BrightEye 57
3G/HD/SD/Analog Test Signal and Sync Pulse Generator

BrightEye 57 is a genlockable sync generator and test signal generator that can be used as either a slave or master reference generator. It can lock to house reference or it can lock to its own internal precision standard. BrightEye 57 is well suited for remote trucks, post, helicopters and fly packs.

1.5 Gb/s HD, 3 Gb/s HD or SD SDI test signals or black with embedded audio is output on the SDI BNCs. Composite, Tri-level Sync and AES digital audio outputs are also provided. There are three user programmable outputs that are selectable between AES, LTC, Word Clock or 6 Hz Pulse. Analog audio and AES outputs provide tone or silence.

Color black, bars, crosshatch, multiburst, and SDI checkfield (pathogenic) are just some of the signals simultaneously available on the SDI and analog composite outputs. The cyclops feature adds a motion element to the selected video test signal. An ID slate with user programmable text can overlay the test pattern.

The internal timecode generator feeds DVITC on the SD SDI outputs and VITC on the composite outputs, timecode can also be selected in LTC form on the programmable Aux outputs.

In addition to the standard suite of test patterns, users can create custom test patterns on a computer. Simply transfer test patterns to the included Secure Digital flash memory card and then insert the memory card into the front of the BrightEye 57. Test patterns can include motion.
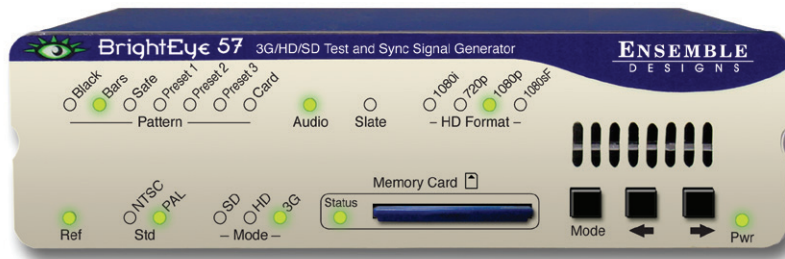
Many controls can be adjusted through the intuitive front panel. BrightEye Mac and PC software provide a complete user interface for all adjustments and controls.

For facilities and manufacturers using 3 Gb/s video, BrightEye units can be combined to form a complete 3G signal chain. The BrightEye 57 test signal generator's 3G output can be distributed through the BrightEye 43 3G distribution amplifier or the BrightEye 46 and BrightEye 48 E/O 3G fiber optical transmitter/receiver set.

ENSEMBLE
D E S I G N S

Designed and built in California
5 YEAR WARRANTY

PICK HIT
BroadcastEngineering
2010

Features

- **Master or slave reference generator for all video and audio gear**

- **Composite, HD SDI, SD SDI, Tri-Level outputs**

- **3 Gb/s HD, Level A supported**

- **30+ HD and SD test signals**

- **Create your own test patterns, transfer via secure digital flash memory**

- **Sync pulse generator**

- **Timecode generator**

- **Analog, AES and embedded audio outputs**

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Reference Input

Number	One
Signal Type	1 V P-P Composite Video PAL or NTSC, Tri-Level Sync, or 10 MHz
Return Loss	>40 dB DC to 5.5 MHz

Composite Output

Number	Two
Signal Type	NTSC/PAL
Impedance	75 Ω
Return Loss	>40 dB DC to 5.5 MHz
Frequency Response	-0.1 dB 10 KHz to 5.0 MHz
Output DC	±50 mV
K Factor	<1.0%
Differential Phase	<1.0 degree
SCH Phase	±5 degrees

Accuracy and Timing Stability

Internal TCXO

PAL Fsc	4.43361875 MHz +/- 1 Hz
NTSC Fsc	3.579545 MHz +/- 1 Hz
601 Fs	27.000000 MHz +/- 5 Hz
Long Term Drift	<1 ppm/year
Analog Jitter	<1 ns
Digital Jitter	<0.2 UI (0.13 UI typical)

