

Quad Noise Gate

DPR-504



Expectations of audio quality, and to the results that can be achieved with creative sound manipulation are changing dramatically. In professional sound production, noise gating has become one of the fundamental processes used on an ever-increasing range of audio signal types. BSS have applied extensive experience in practical dynamics processor design and usage to create the ideal tool in a quick-to-use format that also conserves precious rack space - the **DPR-504 4-CHANNEL NOISE GATE**.

Ingenious proprietary techniques in control and display technology are employed to make the engineer's life easier without compromise to performance or versatility. For example, FAST and AUTO Attack modes have been optimised for accurate and transparent performance over the widest variety of programmed material. AUTO mode continually regulates the gate's speed of response by analysis of the harmonic and dynamic content of the input signal. Hence, source types ranging from percussion to bass guitar - even voice - can all be gated fast and distortion free with the minimum of attention from the operator. FAST mode offers an outstanding 20ms Attack time to handle consistently the most demanding percussion and synthesiser transients. As a further aid to rapid set up, the RELEASE control not only adjusts for decay response of the gate channel but simultaneously sets an appropriate Hold period which tracks proportionally with the Release time. This relationship combines with a special, audio-tapered Release characteristic to give subtle, 'musical' envelope shaping using only a single control.

For multi-mic situations such as drums or percussion set-ups, spillage can often cause spurious, unwanted gate triggers. The **DPR-504** thoughtfully provides a flexible parametric KEY FILTER on each channel to allow frequency conscious gating with absolute precision. Quick adjustment by ear, using the momentary KEY LISTEN switch, eliminates hair-trigger threshold settings with ease, and offers considerable scope for special effects. The unique, 'floating window' key level LED display gives the engineer a constant visual indication of signal level above and below threshold, invaluable for quick set-up and for spotting problems instantly during a show or mix session.

- In live sound mixing, to highlight instruments such as lead and bass guitar whilst keeping amplifier noise down during quiet passages and breaks.
- To 'clean up' multi-miked drums or percussion set-ups, eliminating spill from back line and monitors on stage, as well as from adjacent percussion instruments.
- For recording multiple close-mic configurations, the DPR-504 readily eliminates uncontrolled room reverb, allowing the engineer to mix this in accurately from ambience mics.
- To eliminate tape noise when mixing from multitrack, or to cut out noise from digital samplers and keyboards. Stereo linking ensures accurate gating without image shift.
- Special effects such as gated reverb or modulation of a synth track by the hi-hat to give accurately synchronised 16th chords, for example.
- In broadcasting, on multiple mono or stereo clean-feed/mix-minus lines, to cut down on background noise when commentators or journalists are not speaking.

Main Controls

KEY FILTER and **KEY LISTEN** provides easier and more accurate side-chain control with a variable width, constant Q band-pass filter. KEY LISTEN monitors side-chain signal for accurate key filter tuning.

KEY LEVEL METER and **THRESHOLD** Simultaneous average and peak level indication. Tracks threshold-control rotation in relation to a fixed gate opening point.

GATE OPEN MARKER indicates actual gate-open / closed status, while including the set dynamics.

RELEASE/ HOLD continuously variable combined Hold and Release. Hold tracks proportionally with Release time.

ATTACK Switchable auto / fast innovative AUTO mode, continuously monitors spectrum of input signal level variation. Sets optimum attack response for minimum loss of leading edge information.

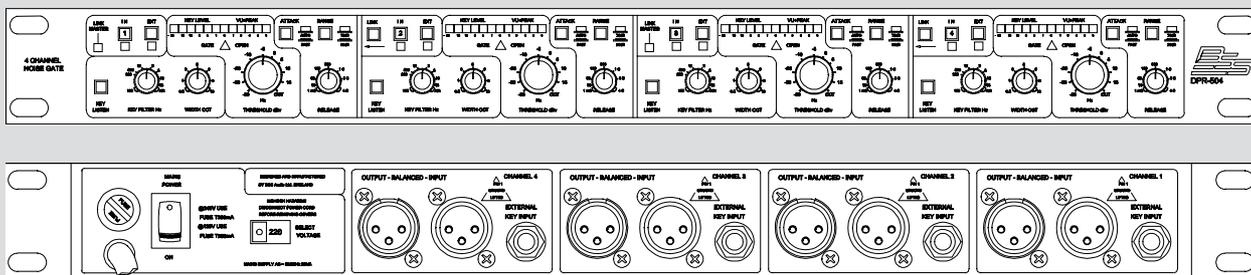
CHANNEL BYPASS for silent re-setting and insertion switching.

LINK for two-channel master / client operation. Stereo linkable in pairs 1/2 and 3/4. Channels 1 and 3 become masters.

KEY SOURCE allows access to external equipment for alternative equalisation and other key sources. Extra gain is available for direct connection of contact microphones.



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TECHNICAL SPECIFICATIONS

Input Section

IMPEDANCE	Balanced 12kOhm differential
MAX INPUT LEVEL	+20dBv
CMRR	>50dB, 20Hz to 20kHz
CONNECTOR	XLR331 or equivalent

Output Section

IMPEDANCE	Balanced and floating to drive 600 Ohm loads
MAX OUTPUT LEVEL	+20dBv into 600 Ohm load
CONNECTOR	XLR332 or equivalent
RANGE	Switchable attenuation between 70dB and 20dB The latter may be user defined by internal links

System Performance

FREQUENCY RESPONSE	+ 1dB, 20Hz to 20kHz
Ultrasonic low pass filter	3dB at 32kHz
NOISE	Measured to CCIR 4682 Zero attenuation : <-86dBv
Maximum attenuation:	<-90dBv
DISTORTION	THD less than 005%, 20Hz to 20kHz
SMPT E IM	< 002%
CROSSTALK	> 90dB 20Hz to 20kHz

Operating Controls

KEY FILTER FREQUENCY	Variable between 30Hz and 15kHz centre
KEY FILTER WIDTH	Variable between 05 and 10 octaves
KEY SOURCE	Internal or External, via rear panel 1/4"TRS jack
THRESHOLD	Variable between +20dBv and 50dBv
ATTACK	Audio attack switchable FAST (20µs) or AUTO (40µs 5ms, programme dependant)

RELEASE

Combined Hold/Release function is variable 1ms to 3 sec Hold period tracks proportionally with Release Stereo linkable in pairs 1/2 and 3/4 Channels 1 and 3 become masters

LINK

Metering

KEY SIDE CHAIN	Simultaneous average and peak reading 12 point LED display showing 20dB range either side of threshold
GATE OPEN	Single LED shows exact gate status and mimics response profile
EXT KEY SOCKET	3 pole, 1/4" RTS jack socket used for EXT keyin or key insert functions

General

SIZE	482mm x 44mm x 282mm 19" x 1.75" x 11"
WEIGHT	5kg (11lbs) gross shipping.
POWER SUPPLY	Switched 120/240V +10% 20% 50/60Hz.

In keeping with our policy of continued improvement, BSS Audio reserves the right to alter specifications without further notice. This product was designed developed and produced by BSS Audio, Hertfordshire, England.

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