SEMBLANCE

TELEMARK

(SEMBLANCE MODULAR)

user manual

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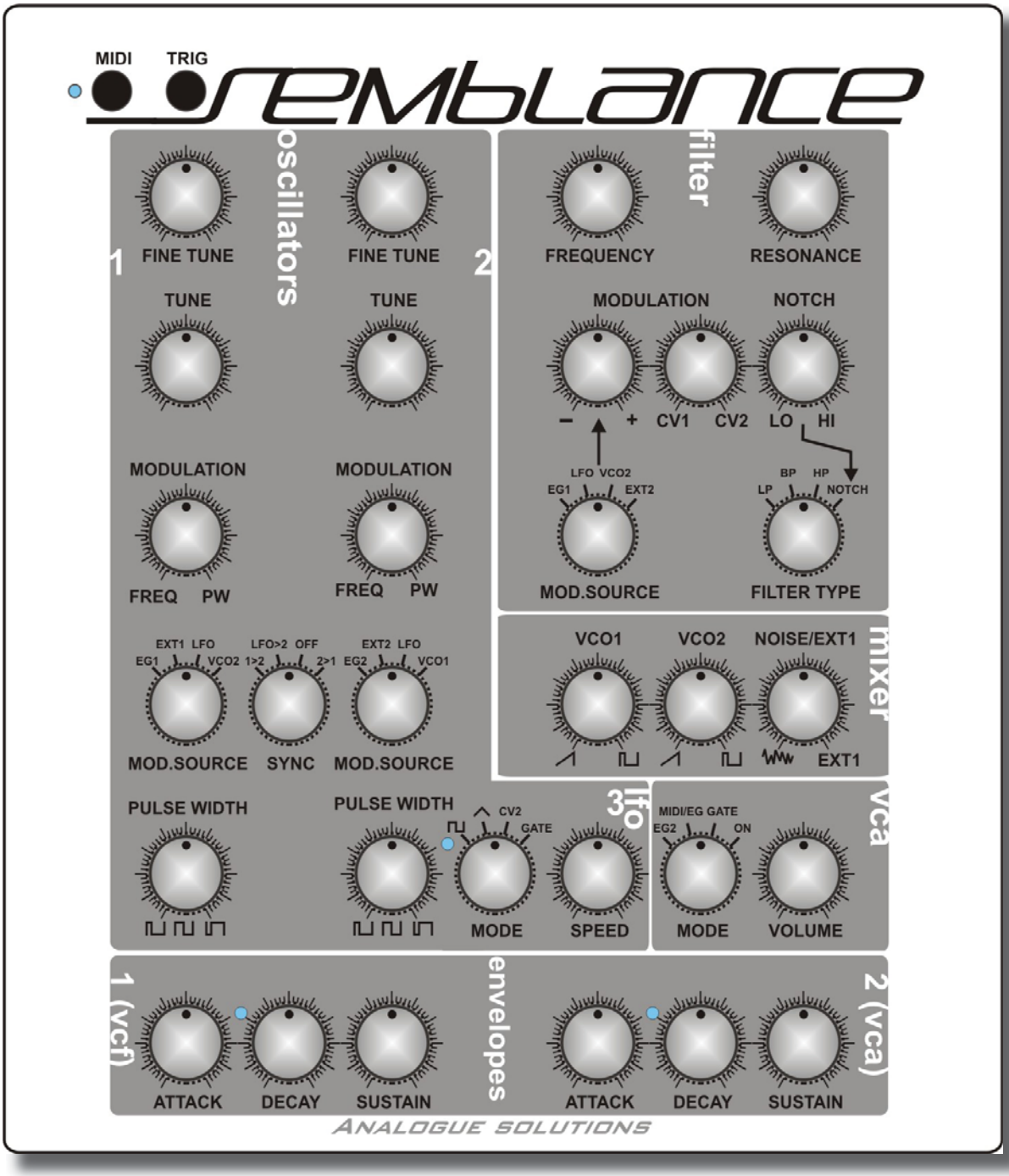
MIDI
TRIG
semblance
oscillators
1
FINE TUNE
TUNE
MODULATION
FREQ PW
2
FINE TUNE
TUNE
MODULATION
FREQ PW
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FREQUENCY
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MODULATION
NOTCH
– + CV1 CV2 LO HI
LFO VCO2 EG1 EXT2
MOD.SOURCE
BP HP LP NOTCH
FILTER TYPE
mixer
VCO1
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NOISE/EXT1
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EXT1 LFO EG1 VCO2
MOD.SOURCE
LFO>2 OFF 1>2 2>1
SYNC
EXT2 LFO EG2 VCO1
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3
lfo
PULSE WIDTH
PULSE WIDTH
CV2
GATE
MODE
SPEED
vca
MIDI/EG GATE EG2 ON
MODE
VOLUME
envelopes
1 (vcf)
ATTACK
DECAY
SUSTAIN
2 (vca)
ATTACK
DECAY
SUSTAIN
ANALOGUE SOLUTIONS

SPECIFICATION

Brief Overview:

Semblance is a self contained TRUE analogue synthesiser. The voice circuitry is entirely analogue, using all discrete and op-amp components. There is no voice DSP happening!

Semblance has a similar sound and specification to the classic Oberheim SEM, but with many improvements such as MIDI, Noise, more modulation. Note however, Semblance is not intended to be and is not a clone of the SEM. If you want a true SEM sound, buy a SEM!

