

Courtyard

CY440 Master SPG/TPG & Timecode Generator

Designed to the same rigorous standards as the flagship CY460, the CY440 is a cost effective Master sync, test pattern & reference generator which meet the needs of broadcast serial digital (Standard, High Definition & 3G) and mixed digital/analogue, post-production, OB and other operational environments. It provides the video reference (Colour Black, Tri-Level Sync), timing and test signals, plus LTC and VITC, unbalanced AES audio, Wordclock, and DARS needed to satisfy many applications in PAL, NTSC, SD SDI, HD SDI, & 3G SDI and mixed standard installations.

The unit is supplied with **external** dual “hot swap” redundant power supplies for maximum security.



The CY440 is designed for use either as a master or, when genlocked, as a slave SPG. Where it is critical to have a backup SPG, the CY445A auto changeover unit complements the CY440. This can be user configured to monitor and changeover analogue, SDI video, Timecode and AES/EBU digital audio signals.

FEATURES

Outstanding performance, stability and reliability

PAL/NTSC/625/525

switchable/simultaneous

Comprehensive range of test patterns for all analogue and digital applications

Lip-Sync Test Signals

± 4 field (PAL) / ± 2 field (NTSC) timing range

Multiple & configurable reference outputs

(PAL/NTSC/Tri-Level Sync in all HD formats)

LTC (standard and offset)

VITC on all SD outputs (User Select)

Embedded audio

Lock time to VITC on genlock ref input

User programmable & animated text idents (3) (independent on each test out)

Text idents

Multiple user configurable and independently adjustable reference outputs (NTSC colour black, PAL Colour Black & Tri-level Sync)

Genlock to Colour Black or Tri-Level Sync

SD, HD & 3G SDI colour black and Test patterns (with embedded tone/silence)

AES digital tone, DARS, Wordclock

Ethernet – Remote control, NTP Client including remote control via Ross Video

Dashboard GUI

SNMP Supported

Courtyard Electronics Limited

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SPECIFICATION

Conforms to relevant EBU, CCIR or SMPTE specifications.

Video Inputs (BNC)

75 Ohm looping reference

Video Outputs (BNC)

Analogue Composite test (1)

Colour Black/Tri-Level (3)

SDI (SD/HD or 3G) Colour Black with embedded silence (1)

SDI (SD/HD or 3G) Test Pattern with embedded tone (1)

Unbalanced AES Audio

AES (2)

DARS (1)

WordClock (TTL) 1 BNC

Controls and Indicators

LCD Display, Rotary Knob & Switch

Ethernet 100Base T RJ45

Timecode outputs

LTC (1)

VITC (user select)

Colour black outputs

Fsc stability: ± 1 Hz over temperature range*

SCH phase: 0 degrees ± 5 degrees

Return loss: >35 dB to 5 Mhz

Sync Pulse Generator

Subcarrier output

Frequency: 4.43361875MHz after warm up (PAL)

Stability: ± 1 Hz over temperature range*

Amplitude: 1Vp-p

Return loss: >35 dB to 5 Mhz

Pulse and pattern outputs

Signals: meet or exceed relevant EBU, CCIR and SMPTE specifications

Genlock

H range: ± 4 fields (PAL). Moves all timing relative to the reference input.

Subcarrier: 0 to 360 degrees

Resolution: <0.5 degrees of subcarrier

Mechanical

Height: 1 rack unit

Width: 19" rack mounting

Depth: 245 mm (overall)

Weight: 3 Kg (unpacked)

Input Voltage: DC +12V

Ordering information

CY440 : SPG/TPG

CY440/05: NTP - Option

*Operational temperature range is 0 to $+40^{\circ}\text{C}$

Courtyard Electronics reserve the right to alter the specification without prior notice



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