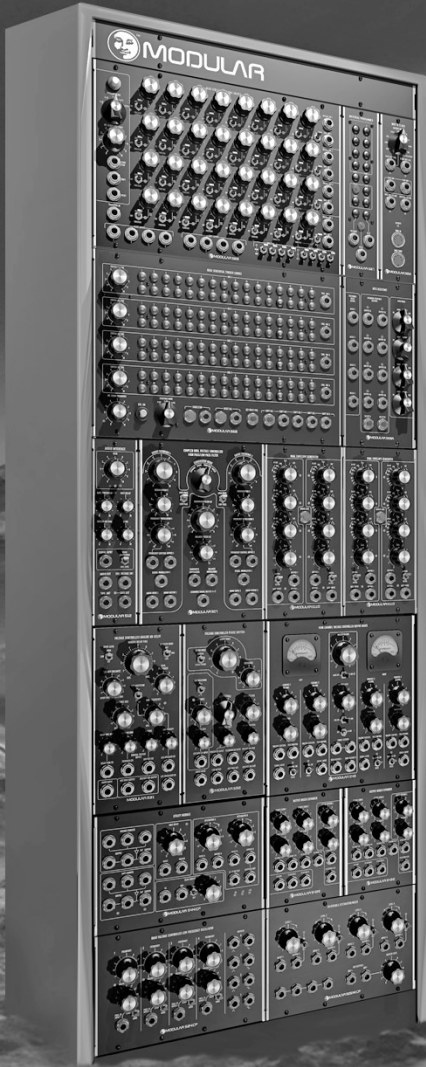


# LUNAR MAGIC

THE RANGE OF  
PRODUCTS DESIGNED  
BY GERT JALASS  
2007–2024



IN THIS BROCHURE YOU CAN  
VIEW THE RANGE OF ALL  
MOON MODULAR PRODUCTS  
DESIGNED BY THE LATE  
GERT JALASS OVER  
THE YARS 2007–2024





# PHOTO ALBUM 1



Gert Jalass 2008 with Udo Hanten in Gert's Berlin home.



Gert Jalass with Hans Zimmer and Pedro Eustache.



Gert Jalass with Martin Gore (Depeche Mode) on the Moon booth at the NAMM Show 2019



Gert Jalass in concert at Nazareth Church/ Ambient Waves event in Munich 2021.



Gert Jalass with Eric Williamson, the "Suit and Tie Guy", and Brian Kehew at the Moon booth on NAMM Show 2015.



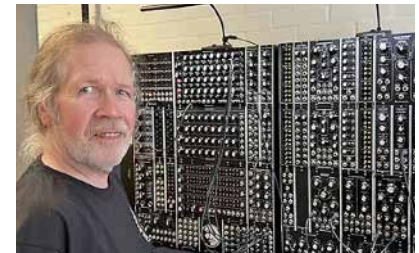
Gert Jalass being interviewed by Amazona, Superbooth22.



Gert Jalass with Dieter Doepfer, NAMM 2016



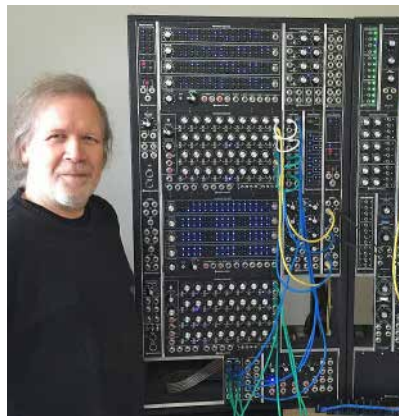
Gert Jalass with Brian Whittington in Washington DC.



Gert Jalass at the Superbooth 2023 in Berlin.



Gert Jalass with Blake Benjamin and Mark Roberts at SynthPlex 2019 in Burbank.



Gert Jalass with Ed Bullers modular system.



Gert Jalass with Udo Hanten at the sound check for the YOU concert at the Sync Festival in Athens, Greece June 2009





# PHOTO ALBUM 2



Gert Jalass with Johannes Schmoelling at the Superbooth 2017.



Gert Jalass performs live at the Superbooth18, Berlin, together with Moon founders Udo Hanten and Albin Meskes (aka YOU).



Gert Jalass with Urs Heckmann, Hans Zimmer and Daniel Miller 2011 in Berlin.



Gert Jalass performs live on his Moon Modular synthesizer at the SynthPlex event 2019 in Burbank.



At work: Gert Jalass repairing Hannes Biegers Moog.



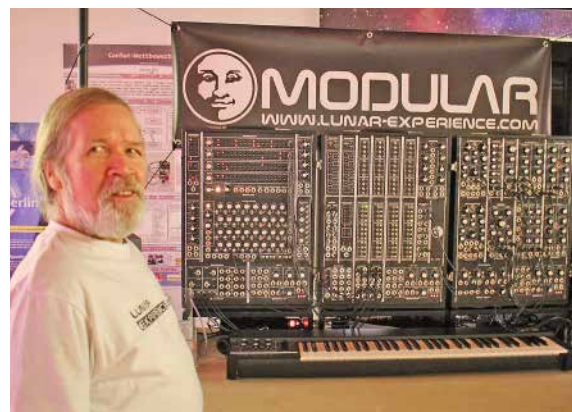
Gert Jalass with Ed Buller during sound check at a concert by his English synthesizer group "Node", London 2015.



Gert Jalass touches glasses with (from left) Markus Gabriel, Gerhard Mayrhofer (both from Synth-Werk), Bernd Kistenmacher and Mark W. Roberts at Superbooth 2022.



Gert Jalass holding a workshop at the Frankfurt Music Fair 2017.