VCO1

Fine Tune, Tune, PW Mod, FM, manual PW, Mod Source controls, Saw out, Pulse out, Sync

VCO2

Fine Tune, Tune, PW Mod, FM, manual PW, Mod Source controls, Saw out, Pulse out, Sync

VCF

Low pass filter, High pass filter, Band pass filter, Notch filter, variable Notch filter.
Cut-off, Resonance, Modulation Amount, Mod Source, MIDI Mod

Mixer

Audio source mixer

VCA

Mode switch, Output volume

EG1

ASR envelope with trigger LED

EG2

ASR envelope with trigger LED

LFO

Speed, Output Mode (Square, Triangle, Gate, External CV)

Noise Generator

White noise

Sample and Hold

For random modulation effects

MIDI to CV Converter
16 bit high resolution with auxiliary controller CV2 output

Many modulation possibilities.

Rotary controls:
24

Rotary switches:
6

Push button:
2

LEDs:
4

Jack sockets (6.35mm, mono);
3

MIDI Sockets;
2

Rugged steel contruction

Dimensions:
Height: 110mm Width: 242mm. Depth: 275mm

Weight:
2.3Kg

Power:
Uses 15VAC, 500mA mains adaptor, 2.1mm DC type barrel plug (draws approx. 40mA)

Accessories:
Manual, Mains adaptor (230v)

INTRODUCTION

Congratulations on buying the Semblance synthesiser. Semblance is part of the Analogue Solutions range of analogue music equipment. Semblance is a precision electronic musical instrument. It combines all the often needed music electronic circuitry to make a music synthesiser in one compact module.

No compromise has been made with the construction of Semblance. Cheaper options in parts have not been used;

Full rugged steel case - no plastic mouldings
Good quality smooth potentiometers, fully sealed against dust
Good quality knobs with spun aluminium caps
High grade double sided circuit board
All power and signal input/outputs have EM filters to remove external noise and improve immunity
High Quality DAC - 16bit! (others use 12 or even 8 bit)
Very stable MIDI to CV conversion
Very stable analogue oscillators
Expensive blue
Hand built by humans
Lasting quality and appeal with a life far longer than any software plug-in or DSP synth

APPLICATIONS

MONOSYNTHESISER

Semblance is for use any time you need analogue sound effects, fat basses, screaming leads, beeps, tones, zaps, and all the other crazy sounds associated with analogue synthesis. Use in place of your boring digital synths and DSP soft synths.

EFFECTS PROCESSOR

Semblance has an audio input socket, so you can feed external sounds into the onboard analogue filters for analogue processing.

SAFETY INSTRUCTIONS

Please read carefully before using:

- Only use the correct power adaptor - 230V (or 115V whatever your country needs)
- Never handle the adaptor with wet hands
- Never excessivly bend the adaptor cable or get it trapped or place heavy objects on it. If the adaptor cable becomes damaged, replace the adaptor.
- Ensure the unit is disconnected from the mains before moving or cleaning.
- Always disconnect the unit from the mains if there is lightning in your area.
- Ensure the unit is on a stable surface, and never place heavy objects on top of it.
- Never allow young children or animals to operate the unit or adaptor.
- Do not use excessive force when using the controls or inserting cables to the connectors.
- The unit should not be operated in the rain or near water and should not be exposed to moisture. If the unit is brought from a cold environment to a warm one, the unit should be left to reach the ambient temperature.
- Keep Semblance away from heat sources, such as radiators, ovens, heaters etc.
- Never allow Semblance to get wet. Do not operate it near water, like pools, sinks, bathrooms etc. Do not place beverages on or near it.
- Never open the case or attempt to make repairs. Refer any servicing to a qualified service personnel.

Preventing damage to other connected devices;

Semblance has a very high dynamic range. It is capable of produce loud signals of very high and sub-sonic frequencies that could blow inadequate speakers if played too loud. It is recommended that input levels to external equipement (mixers, amp's etc.) is kept low when first connected, and then sowly increased to a userable level.

Maintenance Instructions

Any cleaning of the Semblance case should be done with a clean lint-free cloth. DO NOT USE SOLVENTS OR CLEANERS, as this will deteriorate the exterior appearance of the equipment.

Mounting

Mounting does not mean 'place on the wall' or 'to make love to' in this instance. Place Semblance soundly on any stable surface so he cannot fall off or over, causing it or yourself injury.

POWER

Possible sources of US voltage mains adaptors (not tested);

www.radioshack.com
p/n **273-1631 or 273-1690**

INITIAL TUNING

Once the MIDI and audio connections have been made it may be neccessary to tune in the VCOs to the rest of your music set-up. Allow a five minute warm up time.

First set up the controls of Semblance to make a simple sound. It is usually best to leave the VCA at ON. Turn VCO2 to zero volume so you can only hear VCO1.

Play, say middle C on the keyboard. Using a digital keyboard as a reference, adjust the course or fine tuning of VCO1 until it plays in tune with your reference.

Finally, turn up VCO2 so both VCOs can be heard. Using the tune controls of VCO2, tune it to VCO1.

CIRCUITS IN DETAILS

Here follows details on all the sockets and controls, with brief simplified explanations of what the circuits do. We have not gone into technical details on how and exactly what each circuit does but tried to explain each control's function and effect.

Anyone who has used synthesisers before should be familiar with the terms used and therefore be able to predict their behaviour and how they affect the sound. The best way to learn how to use Semblance is to go straight ahead and play with it. Reading of this manual may only be neccessary for finer operational detail.

