Scene Level + Save" now wait 1.5 seconds before saving. This allows you to tap the footswitch repeatedly before the Save is executed. On-screen messages show the status.
- Added "Bank Switch Limits" ENABLE/DISABLE to the FC Config menu. These allows the FM9 to ignore the limits set in bank switches, thereby allowing access to ALL BANKS by default.

## FIXES

- FM9 now correctly loads IRs created by exporting Tone Match data from Axe-Fx III.
- Home menu screen will update when scene is changed from any source, MIDI CC included.
- MIDI over USB messages now detected in MIDI Learn mode in the Setup Menu.
- Amp block copy/paste in FM9 Edit will correctly transfer level, pan, and bypass settings.
- Onboard Pedal 2 and Pedal 3 jacks now allow independent "Switch Behavior" settings
- Preset "SAVED!" message is now shown reliably in all expected cases.
- Tuner-on-heel-down was causing artifacts in the main display.
- Warn on Edited Preset notice no longer overlaps other messages.
- Improved data handling prevents a rare instance of lock up reported by some.
- Other small fixes based on those made on the Axe-Fx III.

## RELEASE NOTES HISTORY

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VERSION 1.0, FEB 11, 2020

- First public release. See the FM9 Owner's Manual for details.