Gert Jalass on the Moon booth at the Superbooth 2017 in Berlin



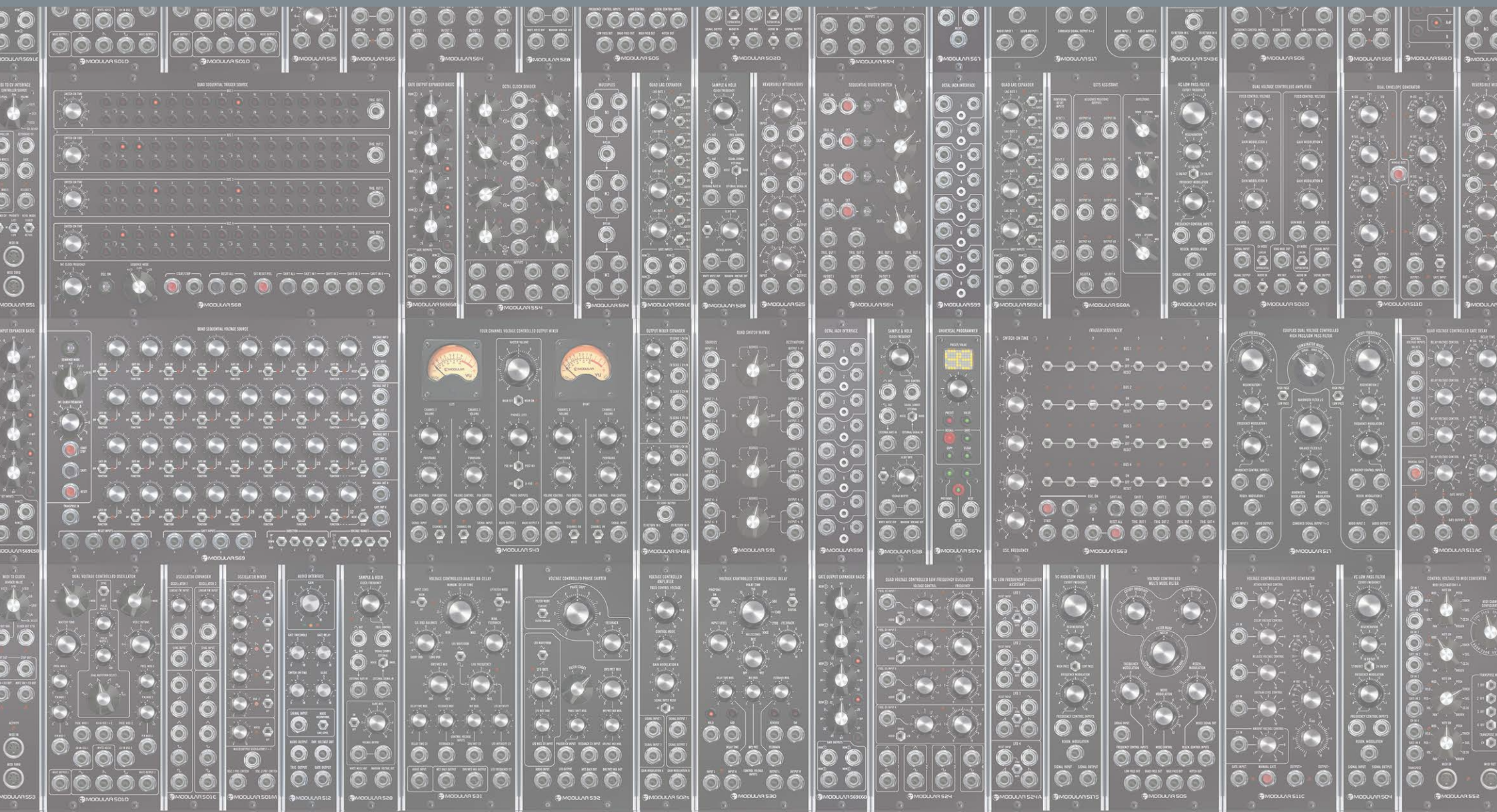
Gert Jalass with Tom Holkenborg (JunkieXL) at the SynthPlex event 2019.



Gert Jalass with Udo Hanten on the Schneiders Buero-Superbooth at the Frankfurt Music Fair 2009.



# THE MODULES ...





# 501D Dual Voltage Controlled Oscillator



This module combines two **VOLTAGE CONTROLLED OSCILLATOR** circuits in one double-width unit.

The two oscillator halves enter a symbiosis in that they share some controls which affect both while other functions are individual to each oscillator.

Each oscillator has its own octave range switch (32'...2' plus low frequency and wide settings, 'wide' augmenting the range of the tune pots to the whole 10-octave span of the oscillators).

The master tune control on the left side affects both vcOs while the corresponding pot on the right controls the detune interval between vco 1 and 2. Bipolar attenuators for frequency and pulse width modulation with their corresponding input jacks are separate as are the two pulse width controls.

The central waveform selector controls both wave outputs 1 and 2 while three additional output jacks provide sine, sawtooth and pulse waves of oscillator 2; the output area is completed by a white noise source. More individual wave outputs can be obtained by adding the 501E expander module.

The seven control voltage inputs allow control of frequency modulation and pulse width modulation of vco 1 and 2.

Two more jacks control frequency (1V/oct) while the central cv input jack controls both oscillators at once.

2013

# 501E Dual Oscillator Expander



The **OSCILLATOR EXPANDER** adds more inputs and outputs to the 501D dual oscillator. Ten output jacks provide the individual waveform outputs of oscillator 1 and 2: sine, sawtooth, triangle, rectangular and pulse. The four inputs expand both vcOs by linear frequency modulation and hard sync.

2013

# 501M Dual Oscillator Mixer



The **OSCILLATOR MIXER** blends the combined outputs of oscillator 1 and 2, plus three individual outputs of oscillator 1 (sine, sawtooth, pulse) and white noise.

The attenuators allow to invert the source signals, too. Each channel has its own mute switch with a LED. The three out jacks provide a mixed output of both oscillator sources plus two individual outputs for vco 1 and 2 overriding the six mute switches (always 'on').

2013

# OSCILLATORS



# 524 Quad Voltage Controlled Low Frequency Oscillator



**QUAD LOW FREQUENCY OSCILLATOR** module combines four voltage controlled low frequency oscillators. Each oscillator produces triangle and rectangular waveforms, has a frequency controller, control voltage attenuator (bipolar) and switchable frequency range ("Audio" approx. 0.5 Hz to 4500 Hz, "LFO" approx. 5 minutes/cycle to 40 Hz; these ranges can be expanded vastly via additional control voltages). Even though the LFOs are V/oct controllable, they are not recommended for serious VCO applications.

Also available as CP-module.

2014

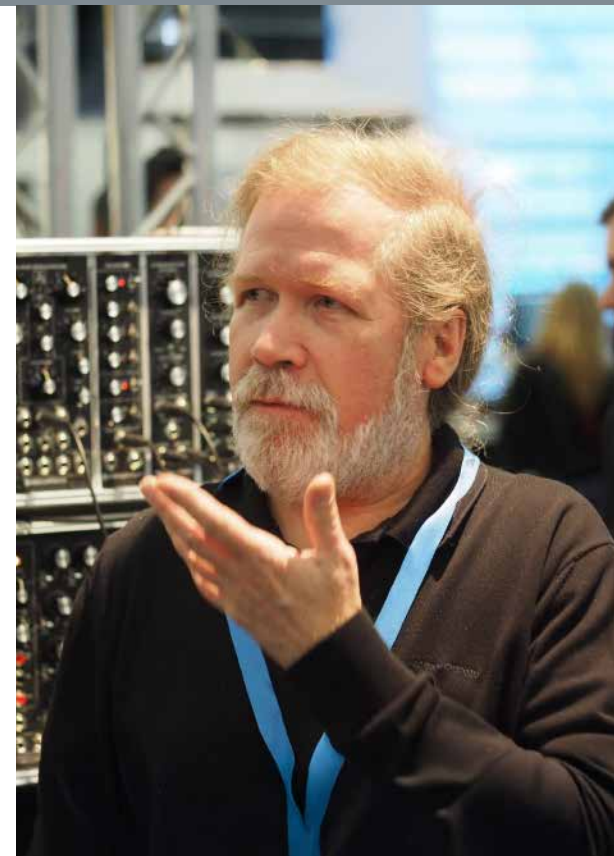
# 524A Quad Low Frequency Oscillator Assistant



The **QUAD LOW FREQUENCY OSCILLATOR ASSISTANT** adds three additional waveform outputs to each of the four LFOs of the attached 524 module: sine, positive sawtooth, negative sawtooth.

The four reset input jacks allow syncing of the LFO frequency to external sources as clock pulses, gates outputs etc. In gate mode each LFO can be gated by external signals.

2015



# LOW FREQUENCY OSCILLATORS



# 504

## Voltage Controlled Low Pass Filter



This **VOLTAGE CONTROLLED LOW PASS FILTER** is a traditional ladder-type filter, switchable 12/18/24 dB/oct with voltage controllable cutoff frequency and regeneration.

