

Multiformat Hand Held, Waveform, Vector and Audio Monitor and Generator*



The Hamlet MicroFlex is the world's smallest multi-format multi-standard handheld waveform, vector, audio, and picture monitor.

Using a built-in 3.5" diagonal high quality VGA (640 x 480) TFT display shows the picture in 4:3 or 16:9 formats. Also shows conventional waveform, vector and audio displays together with data analysis. Easy to plug-in option modules allow

operation in all current formats and enables future standards to be accommodated and allows easy upgrade for the user at any time.

The MicroFlex unit is capable of analysis, measurement and monitoring HD SDI, SD SDI and composite video signals and audio in its embedded, or AES/EBU formats and generating HD SDI and SD SDI video and audio signals dependant on the installed modules.

Waveform, Vector, Audio and Picture can be monitored and measured. Coloured traces, Line Select, stuck bit detect (no activity on one data line).

There is a headphone socket and a speaker on the base so the decoded audio can be monitored.

Computer downloads and data uploads are via USB.

Using the new Option 03 module, video and audio generation is now available simultaneously with the monitoring and measurement allowing a closed loop testing environment to be set up with the device/system under test

It is ergonomically designed machined aluminium case, operating for over 2 hours on 6 x AA batteries or from the supplied 12V power adaptor.

Patented proprietary 10 bit processing of all signals

*This product contains proprietary patented designs.
US 6,493,024B1 GB2329294*

** Depending on installed Module see separate module datasheets for more information*

Features and Functions

Hand Held Unit

- World's smallest hand held HD SDI, SD SDI & composite capable measuring and monitoring and generation instrument*
- Data and gamut analysis, time code logging of assigned errors
- Easy access to full functionality: Parade (YCrCb), 2H, H, Hmag, 2V, V, Vmag, Full field line select, Bow tie, Ext - ref, HFT™ - (Hands Free Timing™), Filtering
- Coloured displays of waveforms, vectors audio bar graphs and phase display
- Select audio source, bar graph type, peak hold, de-emphasis
- Picture display in 4:3 or 16:9
- Built-in monitoring speaker, output jack
- Operator and factory store and recall presets
- Patented proprietary 10 bit processing of all signals
- Computer remote control, up/downloads data via the USB port or connection via new RJ45* option
- Internal battery or 12 VDC powered, mains adapter included

Module Options:

Opt 01 HD/SD*

- Input BNC.
- HD/SD Loop Out BNC.
- Ext Ref. / AES input BNC.
- Auto sensing of HD and SD formats.
- Audio decode.

Opt 02 SD/Composite*

- Input BNC.
- SD Loop Out BNC.
- Ext Ref. / AES input BNC.
- Audio decode.

Opt 03 HD/SD Monitoring and Generation*

- Input BNC.
- HD/SD Loop Out BNC.
- Ext Ref. / AES input BNC.
- Audio decode.
- Video & Audio Generation

Other Options*:

- Soft carry case to hold the unit and its option modules.
- RJ45

TECHNICAL SPECIFICATION

INPUTS WITH HD-SD MODULE option 01

HD/SD digital input. BNC connector. Input impedance 75 ohms. Max d.c. +/- 10V. SMPTE 259M serial digital at 800mV p/p. SMPTE 292M high definition serial digital at 800mV p/p. Auto equalised up to 350 metres of cable at 270mb/s. Auto equalised up to 140 metres of cable at 1.485Gb/s.

HD/SD digital output. BNC connector. Output impedance 75 ohms. Equalised version of the serial digital input.

Ext-ref / AES input. BNC connector. Input impedance 75 ohms. Max dc +/- 3 volts. Video 0.5 to 2.0V p/p. Digital Audio min 150mV p/p, max 3V p/p conforming to S/PDIF, AES3, IEC60958 or EIAJ CP1201.

