

DOEPFER

Musikmesse Frankfurt 2009 News

Hall 5 Booth No. 5.1 C 67



Dark Energy: Monophonic Analog Synthesizer with USB and Midi



Dark Energy is a monophonic stand-alone Synthesizer with USB and Midi interface. The sound generation and all modulation sources are 100% analog, only the USB and Midi interface contains digital components. Dark Energy is built into a rugged black metal case with wooden side plates. High quality potentiometers with metal shafts are used and each potentiometers is fixed to the case (no wobbly shafts and knobs). The distance between the controls is a bit wider compared to A-100 modules and knobs with vintage look are used. Dark Energy is made of these components:

VCO

- Triangle based VCO core
- manual tune control (by means of an internal jumper the range can be set to $\sim \pm 1$ half an octave or $\sim \pm 2.5$ octaves)
- range switch -1 / 0 / +1 octave
- frequency range about 10Hz ... 12kHz
- FM (frequency modulation) control with modulation source switch (LFO1 / off / ADSR)
- manual pulsewidth control for rectangle waveform
- PWM control with modulation source switch (LFO2 / off / ADSR)
- waveform switch (sawtooth / off / triangle)
- the sum of the waveform chosen by this switch and the rectangle is fed into the VCF (to turn the rectangle off the PW control has to be set fully CCW)
- external CV input for VCO frequency (1V/octave), normalled to the CV output of the internal USB/Midi interface
- external CV input for pulsewidth of the rectangle

VCF

- 24 dB low pass
- ~ 12 octaves frequency range
- manual frequency control
- tracking switch half - off - full (internally connected to the frequency CV input of the VCO, i.e. the VCF tracks to the VCO if the switch is set to "half" or "full" position)
- XM: *exponential* FM (frequency modulation) control with modulation source switch (LFO2 / off / ADSR)
- LM: *linear* FM (frequency modulation) control to modulate the VCF by the triangle of the VCO in a linear (!) manner
- manual resonance control (up to self oscillation)
- external audio input (this signal is added to the VCO signal)

- external CV input for filter frequency, normalled to the auxiliary CV output of the internal USB/Midi interface
- 1V/octave tracking for usage of the VCF as a sine wave oscillator (not as precise as the VCO but much better than most of the other filters)

VCA

- manual amplitude control
- AM (amplitude modulation) control with modulation source switch (LFO1 / off / ADSR)
- external CV input for VCA amplitude
- special control scale: exponential scale in the range from about -20dB to -80/90dB, linear scale from about -20dB to 0dB
Remark: this special control scale results in a loudness behaviour that is a bit different from pure linear or exponential VCAs

LFO1 and LFO2

- manual frequency control
- waveform switch (triangle / off / rectangle)
- range switch: low (up to several minutes period) / audio (up to ~ 5 kHz) / medium (usual LFO range)
- LED display (dual yellow/red color for positive/negative share of the signal)
- the LFO1 signal is available as an additional socket (to use the LFO1 signal for external modules)
- an internal jumper can be used to select between the LFO1 signal or the inverted LFO1 signal

ADSR

- manual controls for Attack, Decay, Sustain, Release
- range switch (long, short, medium)
- blue LED display
- ADSR signal is available as an additional socket (to use the ADSR signal for external modules)
- External Gate input (normalled to the Gate output of the internal USB/Midi interface)

