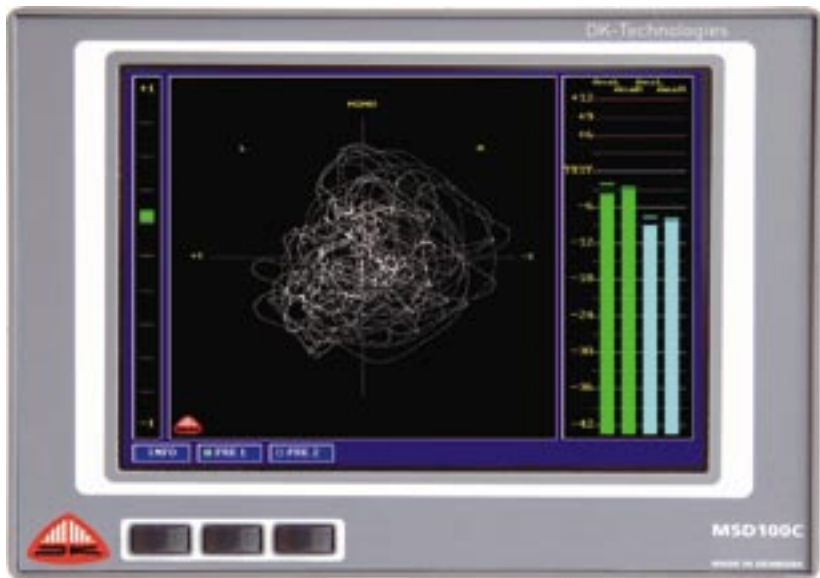# DK-Technologies MSD100C

Often overlooked, underplayed or unappreciated, good metering nevertheless has a vital role to play in any system configuration as the window on your sound. ROB JAMES settles down and inspects his goniometer.

THE NEED FOR ACCURATE and easy on the eye metering should not be underestimated. Although ears should always be the ultimate decision making tools, we all have to operate within technical constraints best judged with the help of a trustworthy meter. The need for this has never been greater. Production methods are rapidly changing with the recognition that the conventional console is redundant in many DAW — centric applications. External metering is set to become the next big thing along with the new breed of controllers combining monitoring with source and destination routing. This is not to say that DAW metering is inadequate, simply that it is not in the right place. Metering must be instantly visible and instinctive at all times and should be able to look at sources and destination returns in addition to levels inside the DAW.

Danish company, DK-Technologies is well positioned to take advantage of the new age. MSD stands for Master Stereo Display and DK's first model, the MSD 550, made its debut as recently as 1994. Somehow it feels as if these meters have been around for ages, always a sign of an appropriate and elegant technology. Today, the DK range of standalone meters runs from simple monochromatic stereo displays, in the MSD100-series, all the way up to the flagship (and costly) MSD600M++ modular multichannel (up to 32) meter unit with surround sound analyser. Apart from conventional metering this offers Jelly-Fish surround sound monitoring, Leq(m) loudness, spectrum analysis and many other options including SDI break-out.

Until now the entry-level MSD100 series has only offered relatively low-resolution (320 x 240) monochrome screens. The originals sold in their thousands and are to be found everywhere from education institutions to major broadcast facilities. The new MSD100C brings higher resolution (640 x 480) and a colour display down to a more affordable price

point, along with the main metering tools, bargraph PPMs with programmable scales, phasemeter, audio vector oscilloscope and level meter. Although the asking price may still seem a little steep at UK£1200 (+VAT), it is worth remembering that a standalone single mechanical stereo PPM was over UK£900, the last time I checked.

I was brought up on BBC standard PPMs and I could probably still line up a valve one if ever the need arose. However, times change and the mechanical PPM, no matter how sophisticated the electronics, is no longer adequate for many current applications. The general principles still hold good though. An ideal level meter will have an extremely fast rise time and a much slower fall time, will be simple to interpret, and will be designed not to cause fatigue when used for many hours at a stretch. The MSD100C ticks all the boxes and adds several extras.

A maximum of four PPM bargraphs are grouped in pairs. One pair is sourced from the analogue inputs, one from the digital. Strangely, there is no Sum and Difference option, with one pair looking at A+B and one at S&D. For anyone not familiar with this, it is a common UK broadcast option where one meter measures the sum of the left and right signals (A+B) while the other measures the difference between them (A-B). Providing the difference is lagging the sum by at least 3dB the signal is reasonably mono compatible and the left-right signals are 'in-phase'. If the difference consistently leads the sum, then the mono compatibility is compromised and the Left and Right signals are likely to be out of phase. Although the phasemeter does substantially the same job, and the goniometer also conveys the same information in a different form, there is a considerable body of opinion that prefers the Sum and Difference alternative.

Metering is a very personal thing and 'standards' vary wildly from country to country. DK recognises this and provides a wide range of scales along with a PC application, MSD-Config, to upload these to the MSD100C. This application also allows for limited customisation of other parameters. Colours can be chosen from a palette of red, blue, green, yellow, fuchsia, aqua and white and various screen parameters can be varied. Scales can be user defined within the DK-Scale section of the MSD-Load application, also included. With this, even LEQ(m) scales can be defined. The applications are not the most user-friendly I've ever encountered, but you won't be using them very often.

Although supplied with a U-shaped mounting yoke and base-plate for free-standing operation, the MSD100C can easily be built into a mixing console meter bridge or other custom furniture. The case is thin (36mm) with a modest border around the screen, making best use of scarce real estate. Three keys on the front are the only operational controls and have a very positive click action. Soft labelled Pre A, B and C, pressing a key selects one of the three preset set-ups. On power up this defaults to Pre A. Double-clicking a key takes you to a list of the 11 presets currently installed in the unit. The list is scrolled with the right-hand pair of keys and your selection is assigned with the left-hand key to whichever key was originally double-clicked.

A single 25-pin D-sub connector deals with the left and right analogue, stereo AES-EBU and power connections. The supplied break-out cable terminates in XLR connectors. Power uses a 4-pole version to avoid any unpleasantness. This is a much more positive solution than the coaxial power connector fitted to the earlier MSD100 series units. The UK power supply included is an in-line type. Two more D-sub connectors' deal with VGA for connecting a standard PC-monitor and a utility connection for RS232 to a PC and power.

DK continues its unbroken run of desirable products with the MSD100C. The price premium over the monochrome units is modest and the benefits of colour tangible. Accurate metering is not an indulgent purchase but an often overlooked essential. It is also a good investment. In the same vein as a high-class monitoring system and long after this year's whizz-bang workstation is being used as a doorstop, the MSD100C will still be a relevant and desirable professional audio tool. ∎
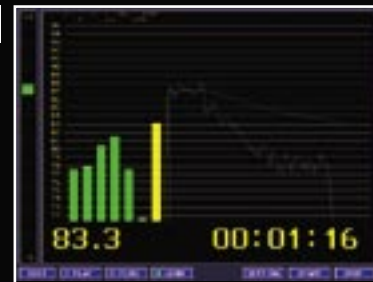
PROS	Precision metering; excellent operational ergonomics; very pretty.
CONS	Configuration applications would benefit from an update; no Sum and Difference PPM metering; price invites competition.
EXTRAS	

New software for DK's flagship audio meter, the MSD600M++, is aimed at engineers working with surround sound trailers and commercials for movie theatres. The Graphical Leq(m) software package allows users to mix to the highest score on the Leq(m) loudness standard. SMPTE timecode input brings automated Start/Stop points and gives a direct readout of where the sound material can be optimised for louder trailers/commercials.

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