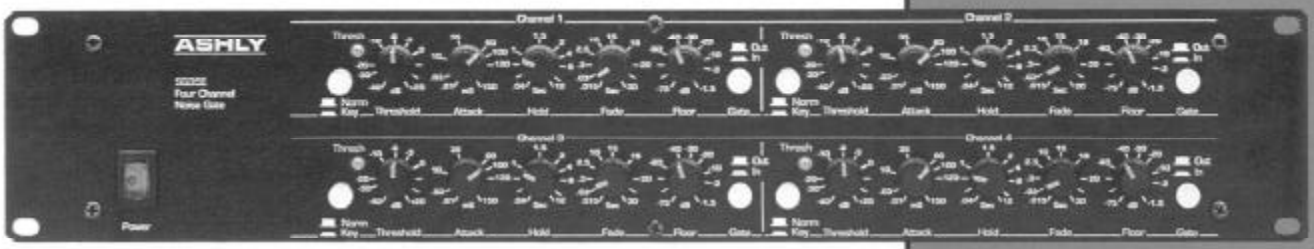
ASHLY

Noise Gates

model SG-33E
model SG-35E

SG-33E



SG-35E

Ashly's **SG-33E** and **SG-35E** Noise Gates are versatile noise reduction systems designed to control leakage and background noise in recording and sound reinforcement applications.

Acting much like a level sensitive "switch", they automatically attenuate audio signals which fall below a user-selected threshold, while passing audio that reaches or exceeds that threshold.

The design of the Ashly Gates can be broken down into two functional building blocks: a voltage controlled amplifier (VCA) which performs the actual task of muting or passing the audio signal, and a detector circuit which is responsible for providing the control voltage that determines the gain of the VCA.

Use of a VCA as a gain control element provides several advantages in a noise gate, including superior audio fidelity, accurate tracking of two or more units that are tied for stereo operation, and attack/release speeds that are much faster than those possible with optically coupled devices. The Ashly VCA used in our noise gates is a class AB device which exhibits extremely low distortion, low noise, low control voltage feedthrough (turn-on click), and excellent thermal stability.

The detector circuit encompasses all of the front panel controls and gives the Ashly Noise Gates their turn-on and turn-off characteristics. Through the use of unusually wide range time constant options, a great variety of gating effects can be achieved. A very fast (10 µs) attack time insures that the leading edge of fast transient material such as snare drums will never be lost, and the fade control offers smooth, linear fade times of up to 30 seconds.

The hold control offers a "wait-before-fading" option to prevent premature initiation of the fade cycle. This is useful when processing material that contains natural pauses such as speech and instrumental solos.

The threshold range is greater than 60dB, making the **SG-33E** and **SG-35E** useful for both professional and semi-pro signal levels. Plus, a key input is provided to allow gating by a second signal, and a stereo tie patch point makes accurate tracking between two channels possible.

Both the **SG-33E** and **SG-35E**, like all Ashly products, are covered by Ashly's exclusive five-year warranty.

Five-Year Worry-Free Warranty

Fast Attack Time (10µs)

