Drum Farm

Instruction Manual

Firmware Version 1.1.0

Welcome to the Drum Farm

Drum Farm is a Eurorack module dedicated to the cultivation and treatment of drum sounds. It combines real-time drum synthesis, effect processes and sampling into a hands-on, multi-engine instrument, delivering up to four simultaneous voices at once.

Drum Farm is built around three core sections: a drum synthesiser with 16 models and algorithms, a 16-process effects engine, and a digital sampler with two playback voices ready to capture the full output of your patch. A preview channel also functions as a fourth voice.

Synthesize Sample Repeat. The onboard sampler can run automatically in the background, sampling into one of 16 sequential audio buffers like an undo queue. Alternatively you can capture the drum synthesiser on its own or record hybrid combinations of synthesis, effects, and samples, which can themselves be re-sampled into richly layered percussion structures or loops. An external input opens the gate to the outside world, allowing direct sampling from your Eurorack system.

Designed for fast, intuitive sound creation, DrumFarm encourages an immediate, iterative workflow: select a drum model, sculpt it, process it live through the effects, sample the result, blend it with another model, and repeat. Complex, evolving sounds emerge quickly and can be further shaped using CV or triggers.

All knobs are control voltage assignable via three CV inputs, and two additional trigger inputs, allowing for the creation of fully hands-free generative patches, self-building sample libraries, or access to round-robin multi samples.

Sounds are saved to a microSD card either as a bank of 16 samples or as a complete snapshot of the entire module; samples, buffers, settings, and knob positions are stored together as a Session, allowing you to return to your work exactly where you left off.

With no screens or sub-menus, Drum Farm offers a classic synthesiser experience, rewarding exploration, welcoming happy accidents and letting ideas grow.

Contents

Drum Farm Sections

Drum Synth	Choose from 16 virtual analogue and physically modeled drum synthesis engines. Each model has a dedicated Pitch and Decay control with additional parameters X and Y, unique to that particular algorithm.
Effects Section	Choose from sixteen different effects; reverb, echo, filters and distortions as well as more experimental processes such as Cymbaliser, Multitude, and Pitch Dive. Reverb and echo are available permanently, allowing you to select a third real-time effect from the remaining fourteen algorithms, enabling up to three effects to be used simultaneously.
Player 1 & 2	Two independent sample players with Pitch & Decay knobs. Player 1 can also access 16 sample variants.
Sample Buffer	Records up to 16 buffers in sequence. Acts like an audio clipboard or an undo queue or can even be used as a fourth playback engine.
File Management	File management is handled by DrumFarm's buffer-based loading system. Each of the 32 banks, selected via the Bank Selector switches, contains 16 samples and can be loaded from the microSD card into the internal buffer for auditioning and playback voice assignment. The same structure is used for saving and recalling Sessions, which store 33 samples along with the complete state of the module, including all settings and parameters, allowing seamless live recall. In total, Drum Farm can access 1,568 samples from a single card.
Inputs and Outputs	Drum Farm has two audio outputs; the Drum Synth is assigned to the main output and the Players can be assigned to Main or Aux outputs. There are 3 assignable CV inputs and 2 assignable trigger inputs. There is also an external audio input and a Record trigger input for sampling.

Drum Synth

Drum Synth Overview

The Drum Synth features 16 unique drum models, each with four main controls. Control values are stored per model and are automatically recalled when a model is selected, either manually or via CV/Trigger. Moving a knob immediately returns it to live control.
Parameters shown in *LIGHT ITALIC* are accessed by holding Shift.
Parameters shown INVERTED are accessed with a long press.

Parameters common to all drum models are:

DECAY

Changes the decay time or damping amount.

GAIN

Sets the volume level.

PITCH

Sets the base frequency of the whole model

ACCENT

Sets the gain increase or decrease when an accent is triggered at the same time.

Accent Controls

An accent can change the volume level of any sound triggered at the same time as the accent.

Accent Amount

Hold Shift + Pitch to adjust accent amount. Centre position represents no accent, turn to the right to boost or to the left to reduce the level of the accent for each voice.

 **Accent Assignment**

First insert a patch cable into TRIG A or B, then quickly press GET SWAP within 2 seconds to assign Accent to that trigger input. Factory default assigns the accent to TRIG B.

Drum Models

Spectral Hi Hat

An advanced cymbal emulator. Five different real-world cymbals have been frequency analysed and reproduced using 12 bandpass filters and white noise. Unlike a sample, each trigger produces a stochastically unique strike rather than a repeated sample.

DECAY

Time taken to decay in volume, and also to morph between magnitudes of filter bands.

PITCH

Adjusts the base frequency of the filterbanks.

X - Character

Morphs between the five sets of analysed cymbal frequencies.

