

Logic Assisted Four Channel Gate Model 105



In 1987 Aphex Systems made a \$10,000 challenge to the world to find a better gate than the Aphex Model 612. Not one manufacturer could make a gate that matched the performance of that unit until Aphex introduced the Model 622 Logic Assisted Expander/Gate™ in 1993. That unit has become the new world standard for expander/gates in studio and P.A. applications. Recognizing that some users may not be able to afford the Model 622 or may not need all its special features and functionality for a particular application, Aphex developed a lower cost, streamlined gate, the Model 105.

The Model 105 Four Channel Logic Assisted Gate incorporates most of the prime features of the Model 622. The most important feature is the pristine audio path whose heart is the exclusive Aphex Voltage Controlled Attenuator VCA 1001. It outperforms all other VCA's and is one of the reasons that Aphex products sound better than all other dynamics processors. Its low control feedthrough, even when exercised extremely quickly, means no clicks or pops in the audio.

The other prime feature is the Logic Assisted detector circuit, which provides positive, stable and accurate triggering regardless of attack time. Another circuit in the detection system is Peak Stretch™ which expands the differences in level between the unwanted program (noise) and the desired program. These proprietary circuits make the Model 105 an easy to use, quick to set up, high performance gate suitable for a wide range of audio applications.

FEATURES

- Four discrete channels
- Aphex VCA 1001
- Dynamic range in excess of 120dB
- Logic Assisted detector circuits with Peak Stretch
- 10dBV/+4dBu switch for each channel
- Simple open/close LED's for gate status
- Key input with front panel indicator
- Adjustable threshold, attack, hold and release
- Switchable attenuation from 6 to 90dB

APPLICATIONS

- Control leakage for recording and P.A.
- Turn off unused channels during mixing
- Turn off unused sound modules or keyboards during recording or live performance
- Attenuate unused open microphones for decreased feedback
- Conference rooms
- Key external sounds to another audio track
- Increasing dynamic range

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1. Threshold: The Threshold control sets the level at which the gate opens and closes. It is adjustable from -50dB to +20dB. When the audio signal (or external key) is above threshold the "Open" LED is lit. When it falls below threshold and the hold time has timed out, the "Closed" LED is lit.

2. Open LED, Closed LED: These two LED's indicate the status of the gate, open or closed. Since the detector circuits are Logic Assisted there is no need for any further metering.

3. Attack: The Attack control adjusts the speed at which the gate will open. If set too fast, the resultant wavefront may cause a click. The Logic Assisted detector circuits assure that the gate will open regardless of the attack time.

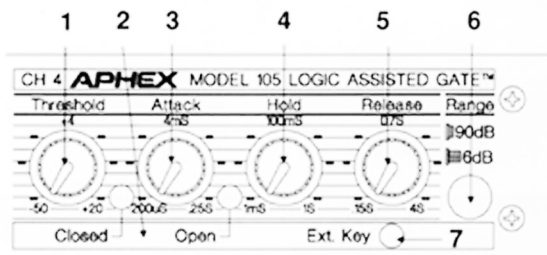
4. Hold: The Hold control establishes a delay of 1mSec to 1Sec before the release circuit is activated.

5. Release: The Release control establishes the speed at which the gate will close.

6. Range: The Range switch establishes the amount of attenuation when the gate is closed from 6dB to 90dB.

7. External Key LED: When the External Key Jack at the rear of the unit has a plug connected the Ext. Key LED is lit and the detector circuit responds to whatever signal is on that plug instead of the audio input signal.

-10dBV/+4dBu Switch (rear panel): This switch should be set in the position which optimizes signal to noise performance for a particular application.



Specifications

System

Number of Channels Four

INPUT

Type Active balanced (+4) Unbalanced (-10)
Impedance 30k Ω (balanced) 10k Ω (unbalanced)
Nominal Operating Level +4dBu or -10dBV
Maximum Input Level +21dBu (+4) or +13dBV (-10)
CMRR Greater than 60dB 20Hz to 10kHz

OUTPUT

Type Pseudo Balanced
Impedance 56 Ω Unbal., 132 Ω Pseudo Bal.
Maximum Output Level +21dBu (+4), +13dBV (-10)
Frequency Response ± 0.1 dB 17Hz to 20kHz
Frequency Response @ -3dB Points 3Hz and 120kHz
Output Noise (+4), Open -86dBu
Output Noise (+4), Closed -100dBu
Output Noise (-10), Open -96dBV
Output Noise (-10), Closed -104dBV
THD @ 1kHz 0.005%
Crosstalk Rejection Better than 90dB 20Hz to 20kHz

CONTROL RATES

Attack Rate 200uSec to 120mSec
Hold Range 1mSec to 1Sec
Release Rate 100mSec to 4Sec
Threshold Span -50dB to +20dB

FUNCTIONS

Controls Threshold, Attack, Hold, Release
Switches I/O Reference, Range
Indicators Open, Closed, Ext. Key
I/O Connectors TRS 1/4" Phone; Input, Output, Ext. Key

OTHER SPECIFICATIONS

Power Source External Wall Transformer
Power Requirements 24VAC 600mA
Dimensions 19" (482.2mm) x 1.75" (44.4mm) x 5.2" (132mm)
Net Weight 5 pounds (2.27K)

APHEX
SYSTEMS

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