VCO1

The voltage controlled oscillators (VCOs 1 and 2) produce the raw audio waveform usually used as the initial source for sound creation. They provide cyclic audio waveforms that can be pitched. VCOs usually receive treatment from the VCF to turn their basic tones into pleasant sounds.

FINE TUNE

Controls fine pitch adjustment of VCO1. Use this to tune VCO1 to your other instruments or VCO2.

TUNE

Controls the course pitch of VCO1. Range is about +/- 2 octaves. Use this to tune VCO1 to your other instruments or to shift the VCO pitch up or down an octave compared to the VCO2.

MODULATION

This controls the amount of modulation to either pulse width or pitch from the modulation source selected by the SOURCE switch.

Turn this knob clockwise in increasing amounts to apply pulse width modulation (PWM) to the square wave. This will have the affect of thickening up the VCO sound. Extreme settings of modulation may result in the sound cutting out.

Turn this knob anti-clockwise in increasing amounts to apply frequency modulation (FM) to VCO1. Use this for vibrato and trill effects on the pitch.

In a central position, there will be no modulation to either PW or Frequency.

MODULATION SOURCE rotary switch

This selects the modulation source for either PWM or FM and is routed to the control above.

The source options are;

EG1	for pitch sweeps. Good for percussion sounds
EXT1	for sound effects and additional modulation
LFO	for vibrato and trill effects
VCO2 Square wave	for frequency modulation effects

Select the source that you want to use to modulate PWM/FM.

PULSE WIDTH

This control allows manual shaping of the pulse wave output. It alters the pulse width (duty cycle) of the pulse wave. In a central position a square wave is produced (50% duty cycle). Try this control and listen to how the tone of the waveform changes. When using Pulse Width Modulation, it is best to set the Pulse Width control to centre, otherwise the sound may cut-out.

VCO2

FINE TUNE

Controls fine pitch adjustment of VCO2. Use this to tune VCO2 to your other instruments or VCO1.

TUNE

Controls the course pitch of VCO2. Range is about +/- 2 octaves. Use this to tune VCO2 to your other instruments or to shift the VCO pitch up or down an octave compared to the VCO1.

MODULATION

This controls the amount of modulation to either pulse width or pitch from the modulation source selected by the SOURCE switch.

Turn this knob clockwise in increasing amounts to apply pulse width modulation (PWM)

to the square wave. This will have the affect of thickening up the VCO sound. Extreme settings of modulation may result in the sound cutting out.

Turn this knob anti-clockwise in increasing amounts to apply frequency modulation (FM) to VCO2. Use this for vibrato and trill effects on the pitch.

In a central position, there will be no modulation to either PW or Frequency.

MODULATION SOURCE rotary switch

This selects the modulation source for either PWM or FM and is routed to the control above.

The source options are;

EG2	for pitch sweeps. Good for percussion sounds
EXT2	for sound effects and additional modulation
LFO	for vibrato and trill effects
VCO1 Square wave	for frequency modulation effects

Select the source that you want to use to modulate PWM/FM.

PULSE WIDTH

This control allows manual shaping of the pulse wave output. It alters the pulse width (duty cycle) of the pulse wave. In a central position a square wave is produced (50% duty cycle). Try this control and listen to how the tone of the waveform changes. When using Pulse Width Modulation, it is best to set the Pulse Width control to centre, otherwise the sound may cut-out.

SYNC

SYNC switch

This switch selects the routings for oscillator sync. The options are;

1>2	VCO2 slaved to VCO1
LFO>2	VCO2 slaved to LFO
OFF	Off/no sync effect
2>1	VCO1 slaved to VCO2

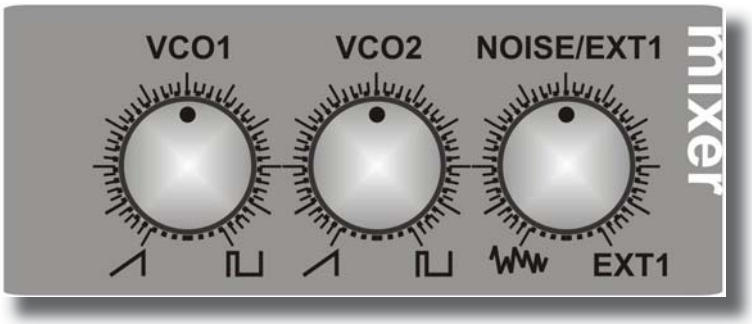
Oscillator sync is where the master signal will reset the waveform of the slave signal each time the master waveform starts a new cycle.

Try the different settings and listen to their effect. Yo may have to modulate the pitch of either VCO1 or VCO2 to enhance the effect. There is a balancing act between the pitch of the two sound sources (usually the 2 VCOs) to get a good effect, once found you'll know you've found it!

NOISE GENERATOR

The noise generator produces white noise. This is like the hiss you hear between radio stations. The signal is available for filtering via the Noise/EXT1 mixer control.

Noise would be used for sound effects such as breath, wind, percussion, etc.



MIXER

The mixer is used to bring various audio source signals together for filtering. There are 3 mixer controls;

Saw/Pulse VCO1 level

Turning the control clockwise in increasing amounts sends VCO1s pulse signal to the mixer.

Turning the control anti-clockwise in increasing amounts sends VCO1s sawtooth wave signal to the mixer.

