front line

DRAWMER MX60 FRONT END ONE INPUT CHANNEL

Paul White bypasses his mixer and goes directly to tape with Drawmer's new mic/line/instrument input channel.

Drawmer's MX60 Front End One is the latest in their MX range of analogue processors, and is designed to function as a single-channel mic, line or instrument front end, complete with gate, de-esser, compressor, parametric equaliser and peak limiter. It also includes a recent Drawmer innovation — a tube-sound stage based on solid-state circuitry that provides independently adjustable saturation in three separate audio bands.

Packaged in a 1U, mains-powered rack case and styled to match the existing MX series of units, the MX60 features balanced +4dBu outputs on both XLR and TRS jack, as well as a further unbalanced output via a -10dBV jack. The input stage may be switched to accept mic-, line- or instrument-level signals — the XLR mic input has switchable 48V phantom power, while the line input is on both a balanced +4dBu TRS jack and an unbalanced -10dBV jack. A high-impedance Instrument jack is located on the front panel for use with electric guitars and basses. Phase, 20dB boost, low cut and bright switches are fitted and there's a TRS insert jack directly after the preamp section.

Many of the sections of the Front End One are based on circuitry already employed in existing Drawmer products. For example, the mic preamp is based on the discrete-component design used in their respected 1960 compressor, while the de-esser works on the same principle as that used in the MX50. Mic and Instrument buttons are used to select the input source — when both buttons are out, the Line input is selected, and status LEDs are used to confirm which input mode has been selected. The VCA-based compressor is similar to the MX30, while the peak limiter and gate can be traced back to the 241 compressor/limiter. Like the compressor, the gate features Drawmer's Programme Adaptive auto-adjustment, meaning the time constants are automatically optimised for the material being processed.

A three-band equaliser follows the compressor, providing shelving high and low sections as well as fully parametric mid-range EQ that can be adjusted right up to the 16kHz 'air' band. Further timbral modification can be made using the Tubesound section which, as the name suggests, is designed to emulate the effects of an overdriven valve, though its circuitry is all solid-state.

The output stage includes a limiter with a preset threshold that comes before the output gain control. A two-stage soft-hard limiting approach has been adopted here, with yellow and red LEDs signifying soft and hard limiting.

A Closer Look

In addition to the usual phase and low-cut facilities, the preamp stage includes a Bright switch for the benefit of those instruments that are normally played through a 'voiced' amplifier, and a 20dB gain-boost button. A four-LED level meter shows the preamp output level and the mic/line gain is adjustable over a range of 60dB.

In the dynamics section, the gate has only a Threshold control, which is turned fully clockwise to bypass the gate. Red and green LEDs show the gate's open/closed status, and other than a Fast/Slow release button, there are no other controls. However, there is a degree of time-constant automation going on behind the scenes, so the gate isn't as basic as it looks.

The Drawmer approach to de-essing is quite sophisticated, in that the de-esser continuously readjusts its own threshold level based on a ▶

DRAWMER MX60

pros
- All the separate stages have the same high sound quality as their dedicated counterparts.
- Easy to set up with mic, line and instrument inputs.
- Attractively priced.

cons
- As with any channel type of product, the individual stages offer less control than on individual dedicated processors.

summary
The MX60 Front End One is a very flexible all-round front end, and is ideal for recording directly to tape or hard disk systems.

SOUND ON SOUND

DRAWMER MX60

comparison of the sibilant sound level and the overall level of the audio being processed. During de-essing, only the offending frequency band is notched out, so the annoying lisping effect characteristic of full-band de-essers is avoided. Furthermore, because much of the process is automatic, the user needs only to select Male or Female (which defines the frequency band in which sibilance is expected to occur), then adjust the De-ess control until the sibilance has been adequately reduced. When De-ess is turned fully anti-clockwise, the de-esser is off.

The compressor has no attack or release controls, though (like the gate) its time constants are programme-adaptive, so it's rather like using a compressor with Auto mode switched on. The ratio is fully variable from no compression at all to hard limiting, and a four-LED gain-reduction meter shows you how much compression is being applied. Gain makes up for any gain lost due to compression (+20dB, -30dB) and a Bypass button takes the whole dynamic section out of circuit.

