

VIDEO NTSC SYNC GENERATOR

Provides six black burst outputs



410BB NTSC SYNC GENERATOR

GENERAL

The 410BB is an NTSC Sync Generator that provides sync generator signals for other video equipment.

FEATURES

- Provides six black outputs
- Provides composite sync and subcarrier outputs
- Provides SMPTE color bars output
- Digital waveform generation provides highly accurate and stable signals.
- Supplies two 1 kHz outputs of audio tone
- The low-profile rackmount size easily fits into system configuration

410BB REAR PANEL



SPECIFICATIONS

410BB

Black Burst

(1) System and other System	NTSC-M, conforms to SMPTE 170M standards
Number of Scanning Lines	525, interlaced
Field Frequency:	59.94 Hz
Line Frequency:	15.73426 kHz
Subcarrier Frequency:	3.579545 MHz \pm 10 Hz
Output Impedance:	75 Ω
Number of Outputs:	6

(2) Sync Signal and Color Burst

Sync Signal

Amplitude	286 \pm 14.3 mV
Blanking Level:	0 \pm 20 mV
Rise/Fall Times:	140 \pm 20 ns
Horizontal Sync Pulse Width:	4.7 μ s \pm 100 ns
Vertical Sync Pulse Width:	3H
Equalizing Pulse Width:	2.3 μ s \pm 100 ns
Vertical Serration Pulse Width:	4.7 μ s \pm 100 ns
Vertical Blanking Period:	20H +1.5 μ s

Color Burst

Amplitude	286 \pm 14.3 mVp-p
Number of Cycles	9
Rise/Fall Times	300+200 ns, or 300-100 ns
SCH Phase	\pm 10 $^\circ$

Composite Sync

Amplitude	4 \pm 0.2 V into 75 Ω
Output Impedance	75 Ω
Polarity	Negative
Timing	\pm 100 ns, compared with black burst
Rise/Fall Times	140 \pm 20 ns
Number of Outputs	1

Subcarrier

Amplitude	2 \pm 0.2 Vp-p into 75 Ω
Output Impedance	75 Ω
Frequency	3.579545 MHz \pm 10 Hz
Phase	\pm 10 $^\circ$, compared with black burst
Number of Outputs	1

SMPTE Color Bar

Specifications	Conforms to SMPTE EG1-1990 standards.
Full Amplitude	1 Vp-p \pm 20 mVp-p into 75 Ω
Number of Outputs	2

Analog Audio Tone

Frequency	1 kHz \pm 100 Hz
Output Waveform	Sine Wave
Output Amplitude	0 \pm 0.5 dBm, or 4 \pm 0.5 dBm, selectable by internal switching
Output Impedance	600 Ω , balanced
Output Connector	XLR type (3-pin), cannon
Number of Outputs	2

Others

Power Requirements	100, 120, 220, 240 VAC, 50/60 Hz, 20 Wmax. selectable by internal wiring
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Dimensions and Weight

	426 (W) \times 44 (H) \times 400 (D) mm
	6 kg

Environmental Conditions

Operating	Temperature:0 to 40 $^\circ$ C Humidity: \leq 85 % RH(without condensation)
Storage	Temperature:-10 to 50 $^\circ$ C

Accessories

Rack support.....	1 set
Power cord.....	1
Instruction manual.....	1