Serial Digital Output

Number	Two
Signal Type	270 Mb/s SD Serial Digital (SMPTE 259M)
	1.485 Gb/s HD Serial Digital (SMPTE 274M, 292M or 296M)
	2.97 Gb/s HD Serial Digital (SMPTE 424M, 425M), Level A
Return Loss	>15 dB to 1.485 GHz
	>10 dB to 2.97 GHz
Max Cable Length	300 meters for 270 Mb/s
	100 meters for 1.485 Gb/s
	70 meters for 2.97 Gb/s
	(Belden 1694A)

Tri-Level Sync Output

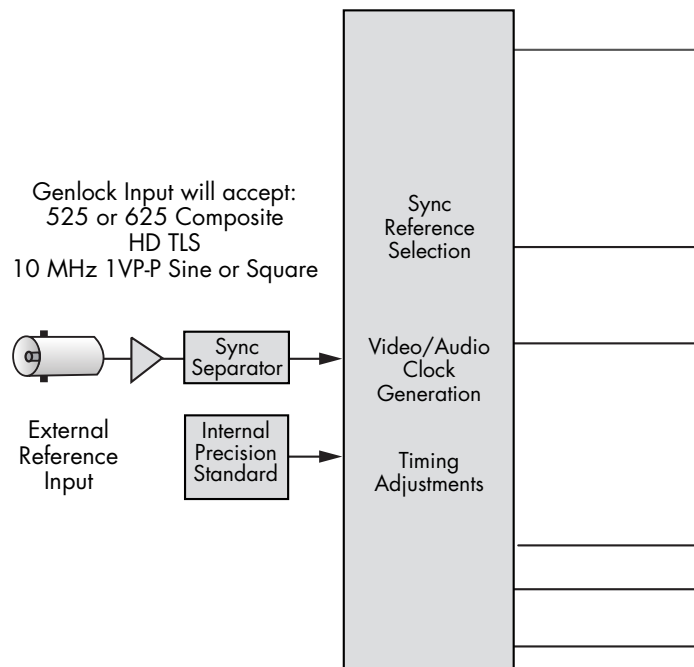|	
Number	Two, 75 Ω
Output DC	±50 mV
Return Loss	>30 dB to 30 MHz

Standards Supported:

1080i (SMPTE 274M -4, 5, 6) 50, 59.94 or 60 Hz

720p (SMPTE 296M -1, 2, 3) 50, 59.94 or 60 Hz

1080p (SMPTE 274M -9, 10, 11) 23.98, 24, 25 Hz

1080sF (RP211 -14, 15, 16) 23.98, 24, 25 Hz

1080p (SMPTE 424M, 425M), 50, 59.94, 60, Level A

625i 50, 525i 59.94, Composite PAL, NTSC

AES Audio Output

Number	One
Type	AES3id, 1 KHz tone or silence
Resolution	24 bit

Analog Audio Output

Number	One stereo pair or two mono
Type	1 KHz tone or silence
Impedance	30 Ω, balanced
Reference Level	-10 to + 4 dBu, adjustable

Genlock Input will accept:
525 or 625 Composite
HD TLS
10 MHz 1VP-P Sine or Square

External Reference Input

Sync Separator

Internal Precision Standard

Sync Reference Selection

Video/Audio Clock Generation

Timing Adjustments

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Programmable Outputs

Number	Three
Type	Selectable between AES, LTC, Wordclock, or 6 Hz Pulse
Impedance	75 Ω

Flash Memory

Number	One
Type	Secure Digital SD Flash Memory Card
Size	2 GB card included

File Type

Video	.tga

General Specifications

Size	5.63"W x 1.65"H x 5.98"D (143 mm x 42 mm x 152 mm) including connectors and flange
Weight	1 lb 7 oz
Power	12 volts, 12 watts (100-230 VAC modular power supply)
Temperature Range	0 to 40° C ambient (all specs met)
Relative Humidity	0 to 95%, non-condensing
Altitude	0 to 10,000 ft.