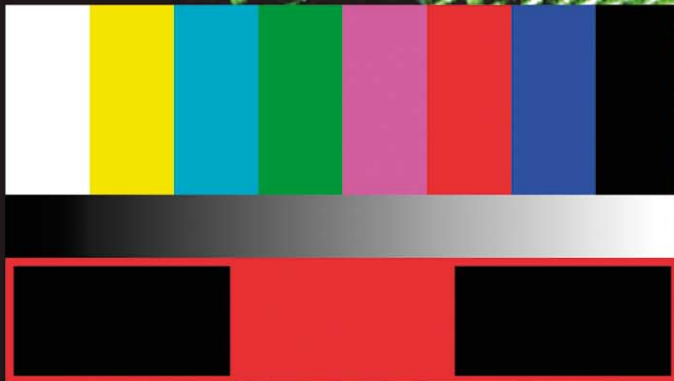




DK-Technologies

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HD

Solution for LIP-SYNC Problems

Lip-sync, currently one of the hottest topics in the broadcast industry, is now highlighted in the new option to the HD-SD Varitime™ Sync Generator PT5300, where a mean has been found to help removing this irritating Gremlin.

Different delays in the audio and video paths often result in the sound you hear not following lip movements which is quite irritating to the viewer. DK's solution is the HD-SD Test Signal Generator, PT8612 a new option for the HD-SD Varitime™ Sync Generator, PT5300 that offers a test pattern to check Lip-Sync. The test pattern is based on the EBU Tech 3305 standard and extended to all common HD formats.

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LCD Colour Sensor



The LCD Colour sensor PM5639/94, has been adopted by the LCD Monitor manufacturer Tamuz. This is the world's first auto-alignment system for LCD Monitors.



New software for the MSD600M++ /PT0600M and PT0660M series

The new software, version 5.0 is implemented in all above-mentioned instruments now delivered.

Next to the well-known JellyFish™ display it offers the new extended Loudness measurement showing the loudness graphically as a function of time. Additionally the time code may be coupled to the signal enabling easy search for any particular location on a recording.

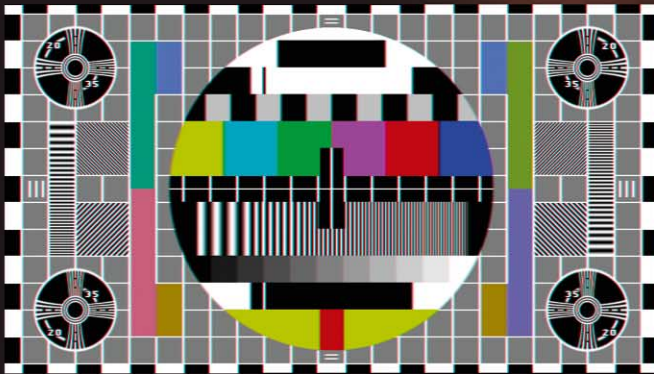
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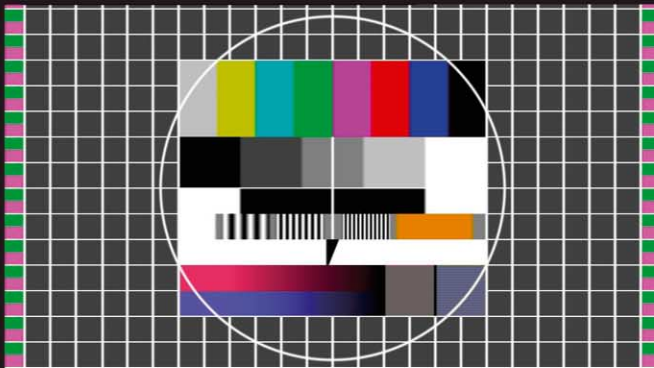
HD-SD VariTime™ Sync Generator



HD-SDI Colourbar



SD-SDI Philips Pattern in 16:9 format



SD-SDI FuBK Pattern in 16:9 format

PT5300 is a high performance sync and test signal generator generating all the signals needed for the different formats and standards available in today's production and post production facilities. It is available in two basic versions, PT5300HD offering 2 BB and 4 tri-level sync outputs as standard and the PT5300SD offering 2 BB outputs in the basic version. It is possible to upgrade to tri-level outputs if required.

