

# 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. 3G Level A and Level B are supported. Composite, HD Tri-level Sync and AES digital audio outputs are also provided. There are three user Programmable Outputs that are selectable between AES, LTC, Wordclock or 6 Hz Pulse. Analog audio and AES outputs provide tone or silence.

Color Black, Bars, Crosshatch, Multi-burst, 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 Time Code Generator feeds DVITC on the SD SDI outputs and VITC on the composite outputs, Time Code 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 and an associated audio clip such as voice over or station ID.

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.



- ▶ 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 and Level B supported
- ▶ 30+ HD and SD Test Signals
- ▶ Create your own test patterns, transfer via Secure Digital flash memory
- ▶ Generates Closed Caption Test Signal to Assist with CC Compliance
- ▶ Sync Pulse Generator
- ▶ Time Code Generator
- ▶ Analog, AES and Embedded Audio Outputs

## ► Specifications

### Reference Input

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

### Composite Output

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

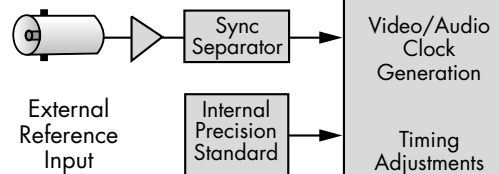
### Accuracy and Timing Stability

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)
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)

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



**Tri-Level Sync Output**

Number Two, 75  $\Omega$   
 Output DC  $\pm 50$  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  
 3 Gb/s Level A or Level B (SMPTE 424M, 425M)  
 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  $\Omega$ , balanced  
 Reference Level -10 to +4 dBu, adjustable

**Programmable Outputs**

Number Three  
 Type Selectable between AES, LTC, VITC, Wordclock or 6 Hz Pulse  
 Impedance 75  $\Omega$

**Flash Memory**

Number One  
 Type Secure Digital SD Flash Memory Card  
 Size 1 MB card included

**General Specifications**

Size 5.625" W x 1.7" H x 5.5" D  
 (143 mm x 40 mm x 140 mm)  
 including connectors  
 Power 12 volts, 12 watts  
 (100-230 VAC modular power supply not included)  
 Temperature Range 0 to 40° C ambient  
 Relative Humidity 0 to 95%, non-condensing