In a central position no signal is sent from VCO1 to the mixer.

Saw/Pulse VCO2 level

Turning the control clockwise in increasing amounts sends VCO2s pulse wave signal to the mixer.

Turning the control anti-clockwise in increasing amounts sends VCO2s sawtooth wave signal to the mixer.

In a central position no signal is sent from VCO2 to the mixer.

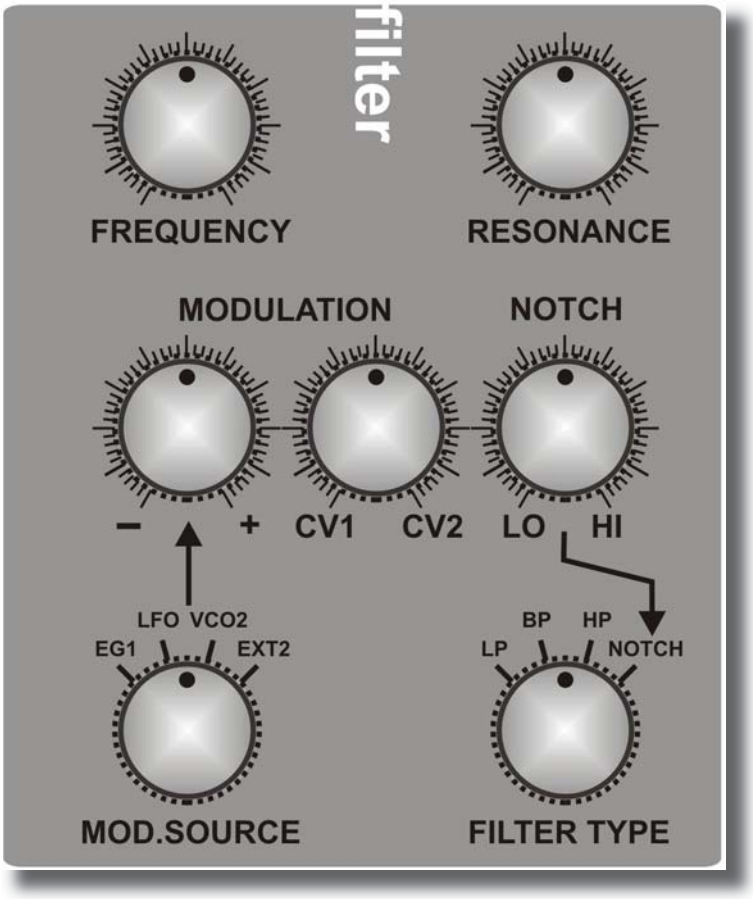
Noise/EXT1 level

Turning the control clockwise in increasing amounts sends the signal (if any) coming in off the rear panel EXT1 socket to the mixer.

Turning the control anti-clockwise in increasing amounts sends white Noise to the mixer.

In a central position no signal is sent from the Noise generator or EXT1 to the mixer.

VCF



The voltage controlled filter (VCF) is used to alter the tone of the VCOs/Noise and is the heart of what gives an analogue synth its character.

There are 4 types of filter available;

Low Pass
High Pass
Band Pass
Notch Pass (variable between Low/High)

CUT-OFF

This sets the cut-off frequency, the point at which the VCF will start to filter-out harmonics.

RESONANCE

Resonance is a feature of adding feedback to the filter circuit. The output of the filter is fed back into the filter input. Resonance sets the level of feedback. As the control is increased to higher levels the filter will self-oscillate. The oscillation frequency is set by

the cut-off control.

Use Resonance to alter the tone of the filter effect. It can be used to create 'squiggy' sounds and 'pulse hits'.

CV1/2 MODULATION amount

Turning the control clockwise will increase the amount that CV2 (MIDI controller/ velocity) will modulate the cut-off frequency.

Turning the control anti-clockwise will increase the amount that CV1 (MIDI note/pitch) will modulate the cut-off frequency.

In a central position CV1 and CV2 will not affect cut-off modulation.

Filter Tracking (of pitch/keyboard note)

This can be achieved using CV1 (pitch) modulation of the filter cut-off as described above.

MODULATION amount

Turning the control clockwise will increase the amount that the modulation source selected by the MOD.SOURCE switch (outlined below) will modulate the cut-off frequency.

Turning the control anti-clockwise works just like clockwise except that the modulation signal is inverted (negative).

In a central position the selected modulation source will not affect cut-off modulation.

MOD.SOURCE rotary switch

This selects the modulation source that will affect the filter cut-off and is routed to the control above.

There are 4 modulation sources;

EG1 EG1 is used as a modulation source. Use for tonal changes.
LFO The LFO is used as a modulation source. Use for filter sweeps (wah-wah).
VCO2 Pulse wave of VCO2 is used as a modulation source. Use for effects.
EXT2 Signal at the EXT2 socket is used as a mod source. Use for external filter control.

NOTCH

This sets the relative mix between the low pass and high pass filters that is fed to the

FILTER TYPE selection switch NOTCH position (see below).

FILTER TYPE rotary switch

This selects the modulation source that will affect the filter cut-off.

There are 4 types of filter;

LOW PASS

LPF filter - signals above the cut-off frequency are attenuated 12dB/octave.

BAND PASS

BPF filter - signals above and below the cut-off frequency are attenuated 12dB/octave.

HIGH PASS

HPF filter - signals below the cut-off frequency are attenuated 12dB/octave.

