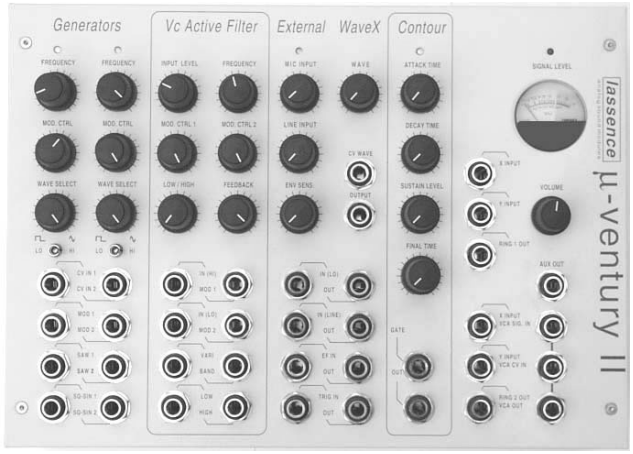
Lassence
µ-Ventury II



Analogue Modular
Sound Generator/Processor

Version 1.1

English Manual

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Introduction

The rarest characteristic of new gear in the synthesizer world, both analogue and digital, is the innovation that something can bring. We've seen it all, been redefining synthesis over and over again and most of the time, what they call « new technology » is in fact the same as always with just a different « skin » on the outside.

Until I got in touch with the analogue technology Fabrice conceives.

His work can be described as ground breaking, breadth taking and non-conventional.

For the µ-Ventury II, I wouldn't just describe it as another analogue modular, but as an extremely flexible sound producing/processing machine, suited for many user profiles, from musicians to sound engineers and DJ's.

As much of a pioneer Serge was in the old days, Fabrice is nowadays, picking up and taking further analogue synthesis where people like Serge and Buchla have left it.

It all starts with a creative mind and in this particular case, forget (almost) everything you know of analogue synthesis and enter a world of experimental sound generation, because that's what will give you the means to use this machine to it's full extension: an open mind!

Have fun playing with the µ-Ventury II

Stefan Leunis
Director of Blue Bay bvba

General description

The µ-Ventury II Analog synthesizer is based around **Lassence modules synthesizer**, compact **Solid-state building blocks** providing **accurate** and **highly creative** synthesizer functions.
The modules present in the µ-Ventury II have been chosen amongst a vast library of special functions so has to build a **comprehensive, flexible and powerful, portable true analog synthesizer**.

It holds 2 analogue Oscillators (Generators) from 0.01Hz to 50kHz, 12dB Variable Filter, External Inputs for low and high impedance signals (pre-amplifier for a.o. guitar and microphone) with envelope follower, Contour Generator (Envelope), WaveX, two Ring Modulators (AC and DC), VCA and a multiple.

This manual is intended as an introductory overview of its features, not as an in-depth detailed technical one.

We put you on the road to discovery …

Modules - Details

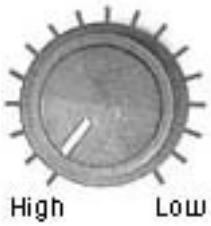
Generators

Control Voltage

The generators can function either in stand-alone mode (like in LF mode or for Ring Modulation purposes) or can be controlled by a CV signal (standard 1V/Oct).

You can send CV signals from sequencers, keyboards, or any other control voltage source. For CV, use the **CV IN** input.

Frequency



Unlike the frequency knob on other synthesizers, turning the **FREQUENCY** knob to the right lowers the frequency, while turning it to the left shifts the frequency up.

Mode: the **LO** setting of the **LO/HI switch** allows the generator to work at low frequency (LF mode - 0.01 Hz to 500 Hz).
At **HI**, it runs at normal audio mode of frequency range: Stop (no oscillation) - 1 Hz to 50 KHz

The LEDs above the Frequency knob monitor the square/sine output.

Modulation

The **MOD CTRL** knob allows you to control the amount of **frequency modulation** that is applied to the generator. The modulation source has to be entered in the « MOD» input. This can be any kind of signal (e.g. output of second generator).

Turn the knob to the left to lower the modulation applied to the generator and to the right to add more modulation.

Wave Selection

2 Continuously variable waveforms (2 outputs for each generator) controlled by the **WAVE SELECT** knob:

SAW - output 1: from (falling) saw tooth to triangle wave (see picture)

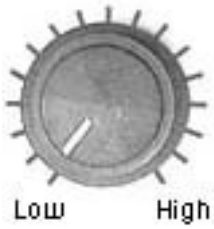
SQ-SIN - output 2: from sine to square

Note:
For customization purposes: additional controls are actually implanted on the PCB and not on the front panel (special management can be set externally): Gate (sync) input, third mod input, clock output, simultaneous variable triangle to square, triangle, saw and sine outputs.

Vc Active Filter / aux out

Input

The filter holds 2 signal inputs: **IN (LO)** (for low audio input), **IN (HI)**: signals that the Ventury II generates itself, or any other high impedance sound source that doesn't need pre-amplification.



The INPUT LEVEL knob controls the volume of the incoming signal.

Ranging from far left (input level set to zero) to the far right (maximum input level).