# 505

## Voltage Controlled Multi Mode Filter



The **MULTI MODE FILTER** features low pass, high pass, band pass (12 dB/oct each) and notch mode (6 dB/oct), which are available simultaneously as well as combined at the mixed output, where the filter mode is voltage controlled.

# 509

## Voltage Controlled Low Pass Filter



The **VOLTAGE CONTROLLED LOW PASS/BAND PASS FILTER** is inspired by the filter part of the famous Formanta Radio Factory Polivoks synthesizer from 1982.

It features a switchable band pass/low pass filter with voltage controllable cutoff frequency and regeneration.

Filter slope in low pass mode is 12 dB/oct, in band pass mode 6 dB/oct.

2018

2016

2024

FILTERS I



# 517

## Coupled Dual Voltage Controlled High Pass/Low Pass Filters



This module combines two **VOLTAGE CONTROLLED FILTER** circuits in one triple-width unit. The two identical filters are switchable high pass/low pass filters with independent controls for cutoff frequency and regeneration. Filter slope in low pass mode is 24 dB/oct, in high pass mode 18 dB/oct.

The four-mode combinator allows using the filters as:

- two separate filters ("stereo mode")

- two filters in series ("maximum slope")
- notch/band reject mode
- band pass mode

The balance between filter 1 and 2 and the bandwidth are voltage controllable. An additional jack combines both filters' audio outputs.

2017

# 517s

## Single Voltage Controlled High Pass/Low Pass Filter



This **SINGLE VOLTAGE CONTROLLED FILTER** is one half of the 517 module without the combinator part, featuring a single high pass/low pass filter with voltage controllable cutoff frequency and regeneration.

2017

# 518

## Voltage Controlled Low Pass Gate



The **VOLTAGE CONTROLLED LOW PASS GATE** is inspired by the special module from Don Buchla found in his famous "west coast type" modular synthesizers (series 200) from around 1970.

The 518 module features a switchable combination of a low pass filter circuit with voltage controllable cutoff frequency and a VCA (called "Gate").

Both functions work separately or in combination.

The filter resonance is voltage controllable.

The low pass filter slope is 12 dB/oct.

2024



# 508/6FB Filter Bank

Including Low Pass/Band Pass/High Pass Filters  
plus Combinator Control Module and a  
Quad Reversible Attenuator Module



2019

The MOON 6FB SIX BAND VOLTAGE CONTROLLED FILTERBANK is a modular filter bank, housed in a vintage style tolex covered wooden cabinet, one row in standard height for eight units. With front lid and power supply ( $\pm 15$  V/+5 V).

It consists of the following eight modules (L to R):

- |              |  |
|--------------|--|
| 1 x M 525    | <b>Quad Reversible Attenuator Module</b> |
| 1 x M 508 io | <b>Bank Controller</b>                   |
| 1 x M 508 L  | <b>VC Low Pass Filter</b>                |
| 4 x M 508 B  | <b>VC Band Pass Filters</b>              |
| 1 x M 508 H  | <b>VC High Pass Filter</b>               |

Each of the filters can be voltage controlled separately or in common and has 6dB/octave (band pass) respectively 12 dB/octave (low pass, high pass).

The 508 io will allow the common voltage control of all filters. It does provide a central input and a

central output for the audio signal.

Patching the inputs and outputs of the individual filter modules will override the internal connections from/to the 508 io.



# 502D

## Dual Voltage Controlled Amplifier with Ring Modulator



The **DUAL VCA** module features each two modulation inputs, switchable linear/exponential mode, switchable AC/DC mode, single, mix and ringmodulator outputs.

2016

# 502S

## Simple Voltage Controlled Amplifier



The **SIMPLE VCA** is a dual VCA module that features two signal inputs and outputs each, two modulation inputs, continuous linear/exponential controller plus switchable AC/DC mode.

2020

# 528

## Sample and Hold with LFO & Noise



The **M528 SAMPLE & HOLD** module is a sample & hold circuit consisting of the following elements:

- The voltage controlled clock oscillator gates the sample circuit and doubles as a VCLFO with triangular and rectangular waveforms.
- External gate input
- Signal input can be the internal noise source (white noise and random voltage, both with separate output jacks) or an external sample signal.
- Dual voltage output jacks with switchable variable glide (portamento) control.

2019

# VOLTAGE CONTROLLED AMPLIFIER - SAMPLE & HOLD



# 530 Voltage Controlled Stereo Digital Delay



The **530 VOLTAGE CONTROLLED DIGITAL DELAY** is a hi-fi stereo delay. Tape, digital and ping-pong modes of delay, hold with overdub and delicate delay time and feedback control in combination with CV and trigger control over various parameters make this module not only a modular FX unit but also an instrument on its own.

- Delay time 3–3000 ms
- Tap and clock synch of delay time
- Reverse delay mode
- Hold mode samples up to 40 seconds of audio with overdub feature
- Trigger control over Hold, Add and Reverse
- CV control over delay time, dry/wet mix and feedback
- Freq. range 5 Hz – 24 kHz
- Sampling 48 kHz, 24bit

2020

# 531 Voltage Controlled Analog Delay



The **531 BBD ANALOG DELAY** is an analogue delay module which includes two separate bucket brigade delay lines. A short one with 1024 stages and a long one featuring 4096 stages. Both delays work simultaneously and one can fade between them to create multi-tap delay effects. Most parameters are voltage controlled, allowing integration in a complex modular setup.

- Voltage control over delay time, feedback and dry/wet mix
- Built in LFO (triangle and rectangular waveforms), with voltage control over speed and intensity
- separate audio outputs for dry/wet mix signal and wet signal only

2022

# 532 Voltage Controlled Phase Shifter



The **M532 Voltage Controlled Phase Shifter** is a phaser module based on a classic phaser design.

Full analogue design with up to eight phasing stages. Built-in voltage controlled LFO (triangle and rising sawtooth waveforms).

The „LFO OUTPUT“ is normalized to the „PHASER CV INPUT“.

Voltage control over phase shift, feedback and dry/wet mix.

With „FILTER MODE“ in the „CLASSIC“ position all phasing stages receive the same phase shift information. The „SPREAD“ mode is supplying them with different phase shift information.

2022

EFFECT MODULES



# 511C Voltage Controlled ADSR Envelope Generator



**VOLTAGE CONTROLLED ENVELOPE GENERATOR** in typical ADSR-Style with five voltage controlled parameters with associated attenuator knobs: attack time, decay time, sustain level, release time and envelope amplitude.

The input jack for the amount of contour control is internally connected to +10 volt. The time parameters range from 1 ms to approx. 20 s (at full modulation). The time control voltage inputs are daisy chained. Control range is 0-10 v. Two LEDs serve as indicator lamps for 'gate pulse present' and for the envelope output.

2009

# 511D Dual ADSR Envelope Generator



A **DUAL ENVELOPE GENERATOR** module in typical ADSR-Style. Time ranges from 1 ms to approx. 20 seconds. Gate button for manual triggering (both envelopes). LEDs for 'gate pulse present' and for each stage of the envelope. "Normal" and "Retrig" Mode.