NOTCH

Notch filter - signals at the cut-off frequency are attenuated 12dB/octave.

Filtering External Sound Sources

External sound sources, such as vocals, guitars, mixer sends, samplers, etc. can be sent through the filter for extra treatment. Note, mic's and guitars may need pre-amp'ing; use if the signal is too quiet.

Simply plug the sound source into the rear panel EXT1 socket.
Turn the mixer control Noise/EXT1 to EXT1, and up to a suitable level.
You may wish to return the VCO1 and VCO2 mixer controls to their centre positions so the VCOs cannot be heard.
Turn the VCA mode switch to ON. This will leave the VCA open so a constant signal can be heard.
Finally, play around with the filter and modulation settings as neccessary.

The VCO signals can also be introduced, and use the various VCA modes and envelopes if you wish to contour the sound level and add additional effects.

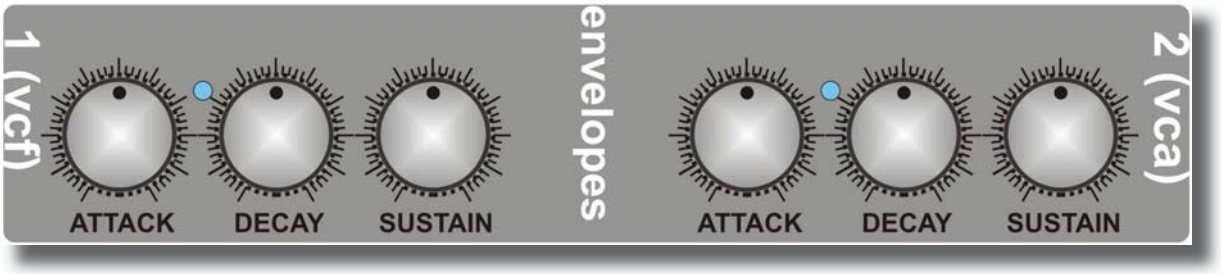
ENVELOPE GENERATORS

Manual TRIGger button

Press this to manually trigger the envelopes (i.e. audition the synth). The pitch applied to the VCOs will be the last MIDI note received. (See MIDI for MIDI button use),

LED indicators

These will turn on each time the EGs are triggered.



EG1 ASR

EG1 is an ASR (attack / sustain / release) envelope generator. Use it to modulate various parameters of the synthesiser. EG1 is generally assigned for use with modulating VCO1 and the filter cut-off.

ATTACK

Controls the Attack time. This is the rate at which the envelope signal will take to reach full level when the MIDI note/key pressed.

DECAY

Controls the Decay or the Release time - the time it take the envelope signal to return to zero when the key is released.

SUSTAIN

Controls the level the envelope will hold at when a key is pressed and the attack cycle has completed.

EG2 ASR

EG2 is just the same as EG1. EG2 is generally assigned for use with modulating VCO2 and the VCA.

ATTACK

Controls the Attack time. This is the rate at which the envelope signal will take to reach full level when the MIDI note/key pressed.

DECAY

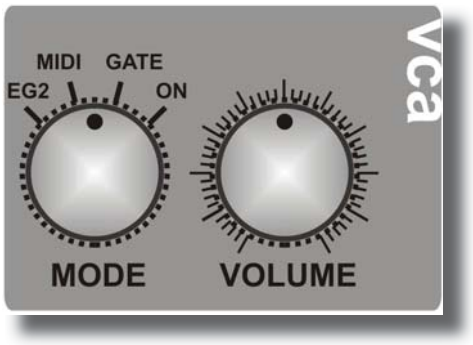
Controls the Decay or the Release time - the time it take the envelope signal to return to zero when the key is released.

SUSTAIN

Controls the level the envelope will hold at when a key is pressed and the attack cycle has completed.

VCA

The Voltage Controlled Amplifier (VCA) is the circuit that is used to change the output volume. Normally an envelope signal would be used to do this, so the sound starts loud then gradually fades away. The filter audio output is hard-wired to the VCA signal input.



MODE rotary switch

The VCA can be controlled in 4 modes;

EG2

When EG2 is selected, the envelope signal of EG2 is used to modulate the VCA level. Use it if you require the VCA level to change over time. (Normal use).

MIDI/EG

When this is selected, EG2 is again used as the modulation source, but the overall

envelope level is in turn controlled by CV2 (MIDI). This allows velocity/controller dynamics to change the volume. If CV2 source is MIDI volume (controller 7) then MIDI volume changes can be realised.

GATE

When GATE is selected, the MIDI note on/off information is used to modulate the VCA. With this, the VCA level is either off or full on. The audio envelope would be like an organ's, with no attack or decay time.

ON

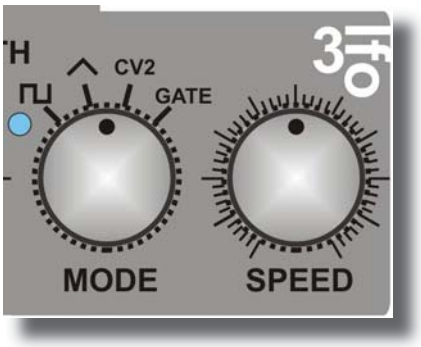
When ON is selected, the VCA is left permanently on at full level. Use this setting if you wish to use the Filter as an effects processor, to process external audio fed into Semblance via the EXT1 socket.

VOLUME

This sets the output volume of Semblance, i.e. the output level from the VCA that is sent to the SIGNAL output socket.

