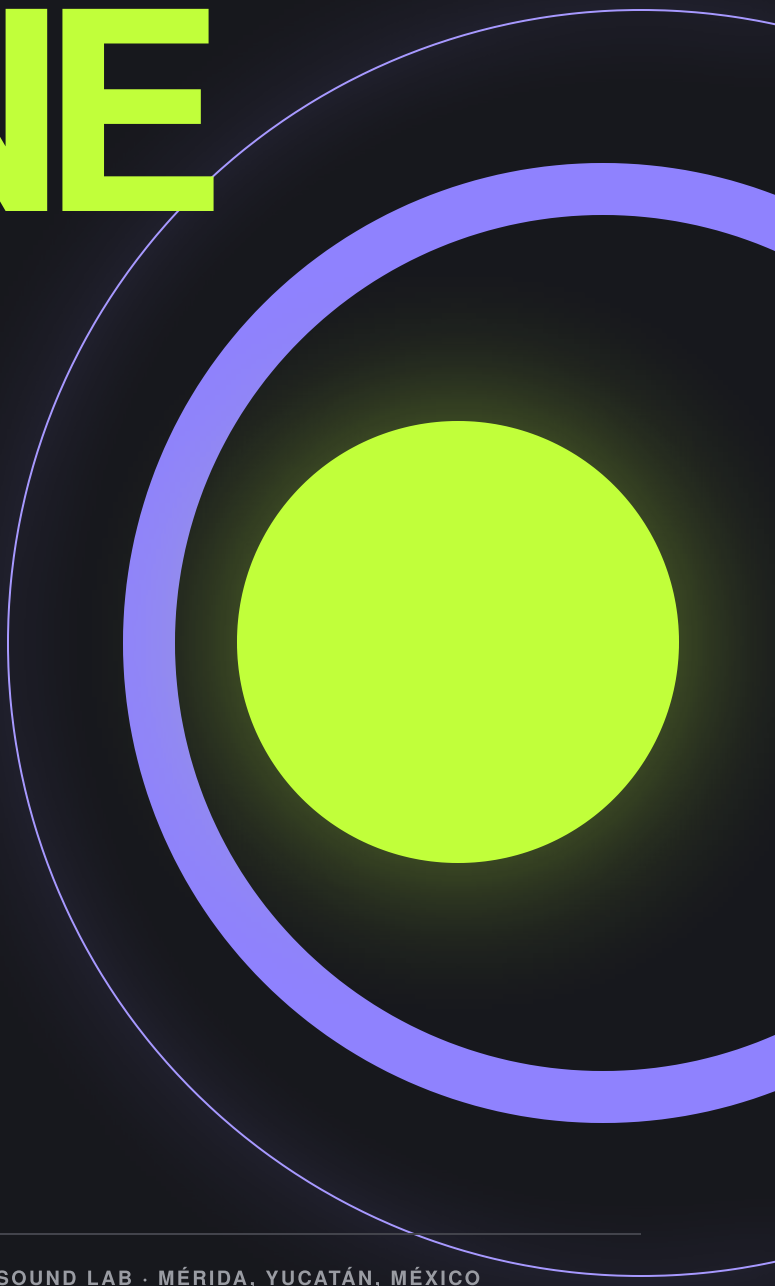
DFD

USER MANUAL · M-VAVE FM-1 · v1.8.2-da1

ACID ENGINE

SEQUENCER / SYNTHESIZER / PATTERN LAB /
HARDWARE TWIN



ENGLISH EDITION

DARK FUNK DURCAL DESIGN · DESARROLLADO EN POLARIS SOUND LAB · MÉRIDA, YUCATÁN, MÉXICO
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ACID AND DIRTY ELECTRO, IN YOUR HANDS.

DFD ACID ENGINE for the M-VAVE FM-1 is a firmware with its own screens and controls: one acid / dirty voice playing the web version's generator, note for note, in 16 styles, 3 scales, 12 keys and 24 seeds each, with 19 sounds and a DIRTY page.

SAFETY Tested on a real FM-1, and on every build automatically on a computer (the patterns against the web version, the voice, every control, the screens, the storage). Back up the music you care about before installing; the installer can always take you back to the official firmware. Use it at your own risk.



fig. 1 · ACID HOUSE, the SOUND page.

