Focusrite

MixMaster™

Stereo Dynamics, EQ and Image Processor

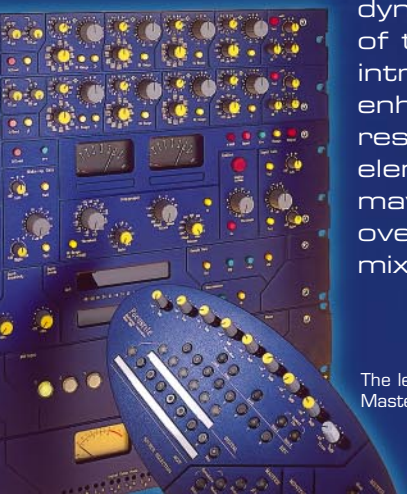


‘How do I make my mix sound like a hit record?’

The Focusrite MixMaster™ is an analogue stereo audio processor designed primarily for project studio mastering. However, with so many useful features in one box, anyone involved in the business of making music will quickly find it indispensable at other stages of the recording process too.

Simple yet effective processing sections cover every aspect of the mix, giving you the quickest route to that seemingly ‘out of reach’ sound that makes a hit record. Within minutes you can give your mix punch, width and sheen with the signature transparency and sonic integrity that made Focusrite famous.

The MixMaster takes its inspiration from the processing circuitry of the legendary Focusrite Blue Mastering range, the preferred choice of many professional mastering engineers the world over. This piece of Outboard Genius refines the final balance and dynamic energy of the mix, introducing stereo enhancement whilst restoring essential elements which may have become overwhelmed in the mixing process.



The legendary Focusrite Blue Mastering Range

Stereo Expander

Essentially a soft noise gate with a threshold variable from –60dB to –30dB and release time variable between 0.5 and 6 seconds. The stereo expander decreases unwanted background noise, which may appear in quiet sections of your mix, without sounding harsh or brutal. With only two controls and an LED monitoring display, controlling the noise floor becomes a breeze.

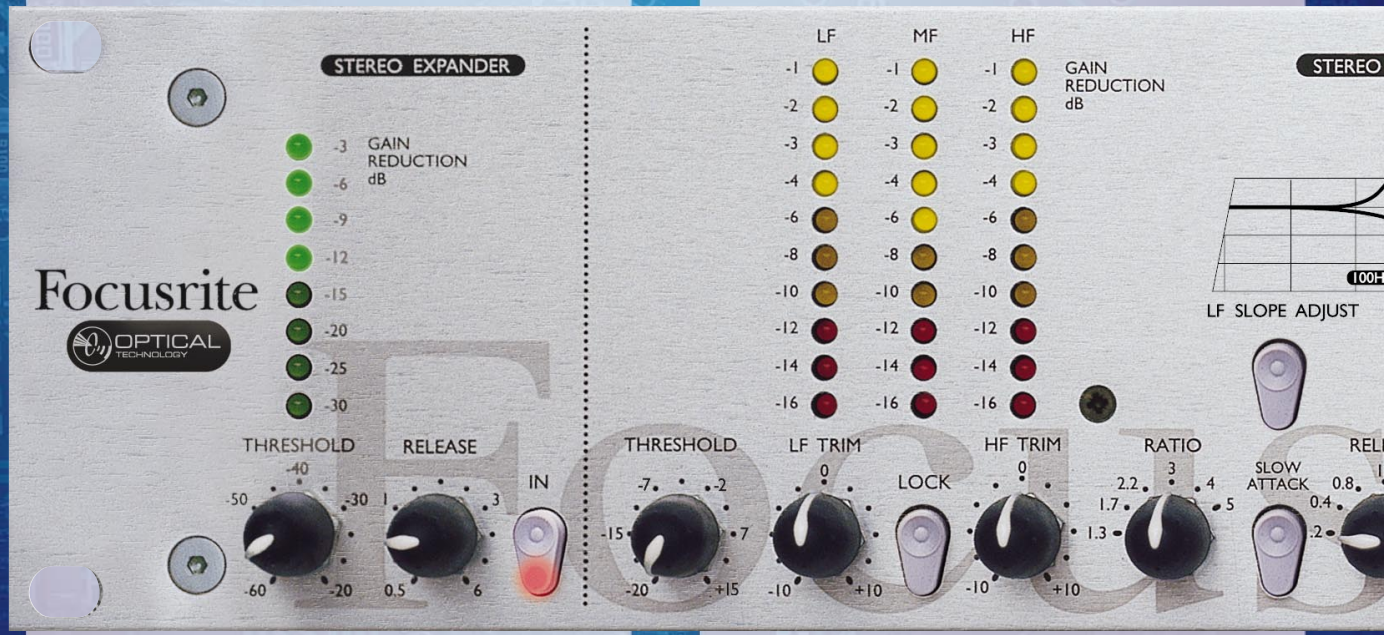
Stereo Spectral Compressor

A serious example of stereo processing power; The Stereo Spectral Compressor is a multi-band compressor with three bands of compression, Low, Mid and High, each being visually displayed. Vital when you need to smooth out different frequency bands and have true control over the mix.