2014

# 511AC Quad Voltage Controlled Gate Delay



The **QUAD GATE DELAY** combines four voltage controlled gate delay circuits in one module, which delay the incoming gate signals in a range from ca. 1 ms up to 20 seconds. Each delay unit has its own pair of display LEDs.

The four gate in/outputs are internally connected like this: Output 1 goes into input 2, output 2 goes into input 3 and output 3 goes into input 4. The 'Manual Gate' button affects delay input 1.

The time control voltage inputs are daisy chained. Input 1 is internally connected to +10 volts.

2011

ENVELOPE GENERATORS



# 569 Quad Sequential Voltage Source



2010

**QUAD SEQUENTIAL VOLTAGE SOURCE** is an analog step-sequencer with up to 32 positions, arranged in four rows. Each row can be controlled absolutely independent from each other, so that the user has practically up to four separate sequencers at his disposal, each with its own

clock- and reset-input jacks, and – at the same time – different running directions (up, down, random and “ping-pong”). In addition the control voltage outputs can be switched between three ranges (2V, 5V and 10V), with the 2V and 5V ranges supplying a (to 1/12V) quantized output voltage.

Each step position has its own “step-mode”-switch to toggle the gate signal of the respective step position on or off. In the “Function” position it (again separately for the four rows) can be defined as skip, reset or stop-command. The module is six units wide.

# 569 EG/ES Gate Output/ Set Input Expanders



2010

The M 569 EG and M 569 ES EXPANDERS are similar companion modules to the M 569 Quad Sequential Voltage Source. The M 569 EG expands the M 569 by 32 individual gate outputs and allows direct access to every single step position. The M 569 ES expands the M 569 by 32 individual set inputs and allows the direct positioning to each step. Both are available as CP-modules as well.

# 569 LE Quad Lag Expander



The **M 569 LE EXPANDER** is one of our companion modules to the M 569 which expands the sequencer's four rows by four lag voltage outputs (aka portamento).

Each row has its own lag rate control as well as switchable on/off/gated mode and switchable lag function for rising or falling edge only or both.

2018

# 569 ESB/EGB Basic Expander Modules



2017



2017

The **M 569 ESB** and **M 569 EGB EXPANDERS** are basic companion modules to the M 569.

The M 569 ESB expands the M 569 by four switchable set inputs, one position per row can be specified. The M 569 EGB expands the M 569 by four switchable gate outputs, one position per row can be specified.

# 569 ESB/EGB CP Basic Expander Modules in CP Size



The **M 569 ESB** and **M 569 EGB EXPANDERS** are available as 2U-CP modules as basic companion modules to the M 569 sequencer.



2018

# SEQUENCER EXPANDERS



# 563 V2

## Eight-Step/ Four Row Trigger Sequencer



2008

**EIGHT STEP/FOUR ROW TRIGGER SEQUENCER** with built-in clock-oscillator. The 32 switches (with associated LEDs) have three positions each: gate-on, gate-off and reset. Switch-on time (adjustable width of the gate pulse) is independently variable for each of

the four busses. Two buttons with associated trigger inputs to start and stop the internal oscillator. Reset to position 1 via trigger pulse. Four independent trigger inputs, one for each bus. M563 V1 sequencers can be upgraded to V2.

# 563 E

## Trigger Sequencer Expander



2009

**TRIGGER SEQUENCER EXPANDER MODULE** for the M563 V2 Trigger Sequencer. Each of the 32 step positions of the connected M563 V2 has now his own dedicated output jack.

# 554

## Octal Clock Divider



2010

**OCTAL CLOCK DIVIDER** combines 8 divider circuits in one module. Each of the dividers offers twelve division factors: 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 10 - 12 - 16 and 32.

The input jacks are normalized to allow complex divider combinations without external patching: Input 1 is normalized to input 3, input 3 to 5, input 5 to 7. Output 1 is normalized to input 2, output 3 to input 4, output 5 to input 6, output 7 to input 8.

Input 8 can be configured (via jumper on the main circuit board) to serve as master reset input for dividers 1 to 7.

# 568

## Quad Sequential 32/128 Step Trigger Source



2011

The QUAD SEQUENTIAL TRIGGER SOURCE is a trigger sequencer featuring four tracks of trigger positions, each with 32 steps, which can be combined to one long sequence of up to 128 steps: 4 sequences up to 32 steps, 2 sequences up to 64 steps or 1 sequence up to 128 steps. The gate positions are activated by pushing the

associated button. The LED lights up. Pushing the button again deactivates the respective gate position. More than one reset position per row can be set. The active reset buttons are displayed by means of blinking LEDs. In 2 x 64 mode the gate outputs 1 and 2 respectively 3 and 4 deliver the same output, while the switch-on times of

both parallel outputs may be different. This means: E. g. output 1 with a short gate time provides all active gates, while output 2 with a really long gate time provides only a few „long“ gate signals. In 1 x 128 mode the four gate outputs provide four times the same signal in parallel. This time with individual gate lengths, as desired, as well.

# 568A

## QSTS Assistant



2011

The QSTS ASSISTANT MODULE expands the basic M 568 by more inputs and outputs. The four left jacks are reset inputs to have the four sequencer rows of the 568 be reset independently from external sources.

The central eight jacks provide trigger outputs, which can be assigned to selectable positions – two on each row of the 568.

The rotary switches on the right side of the module allow to change the running direction of the four rows independently: forward, backwards, ping-pong and random order.



# 565 v3 Quad Quantizer



2009

The QUAD QUANTIZER is featuring four independent quantizer circuits that force variable control voltages into semitone intervals (1/12 volt) over a bipolar input voltage range of more than twenty octaves (255 semitones). Gate pulses fed into the "Gate In"-jack trigger the quantizer. An "open" gate input quantizes, i. e. if no gate jacks are patched. The four gate-ins are passed through, one plugged IN 1 feeds IN 2 to IN 4 as well. The gate outputs supply a pulse, whenever the (quantized) output voltage changes. The most recent quantized value remains preserved until the next quantization will occur.

An M 565 v1 or v2 module can be updated to a v3 module to allow to connect M 565 D controllers.

Also available as CP-module.

# 565 D Quantizer Controller



2012

The QUANTIZER CONTROLLER allows to limit the output voltages generated by the M 565 v3 Quad Quantizer to any desired key, chord or note interval. Using the array of 12 keyboard-like arranged LED buttons, notes can be activated or deactivated in any combination.

Up to two M 565 D Quantizer Controller modules can be connected to a single M 565 v3. If only one M 565 D is connected, all 4 channels are forced to its settings.

If two M 565 D are connected channels 1 and 2 are controlled by the first and channels 3 and 4 by the second.

Multiple quantization settings can be stored if a M 567 Universal Programmer is connected to the M 565 v3.