- Multi-format capability including 21 HD sync formats in addition to PAL and NTSC BB outputs • four parallel HD-SDI / SD-SDI test outputs available • Master application with internal or external high stability reference • Full genlock capability: 2 fields for SDI; 4/8 fields for NTSC/PAL • VariTime™ subnanoseconds delay compensation on all sync outputs • Up to 8 individually timeable HD-SDI / SD-SDI outputs • Up to 12 individually timeable tri-level sync outputs • Backward compatible with modules designed for PT5230 and PT5210 • Embedded audio in HD and SD serial digital outputs • LIP sync moving element in the HD-SDI and the SD-SDI test patterns synchronised to embedded audio "click" • Philips composite circle pattern and FuBK circle pattern in 4:3 and 16:9 formats in SD-SDI • Moving programmable text string

Options

- Analogue TSG option, PT8601 • Multiple Parallel Black Burst gen., 6 out, PT8604 • Tri-level sync gen., PT8611 • Quad HD-SDI & SD-SDI test pattern gen., PT8612 • Analogue Test signal gen. PAL/NTSC, PT8631 • SD-SDI test signal Gen., PT8632 / PT8633 / PT8639 • SD-SDI Digital genlock module, PT8606 • VITC to LTC converter module, PT8607 • Dual BB generator, PT8608 • SD-SDI Black/Colour bar gen., PT8609 • Dual AES3 digital audio output, PT8635 • Time clock interface, PT8637

Compact VariTime™ Sync Generator

PT5202 is a cost effective stand-alone solution with an internal 10MHz TCXO master reference, gen-lockable, with a user-friendly front panel control and key features such as:

- Dual standard 625/50 and 525/60 operations.
- Genlock to PAL, NTSC or 10MHz
- 3 independent BB outputs, individually timeable
- 1 SD-SDI output (incl. SD-SDI colour black), 625/50 and 525/60 with embedded audio
- Source identification as text element with up to 16 characters
- 1 analogue video output PAL or NTSC
- 1 AES3 or analogue stereo output
- 1 Wordclock at 44.1 or 48 kHz
- 4 programmable directly selectable pre-sets
- Operation also via RS-232 interface



VariTime™ Digital Sync Generator

PT5210 is a high end SPG fulfilling the highest requirements for stability and reliability. In master applications it can be controlled by the internal oven controlled X-tal oscillator or it can be locked to an external reference, such as GPS or DCF77. The unit is based on a modular platform allowing it to be configured to meet the exact requirements of the customer.

- VariTime™ 8 fields for PAL
- VariTime™ 4 fields for NTSC
- VariTime™ subnanoseconds delay compensation on all BB outputs
- Genlock to SD-SDI, PAL, NTSC or 10MHz signals
- Multi-standard 625/50, 525/60 and dual standard operations
- Exceeds the ITU, SMPTE and the EBU requirements
- Up to 8 BB outputs individually timeable



Options

- Analogue Test signal gen. PAL/NTSC, PT8601
- SD-SDI test signal Gen., PT8603
- Multiple parallel BB gen., PT8604
- SD-SDI Digital genlock module, PT8606
- VITC to LTC converter module, PT8607
- Dual BB generator, PT8608
- SD-SDI Black/Colour bar gen., PT8609
- Dual AES3 digital audio output, PT8635

VariTime™ Digital Change Over Unit

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.