Y - Resonance

Adjusts the resonance of the filter banks, higher values are more ‘ringy’ and less noisy.

Hat 808

A hi-hat model with a twist. Based on six Schmitt trigger oscillators as found on the TR-808

DECAY

Adjusts the decay time.

PITCH

Sets the frequency of the 6 oscillators, the top 2 oscillators are pitched only slightly to simulate the 808 trimmer control for the cowbell oscillators.

X - Filter

Adjusts the cutoff frequency of the bandpass filter. At the zero position four oscillators fade out to reveal just the lower two oscillators. In the original circuit these two oscillators were shared with the iconic 808 cowbell voice.

Y - Noise

Adjusts the blend between the Schmitt oscillator network and white noise.

Double Shaker

Double Shaker is a bi-directional shaker model. From a single trigger it first plays a forward shake followed by a return shake, resulting in a sound that has the familiar push and pull of a real shaker.

DECAY

Controls the time between the two shakes. Adjust to match the tempo of the beat and trim to change the feel and groove of the shake.

PITCH

The base frequency of the shaker noise filter.

X - Shaker Type

Morphs between 3 shaker models;

1. Large Shaker - coarse, stochastic bead distribution driven by the envelope.
2. Egg Shaker - fine grained and powder smooth, faster snappier envelope.
3. Cabassa - a zippier sound simulating the corrugated metal ridges of the instrument.

Y - Accent

Filter control for simulating the doppler effect of a real shaker motion. Fully Anticlockwise - Makes the filter of the *push* shake lower, Centre Position - both filters are the same, Fully Clockwise - makes the *pull* filter lower. Subtle values just off centre work best.

Super Clap

A virtual analogue TR-909 clap, re-imagined. Where the original used four clap envelopes, Super Clap is adjustable from one to twelve. An added randomisation parameter introduces timing and tonal variation between individual claps, while the decay control is pushed to extremes, from a single dry hit to full stadium-scale applause.

Decay

Controls the noise tail on the clap sound while keeping the basic sound tight (lower values) and then extending the decay time on the clap itself.

Pitch

Adjusts the centre frequency of the claps.

X - Quantity

Select from 1 to 12 handclaps. For TR-909 use 4.

X - Resonance

Adjusts the filter resonance for each clap voice.

Y - Random

Adjusts the random spread of claps over time and also the individual clap filters. Set to zero for 909 vibes, the white noise still makes it sound random. Higher values produce larger variations in clap distribution and timbre.

Y- Presence

Brightens the transient element of the clap sound.

Rim Shot

A short resonant sound based on classic analog rim-shot circuits.

DECAY

Stretches the sound slightly but also adds a noise reverb tail at the extremes.

PITCH

The core frequency of the rim sound.

X - Tone

Adds additional frequency modes.

Y - Click

Modifies the length and tone of the initial click sound at the start.

Metal Bell

Physical model of metallic objects based on multiple modal resonators. Real world bell sounds were analysed for their harmonic content and reproduced using a bank of resonators. Continuously blend between 5 different metallic sounds.

DECAY

Adjusts the decay time.

PITCH

Sets the root frequency of the model.

X - Bell Type

Morph between 5 different bell types: Cow Bell, Agogo Bell, Ride Cymbal Bell, Tubular bell and Triangle.

Y - Mode Coupling

Introduces more inharmonic frequencies using frequency modulation.

Bloop

An LFO modulated oscillator for assorted bleeps and bloops.

DECAY

Adjusts the length of the sound.

PITCH

Sets the root pitch of the oscillator.

X - LFO Rate

Sets the LFO modulation speed up to audio frequency rates.

Y - Depth/Waveform

Set the modulation depth through three waveform zones: Up Ramp, Square Wave and Down Ramp.

Hand Drum

For djembe,conga, bongo or tabla type sounds. Hand Drum simulates multiple frequency modes based on common hand drum types.

DECAY

Sets the overall decay time.

PITCH

Sets the fundamental pitch of the sound.

X - Mode Group

Blend between 9 different sets of frequency modes based on common drum types.

Y - Position

Sets where the hit point is on the drum for different modal resonances.

Tom Tom

A resonator based algorithm that simulates a double skinned drum, ideal for tom tom sounds.

DECAY

Adjusts the decay time of the drum resonators.

PITCH

Controls the base frequency of the algorithm.

X - Depth

Adjusts the relative tuning between top and bottom skins as well as introducing more pitch bend depth.

Y - Intensity

Increases the gain of the topskin and increases the intensity of the stick impact.

Break Snare

Physical model of a 2d membrane, tuned to sound like a rough snare drum mastered to vinyl. Individual controls are optimised to give energy derived accent variations.

DECAY

Adjusts the damping factor of the mesh model.

PITCH

Adjusts the skin tension of the model. Note: may not be truly 1 volt per octave.

