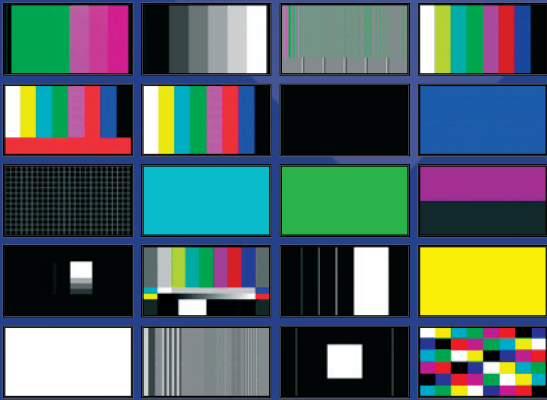


penpal - HD

HD Test Signal Generator



Sample of patterns



Features:

18 formats in 1080i, 1080P, 1080SF, 1035i and 720P.

32 video test patterns including pathologic test

4 stereo pairs of AES embedded audio

Operates from battery or mains power

Test Patterns:

SMPTE HD Bars
100% Colour Bars
100% Colour Bars & Red
75% Colour Bars

SDI Check Field-Matrix
ARC/APM 4:3 & 16:9
Y Pulse & Bar
UV Pulse & Bar

5 Step Y Staircase
5 Step UV Staircase
Limited YUV Ramp
Shallow Y Ramp

Stationary Y Zone Plate
Moving Y Zone Plate
Moving Y Vertical Bar
Moving Y Diagonal Bar

60% Y Sweep (30MHz) with Markers
60% UV Sweep (15MHz) with Markers
Y Multiburst
UV Multiburst

PLUGE ON BLACK
Convergence
Tartan Bars
1 Field In 8 White Bar

White Field	Green Field
Black Field	Blue Field
Red Field	Magenta Field
Yellow Field	Cyan Field



PENPAL-HD

HD Test Signal Generator

PENPAL-HD

Penpal-HD will produce 32 video test patterns in 18 HD standards each of which can be combined with three different audio tone settings.

A full specification broadcast quality TSG ideal for checking signal path integrity or to determine system performance and calibration.

This level of integration and performance has been achieved utilizing video processing and Miniaturisation techniques optimised for reduced power consumption. 10 bit all digital processing and high stability crystals eliminate all noise and distortion.

SPECIFICATIONS

Video standards supported according to the SMPTE 292M and using YCbCr colour encoding. This level of integration and performance has been achieved utilising video processing and compression techniques optimised for reduced power consumption. The 10 bit all digital processing and the high stability crystals eliminate all noise and distortion. The long lasting battery life is a result of the latest power supply technology.

Specifications: (SMPTE 292M)

Serial Digital Video Output Standards:

SMPTE 274M. 1080i/60, 1080i/59.94, 1080i/50, 1080p/30, 1080p/29.97, 1080p/25, 1080p/24, 1080p/23.98, 1080sF/30, 1080sF/29.97, 1080sF/25, 1080sF/24, 1080sF/23.98.

SMPTE 296M. 720p/60, 720p/59.94, 720p/50.

SMPTE 260M. 1035i/60, 1035i/59.94.

VIDEO

Bit depth	10 bits
Interface	SMPTE 292M, 274M, 296M, 260M
Bit rate	1.485 Gbit/s
Output impedance	75 Ohm
Video Connector	BNC female
Return Loss	better than 15dB
Amplitude	800mV +/- 10%
Wideband Jitter	< 0.2UI

AES EMBEDDED AUDIO

Transport:	Audio embedded into video according to SMPTE 299
Precision	20 bits
Sampling Frequency	48kHz locked to video
Tones	1kHz (nominal) 444Hz (nominal) locked to sampling frequency
Level:	-20dBFS (full signal)
Channels	4 x stereo pairs (8 x channels)

BATTERY LIFE

3 hours continuous

POWER REQUIREMENTS

3 Volt Lithium Ion battery	Type DL/CR123
Optional 3v AC power adaptor	110/240 (+/- 10%) 50/60Hz

MECHANICAL

Length	172mm
Diameter	22mm
Weight	175g (without battery)

ENVIRONMENTAL

Temperature	0 to 40 degrees C.
EMI/RFI	Complies with FCC, EU EMC Directive

Penpal-HSD

HD and SD Test Signal Generator



Portable Test Pattern Signal Generator

To verify and fault find system integrity and the performance of SD & HD television SDI signal paths in studios, OB vehicles, distribution & routing networks, transmission systems and general television equipment.