- Switching analogue video, serial digital video and digital audio (balanced and unbalanced) signals
- Basic version offering four channels expandable up to 12 channels (BNC)
- All unbalanced channels may be used for all types of signals
- Up to two XLR channels possible
- Free choice of generator as primary and back-up
- Configuration compatible with PT5210, PT5230 and PT5300 series
- Continues operation with selected SPG in case of power failure on the change-over unit



Options

- Dual BNC Change Over channels, PT8617
- Dual XLR Change Over channels, PT8618



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Digital & Analogue Component Composite Waveform Monitor

PT5664/50 is a versatile Waveform Monitor providing new dimensions in monitoring of digital and analogue video signals in a multi-format environment including SD-SDI signals. Easy alignment of different time planes in the digital domain due to the insertion of the related sync pulse in the displayed signal.



- Inputs for SD-SDI, analogue component, as well as PAL composite signals
- SD-SDI component Waveform and Vector display
- STAR display on component signals for easy check of timing
- Y, Pb, Pr, RGB, parade and overlay displays
- Static non-linearity measurements
- Colour Gamut error indication on front panel
- Easy alignment of SDI timing against composite PAL signal by help of overlay display
- Analogue RGB output (con-

verted from SD-SDI format) • Easy operation with on-screen menu's • Multi-standard 525 and 625 lines

Options

- Cabinet 19" rack mount, PM8539
- Blind plate for PM8539, type PM8540
- Carrying case, PM8541
- Cabinet plain, PM 8543

PT0660M and PT5664 mounted in 19" Rack Cabinet



Loudspeaker, powered Audio Monitor

PT0660M-LS, rack mount 19" is a modular multi-channel audio analyser with up to 32 input channels. The PT0660M-LS has 4 configurable input slots and 4 output slots. Available modules include analogue, AES3, SD-SDI, and HD-SDI formats. Front panel presets selection gives easy access to all inputs. Rotary knob on the front panel controls volume on the output modules. The PT0660M-LS includes two high quality loudspeakers and a built-in main power supply.

- Rotary knob controls output volume for direct connection to active monitor loudspeakers
- 10 presets are directly accessible
- Similar features as found in the PT0660M and the MSD600M++



Master Stereo Meter

MSD600C-III is preconfigured with 2 AES3 inputs and one analogue stereo input. It has 2 AES3 outputs and one stereo analogue output. The MSD600C-III has a full colour VGA LCD display and output to an external VGA monitor. The PT0600C-III is the corresponding version for 19" rack mounting.

- Features Peak Programme Meter
- 7 scales are directly selectable
- PPM peak-hold function
- Vectorscope display
- Phase correlation meter
- 2 analogue audio channels and 2 AES3 inputs
- 2 analogue audio and 2 AES3 outputs connect via the internal matrix to inputs
- FFT spectrum analyser and 1/3-octave analyser



Master Stereo & Surround Sound Meter

MSD600C-5.1 is preconfigured with three AES3 inputs. It features the unique JellyFish™ surround sound display on a full colour VGA LCD display with an output to an external VGA monitor. The PT0600C-5.1 is the corresponding version for 19" rack mounting.

- Ideal for monitoring and test of surround sound signals
- Features Peak Programme Meter
- 7 scales are directly selectable
- PPM colours and headings are user programmable
- Vectorscope with unique JellyFish™ display
- Multiple phase correlation meter
- 3 AES3 inputs are available for 5.1 surround sound
- FFT spectrum analyser and 1/3-octave analyser



Master Stereo Meter

MSD200C is equipped with an analogue stereo input and AES3 input. It has outputs for analogue and digital stereo signals. The MSD200C has a full colour VGA display and output to an external VGA monitor. The PT0200C is the corresponding version for 19" rack mounting.

- Features Stereo Peak Programme Meter for level measurements
- 7 scales are directly selectable
- PPM colours and headings are user programmable
- Vectorscope display
- Phase correlation meter
- 2 analogue audio input and 1 AES3 input
- 2 analogue audio and 1 AES3 outputs connect via the internal matrix to inputs
- FFT spectrum analyser and 1/3-octave analyser



Master Stereo Meter

The MSD100C Master Stereo Display is the cost-effective entry to professional audio metering, with a high quality colour display. The main metering tools such as phase meter, audio vector oscilloscope and level meter with programmable scales are included. It offers both analogue as well as digital audio inputs.