# 567 Universal Programmer for the 568 Sequencer and the 565D Quantizer Controller



2012

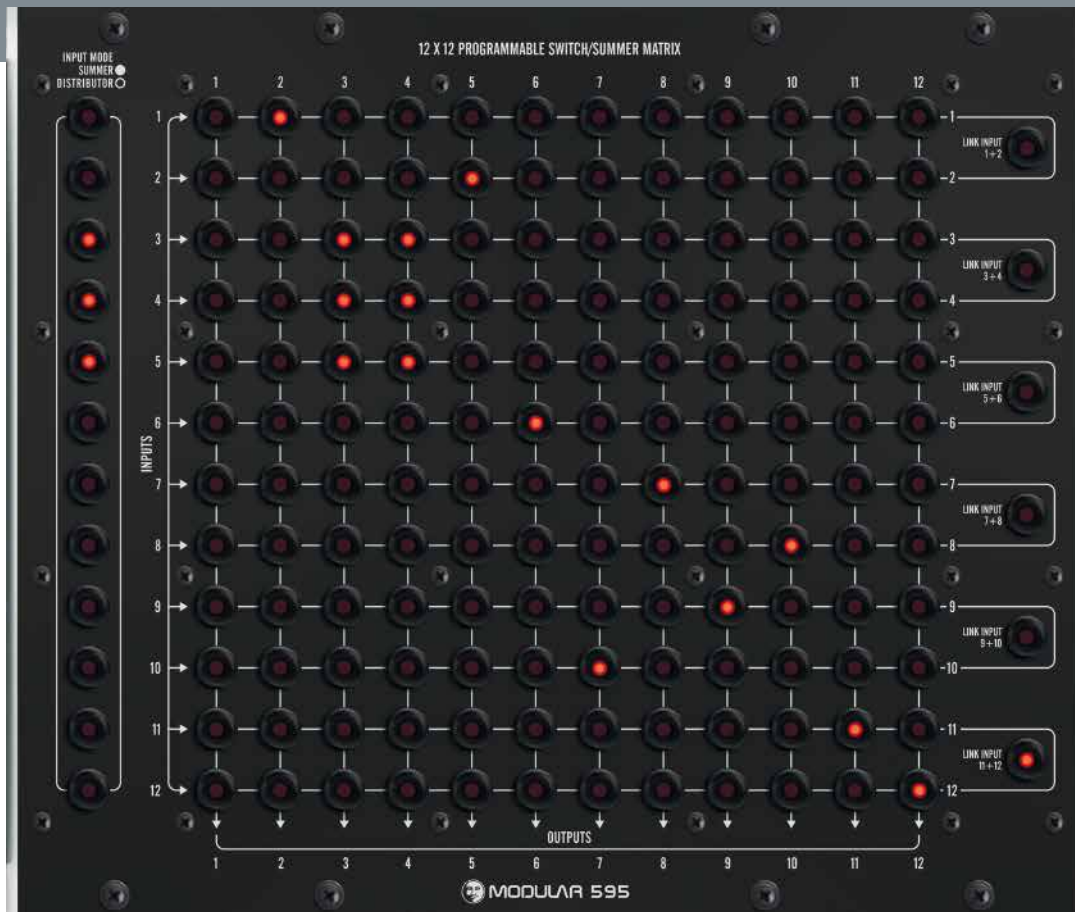
The UNIVERSAL PROGRAMMER MODULE enables the user to save and recall settings from the 568 sequencer, 565D quantizer controller and future modules. The 567 can save 2 x 8 settings in its non volatile memory.

Operation is simple. Via the push buttons the user selects one of 8 memory slots. Two memory banks are selected via the bank buttons. Four push buttons control the memory operations.

With the lower "go to" buttons/jacks one can step through memory positions in either direction, even by trigger pulses from external sources (or from a 568 itself). This way extremely long trigger sequences could be made possible.

QUANTIZER

# 595 12 x 12 Programmable Switch/Summer Matrix



2024

The **PROGRAMMABLE SWITCH/SUMMER MATRIX** is a solution to manage the distribution and/or mixing of 12 inputs to 12 outputs. 12 DC-coupled and buffered inputs and outputs, fully analogue with a high precision signal path.

## INPUT MODE

Routing/Distribution (off/on) or mixing signals (off/third/half/full)

## LINK MODE

Inputs and outputs are paired to handle immediately a combination of e.g. the CV and GATE outputs of a sequencer or a stereo audio signal.

# 595 I/O Input/Output Modules



2024

# 567V Programmer Module



2024

## PROGRAMMER

99 memory locations with an independant edit buffer. The programmers's endless rotary encoder with integrated pushbutton does allow to dial to a memory location and to confirm/abort a command (RECALL, SAVE, COPY, CLEAR).

With the lower "go to" buttons/ jacks one can step through memory positions in either direction, even with trigger pulses from external sources.

SWITCH / SUMMER MATRIX



# 551

## Midi-to-Voltage Converter



**MIDI TO CONTROL VOLTAGE** converts MIDI data into analog control voltages. A MIDI note-on command gets converted into a keyboard control voltage and gate signal, the third output turns the note-on velocity into a corresponding control voltage. Three more output jacks on the left generate voltages from pitch- and modulation wheel controllers. The jack labeled "Controller" puts out a voltage from one of nine selectable MIDI controller sources, e.g.

- after touch · sustain pedal
  - breath controller · pedal
  - panorama · master volume.
- Three toggle switches enable (a) pitch bending to be added to keyboard cv (b) change of note priority [highest, lowest, last] (c) legato mode. The MIDI channel is selectable from 1-16.

# 551 CP

## Dual Midi-to-Voltage Converter with Midi-to-Clock



## 2018

The **DUAL MIDI TO CONTROL VOLTAGE** converts MIDI data into analog control voltages and does provide a basic MIDI clock output.

MIDI note-on commands get converted into keyboard control voltage, gate signal and note-on velocity voltage. Three more output jacks generate voltages

from pitch- and modulation wheel controllers plus a selectable controller source.

In addition to the features of the M 551 module this CP module offers two independent converters (A/B) to generate voltages for duophonic or twin-channel-use.

# 552

## Quad Voltage-to-Midi Converter



The **CONTROL VOLTAGE TO MIDI CONVERTER** module enables the user to integrate midi- and even computer-generated instruments into his modular environment. Control your midi-equipment from your analog sequencer or from other control voltage generating devices.

The M552 features four input pairs for control voltages (0-10 volts) and gate signals to be transformed into midi-compatible control data.

Each input pair can be independently transformed into one of the following types of midi data:

- ## 2009
- Note-on/note-off · Velocity (with note-on) · Pitch bend
  - Modulation wheel (CC1) · Breath controller (CC2)
  - Pedal (CC4) · Volume (CC7) · Panorama (CC10)
  - Special (CC20) · Channel after touch · Sustain Pedal
  - Program Change

Note: output can be transposed via midi information or control voltage.

## 2016

# MIDI CONVERTERS

# 553

## Midi-to-Clock Converter



**MIDI TO CLOCK** converts a MIDI clock into analog clock and gate-signals, to synchronize e. g. analog step-sequencers to MIDI-hardware- or software-sequencers.

The M553 derives clock signals from the native MIDI clock resolution of 1/96 notes up to 1/4 notes.

The right clock-output supplies a fixed clock signal of 1/16 notes.

The start/stop jacks supply relevant trigger-signals from MIDI start/stop commands while the two „note-on...” jacks supply gate signals, derived from MIDI note-on commands.

The MIDI channel is selectable 1-16.

# 564

## Sequential Divider Switch



**SEQUENTIAL DIVIDER SWITCH**, a combination of a sequential 4-to-1/1-to-4 bidirectional electronic switch with clock divider. Each switch has its own set-button for manual activation, trigger input (positive edge) and classic style indicator lamps.