LFO / Sample and Hold

The Low Frequency Oscillator (LFO) is basically identical to a VCO; it is another oscillator, except that it produces periodic wave forms of low frequency, typically sub-audio. These slow cyclic waveforms are used for modulating other circuit parameters, for example, for sweeping the filter cut-off up and down, either slowly for a nice sweep, or faster for a 'wah-wah' type effect. It could be used to modulate the VCO pitch for vibrato.



The LFO block is grouped together with the VCOs as an LFO is an oscillator just like the VCOs are.

SPEED

This sets the frequency (speed) of the LFO.

SPEED LED indicator

This wil turn on each time the LFO signal is at a positive voltage, indicating the speed of the LFO waveform.

MODE

This sets the modulation source that is routed to 'LFO' points for modulation selection.

The options are;

SQUARE wave

TRIANGLE wave

MIDI control (CV2)

SAMPLE AND HOLD

Sample and Hold (S+H) is a flash term that in this instance basically means a modulation is created that has a new random signal level each time the LFO completes a cycle (each time the LFO LED lights up a new modulation level is set).

REAR PANEL


ANALOGUE SOLUTIONS
MIDI
in
thru
SIGNAL
ext 2 in
ext 1 in
vca out
POWER
15v AC
500mA

REAR PANEL DETAILS

The rear panel is shown above and detailed below;

POWER IN

This unit requires a 15v AC, 500mA wall adaptor. The socket requires a standard 2.1mm DC type plug. Note, the adaptor output must be AC not DC. DC will not work.

MIDI IN

Plug your MIDI cable in here. Connect this to the MIDI out or thru of your MIDI controller.

MIDI THRU

The MIDI data coming into the In socket is copied to the Thru socket. This is so you can control additional devices from your MIDI controller without the need of a MIDI thru box. The Thru socket will not function when in Poly mode.

EXT1 signal input socket

This is the input socket to feed audio or control voltage signals into Semblance. The signal is routed to all the EXT1 modulation points, selected via the top panel switches. EXT1 is also available at the mixer to allow external audio signals to be filtered.

EXT2 signal input socket

This is the input socket to feed audio or control voltage signals into Semblance. The signal is routed to all the EXT2 modulation points, selected via the top panel switches.

SIGNAL output socket

This is the main audio output for Semblance. It is the signal output from the VCA, post-Volume control.

All jack sockets are 6.35mm mono.

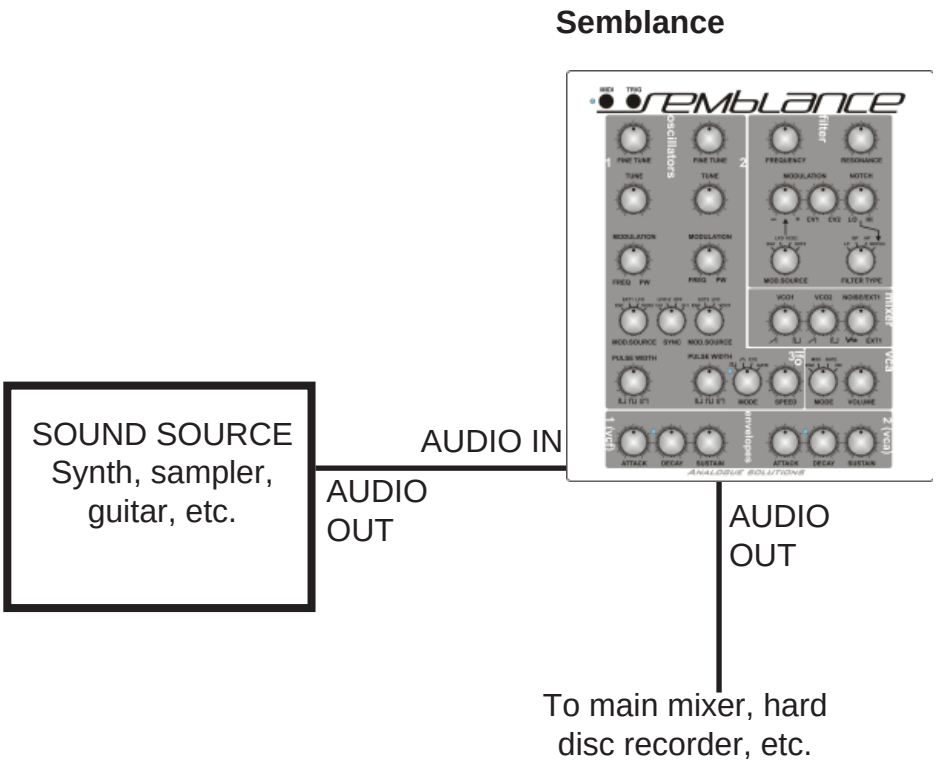
Try to keep your leads under 3M to keep the signal quality as clean as possible.

The 2 small holes are for the calibration trimmers used for MIDI pitch and CV2 offset adjustment. Do not adjust these as it will disturb the units calibration.

REAR PANEL AUDIO CONNECTIONS

The main signal output is on the rear panel. Connect this socket to a spare mixing desk input channel. If you want to feed external signals into Semblance, use the rear panel EXT1 socket. Maybe hardwire if from your desk's effect send.

It is recommended to keep your MIDI and CV/audio cables as short as possible to keep the signal quality as high as possible. We recommend no more than 3 metre cable lengths.



