

ARX SIXGATE

Six Channel Noise Gate

Reviewed by Vic Lennard



Noise gates are one of the commodities that no studio can really afford to be without, even the most modest of home setups.

We only tend to hear noise components during low-level passages of music, which is when a gate comes into operation. Samplers will often leave hiss at the end of samples, or there may be unwanted noise on a vocal or guitar track that can be heard during pauses. The effect of a tight bass drum can be completely ruined if a low-level hiss can be heard each time the sample ends, and this also applies to drum machines which have sampled sounds on board. No matter how many gates you have, Sod's law dictates that there will

always be uses for more than that number. There have been a few cheap gates on the market but these sometimes add as much noise as you are trying to take out. Consequently, a few manufacturers have started to produce multiple gates and compressors and one of these is the Sixgate by an Australian company called ARX.

As the name suggests, this unit has six noise gates encased in a 1U rackmount. The six gates are identical in all respects. Two LEDs show what operation is taking place, a green one to indicate that the gate is open and a red one for closed.

The attack time (the time taken for the gate to go from fully closed to fully open) is program dependent, but the Release time can be set via a rotary control anywhere between 20 milliseconds and 2 seconds. The Depth of the gating can be varied between 1:1 (0dB) and 100:1 (-40 dB), while the Threshold at which gating commences is variable between -40 dB and +12 dB.

Release time goes from 20mS to 2S, Depth from 0dB to 40dB, and Threshold from -40 to +12 with several intermediate values. Since much of the work with a gate will depend on hearing the cor-

rect effect, reproducing it is made far easier if a value can be written down for future reference.

A bypass switch and a blank panel for writing information complete the front panel. There are balanced stereo quarter-inch input and output sockets on the rear along with a stereo 'key' socket which has a double purpose. A mono jack plug can be used to let an external signal control the opening and closing of the gate, independent of the actual incoming audio signal. Alternatively, using a stereo jack plug allows you to insert an outboard device into the control signal path which can be used in a variety of applications. For instance, an equaliser of some description can convert this into a frequency-conscious gate - more about this later.

The Sixgate doesn't have a power switch, although it does have a rear-panel mounted fuse and removable power lead.

PERFORMANCE

Before considering the facilities on offer, it is important to sort out what the Sixgate is intended for. What we have are six independent gates with facilities that are intended for corrective cleaning up rather than creative gating/panning/ducking effects. This arrangement is especially useful for multi-miked drums or perhaps vocals where you might normally tie up a unit which could be used more effectively in other, more creative, areas. These are simply dedicated noise gates so let's consider how well they perform in that context.

No matter what a unit offers, if it is working directly in a signal path and not via an auxiliary send-return path, it must be quiet in operation. To this end the Sixgate passes with flying colours. The unit is subjectively very quiet and no difference could be heard between the original and gated signal which would tend to bear out the frequency response claim of 10Hz to 20kHz (± 1 dB). Also, it would appear that the bypass switch is a true hardwire bypass so that an input signal is indeed routed straight to the output and not via any circuitry such as preamps.

Many so-called semi-professional gates have poor attack characteristics. Too fast an attack leads to a click as the gate opens, while too slow leads to the attack portion of the first audio note being lost or muted.

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ARX appear to have got it just right. Even with the tightest of bass drums, no clicks or loss of front edge could be heard. In fact, the opening of the gate appeared to be so fast that I decided to run a test. A sampled bass drum was run through the gate and resampled at the output and the two samples were visually compared by using a sample editor. Allowing for the slight degradation of the sound through resampling, the attack edge of the waveform was practically identical which was backed up by my ears. Admittedly I haven't tried this with any other gate but still, this is rather impressive.

KEY INPUT

As mentioned above, the key input on the rear panel has two purposes: the first is to let you control the motion of the gate by an external signal. For instance, suppose that you are using two synth basses to achieve a particular bass sound, but sound A has a longer release than sound B and you would like A to be as tight as B. You could run sound A through a channel of the gate and connect a split feed from sound B to the key input for A which will now only sound when B does.

Consequently, the release characteristics of B now control sound A. Beefing

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up the bottom end of a bass drum is often difficult and the need is becoming more common because many samplers tend to leave samples a little bottom-light. Most relatively cheap desks only have a 50Hz shelving EQ which is often not quite the right frequency for the purpose. You could feed the bass drum into one of the gates and a 40Hz tone (from a synth or oscillator) into one of the other gates, key triggered from the bass drum. The 40Hz tone will only be heard when the bass drum plays and so really adds some kick.

These examples came from the manual

and worked well in practice. Admittedly you can do these things with any gate but the first example relies on the speed of attack (and the Sixgate is good in that area), while the second technique would use both channels of a standard stereo gate - here you still have another four left.

The second use for the key input is with a stereo jack, wired ring-send, tip-return. Boosting frequencies at one end of the spectrum reduces the sensitivity of the gate to frequencies at the other end. For example, there may be noise of a low-frequency nature opening a gate set on a vocal microphone. By sending the control signal through a graphic or parametric equaliser and boosting the higher frequencies, the gate will be less susceptible to this extraneous disturbance. This can give results similar to those offered with the Drawmer DS20I dual gate which has the frequency filtering on the front panel.

CONCLUSION

As you may have gathered from the review, I was impressed with the performance of the Sixgate. It's quiet in use, has an exceptionally fast attack and offers a few added bonuses in terms of the key input features, especially when these gates are viewed as being a master of one function rather than a jack of many.

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