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Built on Felucca 1.8.2 by Hügelton Instruments (its drivers: keys, knobs, screen, audio, flash, USB, sequencer). Everything you see and play is DFD ACID ENGINE's own.

INSTALL, AND GO BACK.

01 Connect the FM-1 straight to the computer with a USB-C **data** cable (no hub). Quit apps that use MIDI (DAWs, editors).

02 Open drophlex.github.io/DFD-ACID-ENGINE/fm1/install in **Chrome** or **Edge**, allow MIDI when asked.

03 First save the music and sounds you care about: with the official workbench (official firmware) or the editor (a Felucca-based firmware). **Install** writes the firmware; it does not make that backup for you.

04 Press **Install** and keep the cable in until it says it is done (about a minute).

05 The FM-1 restarts: the splash, then ACID HOUSE. Press PLAY.

BACK TO THE OFFICIAL FIRMWARE

Open the same page, **Return to official firmware**, pick the official FM-1.fwsc (V15 or V16, from m-vave.com): it saves a complete backup of what is on the FM-1 to your computer first, checks the official package and writes it.

> **TIP** If the FM-1 ever does not start: hold OCT- and OCT+ while powering it on (UPDATE MODE), then use the installer page again.

THREE BANDS, ONE GLANCE.

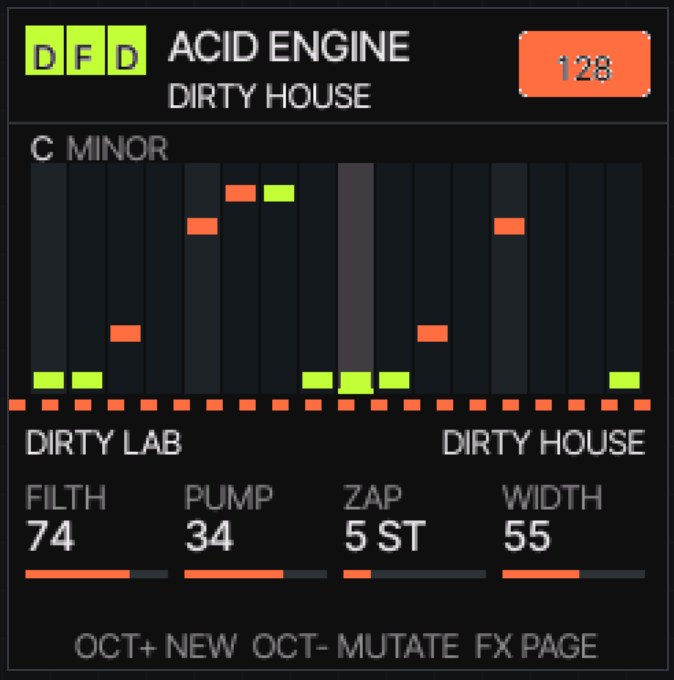

fig. 2 · DIRTY HOUSE on the DIRTY page, playing.

BAND	SHOWS
top	the DFD mark, the style (or MY PATTERN after a mutation), the tempo (orange while playing)
middle	the 16 steps as a roll: height = pitch, lime notes, **orange accents**, **violet slides**, **blue ties**, dots = ratchets; the playhead glows. Key and scale on top, the DNA lock on the right
bottom	the page (SOUND lime, DIRTY LAB orange with its stripe), the sound's name and the four knobs; what you just turned shows large for a moment



fig. 3 · PRESETS just turned: the style, large.

03 CONTROLS

EVERY CONTROL, ONE JOB.

CONTROL	DOES
PRESETS	STYLE: 16 (10 styles and the DIRTY LAB's 6 riff families). A style loads its sound, its tempo and a pattern
ALGORITHM	SOUND: 19 (each style's own and the 9 dirty sounds); the pattern stays
SELECT	TEMPO 40 … 220
K1 K2 K3 K4	SOUND page: CUT · RES · ENV · DEC. DIRTY page: FILTH · PUMP · ZAP · WIDTH
OCT+	GENERATE: another seed of the style
OCT-	MUTATE: a few notes, accents, slides change (step 1 stays)
FX	the SOUND / DIRTY page (FX lit = DIRTY)
SCL	the scale: MINOR · PHRYGIAN · DORIAN (the same seed in it)
ENV	the key: C … B, the pattern moves with it
LFO	DNA LOCK: OFF · NOTES · RHYTHM (LFO lit = on)
PLAY	play / stop
HOME	about: the controls and the credit (and back)
EDIT	English / Español, remembered
the keys	play the voice over the pattern (slides when you play legato)

TIP Everything comes back after a power-off: the pattern, the sound, the style, key, scale, seed and lock.