When using a single band compressor, a loud kick drum can, for example, cause the compressor to pump on every kick. In dance music this effect might be desirable and consequently you have the option to lock the compressor across the bands. The MixMaster also allows you to individually compress each of these three bands, so taming the kick alone is as easy as turning down the LF trim, which only affects this bottom end, leaving the rest untouched.

Taming an overly loud vocal or hi-hat is just as easy; Using the MID band for vocals and the HF band for hi-hat and snare, you have complete control over these specific areas.

The MixMaster simplifies this process to 5 knobs, and 2 buttons, all of which are easy to understand, and allow you not only to hear but also see what effect they are having on your mix.



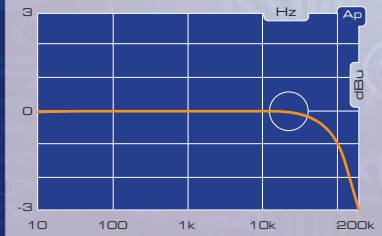


Fig.1; Flat Frequency Response

Frequency is flat from 10Hz to 20kHz

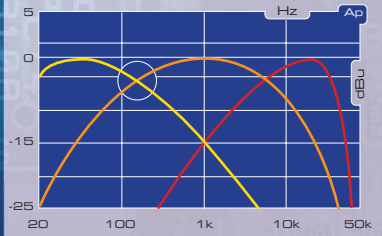


Fig.2; Stereo Spectral Compressor

LF Slope Adjust Switch – OUT
LF & MF crossover at 200Hz

A track put through this section will, when adjusted, sound 'tighter', 'bigger' and 'smoother'. Finally, a device that delivers that elusive 'finished', 'professional' sound. The process is not difficult to employ. Use your ears and you will soon be grinning from one of them to the other as your mix comes to life!

Also included in this section is the LF slope adjust switch. Switching the circuit in gives a fuller bass sound, an instant enhancement for dance mixes at the flick of a switch.

Stereo Equaliser

The Stereo EQ on the MixMaster is three-band, with stepped frequency shelving high (HF) and low (LF) bands, and a parametric mid band. A serious EQ with the ability to add musicality and subtlety to your mix. Each band provides up to 10dB lift or cut; the HF band centre frequencies are switchable at 10, 14 and 20 kHz, the LF band at 40, 70 or 120 Hz.

In addition, both HF and LF can be switched to "tilt", which provides a constant 2dB/octave slope, both starting from the 1KHz point. The "tilt" feature allows gentle emphasis or de-emphasis at either end of the audio spectrum and is a vital mastering function.

The fully parametric mid-band is switchable through 11 frequencies between 100 Hz and 1kHz, or 1 kHz and 10kHz. The Q (bandwidth) control sweeps between a Q value of 0.4 (wide) and 1.5 (narrow).

The MixMaster EQ is a very powerful tool that can gently enhance the tonal quality of the mix, according to the user's objective.