Note:
The input of the wave X module is linked to the stereo tab of the **IN (LO)** *jack. So, to use it efficiently while the filter remains unaffected, just push the signal jack half down to be treated in the WaveX in the corresponding* **IN (LO)** *input.*

Caution:
With high signals and at high resonance settings distortion occurs (it's not a bug, it's a feature!) and interesting sounds come out, but as you already know, high output level changes as sometimes produced by this machine are harmful to some gear (please use a compressor/limiter). So be careful! In this circumstance (speakers, digital mixers, recorders, FX and the like) the use of VU meter and related **AUX OUT** *is highly recommended.*

Frequency - Feedback

You can control the cut-off frequency using the **FREQUENCY** knob. Far left position closes the filter for incoming frequencies, far right opens the filter entirely for all incoming frequencies.

The feedback of the filter (resonance) is controlled by the **FEEDBACK** knob. Varying from minimum emphasis to maximum (to the right) which will give a screaming or distortion like response on the incoming frequencies.

Modulation

2 modulation inputs are available (**MOD 1** and **MOD 2**) and controlled through the **MOD CTRL 1** and **MOD CTRL 2** knobs. This is usually fed with low frequencies (LFO's), generators output, contour (envelope) out, external out, etc…

Put to the far left position to suppress incoming modulation, clockwise to add modulation to the filter.

Outputs

4 outputs are available for Low Pass (**LOW**), High Pass (**HIGH**), Band Pass (**BAND**) and Variable filtering (**VARI**).

Variable output can be set by the **LOW/HIGH** knob. This function gives a smooth transition from Low Pass to High Pass filtering.

External Input

Microphone in (**IN(LO)**): this input can pre-amplify low level signals so that further processing can be applied (to the filter, ring modulator, etc…). The **OUT** output right next to it outputs the amplified signal. The intensity of the amplification can be controlled with the **MIC INPUT** knob.

Line input (**IN(LINE)**): a very cool way to *sync* external audio sources (e.g. guitar) with some functionalities of the Ventury II, in fact the line output (**OUT** right next to the input) is internally linked to the envelope follower (whose output can be used to modulate the filter) and to the trigger generator which provides a train of short pulses depending the signal applied and the sensitivity setting, usually to gate the envelope generator or a sequencer or other. The **LINE INPUT** knob is used to control the volume of the incoming line signal.

Envelope follower (**EF IN**) and trigger inputs (**TRIG IN**): these can be use with signals from the µ-Ventury II or from other sources (external modules, synths, etc.) Jack plug applied here disconnect the line out patching. Envelope follower (**OUT** right next to the **EF IN**) and trigger outputs (**OUT** to the right of the **TRIG IN**)

Wave X

Initially, this module (a kind of wave multiplier) was designed to increase harmonics content of sine waveforms, useful indeed, to imitate overblown wind instruments.

This can be done either with the control knob (**WAVE**) or with an external control signal (sequencer, contour out, midi to cv interface, **but also audio signals**) applied to the CV input (**CV**

WAVE).

The input of the WaveX is hard patched to the 2nd filter input (see the picture to the left).

Probably the first time in synthesizer history that this method is used…

Contour

ATTACK TIME knob: controls the attack time of the envelope: min +/- 2.5 ms --> +/- 20 sec,
DECAY TIME knob: controls the decay time: min +/- 2.5 ms --> +/- 20 sec,
SUSTAIN LEVEL knob: controls the sustain level: min 0V --> 10V,
FINAL TIME knob: defines the release or final time: in +/- 2.5 ms --> +/- 20 sec

Ring Modulators

Two Ring modulators: the uppermost (AC) acts as normal balanced modulator, while the other (DC) can be used as a VC amplifier.

RING MOD 1

Classic Ring Modulator: use **X INPUT** and **Y INPUT** for inputs that will be treated and sent out to the **RING OUT** output.

RING MOD 2 & VCA

Second Ring Modulator serves also as a VCA with **VCA SIG IN** for incoming signal and **VCA CV IN** for the VCA control voltage (most of the time the output of the Contour (Envelope)).

Multiple jacks

Three jack sockets linked together, for merging two inputs into one output or 1 input into two outputs.

Technical Specifications

Generators: VC oscillators with one input calibrated 1V/oct. (4 oct typically). Hi-dynamic special Fm variable input.
Output: continuously variable square to sine waveform: continuously variable square to saw tooth waveform
Audio mode: minimum/maximum frequency range: Stop (no oscillation) - 1 Hz to 50 KHz
LF mode: 0.01 Hz to 500 Hz
Filter: 12 dB roll-off state variable filter with HiQ.
2 inputs signals: line level available for one of them
2 modulations inputs can be set to 1V/Oct sensitivity or beyond
Continuously variable filter mode: from Lo-pass to Hi-pass, in between: all-pass (notch) filter.
Four outputs available simultaneously: Lo-pass, Band-pass, Hi-pass, Variable
Max Output level: 20V pp
External source: Mic input/output, Line input/output
Envelope follower input switched to Line output – Envelope follower output: 0 – 10V maximum.
Gate generator: sensitivity input switched to Line output: Gate out: 0 – 10V
Ring modulators: Dual independent Ring Mods, one DC and one AC. DC ring mod can be used as a VCA.
Wave X: Internally switched VCF variable output to input X (frequency doubling mode).
Envelope generator: ADSR type (true RC envelope
Vu-meter: hardwired to lo-pass filter output (output signal read-out) and volume knob Integrated 220-110V 2A dual power supply, illuminated switch with integrated dual fuse holder

Power requirements:

Domestic: 200-250V at 50Hz
Export: 100-130V at 60Hz
Power Consumption: 30 watts

Dimensions and Weight:

31 x 22 x 11,5 (W x D x H), 3,8kg