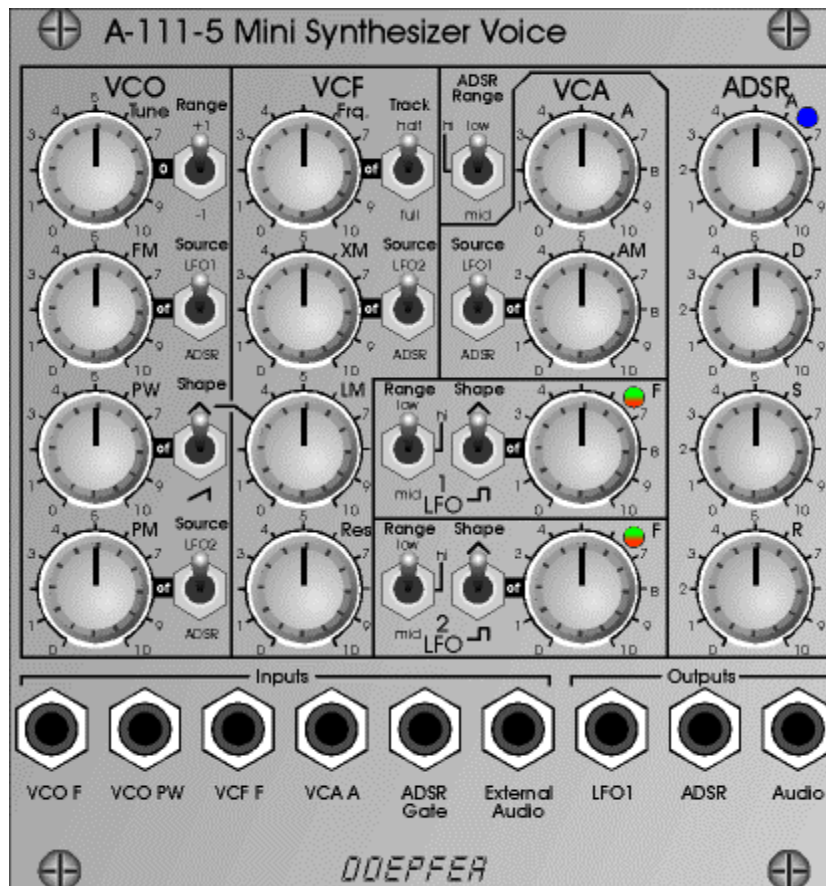
USB/Midi-Interface

- Midi channel and reference note are adjusted by means of a learn button and LED at the rear panel
- The interface generates the gate signal that controls the envelope generator and three analog control voltages: CV1 is used to control the pitch of the VCO, CV2 the VCF frequency (free assignable Midi controller) and CV3 is available as an additional socket at the rear panel (controlled by volume/velocity). It can be patched e.g. to the VCA control input.
- The three CVs and the gate signal are also available at the rear panel as jack sockets

Remarks:

- As the LFO frequencies include the audio range even audio FM effects of VCO (pitch and pulsewidth), VCF and VCA are possible !
- If the VCO is turned off (waveform switch = center position, pulsewidth control = fully CCW) and the VCF resonance is set to maximum the module can be used as a sine oscillator. The sine can be modulated in a linear manner from the triangle wave of the VCO and by LFO2 in an exponential manner at the same time !
- from the factory the socket labelled "LFO1" outputs the inverted LFO1 signal. But as the module has several internal pin headers available even another signal may appear at this socket by changing the internal module patch. These six pin headers are available: LFO1 output, LFO2 output, ADSR output, inverter input, inverter output, output socket. The internal default patch is LFO1 -> inverter input, inverter output -> output socket (i.e. socket = inverted LFO1). But even another signal can be patched to this socket (e.g. inverted ADSR, non-inverted LFO1, inverted or non-inverted LFO2).

Dark Energy is also available as **module A-111-5** for usage within the modular system A-100. The only differences are the missing power supply and USB/Midi interface and the module uses the standard distances between the controls. The VCO frequency CV input (1V/octave) and the Gate input are normalled to the corresponding signals of the A-100 bus via jumpers. The jumpers can be used to interrupt the internal bus connections.



Prices and availability:

Dark Energy: ~ Euro 400.00, Release date: June 2009

A-111-5: ~ Euro 300.00, Release date: May 2009

A-100 News



A-100 Monster Cases 6U and 9U With angled mounting support

6U and 9U versions of the Monster Cases, economically priced because only two power supplies (instead of four) are required, additional support for angled mounting of the cases available (like the upper case in the picture), in this case a Monster Base frame fixed to the lower monster case is required to avoid overturning of the complete assembly.

