DK-Technologies Product Showcase

DK - Technologies

Multichannel HD/SD Waveform Monitors

The PT0760M has been designed to meet the increasingly complex demands being placed on the broadcasters of today. In order to reduce space requirements we have introduced the ability to have up to four waveform monitors in a single chassis while keeping each input independent and providing auto formatting and sensing on each channel.

Smart Timing Analysis - STA - displays timing differences between the external reference, Black Burst or Tri-Level as well as multiple formats.

Smart Video Landscaping Compressor - SVLC – provides highlighting of the detail within the signals. This makes any errors easier to see and improves the user experience.

FEATURES...

- Up to 4 Independent Video Inputs
- Each Input Auto Sensing HD/SD
- 4 Assignable HD/SD Outputs
- Waveform Monitor
- Vectorscope
- Colour Gamut Alarms
- **STA - Smart Timing Analysis**
- **SVLC - Smart Video Landscape Compressor** for detail highlighting
- Independent External Reference Input
- Full HD/SD Audio De-embedding
- Dolby E Decoder
- **StarFish™** & **JellyFish™**
- 5.1/6.1/7.1 Metering
- Simultaneous Audio & Video display
- Surround Sound Downmix capability
- Independent Video & Audio controls
- Multi-user Control Panel (Optional)
- Assignable DVI Output
- Capable of displaying 3 separate images (Waveform / StarFish™ / Vector / Timing) using internal and external screens.

StarFish™ with phase correlation display, timecode and full 5.1, stereo & mono peak metering.

The PT0760M can display up to 4 video channels and up to 16 audio channels on the internal screen. The embedded audio from each of the 4 input channels can be de-embedded (maximum 16 channels). Using the inbuilt DK-Technologies audio matrix, a stereo downmix can be easily achieved removing the requirement for external matrixes or mixer. The meter can been equipped with Dolby E decoding.

The full DK-Technologies audio metering option provides the world renowned **JellyFish™** & **StarFish™** displays for Surround Sound metering. The audio option also includes **BLITS** Ident Tones for 5.1 Surround, ITU Loudness scales, LEQA & LEQM, Spectrum Analysis (1/3rd Octave and FFT).

The Next Generation

DK - Technologies

HD-SD VariTime™ Sync Generator

FEATURES...

- Multi-format sync capability: 19 HD formats in addition to PAL, NTSC and standard definition SDI systems

- Full genlock capability: 1 frame for HD; 2 fields for SDI; 4 and 8 fields for NTSC and PAL

- GPS Genlock and LTC Generator Option

- Up to 12 individually timed tri-level sync outputs

- Dual Link HD-SD Test Signal Generator

- Up to 8 individually timed HD and SD serial digital outputs and 2 SD serial digital outputs

- "Lip Sync" moving element in SDI test patterns synchronised to embedded audio "click"

- Programmable text strings in test pattern generators can be placed on the screen where needed

In today's environment, sync requirements are becoming increasingly diverse, as they need to support multiple production formats. A new flexibility is called for in synchronising systems. The PT5300 HD-SD VariTime™ Sync Generator is specially designed to fit into this new environment with all signals needed for synchronisation, fault finding and checking of the entire video chain. The generator conforms to the relevant ITU, SMPTE, EBU and AES standards.

The generator has up to 12 separately controllable tri-level outputs. For each output any of 19 HD formats can be independently selected. For several HD formats genlocking to the frame rates of SD 525-line and 625-line systems will automatically take place. In this way frame synchronisation is ensured between SD and HD. Each of the 4 tri-level outputs can be individually delayed or advanced with 6.7ns resolution in phase to each other and the mainframe system sync or genlock input.

A GPS module is available as an option for the PT5300 mainframe. The PT8616 GPS Genlock module assures precise video synchronisation through use of the ultra accurate clocks in GPS satellites which will allow synchronisation to the main studio from a remote location without physical connection.

