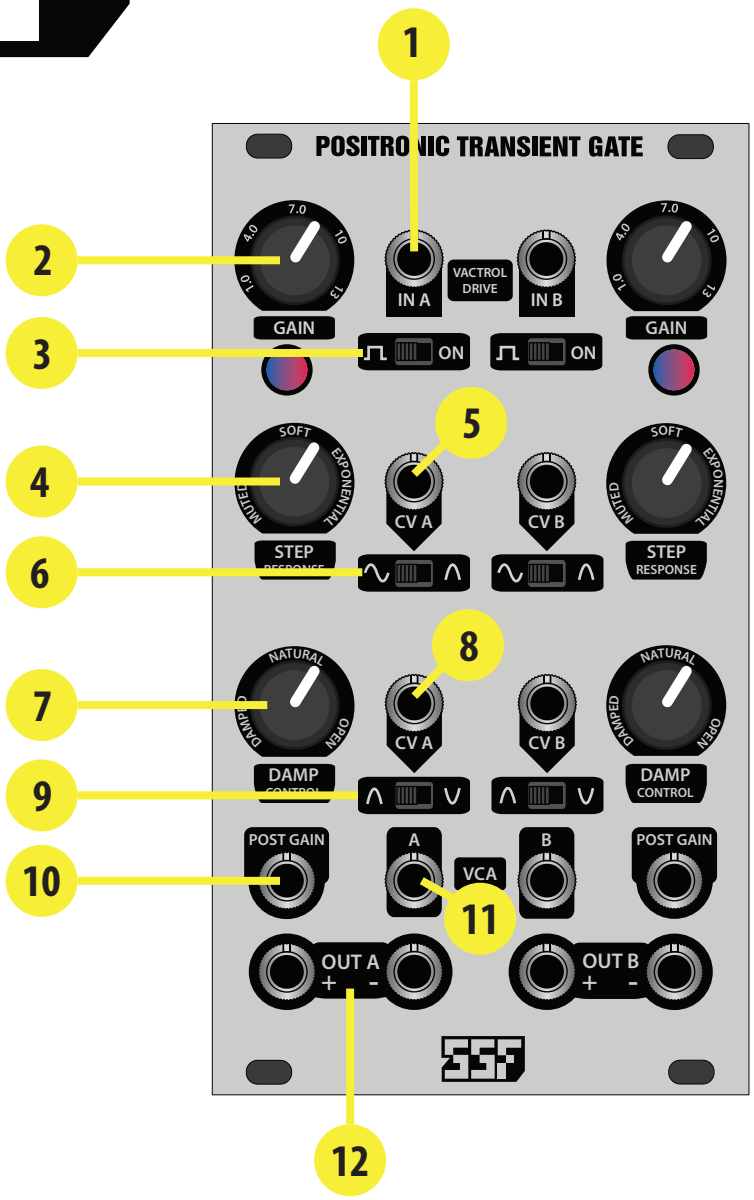
POSITRONIC TRANSIENT GATE

Control and function reference guide



---

1 VACTROL GATE and GAIN amp input*

VACTROL GATE - Input any signal greater than ~2V here to trigger a transient while in gate mode (see 3)
The signal can be amplified by the **GAIN** control 2 if desired - or Set **GAIN** at 1.0 for unity operation.
GAIN amp - The signal present at said input is always processed through the GAIN amp and routed to the **POST GAIN** 10 output.

2 GAIN

The **GAIN** control will increase linearly as this potentiometer is turned Clockwise - from a gain of .75 (attenuation) to a gain of 13. Use this function to amplify signals, add distortion and or amplify the PTG's envelopes for a variety of effects.

3 VACTROL DRIVE mode switch

Gate mode ⎍ - While in Gate mode, vactrol transients can be triggered/re-triggered on by signals greater than ~2V present at 1
Bias ON Mode ON - This mode is analagous to biasing the vactrols on with a constant signal greater than 2V. This mode is very useful and will be expanded upon later.

*** IN A is normaled to IN B - inserting a jack into IN B will break the normalization**

4 STEP RESPONSE control and CV Attenuator

STEP RESPONSE control - This controls the first stage of the vactrol transient. The effect is a combination of attack time and signal amplitude and works similarly to a traditional attenuator. At max setting (fully CW rotation) the attack phase is fastest and amplitude greatest. The attack slows and amplitude reduces as this control is turned down (CCW rotation).
The effect produced is the raw physical behaviour of a vactrol as it is being current starved- by this setting and/or by the voltage level modulating the parameter at the STEP RESPONSE CV input 5
STEP RESPONSE CV Attenuator - This control also acts as the CV attenuator for modulation signals present at the STEP RESPONSE CV input 5
This control attenuates the incoming CV and behaves like a traditional attenuator or volume control.

5 STEP RESPONSE CV input

Apply control voltage signals here to modulate STEP RESPONSE. Any signal polarity and amplitude is accepted here - but responds best to signals from -5V to +10V. CV response is also dependant on the STEP RESPONSE CV mode 6 setting.

6 STEP RESPONSE CV mode

For full response from positive unipolar signals (0-10V); set this mode to the ∩ setting.
For full response from bipolar signals (+/-5V) or negative unipolar voltages down to -5V; set this mode to the ∿ setting.
There is of course no rule stating that either mode cannot be used for any CV - and you may find a particular mode useful despite the CV polarity for a given application.

7 DAMP CONTROL control and REVERSE CV Attenuator

DAMP CONTROL control - This controls the last stage of the vactrol transient. The effect is a combination of the decay/ringing amount and *overall* volume/amplitude of the transient. Note the OPEN control setting; in this territory, the vactrol will exhibit increasing levels of an infinite decay. In the territory before OPEN, long ringing times to silence are possible- and even further, the ringing becomes short, then overall DAMPED out.
DAMP CONTROL REVERSE CV Attenuator - Simply enough, this control also acts as the CV attenuator for modulation signals present at the DAMP CONTROL CV input 8 However, the CV attenuation functioning operates in REVERSE to a traditional attenuator or volume control. Therefore the maximum CV influence occurs when this control is in the fully CCW position.

8 DAMP CONTROL CV input

Apply control voltage signals here to modulate DAMP CONTROL. Any signal polarity and amplitude is accepted here - and responds best to signals from -10V to +10V. CV response is also dependant on the DAMP CONTROL CV mode 9 setting.

9 DAMP CONTROL CV mode

For full response from positive unipolar signals (0 to +10V); set this mode to the ∩ setting.
For full response from negative unipolar signals (0 to -10V) and bipolar signals ; set this mode to the ∨ setting.
There is of course no rule stating that either mode cannot be used for any CV - and you may find a particular mode useful despite the CV polarity for a given application.

10 POST GAIN output

Signals applied to 1 are amplified or attenuated by the **GAIN** control 2 and present at this output jack.

11 VCA input

The PTG uses a static DC voltage as a reference for producing a transient. This DC coupled input breaks that reference and replaces it with whatever signal is present at the VCA input. External CV signals can be applied here and further waveshaped by the PTGs STEP and DAMP parameters or to add dynamic control over any CV or audio signal.

12 OUTPUTS

These are the PTG's transient and VCA outputs. Both positive and negative polarity transients/signals are available here. The default output is a DC coupled vactrol transient. if a signal is present at the VCA input 11 then the vactrol processed signal from the VCA will be present at these outputs.