

# Digital Component Signal Generator



## LT425D

- 4 Serial (includes digital black) and 1 Parallel Outputs
- EDH Codes in Accordance with RP-165
- 4-Channel AES/EBU Embedded Audio **plus**
- Independent AES/EBU Digital Audio Output
- Compression Tests Include Variable Speed, Direction Controlled Marker and Sequentially Switched Patterns

- Digital Genlock with Programmed Advance and Delay
- 27-MHz Clock Output
- 2 Analog Black Burst Outputs
- 20 Character Programmable ID and Calendar/Clock
- Test Signals (Adapt Automatically to 625/50 or 525/60 Requirements)

A precision source of 10-bit 4:2:2 component digital test signals, the LT425D offers features that make it an ideal choice for production and development applications. These include both embedded AES/eBU digital audio test tones and a dedicated rear panel AES/EBU output. Front panel switching includes 625/50 or 525/60 operation (test signals adapt automatically to suit the system selected), on-off control of Y, Cb and Cr. Menu control of operating options is facilitated with front panel keys and on-screen menus. These include embedded audio channel on/off control and tone frequency selection, ID character

and calendar/clock programming, timing advance/delay to  $\pm 16$  lines, EDH on/off, key lock and control of the moving target and switched pattern displays. The latter are of value in compression testing and controls effect the speed and direction of the moving target and the dwell intervals for sequential switching of selected test patterns. Digital genlock includes front panel advance/delay keys (coarse and fine). The coarse keys operate in  $3 \mu\text{s}$  increments, the fine keys in increments of 20 ns. This combined with a  $\pm 16$  line menu selected advance/delay yields precise, calibrated timing control.

## key specifications

### VIDEO PARALLEL DIGITAL OUTPUT

#### Applicable Standards

ITU-R601-3, SMPTE 125M 1992

#### Output Circuit

1 25-pin D-Sub

Balanced ECL (10 k Family)

### VIDEO SERIAL DIGITAL OUTPUTS

#### Applicable Standards

ITU-R656-1, SMPTE 259M

#### Auxiliary Data

Embedded audio (SMPTE 272M)

CH1, 2/3, 4 menu switchable

800 Hz/1 kHz menu selectable

EDH (SMPTE RP-165) menu on/off

#### Output Level

800 mV p-p  $\pm 10\%$  into  $75 \Omega$

### DIGITAL BLACK

#### Auxiliary Data

EDH (menu on/off switchable)

No embedded audio

#### Output Level

800 mV p-p  $\pm 10\%$  into  $75 \Omega$

### ANALOG BLACK BURST OUTPUTS

#### System

NTSC or PAL (follows digital choice)

### INDEPENDENT DIGITAL AUDIO OUTPUT

#### Applicable Standards

AES/EBU

#### Sampling Frequency

48 kHz  $\pm 0.1$  Hz (sync to video)

#### Number of Channels

2

#### Quantitative Bits

20/16 (internal switch)

#### Tone Frequency

1 kHz/800 Hz (internal switch)

#### Tone Level

-18 dB/-20 dB (internal switch)

#### Output Impedance

110  $\Omega \pm 20 \Omega$

### 27-MHZ CLOCK OUTPUT

#### Frequency Accuracy

27 MHz  $\pm 13.5$  Hz ( $\pm 0.5$  ppm)

#### Output Circuit

Single ended ECL (10 k Family)

### TEST SIGNALS

100% Full Field, EBU, SMPTE and BBC

Color Bars, Ramp/Color Bar Combo,

Red Field, Pulse & Bar, 50 & 100% Flat

Field, 60 & 100% Multiburst, Multipulse,

Bowtie, 10-Step Staircase, Oversize,

Digital Limit and Shallow Ramps,

SDI Pathological Checkfield

#### Motion Picture

Moving white chip traverses left, right,

up, down or diagonally 30 steps. Dwell

time for each step 1 field, 1, 2, 4, 8 or

12 frames.

#### Still Picture

Test patterns switched in user-selected sequence with dwell times set to 1 field, 1, 2, 4, 8 or 12 frames.

### GENLOCK FUNCTION

#### Locking Modes

Sync lock and burst lock (burst priority)

#### Locking Method

Burst lock/sync lock automatically with burst lock priority. Menu-selected advance or delay of up to  $\pm 16$  lines with respect to timing reference.

### ID CHARACTER DISPLAY

Menu on/off switchable

#### Number of Characters

20 max, center screen

### CALENDAR/CLOCK DISPLAY

Menu on/off switchable

### POWER REQUIREMENTS

90 to 250 V ac, 50/60 Hz, 55 VA

### PHYSICAL

#### Size (W x H x D)

16<sup>3</sup>/<sub>4</sub> x 13<sup>3</sup>/<sub>4</sub> x 21<sup>7</sup>/<sub>8</sub> in.

426 x 44 x 530 mm

#### Weight

8.8 lbs., 4 kg approx.

### AVAILABLE OPTIONS

Digital Black Outputs (3) (NS-324)