One output/input-jack, four output/input jacks, clock input to shift the switch position. Four counter circuits, doubling as clock dividers, are connected in series with adjustable divider ratios. Ratio switch positions:

- SKIP skip step
- 1 shift after 1 clock pulse
- 2 shift after 2 clock pulses
- 3 shift after 3 clock pulses
- 4 shift after 4 clock pulses
- 8 shift after 8 clock pulses

Each switch has its own gate output: 'on' as long as step is active).

Also available as CP-module.



2010

2009

# MIDI-TO-CLOCK · SEQUENTIAL SWITCH



# 592 Six Channel Reversible Modulation Matrix



2011



2011



2011

**REVERSIBLE MODULATION MATRIX** combines six attenuator units, consisting of three elements each:

- 12 position input selector to choose one of 12 signal inputs
- reversible attenuator, which attenuates or amplifies the input signal in a range from -200 % to +200 %; in zero-position the signal is suppressed completely
- 12 position output selector to choose one of 12 signal outputs

The complete modulation matrix consists of three (or in one special case two, see right) modules – the central active control unit M 592 and the sub-modules M 592i/592o with 12 in- and 12 output-jacks.

The inputs are connected via switching jacks: one single modulation source can – without any extra patchcord – routed to several different outputs at once, via independent attenuators. By removing a couple of jumpers on the back of the input module these connections can be interrupted.

If more than one input signal is routed to one output, these voltages are summed in the output module. Internal connection of in/outputs can be made possible.



2011

If a cabinet in the original Moog form factor (e. g. IIIc) is at one's disposal, this in/out-module of the size of a "CP"-panel (2U width) is available.

# MODULATION MATRIX

# 525 Quad Reversible Attenuator



**QUAD REVERSIBLE ATTENUATOR** module features four active bipolar attenuators for audio signals and control voltages.

„0“-position = no output signal present

„+10“ position = output signal equals input signal (unity gain)

„-10“ Position = output signal equals input signal (unity gain), but inverted

The four input jacks are „chained“, input 1 is internally connected to +10 volts if nothing is patched. So the module doubles as single to quad variable voltage source.

2009

# 526 Three Channel Reversible Mixer



**REVERSIBLE MIXER** is an active bipolar three channel mixer for audio signals and control voltages with master level control and both inverting and non inverting outputs. In addition each channel has a dedicated on/off ('mute') switch with its own status LED.

„0“-position = no output signal present

„+10“ position = output signal equals input signal (unity gain)

„-10“ Position = output signal equals input signal (unity gain), but inverted.

2009

# 525 MCP Four Channel Reversible Attenuator/Mixer



2012

The **M 525 MCP ATTENUATOR/MIXER** combines the functionality of the 525 Reversible Attenuator und the 526 Reversible Mixer: Four input channels with mute switches and LEDs, doubling as separate attenuators. Master outputs with inverting and non-inverting output jacks and master level knob.

MIXER - ATTENUATORS



# 591 Quad Switch Matrix Router



The **QUAD SWITCH MATRIX ROUTER** is a passive module, where 2 x 4 output jacks ("destinations") can be routed in pairs to 2 x 4 signal inputs ("sources") using four 6-way rotary switches with two "off"-positions.

This simple device is intended as a companion module to the M552, but suitable for a multitude of applications, where audio- and control-signals have to be routed fast and with immediate visual feedback. Use your imagination.

2009

# 599 Jack Interface



**INTERFACE MODULE** with eight sets of jacks:

- 1/4" (6,35 mm)
- Banana
- 1/8" (3,5 mm)

2014

# 594 Multiples



**MULTIPLE MODULE** with standard height with 3 x 4 sets of jacks. By using the two additional 'break'-jacks, one can use this module as one, two or three independent four-jack-multiple areas.

2009

# 599CP CP Multiples



2011

The **590M MULTIPLE MODULE** in 2U CP size offers 4 x 4 sets of jacks. By using the three additional 'break'-jacks, one can utilize this module as one, two, three or four independent four-jack-multiple areas.

SWITCHER · INTERFACE · MULTIPLES

# 543

## Four Channel Voltage Controlled Output Mixer



2019

OUTPUT MIXERS

### The M 543 FOUR CHANNEL VOLTAGE CONTROLLED STEREO OUTPUT MIXER

is a master mixer for audio signals and control voltages with master level control, channel on/off switches with status-LEDs as well as independent voltage controllable input volumes and panorama positions.

Master volume control with dual stereo headphone outputs (switchable pre/post master control). Switchable 440 Hz tuning aid. Voltage ranges 0-10 volts, panorama control (set at center position) needs -5/+5 volts for full left/right range.

The module is DC-coupled (except headphone outputs) to use it e.g. as a quad input/dual output mixer for control voltages. DC coupling can be defeated via jumpers on the PCB. Two vintage style VU meters display the L/R master levels.

# 543 CP

## Four Channel Voltage Controlled CP Output Mixer



2019

The M 543 CP FOUR CHANNEL VOLTAGE CONTROLLED STEREO OUTPUT MIXER is identical to the M 543 Output except for the VU meters and the module height.

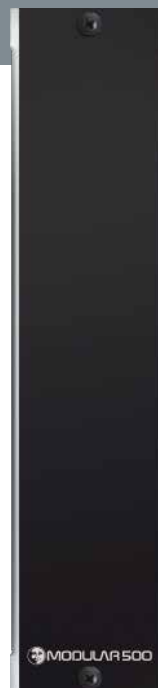


# 543 E/ECP Output Mixer Expander



The M543 E and M543 E CP are expander modules to upgrade the M543/ M543CP output mixer modules by a 4-channel send/stereo return FX path. Two or more of these modules can be connected to the mixer modules to have more effects paths.

# 500 Blank Faceplates



BLANK FACEPLATES with or without the 'Moon' logo, in one or two unit widths.

2019

OUTPUT MIXER EXPANDERS - BLANK PANELS

# 545 Power Supply & Distribution Modules



## M 545 1A

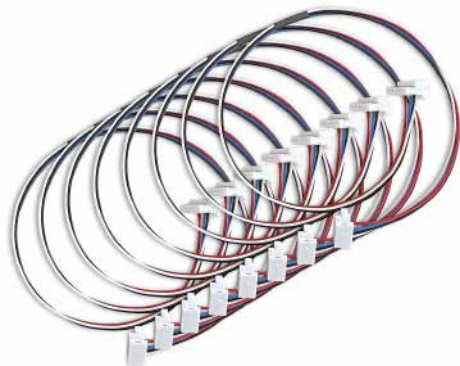
The **M 545 1A Power Module** combines a one unit module with an eight header distribution board, a four jack multiple, master switch and display leds for the three voltages.

Eight DotCom\* style power connectors to feed the attached modules.

Via the dedicated connector an extra power distribution board (500PD, not included) can be applied to drive more modules.

The three output voltages are  
+15 V (1 A) | -15 V (1 A) | +5 V (0.6 A)

A 2.5 A external multi region power adapter and eight 500-PDotCom cables are included.