INPUTS WITH SD-CST MODULE option 02

INPUT

BNC connector. Input impedance 75 ohms. Max d.c. +/- 10V. SMPTE 259M serial digital at 800mV p/p. Auto equalised up to 350 metres of cable at 270mb/s. PAL or NTSC composite video 0.5 to 2.0V p/p.

SDI output. BNC connector. Output impedance 75 ohms. Equalised version of the serial digital input.

Ext-ref / AES input. BNC connector. Input impedance 75 ohms. Max dc +/- 3 volts. Video 0.5 to 2.0V p/p. Digital Audio min 150mV p/p, max 3V p/p conforming to S/PDIF, AES3, IEC60958 or EIAJ CP1201.

INPUTS WITH HD-SD MODULE option 03

HD/SD digital input. BNC connector. Input impedance 75 ohms. Max d.c. +/- 10V. SMPTE 259M serial digital at 800mV p/p. SMPTE 292M high definition serial digital at 800mV p/p. Auto equalised up to 350 metres of cable at 270mb/s. Auto equalised up to 140 metres of cable at 1.485Gb/s.

HD/SD digital output. BNC connector. Output impedance 75 ohms. Equalised version of the serial digital input.

Ext-ref / AES input. BNC connector. Input impedance 75 ohms. Max dc +/- 3 volts. Video 0.5 to 2.0V p/p. Digital Audio min 150mV p/p, max 3V p/p conforming to S/PDIF, AES3, IEC60958 or EIAJ CP1201.

OUTPUTS

SDI Output Serial digital BNC connector. Output impedance 75 ohms. SMPTE 292, serial component. 800mV pp. Full 10 bit pattern generation. Embedded audio tone is a 1KHz asynchronous sine wave at a level of -18dBFS. SD Output Serial digital BNC connector. Output impedance 75 ohms. SMPTE 259M, ITU-R BT.601/656 serial component. 800mV pp Full 10 bit pattern generation. Addition of CRC checksum word.

Addition of embedded tone at -18db

WAVEFORM MONITOR

Built-in 3.5" diagonal high quality VGA (640 x 480) TFT display

WAVEFORM MONITOR

Response Flat is +/- 0.5% 50Hz to 5.5MHz.

Low Pass is -3db @ 1.5MHz, -60db @ 6.75MHz.

Timebase H, 2H and Hmag (x5). V, 2V and Vmag.

Line select is any line from the frame.

Parade is a 3H display of input or filter parade.

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Hamlet products are Manufactured to ISO9001.2000 and ISO14001 specification.

Our most up to date information is available on our web site.

VECTOR MONITOR

Video Traditional component or composite display.

Component accuracy 0.2%. Bandwidth 3.375MHz.

Composite accuracy 1%. Bandwidth 1.3MHz.

AUDIO MONITOR

Audio Stereo phase display of left or right audio pair.

Phase accuracy 2 deg.

Accuracy Better than 0.1db over full scale range.

Characteristics BBC, EBU, Digital, DIN, Nordic and VU.

AUDIO MONITORING OUTPUT

3.5mm stereo jack.

OUTPUTS

Audio output jack and USB

ENVIRONMENT

Indoor and Out door use, 5 to 45 deg.C. Ambient to 2,000m.

Max humidity 80% to 31 deg.C decreasing to 50% at 40 deg.C.

Overvoltage category 2. Pollution degree 2

PHYSICAL

DIMENSIONS: - h 165mm x w 95mm x d 36mm.

WEIGHT: - 650g

WARRANTY: - 1 Year.

Extendable free on registration: - To 2 Years

ORDERING INFORMATION

MicroFlex

Multiformat hand held, waveform, vector and audio Monitor.

At least one input module required

* Features available as options (see options list below)

OPTIONS

MF – chassis	MicroFlex chassis
MF – HD/SD	HD and SD SDI input module opt 01
MF – SD/CST	SD SDI and Composite input Module opt 02
MF – GEN/WFM	HD and SD SDI input module with video and audio generator module option 03
MF - XPSU	External Power Supply
MF – CC	Carry Case