I don't advocate the excessive use of EQ, but it's nice to have access to a good equaliser when you need it, and the EQ section of the MX60 is a good compromise given that there is neither the room nor the budget to provide a fully featured, multi-band parametric equaliser. There are three bands of equalisation; the LF and HF bands are simple shelving filters, but the mid section is fully parametric and may be swept from 250Hz right up to 16kHz. Bandwidth is variable from 0.3 to 3 octaves and all three sections have a +/-18dB control range.

The MX60 contains three circuits (see 'Tubesound' box), each fed from what is, in essence, a three-way active crossover circuit. Each band has its own Drive control that both increases the signal level in that band and adds new harmonics. I found that by juggling the Tubesound and EQ settings, I could achieve a wide variety of effects, from quite subtle enhancement to very obvious coloration.

Finally comes the output stage, which includes the fixed threshold limiter and the so-called Master Fader (actually a knob), which provides output level control with up to 15dB of gain. An eight-LED meter reads the output level from -20dBu to +15dBu.

In Use

I've used a lot of Drawmer gear over the years and I'm pleased to say the Front End One behaved pretty much as I expected, though the Tubesound section was new to me. The Front End is very clean, and its performance with microphones could certainly be mistaken for something rather more expensive. Having a Bright switch is useful for clean guitar sounds, but it is only an approximation of a typical amp voicing so further EQ will probably be necessary.

Moving on to the dynamics section, the gate is easy to set up and quite unobtrusive, providing the amount of noise being dealt with is reasonable and that the threshold is set as low as possible. The Fast/Slow switch is a big help, with Fast release being better for most percussive sounds. I didn't notice any clicking on slower sounds, so the Programme Adaptive attack obviously works.

The de-esser section works better than most dedicated de-essers; it's incredibly easy to use and gets right to the heart of the problem without introducing significant side-effects, providing you dial in only as much as is necessary to get the job done. The compressor also felt familiar and comfortable, and behaved politely and effectively on just about anything I could throw at it. Drawmer compressors always seem to behave predictably, and sit nicely between those compressors that are quite transparent and those that impose a lot of their own character on the sound. At higher settings, you can hear the compressor working, but in a smooth, musical way. Not only is it great on vocals, but it's also good on guitar and bass.

Although the EQ isn't as flexible as having a full parametric on every band, it sounds smooth and is incisive enough to tackle problem spots in the spectrum without throwing everything else out of balance. The shelving sections sound very sweet, and the wide range of sweep on the mid-frequency control makes it quite versatile.

Summary

Given its competitive price and the number of high-quality processing sections included, the MX60 looks like a bargain. It is inevitable that comparisons will be made with Focusrite's Platinum Voicemaster, though both units have their own distinct characters so they can't be considered interchangeable. As a quality front end for any serious project studio, the MX60 would slot in nicely, and for those working with computer-based hard disk systems, it provides an ideal way for getting mic, line and instrument signals into the system cleanly. I was going to single out the compressor and de-esser as being worthy of special attention — but then, the mic amp is also extremely good, and I can't really complain about the EQ either. What's more, Tubesound might not be something you'd use all the time, but it really helps to extend the tonal palette of this device, and in some applications, the results can be outstanding.

The voice channel market has grown pretty busy in recent years, and I'm surprised Drawmer didn't launch something like the Front End One earlier. Now that it's here, I'm pleased to say that it delivers classic Drawmer performance at a very affordable price, and given the number of people now recording direct to tape or disk without going via a mixer, it should do well. SOS

Tubesound

The major innovation in the Front End One is its Tubesound section which, as its name implies, imitates the effect of an overdriven valve. This can sound gently flattering or a trifle angsty, depending on what you do with it. For example, adding just a hint of the high and low Drive gives a vocal mic more of a tube sound with a nice sheen of high-end enhancement, but if you go too far, the coloration may be too much. Gentle high-end enhancement is particularly useful on dull-sounding acoustic guitars, and applying extra drive may be just what's needed to treat other instruments, so the extra drive range is justified. For example, you may want to make a digital synth sound more analogue, or thicken up an over-clinical clean guitar sound. Tubesound isn't supposed to be a substitute for guitar overdrive, so don't expect full-on fuzz — the distortion is quite audible at high settings, but still very restrained. Similarly, there's no speaker simulator in the MX60, so overdriven guitar can sound a little edgy if you don't patch in an external speaker simulator, though the Tubesound effect is a lot smoother than you might imagine from the circuit description. Interestingly, adding even quite generous amounts of the low band of Tubesound to an instrument adds very little in the way of fuzziness, so experimentation often yield useful results, especially when combining Tubesound with EQ settings.

information

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