X - Intensity

Controls both the excitation level and the centre-rim position of the initial impact.

Y - Snare level

Adjusts the noise level vs the drum level in the simulation.

Studio Snare

6 resonator partials based on real world data recorded from a Ludwig Supraphonic drum shell. The drum was analysed for its dominant modal frequencies and envelope characteristics, allowing you to morph continuously between three intensities of drum hit. The noise element has been given a compressed envelope profile for a more processed studio sound..

DECAY

Adjusts the damping of the model.

PITCH

Sets the root frequency of the drum.

X - Morph

Blends between the different drum characteristics.

Y - Snare Level

Adjusts the amount of snare noise added to the signal.

Snare 808

Virtual analog model based on the TR-808 snare drum.

DECAY

Adjusts the noise decay time.

PITCH

Adjusts both the shell and the noise frequency.

X - Tone

Mix between the top and bottom shell tones.

Y - Noise

Blend between shell only and white noise.

Snare 909

A virtual analogue TR-909 snare with extra spice.

DECAY

Adjusts the decay tail of the noise envelope and at shorter values also adjusts the drum damping.

PITCH

Overall pitch of both the drum and the noise source

X - Tone

Blends different modal frequencies of the drum shell, higher values introduce cross modulation.

Y - Noise

AKA Snappy. Blend between pure drum and 8 bit digital noise.

Synth Drum

A simple and extreme pitch bend drum for electro blips and pew pews.

DECAY

Adjusts the decay time of the drum.

PITCH

Sets the base frequency of the drum model.

X - Pitch Decay

Adjusts the decay time of the pitch envelope

Y - Pitch Depth

Adjusts the amount of pitch bend from the pitch envelope.

Kick Rumble

FM noise based rumbling kick that’s never quite the same twice.

DECAY

Adjusts the decay time of the drum.

PITCH

Sets the base frequency of the drum model.

X - Noise

Sets the amount of noise modulation.

Y - Drive

Dynamically explodes the sound into increasing distortion.

Kick Techno

A 909 inspired kick drum that cuts through any mix.

DECAY

Adjusts the decay time of the drum.

PITCH

Sets the base frequency of the drum model.

X - Punch

Sets the amount of pitch bend modulation.

Y - Drive

Adds distortion and enveloped waveshaping.

Effects Section

Effects Types

Three effects are active at once; Reverb, Echo and one other selected effect.
Reverb and Echo each have two possible send levels; “Always” and “Selected”. Always allows you to have a general reverb and echo level that is always present regardless of what other effect is selected. “Selected” is a level you send only when that effect is selected - for example if you wanted a brief burst of reverb or echo when they are otherwise bypassed.
Effect parameter values are stored per effect and are automatically recalled when the effect is active, regardless of the current knob positions. This allows each effect to be configured once and retain its settings when switching between effect types either manually or by CV/Gate control. Note: Under CV control the FX1 and FX2 knobs control the effect type that you can hear, not necessarily the effect type that the knob is pointing to.

Reverb

Reverb has two level settings depending on whether the effect has been explicitly selected or if it is just in the background as a general reverb.

FX1 - Always Level

Sets the general reverb send level heard over all the other effects.

FX1 - Selected Level

Sets the reverb send level only when reverb is selected and the control hasn't yet been touched.

FX2 - Decay Time

Sets the reverberation time

Echo

A tape style echo algorithm.

FX1 - Always Level

Sets the echo send level heard over all the other effects.

FX1 - Selected Level

Sets the echo send level only when echo is selected and the control hasn't yet been touched.

FX2 - Delay

Sets the delay time.

FX2 - Feedback

Sets the amount of feedback.

Flanger

A short delay with inverted feedback, patch in an LFO for sweeping effects.

FX1 - Delay time

Sets the delay time.

FX2 - Feedback

Sets the amount of feedback.

Multitude

Creates 8 random copies of the input sound

FX1 - Random Pitch

Sets the amount of random pitch for each copy.

FX2 - Random Time

Sets the amount of random time delay and filtering of each copy.

Pitch Dive

Makes the sound descend in pitch.

FX1 - Depth

Sets the amount of pitch bend.

FX2 - Rate

Sets the length of the decay envelope controlling the pitch bend.

Octave Warp

Adds a sub octave either one or two octaves down and phase distorts the result.

FX1 - Mix

Sets the mix between sub octave and the dry signal. Turn left of centre to introduce -2 octave effect and turn right of centre for -1 octave, the centre position has the dry signal only.

FX2 - Warp

Phase distorts the signal by modulating the time axis with the dry input signal.

FX2 - Decay

Adjusts the length of the volume envelope of the effect if you want to compensate for the extended length of slowed down audio. Shorter decays will also be noticeable in the dry signal.

