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## Technical File

### *SIXGATE™ Six Channel Noise Gate*

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The ARX Sixgate is the world's first and so far the only fully featured 6 channel Noise Gate in a one rack unit package. Since being introduced in 1987 the Sixgate has become both an industry standard in its own right and a core product for our company.

#### *What are Noise Gates used for?*

Noise Gates offer the user virtually total control over the amplitude envelope of any Audio Signal, whether it's for Drumkits, Vocals, FX manipulation or even for multi channel speech reinforcement systems for conferences.

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#### *Why Six Channels?*

As this product was being conceived ARX design engineers studied the range of products already available and the applications for which they were being used. Our conclusion was that while there were a lot of great, good and not so great 1 channel, 2 channel and 4 channel gates available none of these addressed the most popular use. Most people use gates for Drumkits! How many channels do you usually assign for drums on a console - One? Two? Four?

Well, let's think about it for a second...Kick, Snare, High Hat, a couple of Rack mounted Toms and the Floor Tom. Adds up to six, doesn't it? Now to cover that with 4 channel gates you either need to lash out and buy two units, or to compromise by leaving say the High Hat and Floor Tom or perhaps Kick or Snare ungated. Seems a bit silly? Exactly what we thought to, so the Sixgate was born!

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#### *What features does the Sixgate have?*

Fully variable controls of Threshold, Attenuation, and Release Time, plus Hardwire Bypass and LED Indicators. This combination provides total control plus visual indication of the operational status of each independent channel.

Another important feature of the Sixgate is its extremely low signal/noise level and its ultra low distortion. Due to our use of state of the art opto- electronics, each channel of the Sixgate only has two opamps in the signal path ensuring an ultra low noise and distortion processing chain.

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#### *How easy is it to Interface?*

Another important feature is the factory standard Balanced Input and Outputs, allowing easy interface with other Pro Audio electronics, whether they are Balanced or Unbalanced. The Sixgate also features on every channel a TipRingSleeve Sidechain insert point for easy frequency sensitive gating.

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#### *What user controls are there?*

The Sixgate features the user continually variable control of the three most used functions on any gate. **Threshold** (the level at which the gate operates), **Release Time** (how long the gate stays open) and **Depth/Attenuation** (when it closes, how low in level the signal remains).

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*What about Attack and Hold controls?*

With its internally adjusted program dependent Attack time, the Sixgate doesn't need a user variable attack control.

The need for a HOLD control is negated by the Sixgate's Soft Ramp release function which allows for a gentle gain reduction envelope instead of a hard unmusical reduction or switching off.

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*Can the Sixgate be used in -10dB signal level operating conditions?*

Yes. With its ultra low noise figures and unity gain operating level the Sixgate is ideally suited for -10dB applications without any modification whatsoever.

The Sixgate conforms to the basic ARX design brief - it has both innovative design and high audio quality, with more features than comparable products of a similar price bracket. It's a product that we'd like to use!

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