



# HDG-821

## HD Generator



The HDG-821 is a multi-format generator by Link Electronics. This unit provides the user with a high quality, low cost generator to produce HD Test Patterns. The HDG-821 is a self-contained unit for standard 19 inch rack mounting. It is a multi-format generator and may be used where various HD signals are required. Tri-level sync is on all analog component outputs, RGB or YUV. Sync output can be selected as Bi-level (black burst) or Tri-level.

### 30 Test Signals and 23 HD Video Formats

There are a total of 30 test signals available, including SMPTE, EIA and Full Field Bars. There are 23 HD formats available plus NTSC or PAL black burst. It also has a unit identification that can be enabled to uniquely identify up to 100 units. The HDG-821 has the ability to flash the unit identification on and off or the ID. This feature can be changed to a frame or second counter making the video active so that one can see if the video has been frozen when going through other equipment.

### Digital and Analog Outputs and Selectable AFD Insertion

The HDG-821 has two serial digital outputs at 1.485 GB/s and YUV/RGB analog outputs. The digital and analog outputs are simultaneous on the rear panel, and contain the same test pattern. The HDG-821 can be a free running (stand-alone) unit or a gen-lock unit with a pair of looping BNC connectors on the rear panel. The gen-lock provides infinite adjustments of horizontal and vertical timing and gen-lock indication. The HD SDI output has a resettable ANC embedded time code. The output also has ANC embedded Active Format Description (AFD) in which the AFD value can be changed and the inserted line can be changed. There is a Video Payload Identifier (VPID) embedded in the SDI output. The SDI output also has a CEA-608 test message and a CEA-708 test message embedded on it. This allows you to test the ability of other equipment to read and pass this data. AES3 or AES11 (DARS). There are also two BNC connectors for AES output, which will allow four channels of audio for monitoring.

### Adjustable Audio Frequency and Amplitude

The user may embed internal audio tones on the digital video output if desired. There are two audio groups supported, which will allow for eight channels. The channels can be enabled on an individual basis. The internal tones generated are adjustable from 400Hz to 10 KHz with amplitude adjustment from -30 dBFS to 0 dBFS and silence. The unit will generate one of the two types of audio AES3 or AES11 (DARS). There are also two BNC connectors for AES output, which will allow four channels of audio for testing or audio reference.

### Exceptional Technical Support

The HDG-821 High Definition Generator is backed by the Link Electronics standard 10-year warranty and 24/7 free customer support. It meets the innovative, high performance, flexibility, and reliability requirements of all Link Electronics products.

## Features

- 23 HD Video Formats
- 30 Test Patterns
- HD Analog and SDI Outputs
- YUV or RGB Analog Outputs
- SD Black Burst Output
- Tri-Level Sync Output
- Embedded Time Code
- Two AES Generated Outputs
- AES, Either AES-3 or AES-11 (DARS)

- Master HD & SD Sync Generator
- 8 Selectable Channels To Be Embedded
- Power-up User Settings
- Loadable Factory Defaults
- Embedded Caption Test Message

- Adjustable Audio Frequency and Amplitude
- Adjustable Horizontal & Vertical Timing
- PsF (Progressive Segmented Frame)
- Source ID
- Selectable AFD Insertion
- Video Payload Identifier Insertion



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### Outputs:

HD/SDI: ..... Two 75 Ω BNC's, 800mV ±10%  
 YUV or RGB Analog: ..... One set of three 75 Ω BNC's  
 Y, G, B, & R: ..... 1Vpp, ±10% @ 100% Color Bar  
 U & V: ..... 0.7Vpp, ±10% @ 100% Color Bar  
 Sync: ..... Bi-level or Tri-level one 75 Ω BNC, 0.6Vpp±10%  
 AES/EBU Audio: ..... Two, AES3-ID or AES11, 75 Ω BNC

### Audio:

Frequency: ..... 400 to 10K Hz (100 Hz increments)  
 Amplitude: ..... 0 to -30dBFS plus silence (1dBFS increments)

### Serial RS-232:

Serial Control: ..... RS-232, DB-9 Connector, (Future development)

### Reference Input:

Analog Black Burst: ..... High Impedance Loop, >50K ohms  
 Level: ..... 1Vpp +/- 3dB  
 Configuration: ..... Single ended

### Electrical:

Input Power: ..... Auto Detection 90 to 264VAC  
 Frequency: ..... 47 to 63 Hz  
 Consumption: ..... 12 Watts  
 Compliance: ..... Designed to meet UL Approval

### Mechanical:

Height: ..... 1.75 inches  
 Width: ..... 19 inches  
 Depth: ..... 9 inches  
 Weight: ..... 4.75 Lbs.

### Environmental:

Temperature: ..... 0o to 50o C (ambient)  
 Humidity: ..... 10% to 90% non-condensing

- |                          |                      |                          |                        |
|--------------------------|----------------------|--------------------------|------------------------|
| Test Patterns            | 7. Luma Ramp         | 15. Luma Sweep 1-30MHz   | 23. 75% Green          |
| 1. 100% Color Bars       | 8. Chroma 5 Step     | 16. Luma Pulse and Bar   | 24. 75% Magenta        |
| 2. 75% Color Bars        | 9. Chroma 10 Step    | 17. Chroma Multiburst    | 25. 75% Red            |
| 3. SMPTE Bars            | 10. Chroma Ramp      | 18. Chroma SWP 5-15MHz   | 26. 75% Blue           |
| 4. 75% Color Bars/5 Step | 11. SDI Pathological | 19. Chroma Pulse and Bar | 27. 50% Gray           |
| 5. Luma 5 Step           | 12. SDI EQ           | 20. 100% White           | 28. Black              |
| 6. Luma 10 Step          | 13. SDI PLL          | 21. 75% Yellow           | 29. Luma Zone Plates   |
|                          | 14. Luma Multiburst  | 22. 75% Cyan             | 30. Chroma Zone Plates |

Formats	60	59.94	50	30	29.97	25	24	23.98
720p								
1080p								
1080i								
1080 psf								
1035i								

The manufacture reserves the right to change specifications without notice

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