

## TG-5150 HD/SD & AES Test Signal Generator



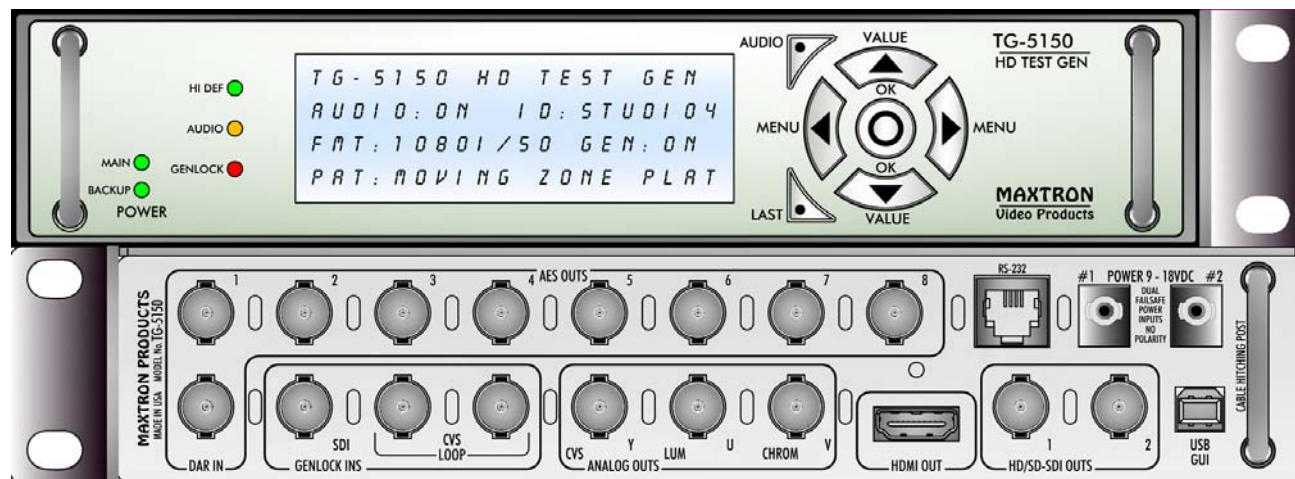
### General:

The Maxtron TG-5150 is a multi-format, SD/HD test pattern generator with SDI, HDMI, YUV, and eight AES channel outputs. Designed to support the SD/HDTV production environment, the TG-5150 also provides a genlock function using external SDI or Composite video sources with independent selection of output and genlock input formats. The AES audio can also be locked to external DAR. The advanced timing and delay controls provide maximum flexibility in system integration. On-screen-display of the signal source ID, plus Voice ID announcement of the individual audio channels make the TG-5150 one of the most versatile and easy to use test generators ever built.

The pattern lineup for the TG-5150 includes new patterns, one specifically designed for the emerging 3D video applications, and new Cr and Cb ramps. Other patterns include the moving zoneplate which is used to expose video compression and scaling artifacts and the pathological pattern which is used to stress the SDI receiver PLL's in the signal path. The RP-219 colorbars has traveling wizard that moves, in a ping-pong fashion, about the screen to reveal dropped or repeated frames in frame stores and MPEG encoders. Also included is a proprietary A/V Sync video flash pattern with coincident gated audio designed to permit measuring the exact system audio-video delay.

There is also a dedicated flash memory to store logos and signal source ID information that can be overlaid on the internal test patterns. Remote control is available through a standard RS232 serial port. Front panel control includes simple navigation lighted push-buttons, individual LED indicators for vital status information, and a bright 20x4-line LCD to display current settings.

The TG-5150 is housed in a 1RU 1/2 rack wide enclosure and can be desk or rack mounted. It is powered from dual external power supplies (one primary, one backup).



### Specifications:

- Video Formats:
  - SD - NTSC/PAL
  - 720p - 60, 59.94, 50, 30, 29.97, 25, 24, 23.98Hz
  - 1080i - 60, 59.94, 50Hz
  - 1080p - 30, 29.97, 25, 24, 23.98Hz
  - 1080sF - 30, 29.97, 25, 24, 23.98Hz

(Continued)

- Test Patterns:
  - 100% SMPTE Color Bars
  - 75% SMPTE Color Bars
  - RP219 Color Bars
  - Black
  - Black to White Ramp (Gradient)
  - A/V Sync Pattern
  - Check Field (equalizer & PLL)
  - 4-pixel square checkerboard
  - Cross Hatch
  - Full White, Red, Green and Blue
  - Ramps - Y/U/V
  - Gray Steps - 10 bars: Gray/Red/Green/Blue
  - Circle Overlay
  - Moving Zone Plate
  - Moving Target
  - Safe Area Vertical Lines / Horizontal Lines
  - Multiburst
- Special Features:
  - Random Sequence Generator for all patterns at fixed format
  - Genlock ON/OFF
  - Genlock H/V phase adjust
  - Genlock Field Invert
  - Genlock Source: Analog/Digital
  - Display contrast control
  - Display brightness/ON/OFF
  - Audio Lock to DAR
  - Audio DAR phase adjust
  - Audio ON/OFF
  - Audio Voice Only
  - Audio Tone Only
  - Audio Level AES/EBU
  - Audio Fast/slow repeat on voice markers
  - Logo on/off
  - Logo Import/Save logo
  - Logo Position
  - Text ID on/off
  - Text ID compose Enter/Edit/Save
  - Text ID Position
- Audio Tone Generator
  - Voice Channel ID's
  - 400Hz/1kHz Sine Wave embedded on HD/SD-SDI and HDMI
  - 16 Channels on 8 Groups
  - Audio Level Settings (AES & EBU)
  - Audio Synchronization Mode (DAR)
- Video Inputs
  - Analog Video Genlock Input
  - SDI Digital Video Genlock Input
- Video Outputs
  - HDMI: 1.3 compliant
  - Digital: Two identical HD/SD serial digital (SDI) outputs
  - Analog: YPbPr/CVS, S-video

## **TG-5150 HD/SD & AES Test Signal Generator**



- Standards
  - SMPTE: 125M, 274M, 296M, 372M, 292M
  - Bit Rate: 1.485 Gb/s, 1.4835 Gb/s, 270Mb/s
  - Resolution: 10/20 bit
- Output Jitter:
  - HD/SD: < 0.05 UI (typical) measured with color bar input
- LED Indicators:
  - High Def - Red; Audio ON - Amber; GenLock - Red
- Interface:
  - 20x4 LCD with 7-way navigation controls
  - Save/Recall settings
- Power:
  - Dual: 5 - 18 volts Locking Connector
  - Power Adapter: 100-240VAC 50-60Hz