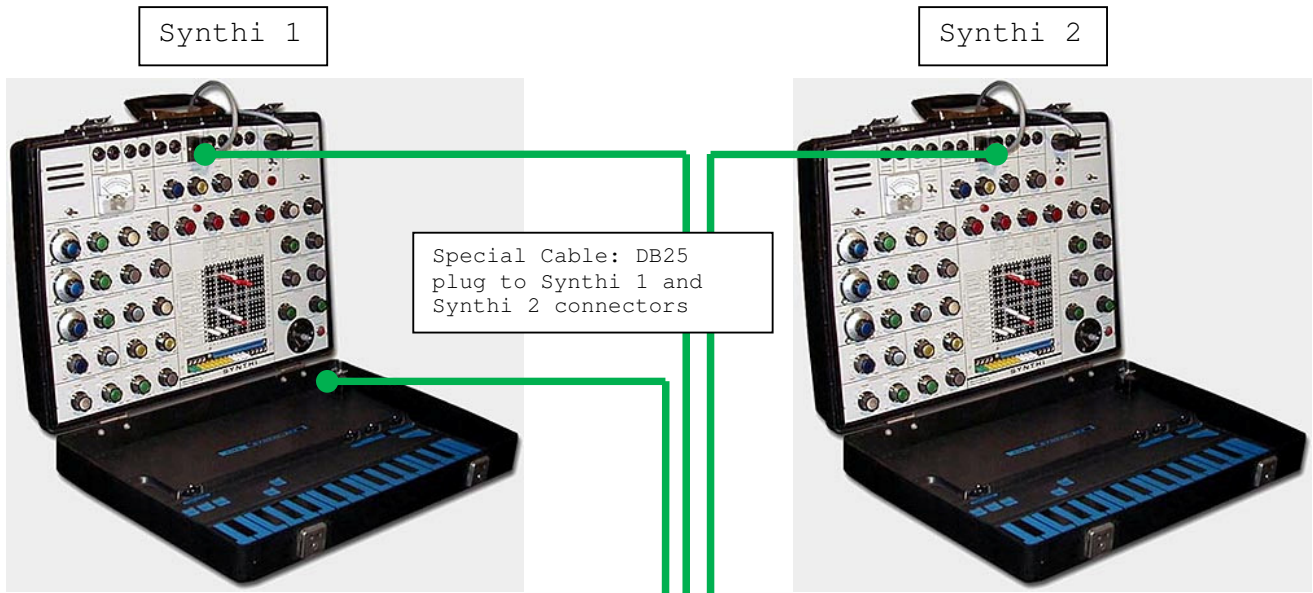


DUAL SYNTHI AKS CV INTERFACE



External CV2 control voltage input

External CV1 control voltage input

Scaling Potentiometers for CV1-CV3

Voltage Inverter for CV3 control input

Switches toggle between KS on Synthi 1 and CV1-CV3+ Gate control

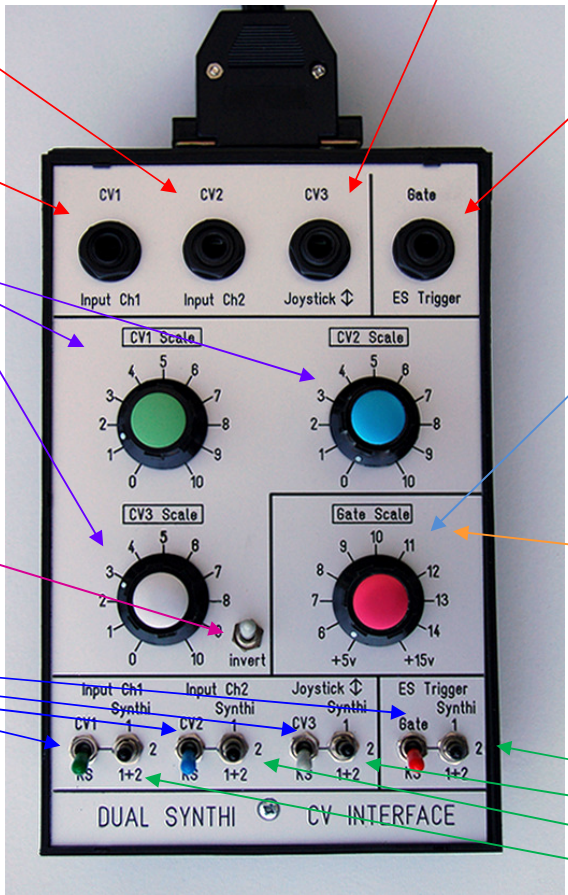
External CV3 control voltage input

External gate +5-15V input

Gate Scaling Potentiometer

Second External Gate triggers Synthi 2 Envelope Shaper (optional)

Switches toggle between Synthi 1, Synthi 2 or Synthi 1+2 Input Channels and Envelope Trigger



DUAL SYNTHI AKS CV Interface

Instructions on using the Dual Synthi AKS CV Interface

Use of this unit is pretty straightforward and allows the simultaneous control of 2 Synthi AKS Units (or one synthi AKS+Synthi A etc)

There are 3 cables connected to the unit, marked Synthi 1, KS1 and Synthi 2. The KS1 cable plugs into a KS keyboard socket on the Synthi AKS 1 and the Synthi 1 male plug to the Synthi AKS1 main unit. The power for the unit is drawn from this Synthi AKS 1 unit and as usual this also powers the KS. Synthi 2 is a secondary unit to which CV/Gate or KS signals are sent. No power is taken from this only a ground connection and the input channels (input ch1, input ch2 and Matrix row 16) and Envelope Shaper (ES) trigger.

There are 4 3-way toggle switches allowing signals (external CV1-CV3 or external gate from the jack sockets) or KS control to be routed to either Synthi 1 only, Synthi 2 only or Synthi 1+ Synthi 2 simultaneously. In addition as an optional extra a 3.5mm input jack is located to the top right of the gate scaling potentiometer. This allows direct triggering of the Envelope Shaper on Synthi 2 via a second gate input (about 6-10v).

There are 4 2-way toggle switches on the unit allow switching of the CV inputs CV1-CV3 or the standard KS signals. The 4th toggle simply switches between external gate triggering or KS triggering of the ES.

