Lawo mc²66

For a company that prides itself on its ability to deliver a user-specific console in the digital age comes a desk for everyone. ZENON SCHOEPE reports on an important live production board.

LAWO HAS ALL the credentials that a prospective customer ought to be interested in — a nice bit of history and lineage behind it, family business, technologically led, innovative and different, good track record with a lot of German broadcasters, tank-like build quality, and reassuringly exclusive. For someone who prides himself on being able to identify, given enough time, most desks from the last 20-odd years from 10m away I don't score that highly with Lawos. I can spot the brand pretty quickly — providing it's not in one of those custom colour German broadcast finishes — but I'll have a problem with the model and I know I'm not alone in this. It comes down to the number of customisation options that the manufacturer's big digital desks are available with and why they can look so very different. Those who believe that custom configuration of desk worksurfaces ended with analogue's heyday will do well to look into the available options for Lawo's top flight boards, with the arrangement of the centre sections being a particular case in point.

My desk-spotter score will go up in the future with the arrival of the mc²66, which, with the sole exclusion of a user panel, is as close to a standard 'fixed' digital desk as things get.

We're looking at a console for live broadcast and particularly OB van use as this attractive new model embraces new build techniques that have resulted in a more compact package. It arose from the need to create a desk that was easy on pricing, manufacturing, developing and size. Comparisons are inevitable to Lawo's mc²82 and the new desk is smaller (fader panels are 33mm wide compared to the 82's 40mm) which means it can realise 56 faders (48 channel and 8 main) in a typical OB van width. It does away with individual fader modules in favour of fader block panels and it's smaller, lighter with a new aluminium shell (a 48-fader version weighs about 82kg), and it sips its electricity far more frugally.

As already implied, it looks substantially different from all the other large Lawos being sleeker and less upright in a wind-tunnel sort of way. Spec-wise its very able, with a routing matrix integrated into its core you can hit a matrix capacity of 3072 mono I-Os, 192 full DSP channels and 144 summing buses at 96kHz. Worksurface modules and 12-inch TFTs are connected on a star and modules can be hot plugged plus there's redundant DSP. Interfaces cover mic, line, line out, AES, TDIF, MADI, ATM, SDI embedded, GPIO and serial.

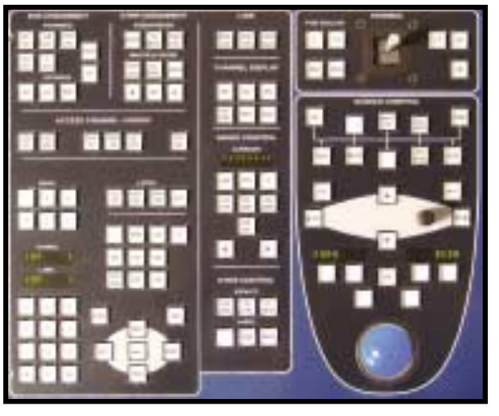
Operationally it's a combo of central access and local assignment via four rotaries per channel strip and the displays alter according to whether you have the desk set up for broadcast, production, recording or surround modes. You can also split the console for two-man operation with separate bank switching, monitoring and PFL summing.

In the Lawo product range it sits below the mc²82 and is perhaps best described as Lawo's affordable big desk. The worksurface is scaleable although Lawo thinks that the 48 channel fader configuration will be something of a mainstay with the option to take this out to 64 channel faders, plus, in both cases, the 8 main faders in the central section. Standardisation of the centre section was one of the key aims in designing the mc²66, to get away from the economic implications of a full custom build. The other really important stuff has occurred in the core rack.

Changes to the way Lawo is now doing its processing (new SHARCs) have made this much more compact than that in older Lawo models. Substantially so in fact; it almost doesn't look like there's enough of it compared to some of the older Lawo processing monoliths. What is most interesting is that this new compact core is exactly the same as that on the mc²82. The hand-on is that this newer core is cheaper than previous equivalents for both models and an mc²66 worksurface is around 40% cheaper than an mc²82 worksurface. It means that a small worksurface mc²66 starts at around Euro 120,000 with 32 faders, 8 mains, three DSP card and an appropriate selection of interface cards. That's new price territory for big Lawo technology.

An important point to note is that next year Lawo will have completed the redesign of this DSP because at the moment, for matters of continuity, its structure is the same as that on the older DSP boards. The newer DSP boards are much more powerful than the older ones and at present they're only running at around 25% of their capability. It means that if you buy a mc²66 now with, say, three DSP boards for 72 channels, in the middle of next year you will double your channel count with what will effectively be a software upgrade!