SIXTEEN STYLES, NINETEEN SOUNDS.

The patterns are the web version's, computed by its own generator for every style, scale and seed: an FM-1 pattern and the web's with the same style, scale and seed are the same notes.

STYLE	BPM
ACID HOUSE	124
ACID TECHNO	138
FILTER HOUSE	122
BIG BEAT	118
RAVE	150
BRAINDANCE	166
ELECTRO	128
HYPNOTIC	120
DIRTY HOUSE	128
FIDGET	130
OCTAVE PUMP · ZAP BOUNCE · GRIND 16THS	128
CALL & RESPONSE · STAB GATE · DROP RIDE	128

VOICE	SOUND
ACID SAW · ACID SQR	one oscillator through the 24 dB filter, accent climbing
DIRTY	three detuned saws and a sub: the wall
FIDGET	two detuned pulses and a saw an octave up

Sounds: the 10 styles' own, then ROTTEN SAW · TEUTON GRIND · ZAP CANNON · OCTAVE MONSTER · 8-BIT BRUISER · SQUEAL PIG · BASS SLAB · GUTTER STAB · RAVE SIREN.



fig. 4 · FIDGET.

THE DIRTY PAGE.



fig. 5 · DROP RIDE with SQUEAL PIG.

K	DOES
K1 FILTH	drive into the filter and a wavefold after it: the grind
K2 PUMP	the sidechain duck on every beat, in time from PLAY
K3 ZAP	each note starts up to 24 semitones high and falls in ~70 ms
K4 WIDTH	the detune of DIRTY and FIDGET

Press FX to come here; turn PRESETS to the riff families (after FIDGET) for the DIRTY LAB's patterns; ALGORITHM to the dirty sounds.

TIP A filthy start: PRESETS → OCTAVE PUMP, ALGORITHM → TEUTON GRIND, FX, FILTH up, PUMP up, OCT+ until it bites.

GENERATE, MUTATE, LOCK.



fig. 6 · LOCK NOTES on the DIRTY page.

DO	GET
OCT+	another seed of the style: a new line in the same genre
OCT-	a mutation: four small changes; press again for more. The screen says MY PATTERN
LFO NOTES	OCT+ keeps the notes where old and new both play, changes the rhythm around them
LFO RHYTHM	OCT+ keeps the timing, accents and slides, brings new notes
SCL / ENV	the same seed in another scale / key

START HERE, FIX IT HERE.

SQUELCH LINE

1. PRESETS → ACID HOUSE
2. K2 RES high, K3 ENV high
3. sweep K1 CUT slowly
4. OCT+ until the riff sticks; LFO → NOTES

ELECTRO FILTH

1. PRESETS → DIRTY HOUSE
2. FX → DIRTY
3. K1 FILTH up, K2 PUMP up, K3 ZAP 5
4. ENV for the key of your track

PROBLEM	TRY THIS
No sound	PLAY; the FM-1's volume; headphones / line out
Notes double or hang	stop and start; nothing else should send MIDI to the FM-1
The installer does not see the FM-1	a data cable, straight to the computer, Chrome or Edge, quit MIDI apps
I want the official firmware back	the installer page → back to the official firmware (page 03)

08 CREDITS

FREE, OPEN, MADE IN MÉRIDA.

DFD ACID ENGINE is free software under the GNU GPL-3.0: use it, study it, change it and share it. The engine, the generator, the factory patterns, the sounds and this manual are original work.

PART	DETAIL
Source code	github.com/drophlex/DFD-ACID-ENGINE
Website, web version, every manual	drophlex.github.io/DFD-ACID-ENGINE
Built with	JUCE 8 (the plug-in, AGPL / GPL-compatible use), Felucca 1.8.2 by Hügelton Instruments (the FM-1 drivers, GPL-3.0)

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