PT5211, is an extremely flexible Change-Over Unit capable of switching all kinds of video, audio, and sync signals, and it is designed to meet the requirements for extremely high reliability offering a MTBF as high as 80.000 hrs.

PT5202 is a cost effective stand-alone solution with an internal 10MHz TCXO master reference, genlockable, with a user friendly front panel control
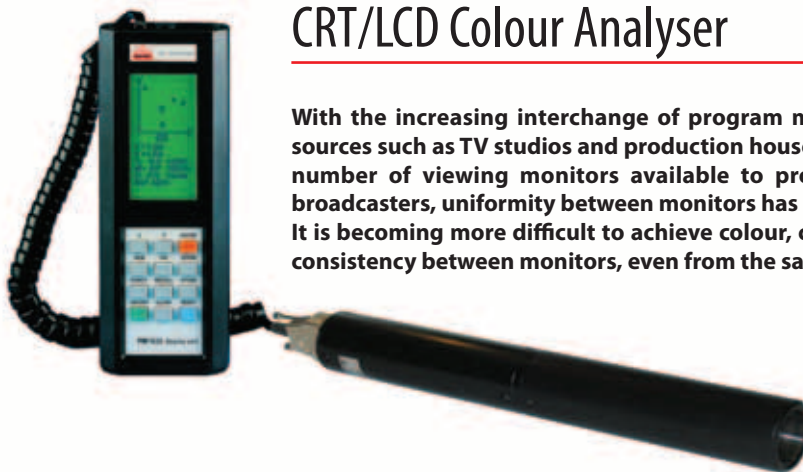
CRT/LCD Colour Analyser

FEATURES...

- Colour balance alignment of LCD, Plasma and CRT monitors

- Handheld battery operated display unit

- User-friendly RGB bargraph display for easy adjustment of the monitor

- High speed operation for automatic manufacturing systems

- Communicates with standard RS-232 interface

- True CIE Standard Observer characteristics

- Reproducible and accurate alignment of any monitor

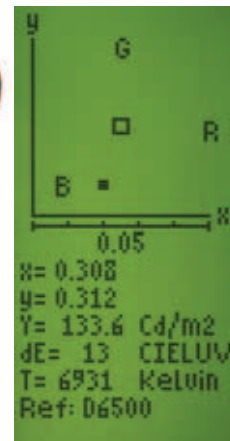- Calibration traceable to international standards

With the increasing interchange of program material from different sources such as TV studios and production houses and the ever greater number of viewing monitors available to programme makers and broadcasters, uniformity between monitors has become a critical issue. It is becoming more difficult to achieve colour, contrast and light level consistency between monitors, even from the same manufacturer.

Colour balance alignment of LCD, Plasma and CRT monitors can be achieved with the user-friendly RGB bargraph display delivering easy adjustment of the monitor. Two absolute measuring modes are available in the PM5639, both defined by CIE, the International Commission on Illumination.

Measuring of white balance on an LCD monitor by use of DK-Technologies LCD colour sensor.

The CIE display showing the measurement as x,y coordinates. The solid ball is the actual measurement, while the square is the target.

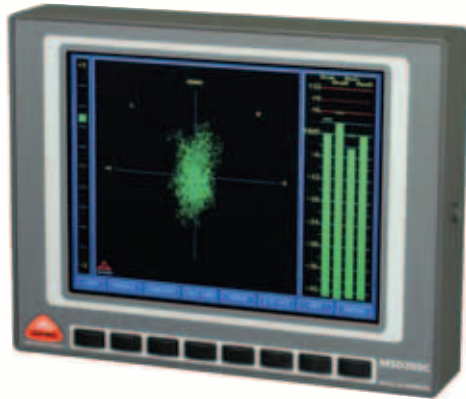**Solutions in Audio & Video**

DK-Technologies Product Showcase

DK - Technologies

Master Stereo Meter

The FFT spectrum of the input signal is calculated at 1024 discrete frequencies.