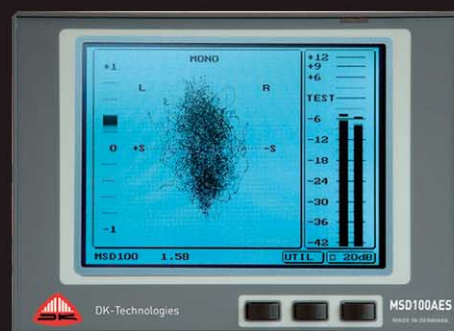
- 1 analogue stereo input, transformer balanced
- 1 AES-3 digital input
- Full VGA colour display
- 3 user definable soft keys
- 11 presets
- Level meter with user definable scales and reference levels
- Audio vector oscilloscope



Master Stereo Meter

MSD100 series, with 320x240 monochrome displays is intended for use in smaller installations, where professional monitoring tools are required. It includes all basic metering and monitoring functions in addition to preset selectable reference levels.

- Features stereo Peak Programme Meter for audio level measurements
- Up to 7 scales selectable
- LED overload indicators warn for high level audio signals
- PPM peak-hold function
- Vectorscope display
- Phase correlation meter
- Versions with balanced and unbalanced analogue audio and AES3 / SPDIF inputs
- Wide band, 1024-point spectrum analyser (not included in the MSD100)
- Bright, monochrome display



Modules for the MSD600M / PT0600M series and the PT0660 series



MSD600M-I/O-23, Interface Module, 23-function remote control

MSD600M-Output/1, 1 analogue stereo output + 1 AES3 output, 24bit, 96 kHz, D-Sub
MSD600M-Output/2, 1 analogue stereo output, + AES3id BNC output, 24bit, 96 kHz, D-Sub

MSD600M-Input-8A/O, 8 analogue inputs, 16 bit, electronically balanced, D-Sub

MSD600M-Input-SDI/4, SD-SDI de-embedder, BNC, 4 digital channels, 24 bit, for 525/625 lines systems
MSD600M-Input-HDSI/4, HD-SDI de-embedder, BNC, 4 digital channels, 24 bit

MSD600M-Input/1, 2 transformers balanced analogue inputs, 1 AES3 input, 24bit, 96 kHz, D-Sub
MSD600M-Input/2, 2 analogue inputs and BNC connectors for AES3id input loop-through
MSD600M-Input-2D/O, 2 digital AES3 inputs, 24bit, 96 kHz, D-Sub
MSD600M-Input-4D/O, 4 digital AES3 inputs, 16bit, 96 kHz, D-Sub

Peak Programme Meter, Digital and Analogue

The 478 series with a bright high resolution display uses a fast DSP to enable accurate level measurements of digital and analogue signals. The meters offer a choice of analogue and digital scales including DIN, Nordic and BBC. All meters are available in vertical or horizontal versions and for rack mount or desktop applications.

- Peak Programme Meter for analogue or digital audio
- High resolution 200 segment orange bar graph display
- Simultaneous reading of peak values with normal or fast integration time
- Instantaneous LED overload indication with adjustable threshold
- Built-in 3 colour LED compatibility meter (optional)
- Zoom function for increased display resolution
- Easily selectable reference level
- Memory for maximum peak storage
- Various display modes for improved readability
- Additionally 20 dB gain for monitoring of "noise floor"

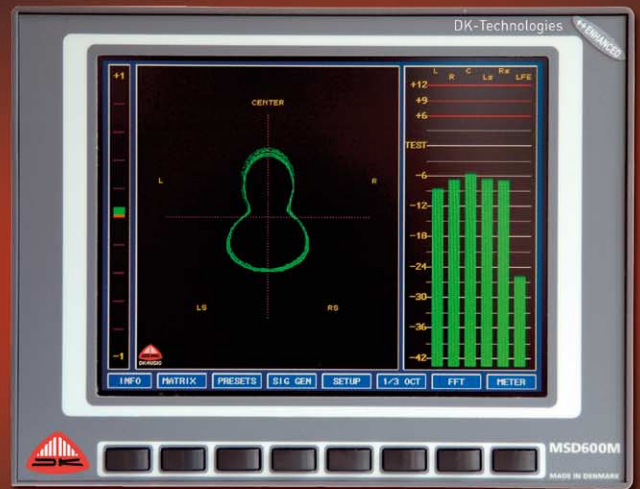
The 478-200 series is with AES3 input
 The 478-100 series is with analogue input