NO SIGNAL?

Check;

Your mixing desk / monitoring equipement is on and working correctly.
Check Semblance is switched on.
Check it is connected to your monitoring equipment correctly and that the cable is not faulty.
Ensure the output volume is high enough.
Ensure the mixer level controls are turned to some sound source like the VCOs or Noise.
Certain extreme filter settings may filter out all of the signal or produce low level signals. Try adjusting the filter cut-off.
Certain extreme PW/PWM settings may cause the pulse outputs to cut-out. Try adjusting PW/PWM as neccessary.
Try putting the VCA to ON to hear Semblance sound, but if you are using a MIDI keyboard to trigger the envelopes and VCA, ensure correct MIDI connection, and that the correct channels have been selected.

QUICK METHOD FOR ZERO MODULATION

Some of the modulation level controls are zeroed when in the centre position. It is quite easy to zero these controls to have no modulation. But another quick and sure method to obtain this is the put the modulation source switch to either EXT1 or EXT2. Assuming you have no signals coming into these rear panel sockets, you will eliminate any modulation.

EXPANSION

For the DIY enthusiast and those wishing to invalidate their warranty, most of the signal source and destination points are indicated on the circuit board. It would be possible with some good skills to bring these points to front panel sockets.
Of course we do not recommend you do this and it will invalidate all warranties.

INTERNAL CALIBRATION OF VCOs

Calibration of Semblance is done at the factory and usually should not needed to be changed.
Only attempt this yourself if you are fully confident you can do it. You may just end up ruining the settings, and be aware, calibration is something that we cannot help with other the phone. There are no additional guides we can give by phone to help that are not already printed here.

Trimmers

There are 3 trimmers per VCO, arranged in a vertical line accessed through small holes in the top panel. Top trimmer is Scale, Middle is Hi-Track, bottom is Tune.

VCO1

1/ Monitor VCO1.

2/ Turn Fine and Course Tune controls to centre.

3/ With MIDI connected, play C4.

4/ Monitor the VCO1 output, and adjust bottom trimmer (tune) until the pitch of VCO matches your reference of a 'C' note (reference using guitar tuner, digital keyboard, etc.).

5/ Play C3.

6/ Adjust the top trimmer (Scale) until it matches your reference of a lower 'C' note.

7/ Repeat steps 3 to 6 several times until all is in tune and a good octave is obtained.

8/ Play C6 and adjust the middle trimmer (Hi-Track) until it matches your reference.

9/ Repeat steps 3 through 8 until all is in tune.

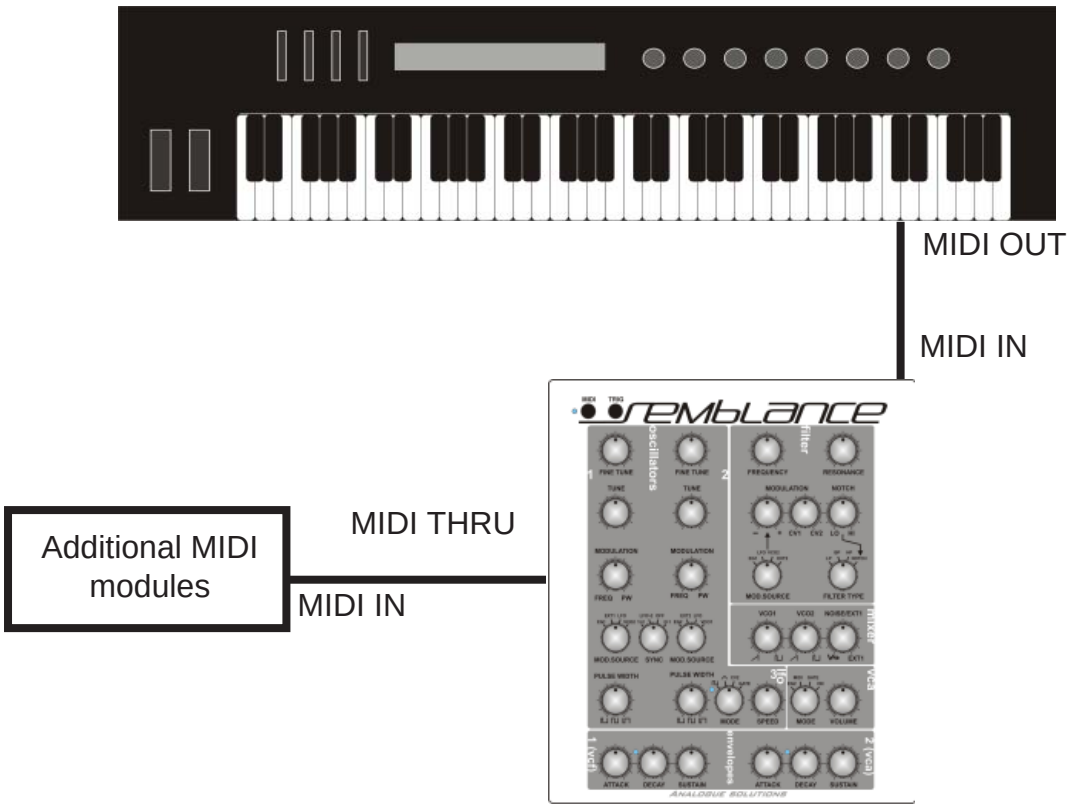
VCO2

For VCO2 you repeat the above steps VCO1 can be used as a reference instead of a tuner, using the zero-beat method.

