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MDS-2

High Frequency Limiter



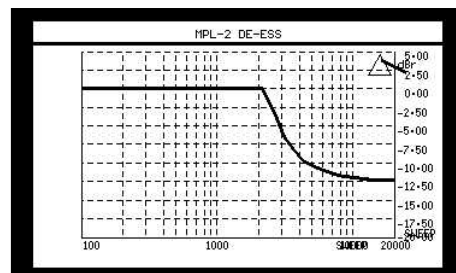
<http://www.maselec.com>

DESCRIPTION

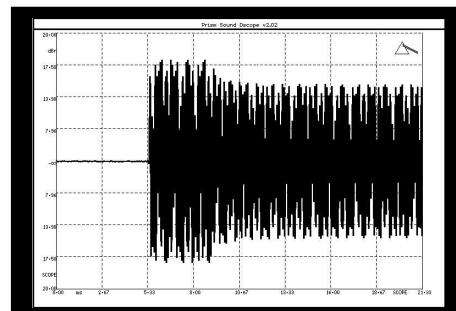
- ❑ The MDS-2 is a dual mono, linkable, high frequency limiter. It is housed in a 1U 19" rack mount alloy case. It is primarily intended for use as a **de-esser**, reducing unattractive high frequencies, with minimum coloration and loss of clarity.
- ❑ Automatic time constants and optimisation techniques for the gain reduction minimises the number of controls. The advantage is not only simple operation but also increased performance for highly dynamic and inconsistent materials without the need for continuous readjustments.
- ❑ With wide input range, up to +29dBu input and low noise, the MDS-2 can be used in many different applications.
- ❑ The *side chain* can be switched to M-S, which can be used to “zoom” in on high frequencies in the centre of the stereo image. With this function switched in the threshold is 6dB lower for the centre image compared to extreme left and right. The M-S function does not affect the actual audio path.

HF LIMITER

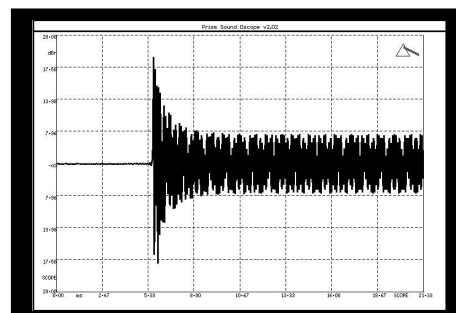
Output frequency response when the HF limiter is adjusted for max. high frequency reduction.



4dB reduction: 5msec attack.



10 dB reduction: 1 msec attack
This shows how the attack time becomes shorter when the high frequency reduction is increased.



OPERATION

- M-S..... Switches the side chain inputs to M-S (sum and difference).
- LINK..... Hard links the side chains *after* the time constants.
- ON..... This control enables the high frequency limiter.
- FAST..... This control makes the release time shorter.
- HF THRESHOLD..... Adjust this control to set the amount of high frequency limiting.
- BYPASS..... Galvanic bypass of the unit. The meters show, with reduced intensity, the gain reduction that would occur if the unit was not in bypass

The meters show the amount of actual gain reduction (no hold times are incorporated). Longer release times will be noticed for:

- Frequent limiting over longer time periods
- Large amount of limiting

Note: 0 dB indicates 'above threshold'.

- Optimum reduction of peaks is maintained for extensive variations of programme materials. When longer release times are noticed, additional reduction of short duration peaks will still only cause short, programme dependent, release times. The result is predictable and consistent performance over a wide dynamic range.
- The HF limiter has a maximum range of 11dB starting at approximately 2kHz.
- The attack time is both programme dependent and non-linear relative to the amount of limiting taking place. It is long for small amounts of HF limiting (>20msec) and becomes progressively faster for more limiting (<1msec). This acts as a barrier for HF limiting near or just above the threshold and increases selectivity.
- The M-S control will further increase the selectivity for programmes with excessive treble in the centre of the stereo image. This is normally the case when de-essing vocals.
- Switching to M-S will reduce HF limiting from 'stereo' signals whilst retaining the limiting on centre signals.
- The M-S mode *does not* affect the actual audio path!

INSTALLATION

Caution: Make sure that the rear panel mounted voltage selector is set to correct voltage!

- Connect inputs and outputs to XLR connectors using high quality cables only.
- Both inputs and outputs are balanced.
- For unbalanced connections either pin 2 or pin 3 should be terminated to audio ground.
- Always connect audio screens to pin 1.
- Do not place the MDS-2 near or above other units producing excessive heat or electro-magnetic fields.

SPECIFICATION

Input dynamic Range.....	Better than 120dB
Output dynamic range.....	Better than 120dB
Maximum input level.....	129dBu (balanced)
Maximum output level.....	129dBu (balanced)
Distortion.....	Typically less than 0.003%
HF limiter attack time.....	Programme dependent 1msec to 20msec
Release time.....	Programme dependent
Input impedance.....	100k \bar{w} ground floating electronically balanced
Output impedance.....	34+34 \bar{w} electronically balanced
Threshold.....	-26dB to + ∞
Gain.....	0dB
H.F. Limiter.....	>2kHz
Power.....	90-130, 180-260 Volts @ 50-60 Hz
Fuse.....	315mA, anti surge (slow)

Subject to change without notice.