2024



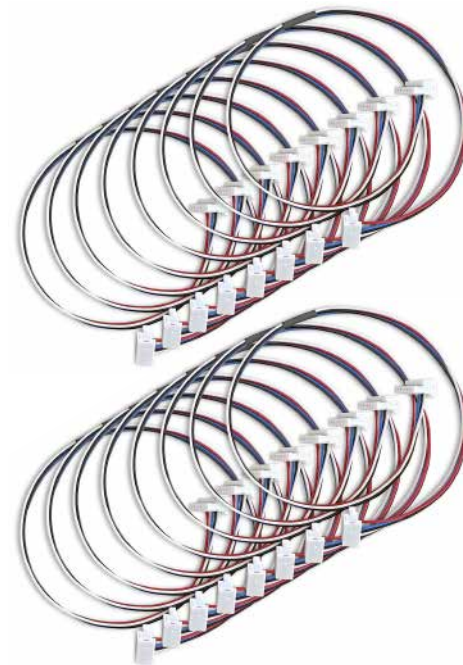
## M 545 2A

The **M 545 2A Power Module** combines a one unit module with a ten header distribution board, a four jack multiple, master switch and display leds for the three voltages.

Ten on board DotCom\* style power connectors to feed the attached modules plus one extra distribution board included.

The three output voltages are  
+15 V (2 A)  
-15 V (2 A)  
+5 V (1.2 A).

A 5 A external multi region power adapter and sixteen 500-PDotCom cables (40 cm long) are included as well as a dedicated power distribution board with ten DotCom\* and three COTK\* headers (500PD).



2024





# 544CP Utility Module



**2016**

The M 544 CP UTILITY MODULE incorporates a couple of useful control voltage and logic functions:

- Two attenuators which double as 2-channel mixer and inverter
- Slew limiter
- Gate delay
- 3-input voltage summer/inverter
- 3-input gate summer/inverter
- Supply-voltage LEDs

UTILITY MODULES

# 598CP Trigger Converter/Multiples



**2017**

The M 598 CP TRIGGER CONVERTER/MULTIPLES module incorporates:

- Front panel connectors for an analog keyboard with dual voltage- and gate outputs
- Dual S-trigger to V-trigger converters
- Dual V-trigger to S-trigger converters
- Switchable 16-jack multiple area.



# 500V2S5-V2S2

Adapter Cable 6,35mm (1/4")  
to Cinch Jones Plug

Cable lengths (V2S2) 200 cm (79") or (V2S5) 500 cm (197")

# 500 SYSTEMS

## Preconfigured Modular Synthesizer Systems



### MOON 8SQ

#### Eight Track Sequencing System

Vintage style tolex covered wooden cabinet with two rows in standard height for 8 units each and one row for modules in CP size. With front lid and power supply ( $\pm 15$  V/ $\pm 5$  V).

Modules included:  
2 x M569 • 2 x M569ESB  
2 x M569EGB  
M544CP + M564 CP



### MOON 6FB

#### Six Band VC Filter Bank

Vintage style tolex covered wooden cabinet, one row in standard height for 8 units. With front lid and power supply ( $\pm 15$  V/ $\pm 5$  V).

Modules included:  
M525 • M508io • M508L •  
4 x M508B • M508H



### MOON 2VS

#### Two Voice Synthesizer System

Vintage style tolex covered wooden cabinet with two rows in standard height for 8 units each and one row for modules in CP size. With front lid and power supply ( $\pm 15$  V/ $\pm 5$  V). The normalization scheme allows to operate it without any patch cord.

Modules included:  
2 x M501D • 2 x M526  
2 x M517S  
2 x M511D • M524  
M526 • M594  
M551CP • M543 CP



### MOON 6TS

#### Trigger Sequencer w/Programmer & Clock Module

Vintage style tolex covered wooden cabinet, one row in standard height for 8 units. With front lid and power supply ( $\pm 15$  V/ $\pm 5$  V).

Modules included:  
M553 • M567 • M568



# 500 SYSTEMS

Preconfigured Matrix Systems

## MOON Matrix PT

Complete 12x12  
Programmable Matrix System  
in P-Top-Case



Vintage style tolex covered wooden cabinet with one row in standard height for 8 units. With front lid and power supply ( $\pm 15$  V/+5 V).

Modules included:

- M 595 Matrix Module**
- M 567v Programmer Module**
- M 595i 12-Matrix-Input Module**
- M 595o 12-Matrix-Output Module**

## MOON Matrix T8

Complete 12x12  
Programmable Matrix System  
in T8-Case

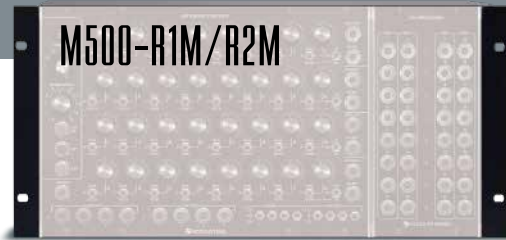


Programmable Matrix System in T8-Case for 8 units. With power supply ( $\pm 15$  V/+5 V).

Modules included:

- M 595 Matrix Module**
- M 567v Programmer Module**
- M 595i 12-Matrix-Input Module**
- M 595o 12-Matrix-Output Module**

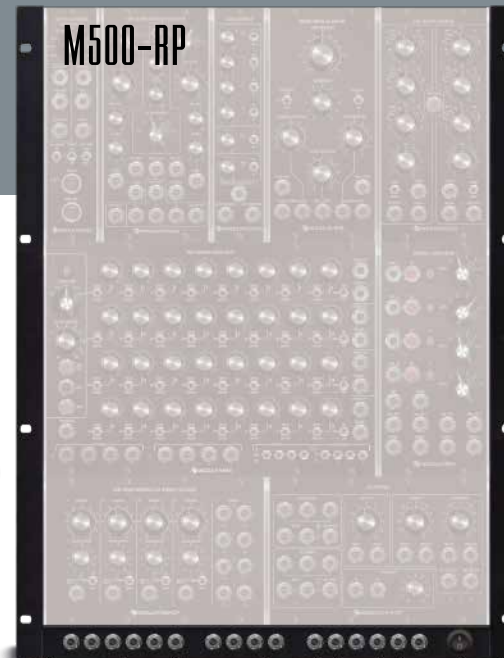
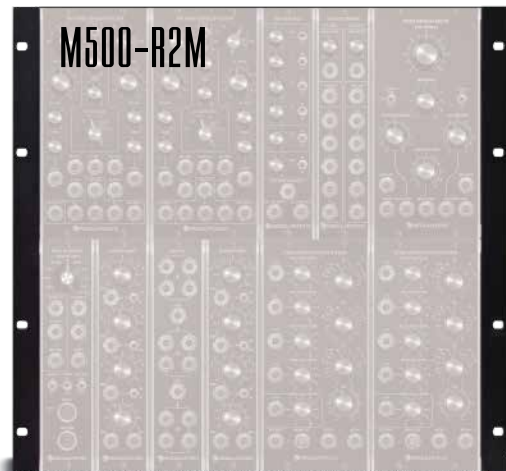
# 500 CABINET SERIES



## POWERED 19" RACK CASES

**M500-R1M** (one row, accommodating 8 module widths) and **M500-R2M** (two rows for 16 units).

Both with power supply ( $\pm 15\text{ V}/+5\text{ V}$ ), connectors for synthesizers.com and COTK, with cabling.



POWERED 19" RACK CASE M500-RP with two rows for 16 standard units and one row for modules in CP size (the CP-row matches exactly the Moog™ CP-height (5 5/8 in = 142.875 mm).