The 1/3-Octave spectrum shows the energy distribution of the input signal.

The MSD200C and PT0200C Master Stereo Meter from DK Technologies offer phase meter, audio vector oscilloscope and PPM / VU level meter as the primary tools. The Level Meter has direct selection of 7 PPM/VU scales. All the standard scales are available including Nordic, EBU, BBC, ABC, NBC, DIN, VU, Digital and others. Each scale can be configured individually concerning overload level and reference level and the colour and width of each PPM bar can be set by the user. The DK-Scale™ software program for Windows contains a large library of scales which can easily be downloaded to the meter.

The spectrum analyser section has both an FFT-analyser and a 1/3 octave analyser. The FFT is primarily used for accurate measurements and exact identification of problem frequencies.

To this end a cursor is available and level and frequency will be shown for each cursor position across the frequency range on the display.

The MSD200C has built-in signal generator which is variable in frequency from 31 Hz to 20000 Hz, and the level in steps of 0,1 dB. The generator can also generate the EBU test signal, pulse signals, and white and pink noise signals for use with the spectrum analysers.
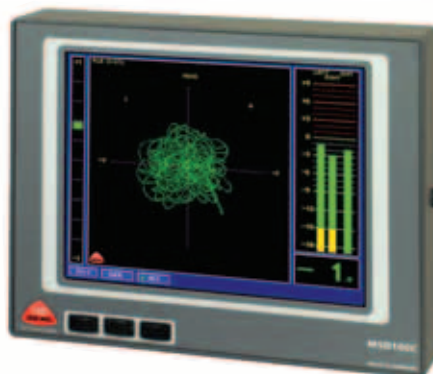
FEATURES...

- 2 analogue audio and 1 AES3 input and output are readily available for choice of format
- Features Stereo Peak Programme Meter for audio level measurements
- 7 scales directly selectable to conform to standard used
- PPM colours and headings are user programmable for easy identification
- Phase correlation meter indicates proper phasing to allow for mono downmix
- Choice of 1024-point FFT spectrum analyser and 1/3-octave analyser for display of frequency distribution of each channel over full audible range
- AES3 bitstream status display indicates characteristics of the digital audio signal
- VGA output

Stereo Loudness Meter

The ITU Recommendation BS.1770 specifies the algorithms to measure audio programme loudness.

The MSD100C Stereo Loudness Meter implements these algorithms to display the loudness of the individual audio channels as well as the sum of the left and right signals.

Different working modes of the meter are selectable:

- Fast mode for real time control of loudness
- Integration mode for measuring the loudness of a recorded section or the complete recording
- Gated mode for viewing loudness of audio material with long pauses (e.g. golf matches).

The matter of subjective loudness is of great importance in the production of commercials, where dynamic range processing is commonly used to maximize the perceived loudness.
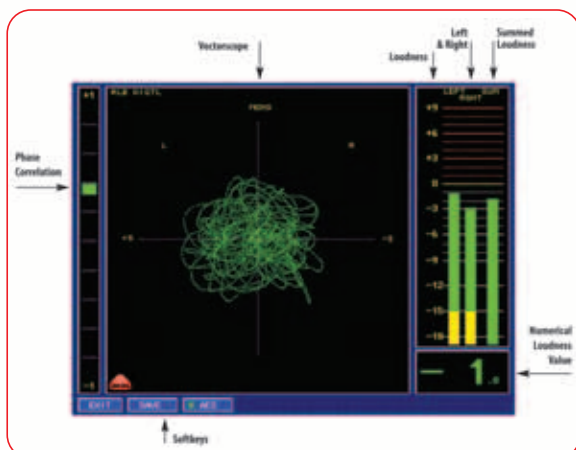
FEATURES...