The worksurface is the sum of several years of tying down user requirements and experiences. The screens are very nice with an attractive main panel in the centre section and some fabulous looking metering above the channel bays. The general demeanour is



almost futuristic by Lawo's normal conservative standards. It's certainly modern and clear. I like the way the various sections of what is still an extremely well stacked centre section are neatly and stylishly demarcated on what would otherwise be a field of switches. Lawo has also clustered switches in an ergonomic way and not restricted itself to a chequer board layout; they are arranged around your hand.

A keyboard is employed only for naming and set-up routines and the rest of the work is done on the surface. The configuration and set up sorts out the desk sources and destinations and the matrix arrangement and in truth, once this has been optimised for a particular application you probably won't be needing to bother with it all that much.

The worksurface has six banks and each bank has two layers. You set up your surface with assign buttons and you're offered a variety of methods for achieving this for individual channels, blocks of channels or the whole desk. The logic is consistent, it's fast and the number of key presses involved is minimal; you select the relevant action key on the centre section and then press the appropriate channel Select and it's done. Once you grasp this fundamental operating principle you can apply it wherever you go.

Possible target buttons flash to tell you when you are in the process of selecting and a press of the relevant centre section button switches them off and cancels the selection mode. You can Forward assign or Reverse assign buses allowing you to choose a channel and then decide which bus you want to send it to or choose a bus and then decide which channels you want to assign to it. A subtle distinction but one that has important operational benefits I think you'll agree.

You can insert channels into a bank and, for important channels, you can assign them to both layers and to all banks so they will stay put regardless of any bank switching you perform. In line with its live production use the mc²66 offers a number of ways to 'safe' bits, parts or actions on the surface from inadvertent alteration.

The full channel facilities include input mixing, the usual input switching functions, MS decoding, leg and phase switching for stereo inputs, stereo image and width, and delay. Dynamics offer a gate and expander and a compressor/limiter. EQ is 4-band fully parametric with bell/shelf switching on the top and bottom and there are also high and low pass filters.

Assigning parameters to the pots on the channel strips involves copying a parameter to a 'clipboard' and then 'pasting' it to the relevant pots simply by touching them. You can 'freeze' control pots so snapshot changes don't alter them. Faders have a PFL overpress and a null position 'virtual' notch along their throw — both are achieved by the fader motors.

Metering can be programmed for its insert point per channel and the metering screen displays group, bus, clean and main assignments together with gain reduction for the dynamics. The bottom block of a channel's metering panel will also show a graphic representation of the relevant 'Free Control' knob's parameter that has been grabbed. This can change dynamically, in step with whichever pot is being adjusted, or it can be fixed to display a particular parameter continuously.

Panning is fully multichannel with an intelligent and informative display that gives you feedback on source position. There is an excellent monitoring control panel to 7.1 and a selection of ways to control monitoring feeds to other destinations.

There are a multitude of clean and direct feed possibilities, advanced variations on talkback and comms themes, N-1 matrix and Audio Follows Video external control with adjustable Rise, On and Fall times. The mc²66 has snapshot automation but no dynamic automation, yet.

It is hard not to be impressed by Lawo technology; you're conscious at all times of driving an extremely comfortable and well-speced board that is working well within its considerable limits.

The mc66 does encourage you to work in a particular way. While what it does is not dissimilar to other digital desk of its type and category, how it achieves this is different enough from more 'ordinary' boards to probably require its specifics to be explained to you. While I'm not saying that an intelligent and well travelled engineer couldn't just sit in front of it and get the hang of it on his own from cold, I am suggesting that an outline of some of the key logic and underlying technology principles would help you to get much more out of it more quickly. It's a powerful desk with a lot of capability and like all really good designs it has its own character and originality. Once you take this on board you'll find it fast and satisfying. If you are experienced in other Lawo boards then I reckon you would find the mc²66 as easy as falling off a log.

The mc²66 is a very important desk for Lawo at a time when a lot of manufacturers are releasing very important desks. It's to do with the refinement of existing markets and defining of new ones, price expectations and distilled feature sets. I believe the mc²66 will be looked back on as the desk that broke the mould at Lawo and opened up its appeal to a much broader audience. I think it's significant and appropriate that its arrival coincides with Lawo breaking out of its predominantly home and local markets and looking elsewhere to internationalise its business.

It's an impressive desk; it really is. Far more approachable than its custom configurable siblings, it will appeal to a much broader group of end users. It deserves to do well. ■

PROS Clever technology; modern appeal and outlook — Lawo's 'jazz' console; 'affordable' now with the promise of doubling the channel count next year.

CONS Not an 'ordinary' digital desk operationally; most experienced 'ordinary' desk users will probably require familiarisation.

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