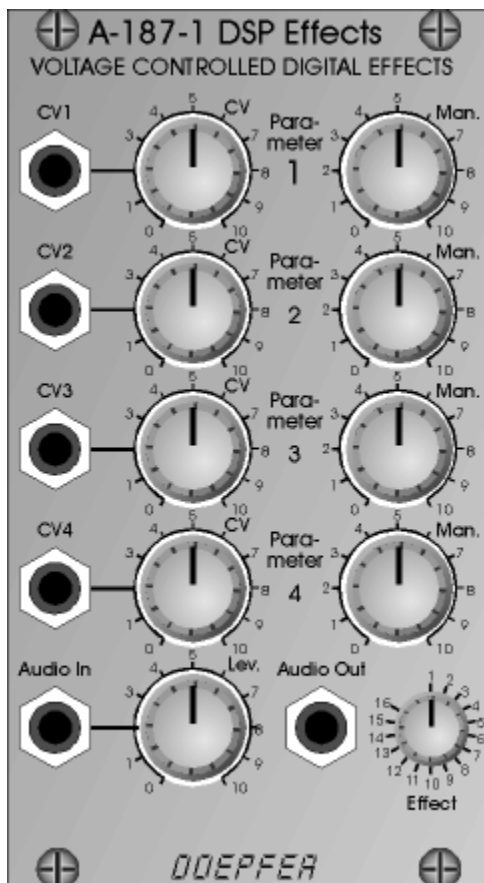
Prices:

9U Monster Case: ~ Euro 850.00

6U Monster Case: ~ Euro 700.00

support for angled mounting: ~ Euro 30.00

Release date: ~ May 2009

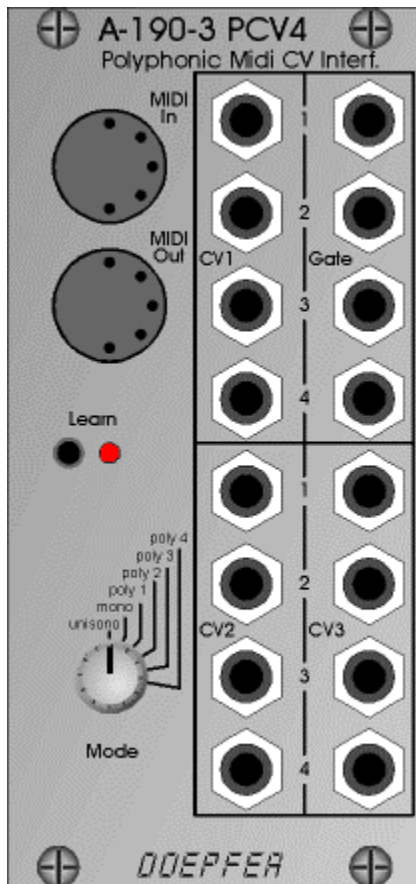


A-187-1 DSP Effect Module

DSP based effects module with voltage control of four parameters of the selected digital effect (with manual control and CV input with attenuator for each parameter). The effect (e.g. reverb, delay, pitch-shifter, distortion, equalizer) is selected by a 16-position rotary switch. A detailed list with all effects and the voltage controlled parameters is available on our website. The final version of the module may be equipped with two audio inputs and two audio outputs because the DSP board used in the module features stereo audio processing. In this case there is no more room for the audio input attenuator. If necessary external attenuators or VCAs could be used. The final decision will be made after the Frankfurt Musikmesse 2009.