CV1-CV3 are all scalable via the units potentiometers. Synthi Oscillators 1 and 2 are scaled to 0.32V/Oct. Most external sequencers produce 1v/Oct scaling although some of the fancier units from Kenton allow the user to adjust this scaling. In any case the scaling pots allow a rough adjustment of the 1V/Oct external pitch CV to 0.32V/Oct required by the Synthi. Once this has been achieved, precise scaling can be obtained by adjusting Input Ch1 or Ch2 level potentiometers (whichever is used for pitch CV input) on the Synthi. Use of two potentiometers this way, allows for accurate pitch scaling not obtainable with a single potentiometer alone.

There is an invert CV3 option on the unit. This simply inverts CV3 before it sent to Matrix row 16. The reason this was added is because Input Ch1 and Ch2 amplifiers on all Synthi's are **inverting**. This means that the sign of voltages sent to them is reversed. A positive CV is made negative. The freq control on Osc1-Osc3 is designed to **increase** the frequency of the oscillator the more negative the CV. Thus if you try and control Osc1/2/3 freq via CV3 and Matrix row 16 since pitch CV from sequencers is **positive** the pitch will work 'backwards' ie the larger the CV the **lower** the pitch! Switching the toggle switch to CV3 invert will thus allow CV3 used as pitch CV to produce normal note pitches (i.e. lower positive CV produces lower pitches, higher positive CV produces higher pitched notes).

The Synthi's are designed so that the ES is triggered by a positive voltage around 5v. The Gate scale pot allows larger voltages to trigger the ES safely up to a maximum of +15v. Many hardware external sequencers produce various trigger voltages so the gate scaling pot can be adjusted to accommodate any gate range between +5 to +15v. By adjusting this pot you can also get different gate times eg if your gate voltage is +5v, adjusting the pot to higher values will result in shorter and shorter gate times until finally the ES will not trigger.