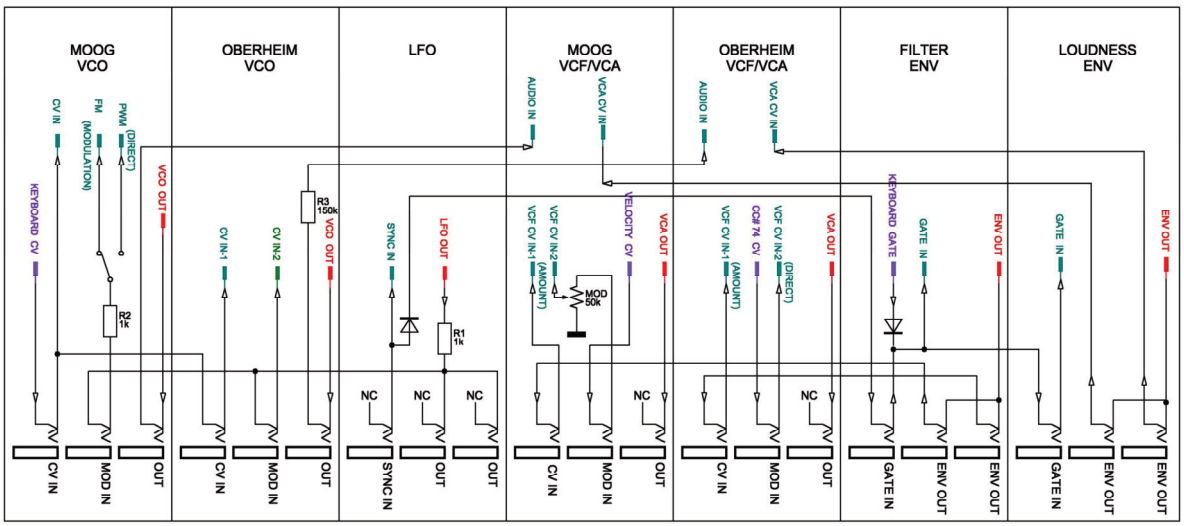
Obermoog
OM-1
mLab 2016



Frequently asked questions

Question:
There are 2 GATE IN jacks in the ENV section. How do I use them?

Answer:
Each of the ENV modules has a GATE IN jack.
The *FILTER ENV* **GATE IN** is used to trigger the ENV module for both VCF
The *LOUDNESS ENV* **GATE IN** is used to trigger the ENV module for both VCA
Both GATE IN jacks are internally linked together and pre patched with the MIDI to GATE interface. If you plug a cable into the FILTER GATE IN jack, then the internal link is broken and the cable should now feed the Obermoog with an external gate signal for both ENV modules. If you plug a cable into the LOUDNESS GATE IN, then only the VCA GATE link will be broken and has to feed externally from the cable, but the MIDI to GATE signal still feeds the FILTER ENV.

Question:
What can I do with the *LFO* **SYNC IN** jack?

Answer:
A lot!
It's not only a Sync Input as labelled, It's also a Sync Out signal. It's a stereo jack.
The ring of the stereo jack is the Sync Input to synchronize the LFO with an external clock signal.
The Tip of the Stereo Jack is the *LFO* **SYNC OUTPUT**, e.g. to feed the Envelope Generators with a proper GATE signal. In this case you can use the LFO as a Sample & Hold random CV/GATE Sequencer.

Question:
If I'm using the LFO as a Sample & Hold random CV/GATE Sequencer,
Waveform = NOISE, S&H RATE 6, AMOUNT fully clockwise, both VCOs FM-Modulation fully clockwise and a patch cable from the *LFO* **SYNC OUT** to the 1st Envelope **GATE IN.**
The LFO then triggers both Envelope Generators and sends a random CV sequence to both VCOs. In other words, the LFO acts as a S&H Generator and plays a random sequence.
And now my question: Why has the Envelope Release time no effect in my case?