MIDI CONNECTIONS

Semblance can make sounds all by itself by leaving the VCA ON, but it is best played with a MIDI keyboard (or other MIDI device).

Connect MIDI Out (or Thru) from your MIDI controller device to the MIDI In of Semblance. Additional MIDI devices can be daisy chained from Semblance's MIDI Thru socket. Ensure Semblance is set to the appropriate MIDI receive channel.



LED Description

The blue LED will flash only when MIDI messages Semblance responds to are received. If it is permanently on Semblance is in program mode.

Program Mode

This mode is used to set the MIDI receive channel and CV2 MIDI source.

To Set MIDI Receive Channel

Press and hold the Program button. Then do either;

Press a MIDI key. This will set and store the receive channel to the channel received in the note data.
CV2 will set itself to Velocity.
Release the Program button.

Or

Move a Continuous Controller. This will set and store the receive channel to the channel received in the CC data.
CV2 will set itself to the CC number received.
Release the Program button.

Note; The Program button must be held in whilst pressing a key or moving a controller.

CC number 7Fh is reserved. Avoid using this controller.

Telemark

(Semblance Modular)

Telemark provides exactly the same features as the Semblance, but with the addition of 'modular synth' patch points.

Details unique to Telemark are listed here.

The unit is rack mountable using rack ears that can be screwed to the sides.

Alternativbely the unit can sit on a table top and is angled back.

It may be possible that we will provide optional wooden side panels that can be attached to give the unit even more of a vintage look. If these become available, prices and details will be on the Telemark web page.

Rear Panel Sockets

The main audio out is on the rear panel as with the Semblance, but the two additional jacks a routed differently. The rear panel sockets EXT5 and EXT6 are hard wired audio input sockets that are fed directly into the VCF to allow signal processing.

Front Panel

The left section (with the knobs) is identical to Semblance with the exception of the switch selections EXT1 and EXT2 that are found on Semblance. On Telemark these switch positions route signals that are patched into the patch panel. There are four signals on Telemark that can be selected; EXT1, EXT2, EXT3 and EXT4. These route signals to VCO1/2 modulation, Filter modularion and an audio input to the mixer, via jack sockets on the patch panel.

Patch Panel

Telemark is internally hard wired (pre-patched) just like Semblance. Using the patch points will not disconnect any internal connections. People use the term 'modular synth' a bit too loosely sometimes, often using it to describe any synth that has some additional jack sockets.

I like to think an accurate classification of Telemark as a 'semi-modualar' synth in that you can re-route signals and introduce external circuits, but is not fully modular as the internal circuits cannot be swapped, removed or new ones added.

The concept of a semi-modular synth is good because you do not need to do any patching to get a good sound. The front panel rotary switches provide a large combinations of possible internal patching. Some further patches can then be done using the patch points.

Telemark is a MIDI synth, but can just as easily be used entirely from an analogue sequencer. An ideal partner would be our Oberkorn sequencer. Telemark's envelopes can be triggered individually from Oberkorn's two gate trigger outputs, and the two VCOs can be controlled from separate sequencer CV outputs.

The patch sockets are clearly labelled and hold no secrects. If you have a basic knowl-

edge of analogue synths then you will be able to use these sockets with no problem.

This manual assumues you already have at least basic knowledge of modular synths. We will not provide you here with a tutorial of modulars synth the Web has many graphic descriptions.tutorials and explanations that will assist. We would be unable to re-write these tutorials any better!

Telemark Optional Wood Sides

These screw in from the inside so that no screws are visible from the outside.

This involves removing the front panel. Done with basic care, no damage can be made to the Telemark, but note the guarantee will be void if there are signs of user carelessness.

1 Disconnect Telemark from the mains.
2 Lay on its back.
3 Remove the 6 black screws on the front panel, 3 along each side. Be careful. Since the panel is angled, it will slide off!
4 Lift of only a little. Reach inside and carefully disconnect the 26 way grey connecctor.
5 Lay a wood side on a desk. Ensure the matt side is up. Matt side will face the Telemark, satin side faces outwards.
6 Place the Telemark on its side on top of the wood. Ensure it is centre.
7 Two methods. With care you can go straight in and fit the screws without marking holes or pilot drilling. Whether you make pilot holes or not is up to you. We don't find it necessary. Just push firmly as you screw in. Ensure the case does not slide around. Keep the case central on the side panel.
8 Repeat for the other side.
9 Refit 26 way connector and screw front panel back on.
10 Completed!

Note: When screwing, do not strip the thread you have created by over tightening.

Use the longer screws provided in the holes that have the rack mount bracket holes. Shorter screw in the rear hole (this rear hole is only on more recent Telemarks).

Specification subject to change without notice.

Warranty

Semblance comes with a 1 year (from purchase date) back to base warranty, (i.e. customer must arrange and pay for carriage to and from Analogue Solutions or the dealer from which purchased).

This warranty shall not apply where the product has been subject to alteration, misuse, accident, neglect (such as extremes of temperature and/or moistur) or to wear resulting from normal use.

At the sole discretion of Analogue Solutions, the warranty is deemed to be void should the unit be or considered to have been opened or any other modifications or tampering be carried out by unauthorised parties.

CE Compliance

This unit complies with Complies with EU Directives 73/23/EEC and 89/336/EEC. Standards: EN55103-1, EN55103-2, EN60065

Semblance 'user manual'
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