

The SP2016 AUTOMATIC PANNER

Factory Program Number F28

The AUTOMATIC PANNER program implements a virtual digital pan pot. It pans a mono or stereo signal in the usual way by changing the level of the two outputs, or it can pan psychoacoustically using the Haas effect: levels remain constant, but slight delays between the outputs are perceived directionally. AUTOMATIC PANNER can be used to create anything from slow subtle sweeps to wild special effects. The sweep can be run continuously, manually with front panel control, or from external signal sources.

PARAMETERS

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|-------------------|---|
| 1. SWEEP PATTERN | PAN SHAPE: LINEAR / SINE / BOUNCE / SWITCH
(SWITCH is available only in LEVEL PAN) |
| 2. SWEEP RATE | LEVEL PAN: .5 thru 1400 SPM
HAAS EFFECT PAN: .5 thru 120.1 SPM
(SPM = Sweeps per minute, where one sweep is one pass L to R or R to L.) |
| 3. MODE SELECT | AUTOMATIC PAN / MANUAL PAN / ENVLOP PAN DEPTH
ENVLOP PAN RATE / ENVLOP PAN D & R |
| 4. ENVELOPE GAIN | 1 (MAX) thru 50 (MIN) (Enabled only in ENVLOP modes) |
| 5. ENVELOPE SPEED | 1 (MAX) thru 20 (MIN) (Enabled only in ENVLOP modes) |
| 6. POSITION | Manually pans signal / Displays panning position in AUTO |
| 7. PANNING MODE | LEVEL PAN / HAAS EFFECT PAN |
| 8. INPUT MODE | MONO <CH1> INPUT / STEREO INPUT |

SOFTKEYS

- | | |
|-------------------|---------------------------|
| 1. FREEZE PANNING | PAN STOPS IN AUTO MODE |
| 2. RESUME PANNING | PAN RESTARTS IN AUTO MODE |

In ENVLOP PAN DEPTH, the envelope follower controls the depth of the pan field (the distance the sound travels from center) varying from about 5 degrees left and right off center to a full 90 degrees (full sound field). As the gain of the envelope increases, the width of the full pan sweep increases.

In ENVLOP PAN RATE, the envelope follower controls the sweep rate of the panner, the upper limit of which is set by SWEEP RATE. As the level of the envelope increases so does the speed of the sweep. With no input to channel 2, the signal will remain stationary.

In ENVLOP PAN D & R, the signal envelope controls both depth AND rate. When using STEREO mode with ENVELOPE PAN the channel 2 input is still the envelope control but it now controls both the channel 1 sweep and its own sweep. The envelope follower is adjusted by ENVELOPE GAIN and ENVELOPE SPEED. The POSITION parameter display can be very useful in setting up the ENVELOPE PAN because it shows exactly where the (left channel) signal is being panned at any given time, for any given envelope input.

ENVELOPE GAIN 1 TO 50 DEFAULT: 40

The gain of the envelope follower is adjustable through this parameter. A setting of 1 (minimum gain) thru 50 (maximum gain) is available. If the full range of either depth control or rate control is desired, a setting close to 50 is recommended. This gain control is connected in SERIES with the channel 2 input fader, so the input gain on the front panel will also affect the envelope gain. This parameter appears only when one of the envelope modes (DEPTH, RATE, or D & R) are selected.

ENVELOPE SPEED 1 TO 20 DEFAULT: 10

This parameter adjusts the response time of the envelope follower. Settings range from 1 (slow) to 20 (fast). Higher settings yield an envelope that responds more directly to the instantaneous signal level in channel 2. This parameter appears only when one of the envelope modes (DEPTH, RATE, or D & R) are selected.

POSITION LEFT TO RIGHT DEFAULT: LEFT (in MANUAL PAN)

POSITION is only changable when in MANUAL PAN. The position of the signal in the stereo space follows the position of the fader, and is simultaneously shown by a dot moving between the L to R on the display. PLEASE NOTE: when panning manually in HAAS EFFECT PAN if you move the fader too fast you will cause distortion, a result of the quick expansion and compression of the delayed signal.

In AUTOMATIC and ENVELOPE modes, the POSITION parameter acts only as a display, showing the position of the channel 1 input in the sound field. This display can be especially useful in setting up the envelope follower, since the movement of the dot can be correlated visually with the envelope input in channel 2.

In STEREO, the channel 2 input will pan in the opposite direction of the dot shown on the display.

PANNING MODE

LEVEL/HAAS EFFECT

DEFAULT: LEVEL PAN

LEVEL PAN gets its sweep effect by changing the level of the output signals. To offer a different kind of effect, HAAS EFFECT PAN keeps the output signals constant in amplitude while altering the amount of delay between them. This is most audible at slow sweep speeds. When the input mode is STEREO and the two input signals are close in content, the HAAS EFFECT PAN can simulate a slow flanger.

INPUT MODE

STEREO/MONO (CH1)

DEFAULT: MONO

This parameter selects whether the input is to be MONO or STEREO. When the input is MONO, the Input Mode Status will read MONO and the channel 1 input signal pans between the two output channels. When the input is STEREO, the STEREO light will be lit and both input channels are panned between the two outputs in opposite directions. When using the envelope follower, channel 2 is the controller whether in MONO or STEREO.

SOFTKEYS

FREEZE PANNING RESUME PANNING

The FREEZE PANNING softkey is used to stop the sweep at any desired spot in the sweep field. The RESUME PANNING softkey is then used to continue the sweep starting at that point. The FREEZE/RESUME softkeys are meaningful only in AUTOMATIC and ENVELOPE modes, and are disabled in MANUAL PAN.

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