

EX-5

Dynamic Expander

There are a wide variety of uses for the **EX-5** including playback of tapes made with the Nagra^{*} SNST as well as those made on any other recorder using the **MC-3** compressor microphone. It is a precision circuit which will restore the full dynamic range of compressed signals. There are two audio channels for stereo recordings. When used with the SNST the **EX-5** provides a more compact and convenient alternative to the Nagra DSP. There is a built-in high pass filter which eliminates hum, wind noise, and synchronizing tones for use with film and video cameras. This allows the **EX-5** to track very accurately under difficult conditions. It is also much more economical than the DSP to purchase and operate.

The **EX-5** has two types of output connectors. The LINE OUTPUT jacks on the rear panel have a fixed signal of "0" dBm at full level and a maximum before clipping of +6 dB. They should normally be used for making tape copies and other situations where the highest quality reproduction is required. Because of the very wide dynamic range produced by the **EX-5** it may sometimes be necessary to adjust the output level and this can be done by using the volume controls to adjust the output at the PHONES/SPKR jack on the front panel. It is designed for headphones or small loudspeakers such as those used with personal (Walkman) tape players, but may also be used for making tape copies. Although any headphones may be used, Daniel Technology can supply several types which are perfectly matched to the **EX-5**. Unlike other units which have a single internal loudspeaker, the external loudspeakers provide full stereo sound for best voice intelligibility.

The WARNING light serves two functions. As an overload indicator, it is on whenever either channel is within 3 dB of clipping and will follow the peaks of the sound. As a low battery indicator, it blinks once every second when the battery should be replaced.

Special input cables contain components which match the **EX-5** to the type of source equipment being used. A cable should always be used which has been designed for that particular source (recorder or receiver). Daniel Technology can supply cables for any equipment, however we strongly recommend that you select a device which has a fixed output level.

The **EX-5** is economical and easy to operate. Power is provided by either a single standard 9-volt battery or an inexpensive wall-plug power supply which automatically disconnects the battery when plugged into the unit.

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EX-5 SPECIFICATIONS

Expander ratio	1:2
Expansion range	25 dB*
Frequency response	150 Hz to 8 kHz \pm 1 dB -20 dB @ 60 Hz
Dynamic range	line output \$90 dB phones output \$80 dB
Distortion	< 1.0% THD @ 0 dBm
Channel separation	line output \$90 dB phones output \$60 dB
Input	selected by input cable minimum 150 millivolts RMS
Line output	1.5 volts RMS (+6 dBm)
Phone/Speaker output	10 Ω 1.5 volts RMS any load impedance (protected)
Power supply	6 to 15 volts DC < 100 milliamps
Battery	rectangular 9V (MN1604 or equal) 10 to 40 hours depending on load 25 to 80 hours with lithium batteries
Indicators	single LED - peak responding either channel within 3 dB of clipping flashing when supply voltage is low
Dimensions	4 W x 4 D x 1½ H inch

* May be extended to 40 dB expansion for special applications

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