Power supply ( $\pm 15\text{ V}/+5\text{ V}$ ), connectors for synthesizers.com and COTK, with cabling.



Vintage style tolex covered portable wooden cabinet with two rows in standard height for eight units each and one row for modules in CP size. The CP-row matches exactly the Moog™ CP-height (5 5/8 in = 142.875 mm).

With power supply ( $\pm 15\text{ V}/+5\text{ V}$ ), connectors for synthesizers.com™ and cabling.

## M500-T4 · T6 · T8 · T10 Powered Tabletop Cases

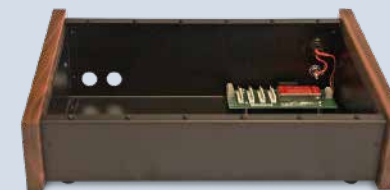
M500-T4 (one row, accommodating 4 module widths) to M500-T10 (10 module widths) each with power supply ( $\pm 15\text{ V}/+5\text{ V}$ ), connectors for synthesizers.com and cabling. Wooden side panels are included. Cases can be combined to achieve longer units and are available without side panels.



M500-T10



M500-T8



M500-T6



M500-T4



# 500 CABINET SERIES

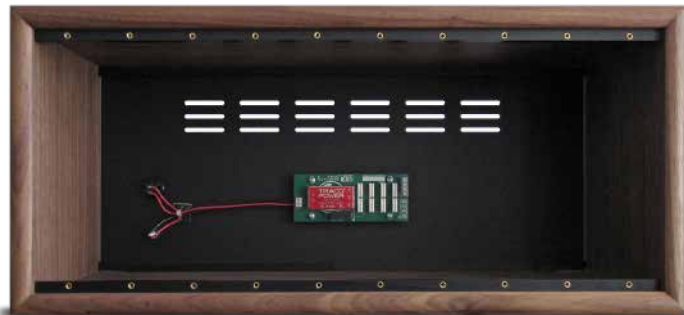


## M500-T4 · T6 · T8 · T10 Powered Tabletop Cases

**Vintage style tolex covered portable wooden cabinet** with two rows in standard (MU) height for eight units each and one row for modules in Euro size (85 HP). With two separate power supplies:

A: One to power the MU sized rows with connectors for synthesizers.com™ and delivering  $\pm 15$  V and +5 V. Cabling between power supply and modules is included.

B: One to power the Euro sized row with 16pin keyed headers and delivering  $\pm 12$  V and +5 V. Cabling between power supply and modules is not included..

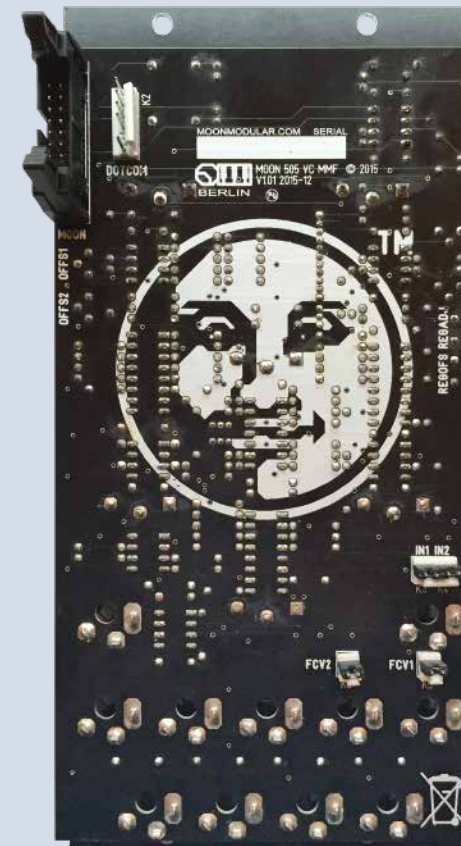


## M500-C10 Wood Case

**POWERED WOOD CASE M500-C10** (one row, accomodating 10 module widths) with power supply ( $\pm 15$  V/+5 V), connectors for synthesizers.com and cabling. The case is a handsome blend of birch wood and walnut.

# 500 SERIES

The 500-SERIES module format follows the 5U industry standard known from other manufacturers (e. g. synthesizers.com/Moog/ Synth-Werk/Curetronic/Mos-Lab/STG etc.).



Our modules work with supply voltages of -15 volts/+15 volts. They can be adapted to Moog standard (-6 volts/+ 12 volts) or -12 volts/+ 12 volts as custom order – please ask us.

Two power connectors (Club of the Knobs/synthesizers.com) are on-board as standard, adaptors for other systems are available upon request.

Threshold voltage of the trigger inputs is +1 volt.

Control voltage range is usually 10 volts.

The faceplates are etched as the original Moog™ modules.

Trademarks and logos are the property of their respective owners.

# 500 RF1/RF2 Rack Frame Kits

## M500-RF1 Rack Frame Kit

The M 500-R1 SINGLE ROW DIY 19" RACK FRAME KIT makes a rack frame to set up one row/8 units wide for 5U modules into flight cases, studio racks or custom cabinets. A set of screws to mount the modules is included.



## M500-RF2 Rack Frame Kit

The M 500-R2 DOUBLE ROW DIY 19" RACK FRAME KIT makes a rack frame to set up two rows/8 units wide of 5U modules into flight cases, studio racks or custom cabinets.

A set of screws to mount the modules is included.





# 590 CUSTOM MODULE SERIES

Over the years several customers asked us to design modules following their special specifications or applications. In part these modules found their

way into our standard production line of modules while others – examples shown here – are made on special request.

In general the idea behind the modules shown on this page is to use a modular synthesizer in its basic functions on stage or in the studio without creating

a complex jungle of patch cords – achieving a faster workflow without losing track of the given patch of the synthesizer.

## 590 FM

The M590 FM is providing the sum of 12 CV inputs and the sum of 4 audio inputs to a filter, e.g. a 904a/b/c.



## 590 TL 590 TLCP



The M590 TL CP is a 2U wide "trunk line" module that offers 24 entry/exit points to/from our 19" 2U back plane(s).

## 590 VI/V



The M590 VI **Voltage Summer Inputs** allows to distribute 12 control voltages to M590 V **Voltage Summer** modules. These modules contain precision summers and their output can be wired to e.g. an oscillator or filter CV input. The bus can be part of our standard 19" 2U back plane interconnect.

## 590 GI/G



The M590 GI allows to distribute 12 gate/trigger signals to M590 G modules. These modules combine (logical or) and their output can be wired to e.g. an envelope generator input. The output is available as gate and Moog S-Trigger. The bus can be part of our standard 19" 2U back plane interconnect.

## 590 VI/GI



## 590 FO

The M590 FO CP is providing CV sub sum outputs and audio sum outputs of each (of 4) 590 FM.



## 590 OM

The M590 OM CP allows to attenuate and sum the outputs of e.g. a 901a/b or 921a/b oscillator bank.



## 590 OM

The M590 OM in 5U height allows to attenuate and sum the outputs of a 921a/c oscillator bank.

## 2010

The M590 TL is a "trunk line" module that offers 18 entry/exit points to/from our 19" 2U back plane(s). They are used to provide the connectivity between multiple cabinets (using multicore cables with EDAC connectors).

## 2010

## 2010



TM

# MODULAR

BY SYNTH-WERK™



MOONMODULAR.COM · SYNTHWERK.COM