Price: ~ Euro 200.00

Release date: ~ summer 2009

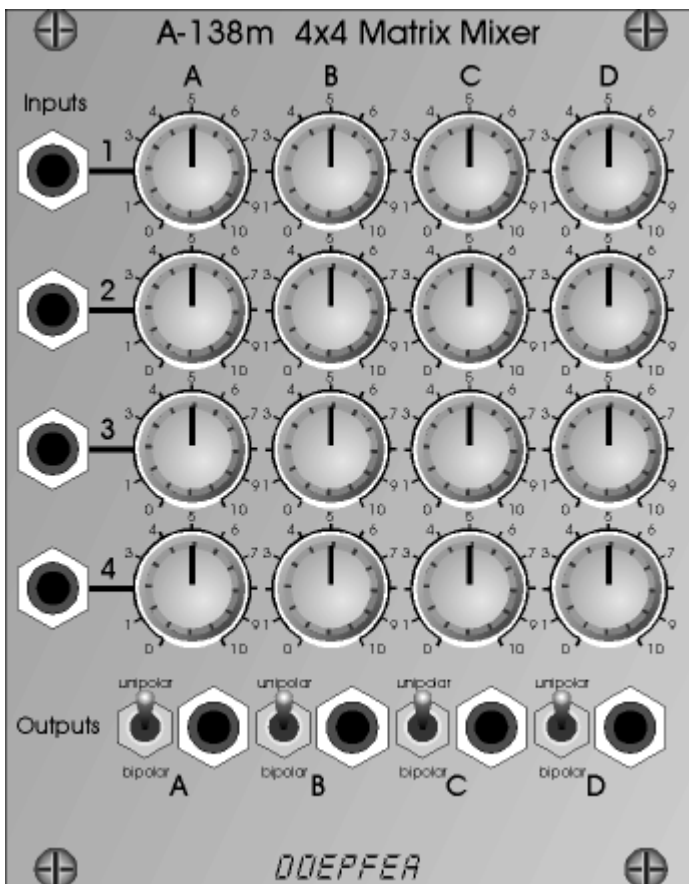


A-190-3 Polyphonic USB/Midi-CV Interface

Four voice USB/Midi-to-CV/Gate interface. For each voice a pitch control voltage (CV1, to control VCOs), a gate output (to control envelope generators) and two additional control voltages (CV2, CV3) are available. The two additional CV outputs are probably controlled by velocity/volume and a free assignable Midi controller. The mode is selected by means of a rotary switch. These modes are planned (without obligation): unisono, four voice monophonic (i.e. to control four monophonic voices by four succeeding Midi channels), four voice polyphonic (i.e. to control four monophonic voices by one Midi channel). In the polyphonic mode different assign algorithms are planned. The final version will be probably equipped with both USB and Midi interface (USB socket is not shown).

Price: ~ Euro 200.00

Release date: ~ summer 2009



A-138m 4 x 4 Matrix Mixer

Matrix mixer with four rows (1 - 4) and four columns (A - D), switches for unipolar/bipolar mode for each column. Unipolar means that the controls of the column in question work as attenuators. Bipolar means that the controls work as polarizers. In this mode the amplification is zero in the middle position of the corresponding control. Turning the knob counterclockwise from the center position the signal is subtracted from the output sum with increasing amount (i.e. negative). Turning the knob clockwise from the center position the signal is added to the output sum with increasing amount. As the module is DC coupled it can be used for both control voltages and audio signals.

Price: ~ Euro 120.00

Release date: ~ June 2009



A-183-1 Dual Attenuator

Two passive attenuators. Passive means, that each unit is made of two sockets and a 50k linear potentiometer only. There are no active parts like amplifiers or buffers and no power supply is required. This is how the A-183-1 works: At the output socket appears the attenuated input signal, i.e. zero level at the fully CCW position and max. level and the fully CW position.

Applications:

Adjustment of the level of CV or audio signals to control other modules that do not have attenuators or modules of other manufacturers).