Reverse and Trim

This effect trims the start and end points of the sample and if the end point is set before the start point the sound is reversed. For sample playback voices only, this has no effect on the live Drum Synth.

FX1 - Start

Sets the start point.

FX2 - End

Sets the end point.

Cymbaliser

Adds a metallic filtered cymbal sound from any given input

FX1 - Tone

Blend between 5 different real-world cymbal frequency spectrums.

FX1 - (Pitch)

Sets the root frequency of the filter bank.

FX2 - Decay

Sets the decay time of the cymbal sound.

Ring Modulator

Processes the incoming sound through a VCA modulated by an oscillator. The oscillator is synced to the trigger for rhythmic effects.

FX1 - Depth

Sets the amount of volume modulation and oscillator type, left for square wave and right for sawtooth.

FX2 - Speed

Sets the oscillator modulation speed from 60 bpm to audio level frequencies of 4000hz.

Distortion

Hard distortion with a bandpass filter.

FX1 - Amount

Increases the amount of gain into the distortion.

FX2 - EQ

Sets the bandpass EQ frequency for added emphasis at that frequency.

Fold

Wavefolding effect where the audio signal is mirrored above a certain threshold.

FX1 - Mix

Blends the effect between dry signal and effect.

FX2 - Threshold

Sets the level at which the folding begins.

Bit Crush

Reduces bit depth and sample rate for vintage digital sounds.

FX1 - Bit Depth

Set from 2 bit distortion to 16 bit clarity.

FX2 - Sample Rate

Sets the sample rate from 1khz Hz to native 48khz.

Compress

Attenuates the initial transient of the signal. Unlike regular compressors, the compression release envelope is triggered by the drum trigger itself and not by passing a threshold in the audio level. This results in very rhythmic effects that can be fine tuned using the Release control.

FX1 - Ratio

The amount of attenuation of the original signal.

FX1 - (Attack)

The attack envelope of the compressor.

FX2 - Release

The time taken for the gain to return to 100%.

Side Chain

Attenuates the signal from one channel using the trigger input from the other channel. For example you could duck the snare and hihat in the *main* output using the kick drum assigned to the *aux* output, or vice versa. The ducking effect is always heard on the fx assigned output and

is always driven by the opposite output. If all outputs are on the main output then no effect is heard.

FX1 - Amount

Turn fully anti-clockwise for ducking and fully clockwise for boosting. In the centre there is no effect.

FX2 - Release

The time taken for the gain to return to 100%.

EQ Bandpass

A tunable bandpass filter that is added into the original signal.

FX1 - Frequency

Frequency band that the filter will boost.

FX2 - Blend

Blends between the original signal and the bandpass only signal.

EQ DJ

A resonant hi-cut and lo-cut combination filter with no effect in the centre position.

FX1 - Cutoff Frequency

Cutoff frequency for the lowpass filter (left) and for the highpass filter (right).

FX2 - Resonance

Sets the resonance value of the filters.

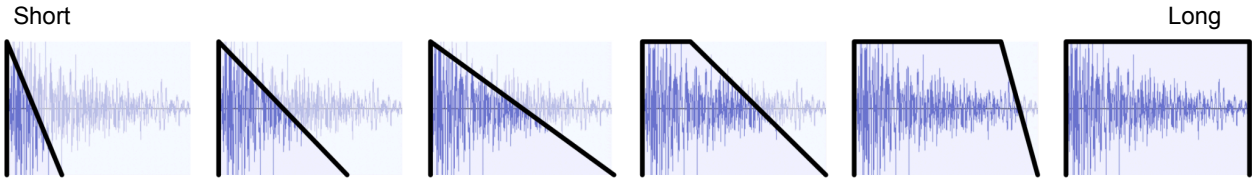
Player 1 & 2

Player Overview

The Player voices provide two sample playback options for recorded audio.
Player one has 16 playback slots accessed with a file selector knob or by CV, it can also playback sequences of samples, overlapping voices if required.
Player 2 is a single sample playback voice.
Both voices feature the same common controls as the Drum Synth: Decay and Pitch with Gain and Accent as Shift functions.

DECAY

Changes the decay time in proportion to the length of the sample.
Short decay times will immediately fade out the sample and longer decay times will sustain the sample before fading out exactly to the end. Handy if you want to preserve the sampled envelope but with a soft ending. See below:



GAIN

Hold Shift to set the volume level.

PITCH

Pitches the sample up or down one octave. The centre detent represents the original sample pitch.

ACCENT

Hold Shift to adjust the amount of gain up or down during accented beats.

GET

Press GET to *copy a sound into that player's destination*. When get is pressed, any available sources' Trigger buttons will start to flash. To confirm your choice, press a Trigger button within two seconds.

