Gotharman's
SP-box

SP-1200 output stage for Little deFormer and future products

User Manual

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<u>Introduction</u>

Thank you very much for purchasing/consider to purchase a Gotharman's SPbox.

When connecting SPbox to your Little deFormer 1 or 2, it will get an extra output with the same 12 bit D/A converter and analog 24 db lowpass filterstage as the Emu SP1200. This extra output can be assigned to any of Little deFormers 4 audio busses.

This will not turn your Little deFormer into an Emu SP-1200. This is still a unique piece of gear, but it will give all your samplings, synthsounds and whatever you feed into LD's audio inputs, a gritty 12 bit sound.

Unlike on the SP1200, SPbox lets you control all parameters of the output stage, like cutoff, resonance, sample frequency and output envelope, and it is possible to modulate most of these, using any of Little deFormer's modulation sources.

With this fully controllable analog filter and VCA section, it is also possible to make analog synth sounds, by feeding it with Little deFormer's waveforms.

Connecting SPbox and Little deFormer

For connecting SPbox to your Little deFormer, you will need the 180 cm long cable, that was supplied together with your SPbox.

If you should need a longer cable, or if your cable one day gets lost, you can use a 1:1, 9-pin SUB-D cable. If you have a Little deFormer 1, just notice, that like on the picture, pin 5 of the male connector must be cutted. This is because, on some Little deFormers, pin 5 on the expansion connector are connected to its audio path, and if this pin on the cable are connected, it will create a lot of noise on the audio. If you have a Little deFormer 2, you can just use the SUB-D cabel as it is.

Connecting
-If you own a Little deFormer 1, make sure that it is updated with at least update 493. If it can't registrate the SPbox, it will probably need to get updated. Little deFormer 2 does not need any update.

-Turn off your Little deFormer.
-Connect the cable male connector to the expansion connector on Little deFormer.
-Connect the cable female connector to the expansion connector on SPbox.
-Turn on your Little deFormer.

-It should now automaticly have detected the SPbox. You can check this by pushing the "Edit" button one time, to enter the edit group select screen, and then push and hold the "Inc" button, to scroll through the edit groups. The last selectable edit group should now say: "SP BOX".
Push the "Edit" button one more time, to enter the parameters for it.

Connections

Audio Out:
The 1/4 inch jack connector is the audio output. Connect this to a mixer or an amplifier, or connect it to one of Little deFormers audio inputs, if you would like to re-sample or further process the sound from SPbox. The sound is not internally routed back to Little deFormer.

Clock In:
The 1/8 jack connector are the clock input. This accepts voltage/trigger sources in the range from – 15 volts to +15 volts. The trigger point are around 3 volt, so voltages higher than 3 volt will turn the trigger on, and voltages below 3 volt will turn the trigger off.

It is possible to trigger any of Little deFormers samplings, to control the Freeze function, and to clock, start/stop and reset the internal sequencer, using this.

Parameters

When SPbox are connected to your Little deFormer, a new edit group: "SP BOX" will appear. Under this group, you will find the following parameters. All parameter values are stored within each preset.

Bus - Values: 1 to 4. This parameter selects which of the 4 audio busses, SPbox are assigned to. Any samplings, synthsounds and audio inputs, assigned to the same bus, will be outputted through SPbox.
The bus selected for SPbox, will not be present on Little deFormer's main outputs. Signals are sent to SPbox before any of Little deFormer's effects. When you trigger a sampling/synth, that are assigned to the same bus as SPbox, its trigger LED will flash.

Trig - Values 0 to 255. The SP1200 had a static trigger envelope, that controlled the filter cutoff, to give it more punch. With SPbox, this is fully adjustable. This parameter adjusts how much the trigger envelope should affect the filter cutoff, of the analogue lowpass filter.

Dec - Values 0 to 255. Adjusts the decay time of the trigger envelope.

Cut - Values 0 to 255. Adjusts the cutoff frequency of the analogue LPF.

Reso - Values 0 to 255. Adjusts the resonance of the analogue LPF.

Levl - Value 0 to 255. Adjusts the output level of SPbox. Higher values might result in a distorted sound (YEAH!:-))

Rate - Value 0 to 255. Adjusts the sample rate of SPbox. 0 is the maximum sample rate, while 255 represents the lowest possible sample rate.

Folr - Values Off / On. When on, an envelope follower, that follows the signals sent to SPbox, are controlling the output level. This is usefull to avoid constant screaming at higher resonance settings.

Cutmod 1 - Values: Source: Any Little deFormer modulation source. Amount: 0 to 255. Modulation of the analog LPF cutoff frequency.

Cutmod 2 - Values: Source: Any Little deFormer modulation source. Amount: 0 to 255. Modulation of the analog LPF cutoff frequency.

Resomod - Values: Source: Any Little deFormer modulation source. Amount: 0 to 255. Modulation of the analog LPF Resonance.

Vcamod - Values: Source: Any Little deFormer modulation source. Amount: 0 to 255. Modulation of the VCA output level.

Clock – Values: smp1, smp2, smp3, smp4, smp5, smp6, smp7, smp8, smp9, sm10, sm11, sm12, sm13, sm14, sm15, sm16, frez, clk (sequencer clock), s/s (sequencer start/stop), c/s (sequencer continue/stop), rst (sequencer reset). Selects the destination for the clock input.

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