Penpal-HSD will produce 32 video test patterns in HD and SD standards each of which can be combined with three different audio tone settings.

A full specification broadcast quality TSG ideal for checking signal path integrity or to determine system performance and calibration.

This level of integration and performance has been achieved utilizing video processing and miniaturisation techniques optimised for reduced power consumption. 10 bit all digital processing and high stability crystals eliminate all noise and distortion. The long lasting battery life is a result of the latest power supply technology.

- World's smallest
- Truly portable
- Battery powered
- Fits in a shirt pocket
- Never be without it!

Features: HD and SD formats.

32 video test patterns
Including pathologic test

4 stereo pairs of AES
embedded audio

Operates from battery or
mains power

TEST PATTERNS:

100% COLOUR BARS
100% COLOUR BARS & RED
75% COLOUR BARS
SMPTE HD (SD-compatible) bars

SDI CHECK FIELD-MATRIX
ARC/APM 4:3 & 16:9
HD/Y PULSE & BAR /
SD/2T+MODULATED P&BAR
HD/UV PULSE & BAR /
SD/FULL-FIELD LINE 17ITS

5 STEP Y STAIRCASE
HD/5 STEP UV STAIRCASE /
SD/ 5-STEP MODULATED
LIMITED YUV RAMP
SHALLOW Y RAMP

STATIONARY Y ZONE PLATE
MOVING Y ZONE PLATE
MOVING Y VERTICAL BAR
MOVING Y DIAGONAL BAR

60% Y SWEEP (30MHZ) WITH MARKERS
60% UV SWEEP (15MHZ) WITH MARKERS
Y MULTIBURST
UV MULTIBURST

PLUGE ON BLACK
CONVERGENCE
TARTAN BARS
1 FIELD IN 8 WHITE BAR

WHITE FIELD
BLACK FIELD
RED FIELD
YELLOW FIELD

GREEN FIELD
BLUE FIELD
MAGENTA FIELD
CYAN FIELD



The world's smallest, portable, professional broadcast HD and SD SDI test signal generator.

SPECIFICATIONS

Video standards supported according to the SMPTE 292M and 259M using YCbCr colour encoding.

Video

Bit depth	10 bits
Interface	SMPTE 274M, 296M, 260M, 259M
Bit rate	1.485 Gbit/s and 270 Mbits/s
Output impedance	75 Ohm
Video Connector	BNC female
Return Loss	better than 15dB
Amplitude	800mV +/- 10%
Wideband Jitter	< 0.2UI

AES Embedded Audio

Transport	Audio embedded according to SMPTE 299M & 272
Precision	20 bits
Sampling Frequency	48kHz locked to video
Tones	1kHz (nominal) 444Hz (nominal) locked to sampling frequency
Level	-20dBFS (59.94Hz) -18dBFS (50Hz)
Channels	4 x stereo pairs (8 x channels)

Battery Life

3 hours continuous

Power Requirements

3 Volt Lithium Ion battery	Type DL/CR123
Optional 3v AC power adaptor	110/240 (+/- 10%) 50/60Hz

Mechanical

Length	172mm
Diameter	22mm
Weight	175g (without battery)

Environmental

Temperature	0 to 40 degrees C.
EMI/RFI	Complies with FCC & EU EMC Directive

Penpal-HSD/50

Video Format Audio Level

1080i / 60 - 20dB
1080i / 50 - 18dB

1080p / 30 - 20dB
1080p / 25 - 18dB
1080p / 24 - 20dB

1080sF / 30 - 20dB
1080sF / 25 - 18dB
1080sF / 24 - 20dB

1035i / 60 - 20dB

720p / 60 - 20dB
720p / 50 - 18dB

SD: 625/50Hz
576i / 50 - 18dB

SD: 525/59.94Hz
480i / 59.94 - 20dB

Penpal-HSD/59.94

Video Format Audio Level

1080i / 59.94 - 20dB

1080p / 29.97 - 20dB
1080p / 23.98 - 20dB

1080sF / 29.97 - 20dB
1080sF / 23.98 - 20dB

1035i / 59.94 - 20dB

720p / 59.94 - 20dB

SD: 625/50Hz
576i / 50 - 18dB

SD: 525/59.94Hz
480i / 59.94 - 20dB

PenpalHSD is a registered trademark of Electronic Visuals Limited

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