Output Select Switches

The two output select switches allow each player to be routed through either the Main out or the Aux out. This also allows for different effects paths for each player and/or separate outputs. The Drum Synth is always routed to the Main out path.

Player 1

Player 1 is a multi-sample voice with the ability to overlap sounds, round robin sounds and randomly select playback samples.

Trigger Button

Press to trigger the current Player 1 sample. Hold Shift + Trigger to sample the result into the sample buffer.

GET + Source Button

To copy a sound into Player 1, briefly press its GET button and then select a flashing Trigger button as a source. GET will transfer that sound into Player 1.
Tip
Selecting Load bank button as a source will directly load all samples from the selected bank.

GET ALL - Long Press

Hold down GET until the Preview button flashes, then confirm by pressing Preview button to copy *all* samples from the buffer into *all* Player 1 slots.

SET - Short Press + Shift

Copies the selected Player 1 sample back to the buffer.

SET ALL - Long Press + Shift

Hold down GET and Shift until Preview flashes, confirm by pressing Preview button.
Copies *all* samples from Player 1 back to the buffer.

GET + LOAD BANK

Press GET until Preview flashes, then confirm by pressing Load.
Loads a whole bank directly into Player 1.

Player 1 Sample Select Knob

Selects the active sample for playback. Changes only take effect with each new trigger, currently playing samples will continue without change.

Sample Trigger Modes

Hold Shift and change Sample Select to choose from 16 different trigger modes. See table below to see what each mode does.

Voice Mode

- Overlap. Invokes two voices allowing longer samples to continue playing when the next sample is triggered.
- Mono. Cuts short any current samples being played.

Slot Select

- Static. Always plays the selected sample
- Random. Plays a sample at random and avoids playing the same one twice in a row
- Rotate Fwd. Plays the next sample in a clockwise direction
- Ping Pong. Plays the next sample then reverses back through the sequence
- Rotate back. Plays the samples in an anti-clockwise direction

Shift +Slot	Voice Mode	Slot Select	Empty Slots
1	Overlap	Static	Silent
2	Overlap	Random	Exclude
3	Overlap	Rotate Fwd	Exclude
4	Overlap	Ping Pong	Exclude
5	Overlap	Rotate Fwd	Silent
6	Overlap	Random	Silent
7	Overlap	Ping Pong	Silent
8	Overlap	Rotate Back	Silent
9	Mono	Static	Silent
10	Mono	Random	Exclude
11	Mono	Rotate Fwd	Exclude
12	Mono	Ping Pong	Exclude
13	Mono	Rotate Fwd	Silent
14	Mono	Random	Silent
15	Mono	Ping Pong	Silent
16	Mono	Rotate Back	Silent

Empty Slots

Changes the behaviour when dealing with empty sample slots.

- Silent. Plays silence for that trigger, allowing you to force 16 beats into a sequence.
- Exclude. Skips the empty slot and keeps searching for a valid sample to play instead.

Tip: To reset the sample sequence to the start use the buffer RESET Shift function.

Player 2

Trigger Button

Press to trigger the Player 2 sample, hold Shift to sample the result.

GET + Source Button

To copy a sound into Player 1, briefly press its GET button and then select a flashing Trigger button as a source. GET will transfer that sound into Player 2.

SWAP - Long Press

Swaps Player 1 sample with Player 2 sample.

INSERT - Short Press + Shift

Copies the Player 2 sample into the current buffer location, moving the current buffer and remaining buffers along. Note that the last buffer #16 is lost in this operation. To overwrite instead of insert see Player 1.

Sample Buffer

Sample Buffer Overview

Drum Farm uses a 16 sample buffer to manage sounds on the device. This allows sounds to be handled in groups of 16 for loading and saving, with options to preview sounds before assigning them to playback voices. The preview section can itself be used as a fourth voice but it is primarily intended as a utility voice to help manage and navigate sounds without the need for a visual display.

How To Sample

There are 4 ways to record a sample:

Record Switch

Samples whenever the Drum Synth trigger button is pressed.

Shift Trigger

Holding Shift and pressing Trigger button Player 1 , 2 or Drum Synth will sample the result.

Ext Record

A trigger signal patched to the Record jack will sample the output.

GET

Pressing GET followed by a Trigger button will copy that source directly into the relevant playback voice. Note: the GET function does not record the external input or the effects.

The sampler will continue to record until …

- The audio is silent
- Another recording is initiated
- The maximum sample time is reached

Samples are recorded from the MAIN and AUX output into the current sample buffer. Each recording increments through the buffers in rotation, so after 16 samples it will record over previous samples.
A buffer can be Previewed using the Preview Button and the Back and Forward buttons.
The current active buffer can be grabbed by either Player 1 or Player 2 using their GET buttons.
Player 1 can grab all 16 buffers using a long press.