- 1 AES3 input
- 2 analogue inputs, transformer balanced
- Accurate loudness matching of audio signals
- Loudness Measurement in accordance with ITU Rec. BS.1770 and BS.1771
- Selectable digital and analogue stereo inputs
- Displays left and right channel loudness as well as the summed loudness
- Numerical display of summed loudness
- Scale in Loudness Units (LU) from −18 dB to +9 dB
- Audio vector oscilloscope and phase correlation meter displays
- Full VGA colour display and VGA output for external display

Solutions in Audio & Video

Master Stereo & Surround Sound Meter

FEATURES...

- The Peak Programme Meter measures level of up to 32 audio channels simultaneously.

- 7 scales directly selectable to conform to standard used.

- PPM colours and headings are user programmable for easy identification.

- Vectorscope for stereo and surround sound with unique **JellyFish™** & **StarFish™** display supports aural impression at a glance.

- Multiple phase correlation meter indicates proper phasing to allow for downmix .

- Rotary knob controls output volume for direct connection to active monitor loudspeakers (PT0660)

- 10 presets are directly accessible for fast recall of settings (PT0660)

- Modular, choice of input modules accepting analogue audio, AES3 and SDI, with de-embedder for SDI video.

- Flexible, up to 8 analogue audio outputs and 4 AES3 outputs connect via the internal matrix to any input, internal audio generator, and sum and difference amplifiers.

- Choice of 1024-point FFT spectrum analyser and 1/3-octave analyser for display of frequency distribution of each channel over full audible range.

- AES3 bitstream status display indicates characteristics of the digital audio signal.

- Bright, VGA colour display with adjustable backlight allows adaptation to environmental light conditions

- VGA output connects directly to an external monitor for remote or larger display.

Solutions in Audio & Video

The **MSD600M++, PT0600M & PT0660M Stereo and Surround Sound Meters, from DK-Technologies offer phasemeter, audio vector oscilloscope and PPM / VU level meter as the primary tools.**
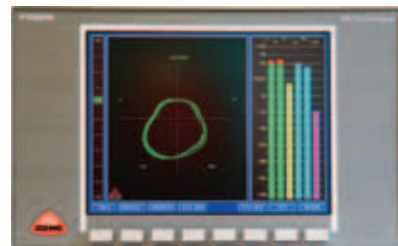
The Level Meter has direct selection of 7 PPM/VU scales. All the standard scales are available including Nordic, EBU, BBC, ABC, NBC, DIN, VU, Digital and others. Each scale can be configured individually concerning overload level and reference level. Furthermore the colour and width of each PPM bar can be set by the user.

As surround sound becomes more and more the standard in studios nowadays, accurate audio monitoring is becoming increasingly important. DK-Technologies' exclusive **StarFish™** & **Jelly-Fish™** surround indicator has become the adopted standard, presenting the surround sound image in a logical and intuitive way. The energy content of all channels is easily recognizable on the screen, and phase errors in individual vectors are immediately highlighted by a red colour.
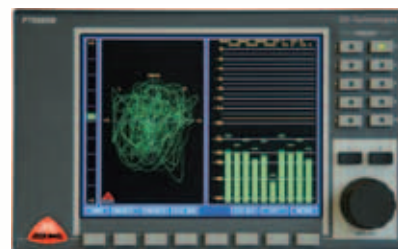
The MSD600 meters feature 5.1/6.1/7.1 Surround Sound Metering, DK-Technologies **JellyFish™** & **StarFish™**, ITU Loudness with logging software, 32 Analogue or digital audio Inputs and 16 Analogue or digital audio Outputs, 32x16 Audio Matrix. Also provided are SDI Audio De-embedding, **BLITS** 5.1 Surround Sound Channel Identification using the built-in Signal Generator.
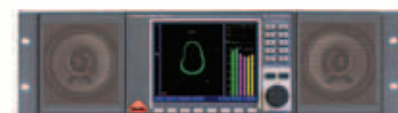
Available Options

PT0600M

PT0660M

MSD600M++

PT0660M-LS

DK - Technologies   WORLDWIDE OFFICES: **www.dk-technologies.com**