**804 Multimedia Test Instrument**

Introducing the 804 Multimedia Test Instrument for testing HDTVs on a production line. The rack mountable 804 is optimized for testing modern HDMI flat panel TVs. It features four (4) HDMI outputs—all active simultaneously—for testing HDTVs with multiple HDMI inputs. This eliminates the need for splitters often required for testing each HDMI input on an HDTV. The 804 can also output component analog and composite analog for testing an HDTVs analog video outputs. Switching between video timings is fast; less than 100ms. The 804 is equipped with all the standard video timings and test patterns including 3D patterns and tests for HDMI protocols such as HDCP, EDID and CEC.

The 804 tests compressed and uncompressed HDMI audio formats using a variety of audio test signals. An HDTV’s analog audio inputs can also be tested using the 804’s programmable analog audio outputs.

**Key Features + Benefits**

- **Four (4) HDMI outputs**
  Up to 36-bit/pixel (12-bit/component) Deep Color at 1080p, TMDS link up to 2.25 Gb/s.

- **Analog video outputs**
  Test HDTVs analog component and composite video inputs.

- **Standard video timings and patterns**
  Supports standard video timings and test patterns, including HDMI 3D test images.
  Switches between timings and test patterns in less than 100ms.

- **HDMI and analog audio outputs**
  Supports HDMI compressed and uncompressed audio formats various patterns with programmable amplitude, sampling rate and bit depths.

- **Serial command line interface**
  RS-232 and USB interface for command line control or for automated test system.

- **Rack mountable**
  Fits in a standard 19" relay rack.
  Occupies two rack units.

- **Color touch display**
  Monitor the status of the test on the color display.
  Configure the 804 through the touch interface.

- **USB host interface (Optional)**
  Attach a keypad for simplified testing.
**SPECIFICATION**

### Formats (timing)
- **Over 110 standard timings** for Consumer Electronics, Computer

### Test Patterns
- **Over 35 standard test patterns**
  - add custom bitmaps
- **ZonePlate, POC, grbg, imported bitmaps**
- **Top-and-Bottom, Side-by-Side, Frame Packing**

### Special test patterns
- Functions
- HDCP
- EDID
- CEC
- CEC Ping

### HDMI (DVI)
- **Connector**
  - HDMI: Type A
  - DVI: 4x4
- **Video**
  - Pixel rate: up to 165 MHz
  - TMDS clock rate: 2.25 Gb/s
  - Encoding (HDMI): RGB, YCbCr
  - Encoding (DVI): RGB
  - Sampling mode (HDMI): 4:4:4, 4:2:2
  - Sampling mode (DVI): 4:4:4
  - Color depth (HDMI): 24/30/36 bits per pixel
  - Color depth (DVI): 24 bits per pixel
  - Color space: ITU BT.601 & BT.709

### Audio
- **Sampling rates (kHz)**: 32, 44.1, 48, 88.2, 96, 176.4, 192.0
- **Number of channels**: 2 to 8
- **Audio content**: FL, FR, LFE, RL, RR, RC, FLC, FRC, RLC
- **Bits per sample**: 16, 20, 24
- **Audio formats**: LPCM, Dolby Digital, DD+, DTS-ES
- **Frequency range**: 10Hz to 20kHz in 1Hz increments
- **Amplitude**: -99dB to 0dB in 1dB increments

### YPbPr Component Analog Video output
- **Connector**: (3) BNC
- **Component analog**: Video
- **Bit depth**: 24 bit color
- **Pixel rate**: Up to 80MHz (resolutions above 80MHz are supported through pixel doubling)
- **Colorimetry**: YPbPr
- **Sync type**: Separate and Composite

### RGB Component Video output
- **Connector**: D-Sub (1)
- **VGA**: Video
- **Bit depth**: 24 bit color
- **Pixel rate**: Up to 80MHz (resolutions above 80MHz are supported through pixel doubling)
- **Colorimetry**: RGB, YPbPr
- **Sync type**: Separate and Composite

### Analog Composite Video output
- **Connector**: (1) BNC
- **CVBS**: Video
- **Y/C**: S-Video
- **Pixel Rate range**: 13.5 - 13.52MHz
- **Sync Type**: Composite

### Analog Audio Output
- **Connector**: (2) RCA
- **Audio parameters**: 2 (L, R)
- **Audio signal**: Sine wave
- **Frequency range**: 10Hz to 20kHz in 1Hz increments
- **Amplitude**: -99dB to 0dB in 1dB increments

### Color Touch Display
- **Screen Size**: 480(H) x 272(V)
- **Color**: 24 bit RGB

### Administration
- **Interfaces**
  - RS-232: Automated command line control
  - USB host - back: Attachable keypad
  - USB peripheral - front: Updating firmware / gateware and command line
  - SD Card - front: Updating firmware / gateware

### Dimensions / Weight
- **Dimensions**
  - Height: 3.25 inches; 8.3 cm
  - Width: 16.5 inches; 41.9 cm
  - Depth: 6.1 inches; 15.5 cm
- **Weight**: 6.62 lbs; 3.0 kg

### Power
- **Voltage range**: 100 - 240 - VAC
- **Frequency**: 50 - 60 Hz
- **Power**: 24 VA

### Environmental
- **Humidity**: 30% to 80% RH non-condensing
- **Temperature**: 32 - 104 Deg F; 0 – 40 deg C

**Specifications are based on hardware and firmware revisions available as of March 2015, and are subject to change without notice. HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.**

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