PREVIEW

Plays current active sample buffer.

NORM

Normalises the current buffer sample to its maximum possible volume level.

BACK

Plays the sample in the previous buffer.
Tip: Assign this button to Trigger A or B to sequence through a set of samples.

ERASE

If the selected buffer contains a sample, pressing Erase will clear its contents. If the buffer is already empty, pressing Erase again will remove the buffer itself and shift all remaining samples along to fill the gap. Depending on what you want to achieve, you may need to press Erase twice.

FORWARD

Plays the sample in the next buffer.

RESET

Resets the buffer to buffer number 1. Also resets Player 1 to slot number 1.
This is useful if you are sequencing samples.

Record Switch

Drum Farm can sample itself whenever the Drum Synth is triggered.

ON

Samples on every drum trigger

AUTO

Samples only when a parameter has changed since the last trigger.

OFF

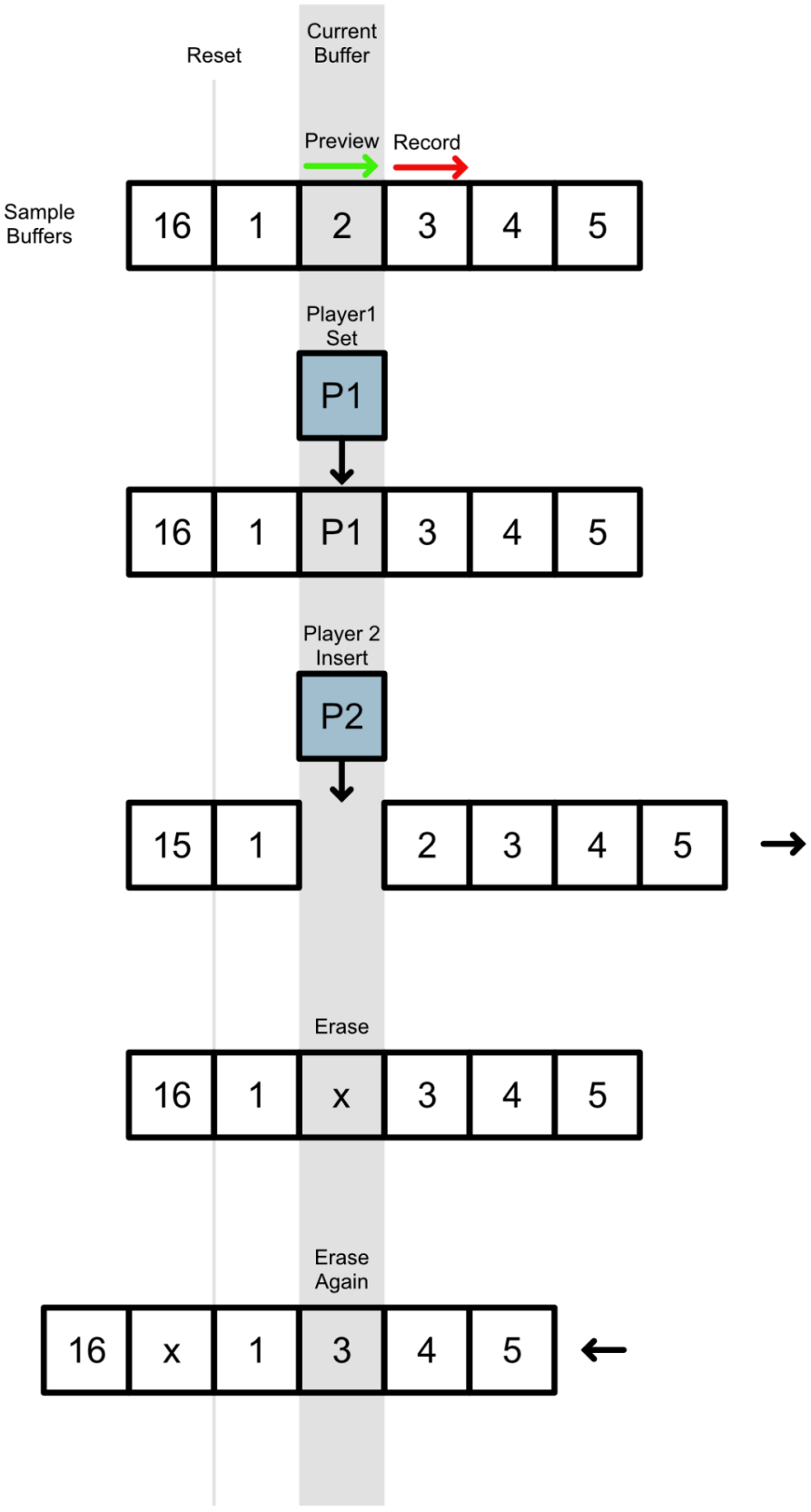
Trigger sampling is off.