Price: ~ Euro 35.00

Release date: ~ June 2009

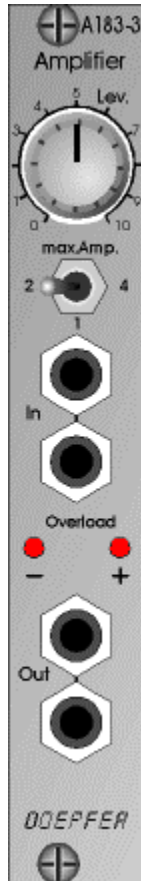


A-183-2 Offset/Attenuator

Voltage offset generator combined with an attenuator/ polarizer for the input. A switch is used to select attenuator or polarizer function for the input control. At the output appears a DC voltage that is adjusted with the *Offset* control in the range 0...+5V or -5V...+5V (selectable by an internal jumper). The DC voltage is overlaid by the attenuated or polarized voltage that is fed to the *In* socket. When the switch is in the *Attenuator* position the control works as an usual attenuator. When the switch is in the *Polarizer* position the control works as a polarizer, i.e. zero level appears at the center position. Right from the center position the *In* signal is added to the offset voltage, left from the center position the *In* signal is subtracted from the offset voltage.

Price: ~ Euro 40.00

Release date: ~ June 2009



A-183-3 Amplifier

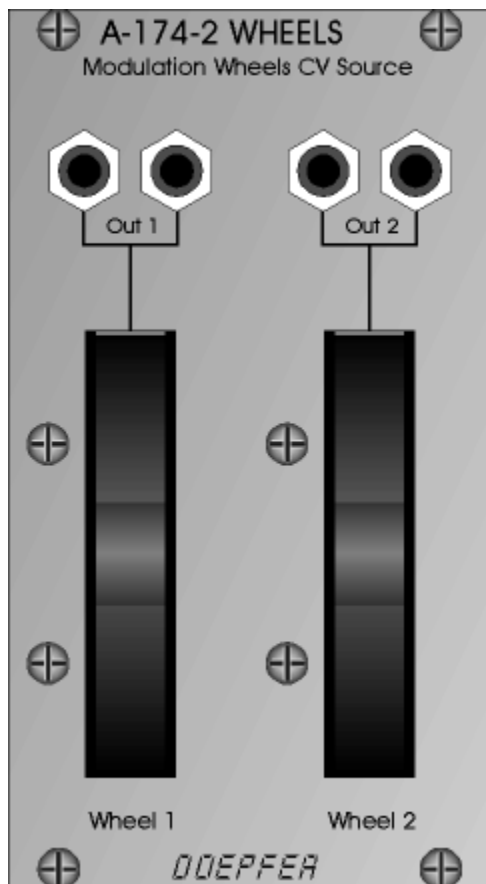
DC coupled voltage amplifier that can be used for both CV and audio signals. The maximal amplification can be switched between 1, 2 and 4 (in position 1 the module does not work as a *real* amplifier but only as attenuator). The level can be adjusted by means of the *Level* control between zero and the chosen maximum amplification (1/2/4). Two overload LEDs indicate if the output signal goes beyond +10V or becomes less than -10V. Input and output are equipped with miniature 2-fold multiples.

The main application of this module is to adapt differing audio or CV levels between different modules or systems. For example VCO, LFO, ADSR or Gate levels between modules of different manufacturers can be increased or attenuated.

Remark: Not a preamplifier for microphones or electric guitars !

Price: ~ Euro 40.00

Release date: ~ June 2009



A-174-2 Wheels CV Source

Modulation wheel module with two wheels, factory setting: one spring loaded wheel with bipolar voltage output (i.e. 0V in center position, positive voltage in the upper range, negative voltage in the lower range) and one wheel without spring and positive voltage output (i.e. 0V in the lowest position and positive voltage when operated), the factory setting can be changed by means of jumpers (e.g. 2 unipolar wheels without spring or two bipolar spring-loaded wheels)

