

ROCKMAN SMART GATE™

OPERATING MANUAL





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Front Panel Overview

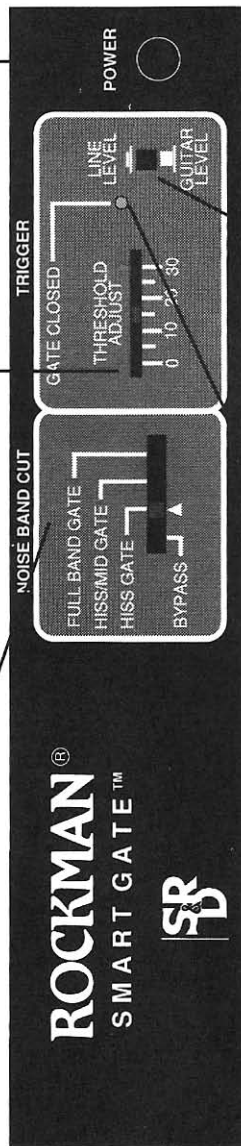
Noise Band Cut:

Switch determines the lowest limit of noise gate filter. Noise and hiss will be removed from 20 kHz down to 1 kHz in HISS position, 20 kHz down to 500 Hz in HISS/MID position, and 20 kHz down to 20 Hz in FULL BAND position.

Threshold Adjust:

Slider varies the sensitivity of the gate's threshold, allowing it to be adjustable to any input source.

Power:
On/Off.



Gate Closed LED:

Yellow LED indicates that the SMART GATE™ is reducing noise.

Line Level/Guitar Level:

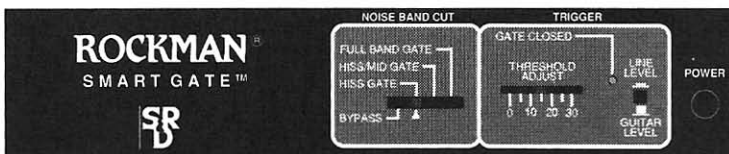
Button matches the input source to the Smart Gate™ circuitry for optimum operation. Push button IN for line level inputs; OUT for guitar level inputs.



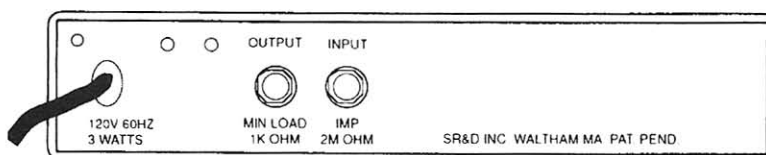
General Operating Instructions

These general operating instructions will get you started using your ROCKMAN® SMART GATE™ right away. We urge you to read the rest of this manual soon, so you will fully understand and be able to enjoy all of the capabilities of this sophisticated noise reduction system.

1. Connect the power cord of the SMART GATE™ to an AC outlet. CAUTION: Line voltage must match the voltage requirement printed on the rear panel of the unit.
2. Connect an audio cable from your input source (instrument, effects, tape deck, mixer or effect loop send) to the rear input jack of the SMART GATE™. Connect another cable from the rear panel output jack of the SMART GATE™ to your amplification system or effect loop return. (See the rest of this manual for more details on hook-ups.)
3. Push the SMART GATE™ power button ON.
4. Set the NOISE BAND CUT switch to either HISS GATE, HISS/MID GATE, or FULL BAND CUT position, depending on your input source material. (See Applications, page 8.)
5. Push the LINE LEVEL/GUITAR LEVEL button IN for line level inputs, or OUT for instrument level inputs.
6. Adjust the THRESHOLD LEVEL slider from "0" towards "30", until hiss is suppressed before the notes or program material have completely died out. The yellow LED will light when the gate is activated. (See Page 7 for more detailed information.)



