

# KRACKEN ANATOMY

## ❖ TENTACLE CONTROL SECTION

-- a flexible, mobile, elongated organ present in some species of animals

Initial response is created by an 8-stage *Trigger Generator*, which internally outputs rising edges to incrementally sequence the internal inputs of eight internal *Precision Voltage Controlled Timing Generators* to create 8 independent Gates (0-5v), each of which can be accurately set over a 1000:1 range via individual panel potentiometer, with their initial programming then being added with any applied external voltage control source(s), or through recursive 'feedback' patching, via the 'VC All' Input jack, with its associated control voltage attenuator and 'Octal Buss' routing toggle switch, for maximum dynamic control programming over the Kracken's extremely flexible octal neural stimulator. Gate length [on-off] is displayed via individual amber Fresnel LED.

The *Trigger Generator* can be stage incremented via 0 to 5v control voltages, bi-polar signals, low frequency audio, as well as traditional discrete gate and 'clock' pulse trains patched into the 'Clock IN' jack, as well as manually initiated via the spring loaded 'Step' command emanating from the on-board 3-position Toggle Switch. The 'Step' command allows for the initiation of on-board recursive patch clocking techniques.

Incrementing and de-incrementing is provided via two command input jacks. One of which, the 'Up/Down' select function input, has internal comparator hysteresis with multi-functional input ranges as provided with the 'Clock IN' jack (above). This feature allows stage length selection programming via either external voltage sources or by recursive 'feedback' from any of the Kracken's multiple (17) outputs. There is also included a 'Hold' programming input to allow for 'windowing' stages when the *Trigger Generator* is clocked from fast pulse train or audio signals.

Associated with the *Trigger Generator* is a row of panel potentiometers that provide preset discrete voltage values emanating from the 'V Out' jack. These one-of selected voltages are, as in traditional sequencers 'row' outs, available to program globally the Kracken's two internal 'Octal Buss' structures: one dedicated to the overall timing of all eight of the independent *Precision VC Timing Generators*, and the second 'Octal Buss' being dedicated to the eight independent *Precision VC Up/Down Slew Integrators*. This source of programmed voltages can be also applied to any external function, such as VC Clock frequency, setting the Clock's pulse width, and select Gate, Control Voltage or Audio Signal routing via X-Fader, Active Processor or Boolean Logic functions as a few examples of the possibilities available.

# KRACKEN ANATOMY PT. 2

## ❖ TENTACLE ANIMATION SECTION

Each of the eight *Precision Voltage Controlled Timing Generator's* 'Gate Outputs' is internally hardwired to the dedicated signal input of its associated *Precision VC Up/Down Slew Integrating* 'Tentacle', who's output voltage then appears at its number assigned 'V OUT' jack. Voltage to luminance of the eight individual 'tentacle' outputs is displayed via dedicated green Fresnel LED.

The linear integration rate of each of the *Precision VC Slews* is pre-established by means of a panel potentiometer over a 1000:1 range for accurate control of AR envelope, ASR envelope, arbitrary voltage function generation and multi-stage envelope creation.

Independent voltage control of each 'Tentacle's integration rate is individually available via the 'VC IN' jacks for implementing programmable time modulation capabilities, which allow the envelope ramps to be modified during both 'Up/Down' operations.

Dynamic wave shaping can be achieved on all eight individual slews by means of recursive patching, plus added global time modulation via the 'VC ALL' input for dynamic 'shrinking and stretching' the Kracken's tentacles as sourced from envelope following external voltage generators and feeding back outputs of other tentacles.

The output voltage range of each VC dynamically programmable 'tentacle' is 0 – 5 v

Hope you all enjoy this awesomely powerful beast ! –

*Rex Probe*

President - STS

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