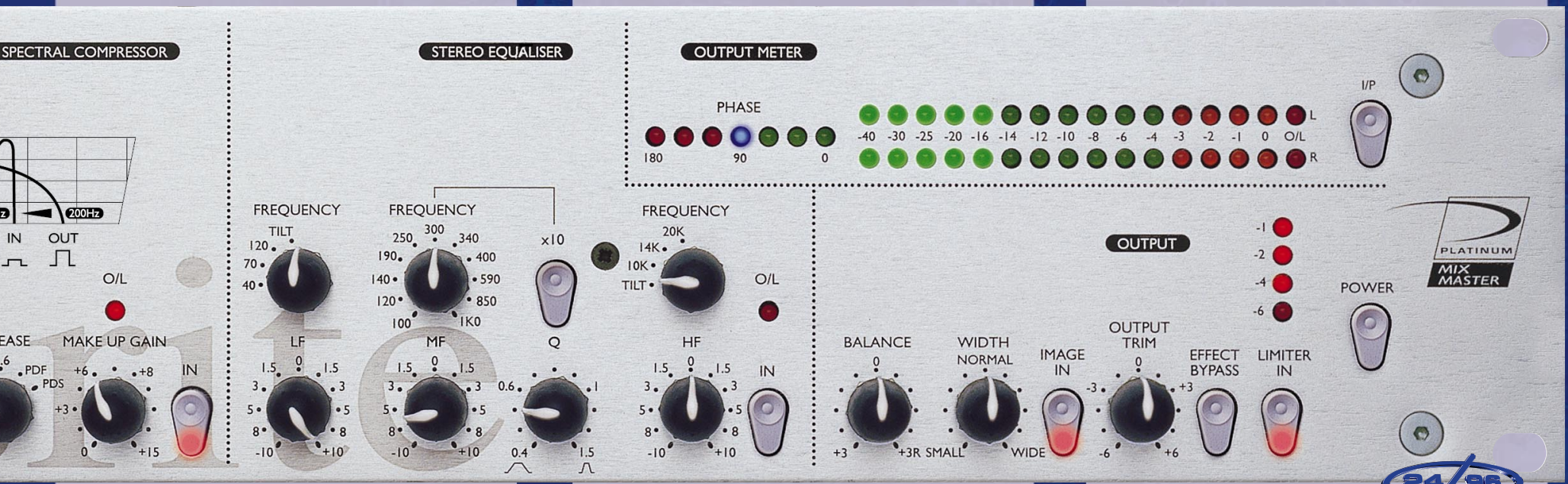
Output

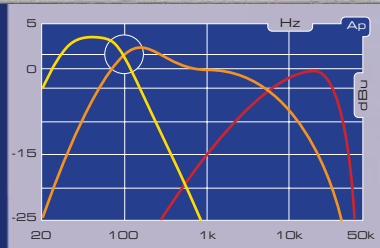
Fine control of stereo balance and trim is available before the A/D converter or analogue outputs. For output protection, switch in the stereo frequency adaptive limiter, with its own LED meter, to stop those critcal digital 'overs'.

Width Control

An analogue spatial enhancer for widening your stereo image. A slight adjustment of the image controller allows you to create an ambient, spacious mix that extends beyond the normal stereo extremities, breathing new life into your projects. A tweak in the opposite direction produces a narrowed, focussed image.

Many width enhancers can cause phase coherence problems for centrally-panned mix elements, but the MixMaster's additional direct inputs allow critical central elements (like lead vocals or a kick drum) to be added to the mix after stereo enhancement. This means that you can enjoy the benefit of wide, airy mixes, but retain critical tight focus on, say, the lead vocal.





LF Slope Adjust Switch – IN
LF & MF crossover at just below 100Hz

Fig.3; Stereo Spectral Compressor

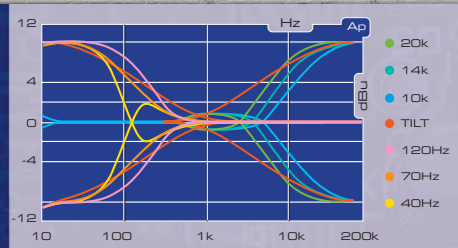


Fig.4; Freq.Response: Shelving EQ

Optional A/D converter

24/96 READY

An optional digital interface enhancement, the A/D converter is a high quality 16/24 bit 128 times over-sampled digital output which can be synchronised to an external wordclock if required. Sample frequency may be set as 44.1, 48, 88.2 or 96kHz and output format is switchable between AES/EBU or SPDIF. Digitally interfacing your MixMaster couldn't be easier or more effective.

Features and Controls



Inputs Electronically balanced, 20kΩ, nominal level +4dBu/-10dBV

Expander

Threshold: -60dB to –30dB (continuously variable)

Release: 0.1s to 5s (cont. variable)

Attack & Release: Variable or auto (program dependent)
Attack: 100µS to 100mS Release: 100mS to 4S

Stereo Spectral Compressor

Threshold: -20dB to +15dB (cont. variable)

Ratio: 1.3, 1.6, 2, 3, 5,7 (switched)

Slow Attack switch: decreases attack time of compressor

Release (switched): 0.2, 0.4, 0.8, 1.6 (Auto Fast, Auto Slow)

LF Trim (200Hz): +10dB to -10dB

HF Trim (3kHz): +10dB to -10dB

Slope Select: 100Hz / 200Hz crossover point from LF to MF

Lock switch: Switches between full-band or multi-band compression

Makeup Gain: 0dB to +15dB (cont. variable)

In/Out Switch: switches in compressor

Stereo EQ

LF: Gain (+/- 10dB) & Frequency (40Hz, 70Hz, 120Hz + 'tilt'

Parametric Mid: Gain (+/- 10dB); Frequency (switched) 100Hz to 1kHz or 1kHz to 10kHz & Variable Q: 0.4 – 1.5

HF: Gain (+/- 10dB) and Frequency (10kHz,14kHz,20kHz+'tilt')
The tilt slopes are very gradual, from 1kHz (~2dB/octave)

In/Out: Bypasses / switches in EQ module

Output Stage

Electronically balanced, 50Ω, nominal level +4dBu.

Unbalanced, ground compensated, 75Ω, nominal level –10dBV

Output Trim: -6dB to +6dB (cont. variable)

Performance Specifications

Headroom: 22dB

THD: @ +4dBu, all sections in, no gain reduction:
<0.006% (80KHz BW). Distortion during gain reduction is determined by the attack and release times set.

Noise: (20Hz to 22kHz): < -96dBu (all sections out);
< -86dBu (all sections in)

Frequency resp.: (5Hz - 200KHz): +/- 2dB

Optional Digital Output:

High quality, 24 bit 128 times oversampled, 96kHz digital output with wordclock sync input (BNC connector).

Dimensions. : 480 mm (w) x 88 mm (H) x 265 (D)

Weight : 5.2kg

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