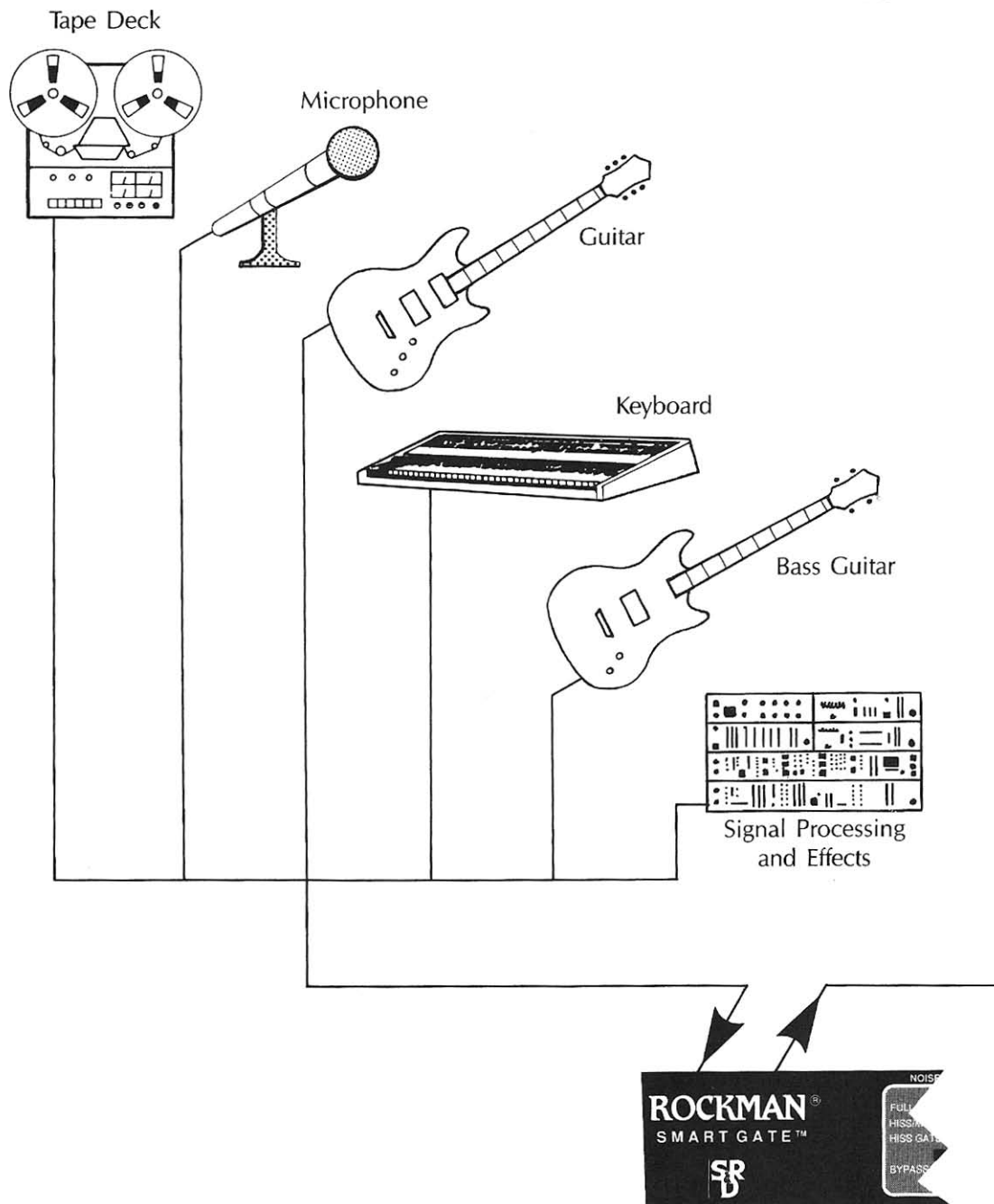
FRONT PANEL



REAR PANEL



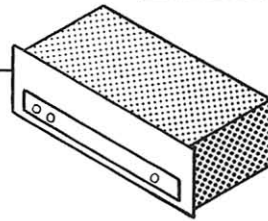
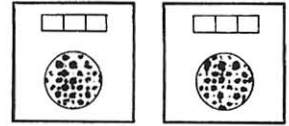
In/Out



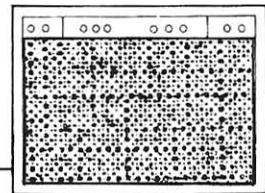
ROCKMAN

Connections

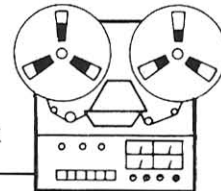
Power Amp with Speakers



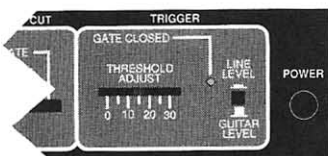
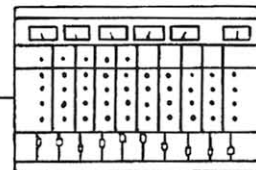
Guitar Amp



Tape Deck



Mixer



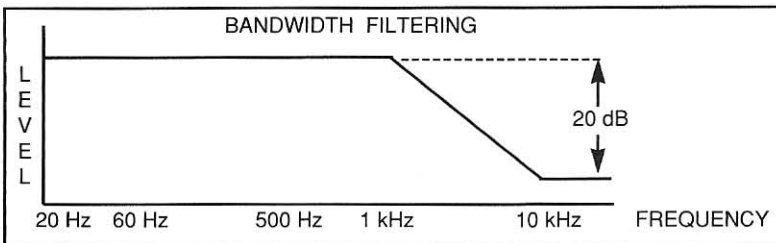


General Description

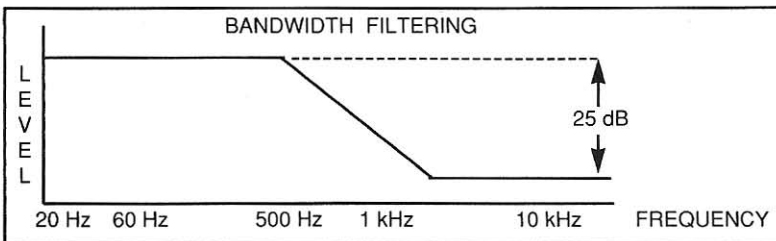
The ROCKMAN® SMART GATE™ is specifically designed to remove high and low frequency hiss, hum and other noise. When no high frequencies are present in the input signal, the upper half of the frequency spectrum is gradually attenuated by a low pass filter at 6 dB per octave starting at either 1 kHz or 500 Hz (depending on the NOISE BAND CUT switch position). This leaves the fundamental tone and low harmonics unaltered for their full sustain. When the NOISE BAND CUT switch is on FULL BAND, the gate's high pass filter will attenuate low frequencies at 6 dB per octave (up to 20 dB at 60 Hz).