Getting and Setting samples to Players

See the Player 1 & 2 section.

Sample Movement Operation Behaviour

This table shows how samples are moved or overwritten depending on the operation.



File Management

Loading and Saving Sessions

A session on Drum Farm represents the complete state of the device at a specific point in time. Think of it as saving a work in progress or a complete performance recall. A Session will store the following:

- 16 samples in the sample buffer
- 16 samples in player 1
- 1 sample in player 2
- Stored knob values for all the models and all the effects
- CV input destinations and Trigger A & B assignment destinations
- Switch positions for drum type, effects type, effects routing and output selection

Up to 32 Sessions from A to P - User and ROM - can be saved and recalled from the microSD card giving a total of 1056 samples in addition to the 512 samples that can be loaded into the buffer.
Note: Recalled sessions may not reflect the physical state of the switches and knobs, priority is given to reproducing the settings at the time the Session was saved.

LOAD SESSION

Loads in all samples and settings from the selected Bank.

SAVE SESSION

Saves all samples and settings to the microSD card.

Loading and Saving Sample Buffers

To import sounds from a microSD card without losing sounds in the session you must load a bank of 16 buffers from a Bank on the card. From there you can preview sounds in the buffers and copy them over to each player using the GET buttons.

LOAD BANK

Load 16 samples from the selected Bank into the preview buffer.

SAVE BANK

Save the current 16 buffer samples to the selected SD card Bank.

User/ ROM

The User/ROM switch selects between two volumes that you can save to. The ROM directory can not be overwritten*, the User directory can be written to at any time.
*This behaviour can be changed by editing the SETTINGS.CFG file on the SD card. See Global Settings.

File Error Handling

When Drum Farm is loading or saving files correctly the red LED will blink very rapidly while the microSD card is being accessed. If there is an error the red LED will blink slow enough to count the blinks. Use the table below to diagnose the error from the number of blinks

Blinks	Reason
2	SAVE BUFFER ERROR - ROM PROTECTED
2	SAVE SESSION ERROR - ROM PROTECTED
2	SAVE BUFFER ERROR - FILE WITH SAME NAME EXISTS IN ROM DIRECTORY
3	LOAD BUFFER ERROR - NOTHING TO LOAD OR ERROR
3	LOAD P1 ERROR - NOTHING TO LOAD OR ERROR
4	SAVE BUFFER ERROR - WRITE FAILED
5	SAVE BUFFER ERROR - SD MOUNT FAILED
6	SD MOUNT FAILED ON STARTUP

Trigger and CV Assignment

There are three CV inputs and two trigger inputs that can be custom assigned to any parameter on the Drum Farm front panel. CV assignments can be mapped as an offset value to any control knob including the rotary switches (except Bank selector). Trigger signals can be mapped to any push button or rotary switch (except Bank select and Load/Save buttons)

How To Assign

To assign a parameter or function to a CV/Trigger input simply insert a patch cable into one of the inputs, the trigger lights should flash in sequence for just two seconds. Within that two second window select a destination parameter or function by turning a knob or pressing a button.

Rotary Switch Trigger Assignments

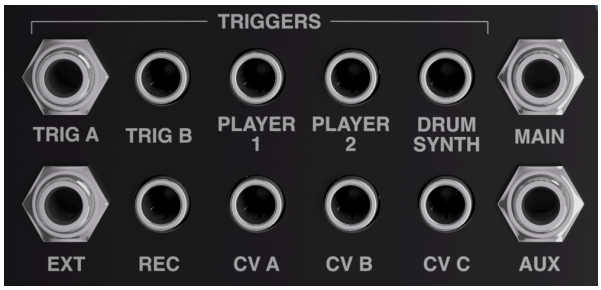
Control	Action	Result
Drum Synth Selector	Rotate Left/Right	Next/Previous Drum Model
Drum Synth Selector	**Shift** + Rotate Right/Left	Play Next/Previous Drum Model
Effect Type Selector	Rotate Left/Right	Next/Previous Effect Type
Effect Type Selector	**Shift** + Rotate Right/Left	Play Next/Previous Effect Type
Player 1 Selector	Rotate Left/Right	Next/Previous Sample
Player 1 Selector	**Shift** + Rotate Right	Play Next Sample
Player 1 Selector	**Shift** + Rotate Left	*Play Random Sample

* You can choose sample trigger modes for Player 1 by holding Shift and Sample Select.

Rotary Switch CV Assignments

Assigning a CV input to a rotary switch will map a voltage to a position on the dial. In most cases the change will only be activated on the next incoming trigger rather than halfway through a sound.

Inputs and Outputs



Audio Outputs

MAIN

The Drum Synth only comes out of the main output. Player 1 & 2 voices can be routed to Aux or Main using the front panel switches. Preview defaults to the AUX output but this can be changed in the Global Settings.