60db Threshold Range

Stereo Tie Patch Point for Accurate Tracking of Two or More Gates

Inputs May Be Used Balanced or Unbalanced

Extremely Low Noise and Distortion

In/Out Bypass Switching

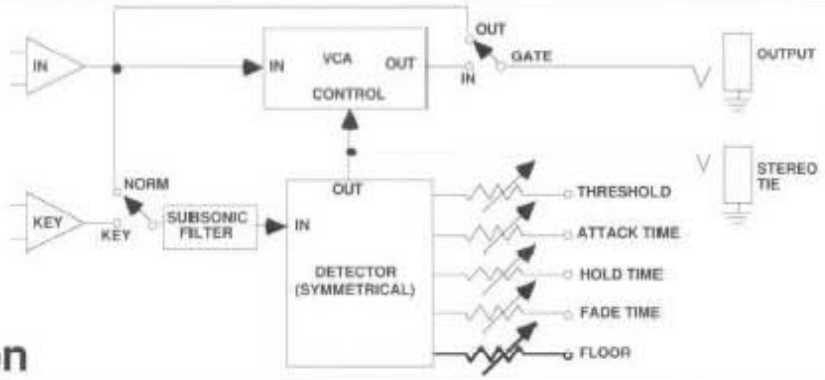
Two-Stage Release Circuit

Specifications

Frequency Response:	5Hz to 100kHz, +0, -2dB
THD, 20-20kHz, +10dBV Input:	.02%
IM Distortion 20-20kHz, +10dBV Input:	.02%
Crosstalk from Key Input @ 1kHz:	-85dB
Noise, 20-20kHz:	-85dBV
Gain:	Unity
Detector Symmetry:	± 0.25dB
Control Voltage Feedthrough:	-65dBV typical
Maximum Input/Output Level:	+20dBV
Slew Rate:	>10V per µS
Threshold Range:	-40dBV to +20dBV
Attack Time (per 40dB gain increase):	10µs to 30 seconds
Hold Time:	40 milliseconds to 12 seconds
Fade Time (per 40dB gain decrease):	15 milliseconds to 30 seconds
Noise Attenuation (Floor):	0dB to 75dB
Input Impedance:	10kΩ Balanced Bridging (Active)
Output Impedance:	200Ω, terminate with 600Ω or greater
Additional Features:	Key Input-switch selectable, Noise Gate Bypass switch, Stereo interconnect via rear panel jacks, LED Threshold Indicator
Power Requirements:	120VAC, 50-60Hz, 5W
Size:	SG-33E: 19"L x 1 3/4"H x 6"D SG-35E: 19"L x 3 1/2"H x 6"D
Shipping Weight:	SG-33E: 8 lbs SG-35E: 10 lbs

Block Diagram

Single Channel



Architect's Specification

The unit shall be a two (SG-33E) or four (SG-35E) channel noise gate utilizing a class AB Voltage Controlled Amplifier and a detector which has a dual release time circuit. The noise gate shall have key inputs, stereo patch tie points and front panel noise gate bypass switches. Performance specifications of a typical production unit shall meet or exceed the following: Frequency response shall be from 5Hz to 100kHz, +0, -2dB. The THD between 20Hz and 20kHz w/ +10dBV input shall be no more than .02%. The IM Distortion between 20Hz and 20kHz w/ +10dBV input shall be no more than .02%. Crosstalk from the Key Input shall be no greater than -85dB @ 1kHz. Noise, between 20Hz and 20kHz shall be no greater than -85dBV. Gain shall be unity. Detector symmetry shall be ±0.25dB. Control Voltage Feedthrough shall be typically -65dBV. Maximum input/output level shall be +20dBV. The Slew Rate shall be >10V per µS. Threshold Range shall be adjustable from -40 to +20dBV. The attack time shall be adjustable from 10µS to 30 seconds per 40dB of gain increase. The Hold-Before-Fade time shall be adjustable from 40mS to 12 seconds. The Fade time shall be adjustable from 15mS to 30 seconds per 40dB of gain decrease. Noise attenuation (Floor) shall be adjustable from 0dB to 75dB. The input impedance shall be 10kΩ Balanced Bridging (Active). The output impedance shall be 200Ω terminated with 600Ω or greater. The unit shall operate at 115VAC ± 5%, 50-60Hz. The unit shall be designed for mounting in a standard EIA 19" rack (19"L x [1.75"H (SG-33E) or 3.5"H (SG-35E)] x 6"D) and shall have a shipping weight of 8 lbs (SG-33E) or 10 lbs (SG-35E). THe unit shall be either a model SG-33E two channel Noise Gate or a model SG-35E four channel noise gate manufactured by Ashly Audio Inc. No other unit shall be acceptable unless data submitted from an independent test laboratory verifies that the above combined size/performance specs are met.

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