**Review of Seeport Mixer - Line Up magazine, issue June/July 2002**

# Seemix Seeport Portable Mixer

***ALAN CRIDFORD MIBS investigates a location mixer from the land of the midnight sun.***

When I think of countries that manufacture film and broadcast equipment Norway is not one that springs immediately to mind. This is very unfair, though, as this country has a grand broadcasting tradition with many manufacturers in our field. Seemix is one of them and, under various owners, has been manufacturing a range of high quality analogue audio equipment for many years. The Seemix Seeport 4, seven channel location mixer is one such product, being a general-purpose analogue mixer, built to a very high engineering standard, in a small frame size and well-suited to the rigours of the location film recordist or small OB unit.

Although at first glance the Seeport 7/4 would appear to have an odd number of channels (seven), this is due to the particular combination of frame size and output configuration of the review model. Essentially, one of the channel positions is taken up with the extra double-output module that the 4-output configuration requires. I was driving a Deva II recorder so the four separate outputs were perfect for this job. A conventional dual-output configuration would provide eight input channels.

The faders are full-length Penny and Giles types with a silky smooth feel to them.

## Simple EQ

Very comprehensive facilities are provided on the mono mic/line channels consisting of peak LED, 'on air' LED, 4 routing buttons with LEDs and PFL switch with yet another LED. M/S decoding is also provided on each channel pair together with Pan off-switch and pan control. Each channel is also equipped with four Auxes with both pre and post send switching. However, while Aux 3 and 4 have send level controls, Auxes 1 and 2 only have switches on the channel strips, but all the Auxes have master send level controls.

The equalization is simple but effective. Two swept bands are provided with a fixed Q of 1.3 and ±12dB boost and cut. The frequency ranges are 50Hz to 1kHz for the bass end and 600Hz to 10kHz at the high end. I would have preferred to see an EQ bypass switch fitted, as I prefer to adjust the EQ and then compare my corrections with the original source, which is not possible on this mixer. A high pass filter is provided on a switch, which offers 80 and 140 Hz turnovers with a roll off of 12dB per octave.

A fixed 40dB of gain is provided on the electronically balanced mic inputs with a further ±20dB of trim available. The transformer balanced line input shares the ±20dB trim control. Phase reverse and phantom power switches round off the mono channel modules.

As some of these controls are located between the faders I was initially concerned that, in operation, I would hit these buttons and switches regularly. I did - but only when I dumped my script or cans on the top of the mixer - not when I used the mixer properly. Putting script and cans somewhere else, which is good practice anyway, solved the problem.

## Mono and Stereo channels

The review mixer was fitted with six mono mic/line channels and one stereo line channel. The latter differs in that it is a dual-input with no mic gain available. EQ is simplified to just high and low shelf filters, starting at about 1kHz in each case, with a further high pass switchable filter set at 140 Hz. The input is electronically balanced and the channel is provided with MS decoding, phase reverse and mono switches. A variable gain trim of ±20dB is provided.

The main output units provided two outputs each, and had additional labels to mark them as A, B, C and D outputs. Half width P&G faders are fitted to each unit, which also includes gangable limiters, and two returns. Two vertical rows of LEDs at the top of the strip provide metering with a Nordic PPM scale (similar to the SQN meters). As these are parallel rows of LEDs, stereo balance can be judged more accurately than with conventional adjacent moving coil meters. I liked this arrangement, as I was immediately able to see how I was routing split tracks.

The monitor module has a similar, smaller row of LED meters, which display the monitoring signal. Two banks of monitoring switches enable any source on the mixer to be auditioned, including some external sources.

Outputs are provided to drive loudspeakers and the main headphones socket. Both rows of selector buttons could be summed to mono, and MS decoding is also provided. A second head phone socket is also provided which can have its source selected by internal jumpers.

## Shouts of pain

A dedicated module generates line-up tones (1kHz, 60Hz and 12kHz) and provides talkback functions via an internal mic (or an external mic connected via Bantam jack). Talkback can be sent to all the auxes as well as the outputs. None of these buttons latch, which is fine for talkback but makes sending tone to an output much harder than normal as you have to hold the button down yourself! Also, sending tone to all four outputs at the same time is not really possible so I resorted to recording tone on one output only. The tone generator is actually switched with the talk destination buttons and it is easy to send tone inadvertently when you intend to speak. I was soon told of my error when a shout of pain came from the set! The master aux send controls are also included on the monitoring unit together with additional A to C and B to D (sub-group) routing buttons.

The last module in the mixer is the power supply, which in my case was the AC/DC version to enable me to use the Seeport mixer on location. This unit gets quite hot as it draws 2 amps at 12 volts. This is fine on cold days for hand warming, unfortunately it knocked out my lump battery quite quickly on the first day of the shoot and I quickly switched to AC power whenever I could. This power consumption is due, in part, to the ability of the outputs to drive 600 Ohm lines to professional levels, as well as the large number of LEDs on the operating surface - some of which I would consider disabling if I owned the mixer.

The back panel provides all the I/O connectors which are mainly XLR types, with a couple of multi-pin D-sub connectors. The latter are used to provide Cue outputs and remote control, and the mix busses for cascading two mixers. Another provides metering feeds for an optional VU meter bridge and optional D-sub connectors can be fitted to each channel to provide insert points. The ubiquitous IEC mains plug is also located on this panel.

## Very competent

Many of its features make the Seemix Seeport 7/4 mixer ideal for location work but it can also be specified with many alternative options to suit radio, TV and OB installation, for example with presenters modules and telephone hybrid units, as well as a variety of monitor split and automatic mute facilities defined by internal jumpers.

Overall I found the Seeport a totally competent and flexible mixer which I'm sure will prove to be a very reliable heart in any sound installation. The Seemix Seeport 7/4 must rank amongst the top flight of small analogue mixers in the field. jbs

## Versions, Configurations, and Modules

The Seeport is available as either a two-output version, the Seeport 2, or a four output version, the Seeport 4. The same frame is used for both versions, the differences lying in the motherboard and rear panel connector complement.

The smallest of the three available frame sizes accommodates eight input channels (seven on the Seeport 4 model), while two larger frames cater for 12 and 16 channels (11 and 15 respectively on the Seeport 4). Input channels may be any combination and arrangement of mono mic/line or stereo line (with either two or four output routing facilities). The monitor and Talkback/Aux modules are also available in configurations to suit the two or four output versions of the console.

In addition to the modules already described, several others are available, including a telephone hybrid module (which occupies two module positions), again in both 2- and 4-output versions. This is a full function channel module with aux sends and EQ, and includes a postfade channel output to provide a stand-alone telco feed independent of the rest of the mixer. As an alternative to the standard output modules, a 'stripped down' version is available with no controls at all and the internal summing amplifiers set at unity gain. This is primarily intended for self-op on-air radio applications.

A Monitor Expansion Module is also available which adds several useful functions, including five further stereo monitoring sources, a PFL speaker, a phasemeter and an additional headphone output. A slot is normally reserved for this module in the two larger frame sizes. The Presenter Monitor Feed Module occupies two module positions and is intended for use in OB situations, providing one or two presenters with independent, dedicated headphone/earpiece mixes of various internal and external signals. The presenter mixes can be monitored via the mixer's main monitor module.

Finally an AC-only PSU module can be fitted instead of the dual supply AC/DC PSU, where battery-powering is not required.