AUX

Each sample player can be routed to the separate Aux Out using the two slide switches. If the Aux Out is not connected it is routed to the Main Out.

External Input

EXT

The external input EXT is set up for Eurorack level audio and is routed to the same audio channel and level as Player 2.

Envelope Mode

To also use the envelope of Player 2 with the EXT signal, hold down the Player 2 Trigger button while inserting a plug into the external input. This will disable the sample playback of player 2 and route the external audio through the envelope shaper To reset, remove the plug from EXT input.

Trigger Inputs

Drum Synth

Triggers the Drum Synth.

Player 1

Triggers the current active Player 1 sample.

Player 2

Triggers Player 2 or the External Input (press and hold for 2 seconds)

Rec

Triggers the sampler to record.

Assignable Trigger Inputs

Trig A and B can be assigned to many parameters, including rotary knobs. Insert a cable and the Preview button will flash red for 2 seconds while you choose your destination. If nothing is pressed the assignment will revert to the previous assignment. If there is no assignment saved for this session the default values will be set.

Trig A

By default this trigger is set to play the active Preview sample.

Trig B

By default this trigger is set to play an accent.

Assignable CV Inputs

CV A-B-C

Drum Farm is equipped with 3 bipolar CV inputs, A, B and C. Each one can be assigned to any knob, including rotary switches (*except Bank selector).
To assign a CV input, insert a jack and move the destination parameter within 2 seconds - while the red led is still flashing. Shift Knob functions can also be assigned, but be quick!

Global Settings

The SD card contains a file called SETTINGS.CFG
This file can be modified on a computer using a simple text editor.

```
# DrumFarm global settings
maximum_sample_time_secs=4
sample_end_threshold_db=-90
dont_link_aux=0
preview_output_destination=AUX
master_gain=0.750
```

maximum_sample_time_secs

Drum Farm will automatically try to end sampling when there is no audible sound, there is no way to manually stop recording other than to trigger another sample. Limiting the sample time avoids accumulating longer than necessary drum samples which can slow down save and load times. There is enough memory in Drum Farm to have every sample 10 seconds long.

`= 4` (default)
`= 10` (max)

sample_end_threshold_db

Sets the level at which sampling will automatically end. Increase this if your samples are not finishing at the end of the sound, there may be a noise floor preventing this.

`= -70` (default)

dont_link_aux

When the trigger Link switch is on, a Drum Synth trigger will also trigger the sample players. dont_link_aux will not trigger any player that has its output set to the AUX channel.

`= 0` (default)
`= 1` Aux routed sounds ignored on link trigger

master_gain

Master gain adjusts the maximum output of Drum Farm. Note: Values above 1.0 may clip the output.

`= 0.75` (default)

ROM_protection_enabled

ROM sample banks are write protected. This can be disabled here so that ROM banks are overwritable just like USER banks.

`= 0` Both user and ROM are overwriteable.
`= 1` ROM sounds are write protected.(default)

preview_output_destination

Assign which output the Preview voice appears at.

= MAIN

= AUX

= BOTH

gate_mode

By default, a triggered sample voice begins its decay phase immediately. Set this parameter to 1 to enable Gate mode, causing the sound to sustain for as long as the trigger input remains high.

= 0 Envelope immediately enters the Decay stage regardless of gate state.

= 1 Envelope sustains until the gate is released, then enters the Decay stage.

Warranty

This product is designed and manufactured to a high standard and is warranted against defects in materials and workmanship for a period of 12 months from the date of purchase.

If a fault arises during this period under normal use, Knobula will, at its discretion, repair or replace the product free of charge. Proof of purchase will be required.

What is covered

- Manufacturing defects
- Component or assembly faults under normal operating conditions
- Failures occurring during typical Eurorack use within specified power and environmental limits

What is not covered

- Damage caused by incorrect installation, including the effect caused by reverse power connection of other modules in the same rack
- Damage resulting from misuse, modification, or unauthorised repair
- Cosmetic wear or damage from normal use
- Damage caused by external factors such as power surges, liquids, or physical impact
- Operation outside recommended voltage ranges or environmental conditions

Service

If you believe your module is faulty, please contact your retailer or Knobula directly before returning the unit. In many cases, issues can be resolved quickly without the need for return.

If a return is required, the customer is responsible for safe packaging and shipping to the service location. Knobula will cover return shipping for warranty repairs.

Limitations

This warranty is limited to the repair or replacement of the product and does not cover any indirect or consequential loss, including damage to other equipment, loss of data, or loss of use.

Final note

Eurorack systems are inherently experimental environments. While every effort has been made to ensure reliable operation, careful installation and use are essential. If in doubt, double-check your power connections.