Price: ~ Euro 60.00

Release date: ~ summer 2009



A-177-2 Foot Controller Module

Economically priced module for connecting one foot controller and one double foot switch for control A-100 functions by means of the feet. For example the frequency of a filter or the loudness can be controlled by a foot controller, but even other parameters like LFO frequency, modulation depth, phasing, pitch or any other voltage controlled parameter. The gate outputs controlled by the double foot switch can be used e.g. to trigger an envelope generator or to start/stop a sequencer. A special application of the A-177-2 is the usage within a Trautonium replica. The foot switches can be used to switch the mixtures of the subharmonic oscillator A-113. The foot controller can be used to control the overall loudness in combination with a VCA. A-177-2 is compatible with the footcontrollers FP5 and double foot switch VFP2.

Price: ~ Euro 40.00

Release date: ~ summer 2009

Keyboard News



Our Midi Master Keyboards **LMK4+**, **LMK2+** and **PK88** are now equipped even with **USB** interfaces. The USB interface outputs the same data as the Midi interface. LMK2+ and PK88 can be powered via USB too.

Prices (88 / 76 key versions):

LMK4+/USB: Euro 1329.00 / 1349.00

LMK2+/USB: Euro 999.00 / 1019.00

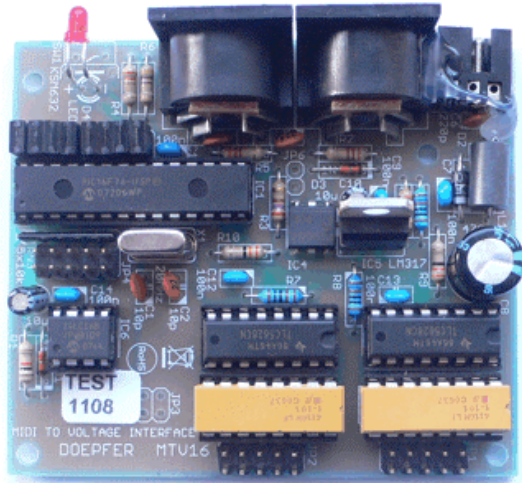
PK88/USB: Euro 769.00 / 780.00

Release dates:

LMK2+/USB and PK88/USB: already available

LMK4+/USB: May 2009

OEM/DIY News

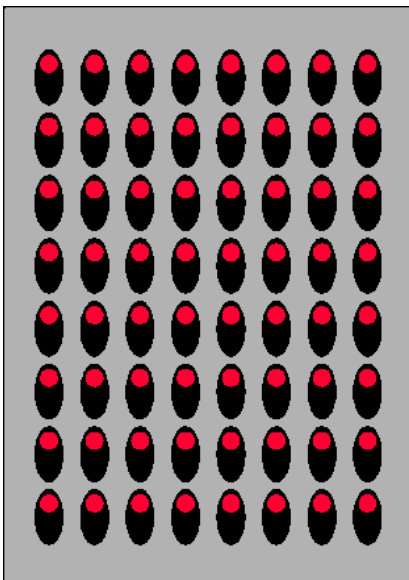


MTV16

Interface that converts midi control changes messages into 16 analog voltages in the voltage range 0 ... +5V, resolution of the voltages: 128 steps or 7 bit (based on the 7 bit midi data), the voltages are controlled by 16 subsequent midi control changes messages on the same midi channel, the midi channel is adjusted by means of four jumpers, the control change number of the first output can be set to 0, 16, 32, 48, 64, 80, 96 or 112 by means of three jumpers

Price: Euro 100.00

Release date: already available



Button/LED Board (no name so far)

a pc board that contains 64 buttons with assigned LEDs, each button can be assigned to a Midi message (e.g. note on/off, control change, program change), different switch modes: momentary (like a key of a keyboard), toggle (state changes with each operation), radio buttons group (group of buttons which one active button only, if one of the buttons is operated the others of this group are released), even with different LED colors available as custom product, Midi and USB interface

Price: ~ Euro 150-200.00 (standard version with red LEDs)

Release date: ~ summer/fall 2009

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