Answer:
Yes, this is correct. The *LFO* **SYNC OUT** signal is a GATE and not a TRIGGER.
Each time the S&H outputs a new CV value, the GATE becomes interrupted for a very short time. The Attack, Decay and Release time then will reset and the envelope-curve starts from the beginning, so that a VCF & VCA can be gated with fully SUSTAIN level feature.
This is different from other Systems who are using Trigger signals instead of Gate.
Such systems have side effects, which are dependant of the sequencer speed and needs work around by using an additional Gate Time Generator.
In my view, - there is too much adjustment to handle.
Play with Attack, Decay, Sustain and Output Level and you'll find out that the SUSTAIN Level has a similar effect, very close to the release time.

If you're using the LFO without the random generator (**S&H RATE** fully counter clockwise), then the *Sync Gate Time* can be controlled by the Duty Cycle POT.

Question:
Can I control parameters via MIDI?

Answer:
Yes you can!
There are 6 CV – and 6 GATE outputs coming from the internal MIDI interface.

The following parameters are pre defined:

CV 1 = Note Number & Pitch	(pre patched to VCO 1 & 2) CV IN
CV 2 = Velocity	(pre patched to moog VCF) MOD IN
CV 3 = Volume	(pre patched to LOUDNESS ENV) AMOUNT
CV 4 = Modulation	(pre patched to LFO) AMOUNT
CV 5 = Cut Off Frequency	(pre patched to both VCFs FILTER FREQUENCY)
CV 6 = Channel Pressure	(not patched but internally available for general purpose)

The pre defined default MIDI setup can be changed via MIDI System Exclusive commands.
6 * CV can be controlled by any MIDI cc# on any MIDI channel or in OMNI mode.
6 * GATE can be controlled by Note On/Off events on any MIDI channel or in OMNI mode.

Question:
I see, the Oberheim VCO has a Sync button. What can I do with it?

Answer:
This is a latching toggle switch. If depressed, then SYNC is active. In this case, the Oberheim VCO is in perfect tune with the moog VCO. It's a pretty biting hard sync effect.
Turn the Oberheim VCO Frequency POT while in Sync. Or set LFO modulation, and you'll get a fascinating sound effect, similar to the legendary moog prodigy sync sound.

Question:
I see that the moog VCO has a switch, labelled PWM/FM, what is this?

Answer:
The LFO output signal is always waiting for you at the *VCO* **MOD IN** jacks followed by the modulation POT and from there the mod signal goes to the *moog VCO* **FM/PWM** switch
You can choose, between Pulse With modulation, and Frequency Modulation.
If set to PWM (only if one of the three PULSE waveforms is selected) then the LFO signal will do a Pulse Width Modulation, otherwise, if set to FM, then the LFO will do a Frequency Modulation.

Question:
I can't find the MAIN OUTPUT of the Obermoog Synthesizer.

Answer:
You are right, there is no MAIN OUTPUT. The Obermoog is a pre patched analogue modular system and not just another synthesizer. What we usually call MAIN OUT is the AUDIO OUTPUT behind the VCA.
We have two FILTER/VCA modules with an OUT jack each.
Please use these two OUT jacks as THE STEREO MAIN OUTPUT.

Question:
The LFO and the 2 Envelopes, each has 2 Outputs. Is there any difference between them?

Answer:
Yes and No. The signals are the same but if you plug a cable into the centre jack, then the pre patched signal flow is interrupted, neither the synthesizer modules not the right plug will be feed with any signal. But if you plug a cable into the right jack, then nothing will change. This is just a multiple split output.

Question:
I'm using my VOLUME MIDI controller cc#7 but nothing happens. The Obermoog can't be controlled by cc#7

Answer:
This is correct, as long as your *LOUDNESS ENV* **AMOUNT POT** has been turned fully clockwise. If you want to enable MIDI cc#7 LOUDNESS control, you must turn the *LOUDNESS EV* **AMOUNT POT** fully counter clockwise.

Question:
I noticed that MIDI cc#74 controls the filter frequency of both VCF modules inverse.
The higher the controller value, the lower the filter frequency. Is this normal?

Answer:
Yes you are right. This isn't normal, but it is as it is. The reason is that an initial MIDI controller value never ever is 127, but ZERO. If the default value ZERO would close the filter, then we won't hear any sound until we set cc#74 to 127.

Question:
What about cc#7, isn't it the same scenario then?

Answer:
Yes it is, but by default we want have the MIDI cc#7 control disabled, otherwise eventually we can't use the VCA AMOUNT POT by default. This would newly raise an issue.