Master Stereo and Surround Sound Meter, modular

MSD600M++ and PTO600M series are the industry standard for multi-channel (up to 32) audio level metering with phase correlation meter. The unique JellyFish™ display visualises surround sound. The extended CPU speed and memory offer advanced router capability. The meters support all international and regional scales. It includes a windows based software package with the utility software "DK-matrix" featuring easy configuration of the input / output matrix, labelling of each audio signal, and design of proprietary PPM scales.

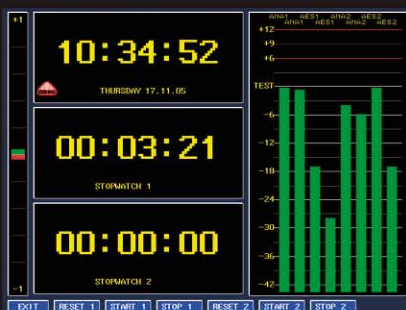
- 7 scales are directly selectable • PPM colours and headings are user programmable • PPM peak-hold function • Vectorscope for stereo and surround sound with unique JellyFish™ display • Multiple phase correlation meter indicates correct phasing. • Modular construction offers choice of input modules for analogue audio, AES3 and SD-SDI or HD-SDI with the integrated de-embedder • 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 • AES3 bitstream status display • Bright, VGA colour display with adjustable backlight • VGA output connects directly to an external monitor display

New software for the MSD600M++ /PT0600M and PT0660M series

The new version 5.0 has a number of extended functionalities like programmable start up display, easy configuration of the input / output matrix by help of the DK-MATRIX software. Connection of a PC directly to the MSD600/PT0660 family makes the transfer of data possible allowing automatic monitoring in play-out centres and facilitating acceptance testing of programme material.



DCF77 real time clock display



Extended menu showing the HD formats available



Menu for group selection for volume control

Master Stereo and Surround Sound Meter, modular, volume control

PT0660M has all the features of the MSD600M / PT0600M plus front panel preset selection and a rotary encoder for volume control of the output modules. Available modules include analogue, AES3, SD-SDI, and HD-SDI formats.



Colour Analyser series

PM5639/0x is a series of handheld Colour Analysers for SDTV as well as HDTV picture monitors equipped with a CRT or LCD. These units can be used as a Colour Analyser as well as an easy alignment tool for white balance on the CRT or LCD picture monitors.

- Unique graphic CIE chromaticity display
- Numerical read-out of xy or u'v', luminance Y and correlated colour temperature
- User friendly bar graph display for easy setting of white balance
- Traceable to international standards
- Calibration to any white reference
- CIE 1931 standard observer response
- Automatic adaptation to any field rate
- Use of interference filters makes calibration before use superfluous

LCD Colour Analyser

PM5639/06 is the newest development for the maintenance of picture monitors in production and postproduction studios. This unit is designed for use with LCD based monitors.

CRT Colour Analyser

PM5639/00 has been developed for maintenance of picture monitors in production and postproduction studios. This unit is designed for use with CRT based monitors.



Colour Alignment Generators, component and composite

Handheld battery operated test signal generator for the colour analyser PM5639 series. Test signals include: PLUGE, stepped window signal, flat-field grey, cross-hatch, staircase. Analogue Y, PR, PB and RGB signals in 625-lines and 525-lines video formats.

PM8539G/82, component 625/50, PM8539M/82, component 525/60, PM8539G/83, composite PAL, PM8539M/83, composite NTSC.



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