The ROCKMAN® SMART GATE™ will not only minimize hiss and noise from all sorts of signal processors and effects, but will also help remove hum and buzz from guitars with single coil pickups and poor RF shielding.

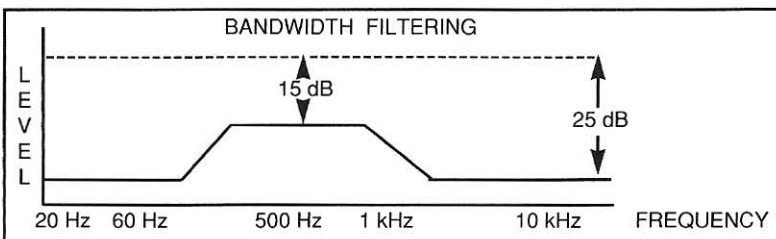
This is no ordinary noise gate. The SMART GATE™ knows to gate out noise slowly when notes are being held, and quickly when they are stopped short. It will not cut off the ends of notes. The gate's attack time is extremely fast and will not degrade picking transients or harmonic overtones.



HISS
GATE



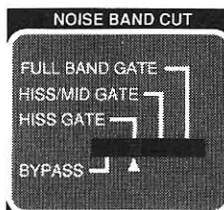
HISS/
MID
GATE



FULL
BAND
GATE

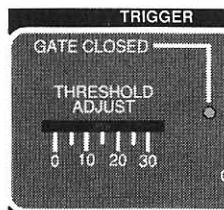
Detailed Function Descriptions

NOISE BAND CUT



The NOISE BAND CUT switch lets you select the noise gate filter cut-off point. Thus the noise gate function can be tailored to different kinds of input signals. The different kinds of noise reduction available are HISS, HISS/MID, or FULL BAND.

TRIGGER



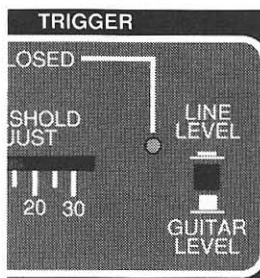
The THRESHOLD ADJUST slider varies the sensitivity of the gate's threshold, allowing the gate to be adjustable to any input source.

TO ADJUST THRESHOLD LEVEL:

- 1) Start at the "0" (hard left) position and, while listening for noise, with no signal into the gate, move the slider towards "30" (hard right). Stop when the noise is suppressed. The yellow LED will light when the gate is activated.
- 2) Then while playing at the loudest level you will be using, quickly mute the strings (or stop playing if you're using a keyboard, etc.) Listen to make sure the noise is quickly suppressed.
- 3) If while performing Step 2 the noise decays slowly, move the slider to the right, and repeat Step 2 until the noise decays quickly.
- 4) Play a sustained note or chord and allow it to ring off. Listen to make sure the end of the note is not cut off. If it is, move the slider back towards the left. Then repeat Steps 2 and 3.



LINE LEVEL/GUITAR LEVEL



The LINE LEVEL/GUITAR LEVEL button allows the Smart Gate™ to be used with a wide range of input sources. Under normal conditions, push the button IN for line level inputs or OUT for instrument inputs. Since all instruments and processors are different, you may need to push the level button IN if you're using the Smart Gate™ after a guitar and noisy stomp box or OUT if it's in the effect loop of an amplifier. The main objective is to reduce noise without noticing the action of the Smart Gate™. Your equipment, and the sounds you are trying to achieve, may require different threshold and line level settings under various playing conditions. Feel free to set the Smart Gate™ controls anywhere that work best for you.

Applications

While the SMART GATE™ is a "set and forget" type device, some thought should be given as to which noise band cut-off frequency points are most effective in reducing noise with various types of input sources.

In general, the HISS GATE noise band cut works well with instruments and input sources that have high frequency boost (vocal mikes, keyboards, wind instruments, electric bass, etc.) The HISS/MID GATE noise band cut is effective on instruments with high gain midrange frequency boosts (distorted electric guitar, amplified harmonica, etc.) The FULL BAND noise band cut is most effective in quieting input sources with low-end hum and buzz problems (AC line noise, display noise, and noise from light dimmers).

To quiet a rack full of noisy effects and signal processors, place the SMART GATE™ last in the audio chain, right before the amplification system. For a stereo performance system, use two SMART GATES™.

For recording and mixdown situations, connect the SMART GATE™ in between the instrument or signal source and the mixer or tape machine. Again, for stereo mixdown applications, use two SMART GATES™ with their THRESHOLD sliders set identically.

