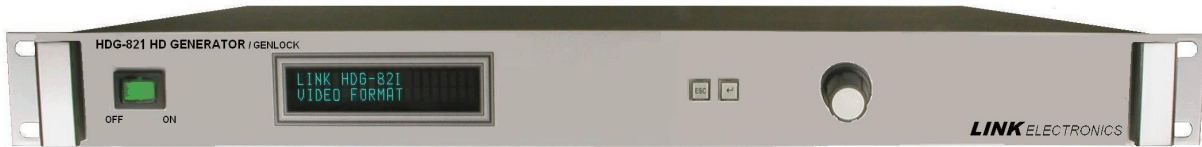




LINK ELECTRONICS, INC.

HD TEST SIGNAL GENERATOR, **GEN-LOCK** MODEL HDG-821



FEATURES

- ◆ Standard HD Formats
- ◆ 20X2 Green VFD
- ◆ 30 Test Signals
- ◆ **HDG-820 Without Gen-Lock**
- ◆ **HDG-821 With Gen-Lock**
- ◆ Embed Internal Tones
- ◆ Optical Rotary Encoder
- ◆ **Analog and SDI HD Outputs**
- ◆ **HDG-821 With Gen-Lock**

The HDG-821 gen-locks to an analog black burst signal. The HDG-821 is a high definition video test pattern generator in a standalone one rack (RU) chassis. The unit has two serial digital HD 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. A separate tri-level-sync output is also provided. The tri-level-sync output has the same data rate as the test pattern being generated. 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 400Hz and 1 KHz. There are also two BNC connectors for AES output, which will allow for four channels of audio for monitoring. Serial control will allow changes to be made via a PC.

There are a total of thirty test signals available, including SMPTE, EIA and full field bars. AES audio amplitude is adjustable from 0 to -30dBFS and frequency of 400 Hz to 10KHz.

The Link Electronics product design, performance and reliability are reflected in the New-Generation of Link Electronics products. Two lighted push button switches on the front panel selects between menu's and an optical rotary encoder to selects the desired function. User friendly operation is a key concept of this instrument.

A VFD 20X2 green transmissive display shows the function selected. The two push buttons on the front panel selects the required operation. All internal adjustments use digital potentiometer for precise and accurate settings. The user may choose to have all of the selections saved for power up defaults.

The HDG-821 multi-format generator can be used where various HD signals are required. Tri-level-sync is on all analog component outputs, RGB or YUV.

The AES audio frequency is adjustable from 400 to 10 KHz and amplitude from 0 to -30dB FS,
Two versions HDG-820 is without Gen-Lock.
 HDG-821 is with Gen-Lock
 External reference input is analog black burst.

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|--------------------------|-------------------------|--------------------------|-----------------|
| 1. 100% COLOR BARS | 9. 5 STEP CHROMA RAMP | 17. PULSE & BAR LUMA | 25. ZONE PLATES |
| 2. 75% COLOR BARS | 10. 10 STEP CHROMA RAMP | 18. MULTI BURST CHROMA | 26. 75% MAGENTA |
| 3. SMPTE BARS | 11. CHROMA RAMP | 19. CHROMA SWP .5-15 MHz | 27. 75% RED |
| 4. 75% COLOR BARS | 12. SDI PATHOLOGICAL | 20. PULSE & BAR CHROMA | 28. 75% BLUE |
| 5. 75% COLOR BARS W/RAMP | 13. SDI EQ | 21. 100% WHITE | 29. 75% GRAY |
| 6. STEP LUMA RAMP | 14. SDI PLL | 22. 75% YELLOW | 30. BLACK |
| 7. 10 STEP LUMA RAMP | 15. MULTI BURST LUMA | 23. 75% CYAN | |
| 8. LUMA RAMP | 16. LUMA SWEEP 1-30MHz | 24. 75% GREEN | |



HDG-821 HIGH DEFINITION GENERATOR

OUTPUTS

HD/SDI: Two, 800mV ±10%
 Y & G: 1Vpp, 75Ω
 R & B: 1 V p-p, 75Ω
 U & V: 0.7 V p-p, 75Ω
 YUV or RGB: One Pair, selectable from front panel
 AES/EBU Audio: Two, AES3-ID, 75Ω BNC
 Amplitude: 0 to -30 dB FS. In 1 dB steps
 Frequency: 400 to 10KHz, 100 Hz increments
 Tri-Level Sync: One output, 0.6 V p-p
SERIAL RS-232: (Future option) Serial Control:

EXTERNAL REFERENCE, For HDG-821: Analog black burst

ENVIRONMENTAL:

Temperature: 0° to 50°C (ambient)
 Humidity: 10% to 90% non-condensing
 Power: 7 Watts
 AC Input: 120/240VAC (±10%) 50/60Hz

MECHANICAL:

Height: 1.75 inches
 Width: 19 inches
 Depth: 8 inches
 Weight: 4.75 Lbs.

HD Formats

720P Formats								
Active Samples	Active Lines	Frame Rate(Hz)	Scan Format	Frequency	Samples	Total Lines	Standard	Smpte
1280	720	60	Progressive	74.25MHz	1650	750	NTSC	296M
1280	720	59.94	Progressive	74.1758MHz	1650	750	NTSC	296M
1280	720	50	Progressive	74.25MHz	1980	750	PAL	296M
1280	720	30	Progressive	74.25MHz	3300	750	NTSC	296M
1280	720	29.97	Progressive	74.1758MHz	3300	750	NTSC	296M
1280	720	25	Progressive	74.25MHz	3960	750	PAL	296M
1280	720	24	Progressive	74.25MHz	4125	750	FILM	296M
1280	720	23.98	Progressive	74.1758MHz	4125	750	FILM	296M
1080P Formats								
Active Samples	Active Lines	Frame Rate(Hz)	Format	Frequency	Samples	Total Lines	Standard	Smpte
1920	1080	30	Progressive	74.25MHz	2200	1125	NTSC	274M
1920	1080	29.97	Progressive	74.1758MHz	2200	1125	NTSC	274M
1920	1080	25	Progressive	74.25MHz	2640	1125	PAL	274M
1920	1080	24	Progressive	74.25MHz	2750	1125	FILM	274M
1920	1080	23.98	Progressive	74.1758	2750	1125	FILM	274M
1080I Formats								
Active Samples	Active Lines	Frame Rate(Hz)	Format	Frequency	Samples	Total Lines	Standard	Smpte
1920	1080	30	Interlaced	74.25MHz	2200	1125	NTSC	274M
1920	1080	29.97	Interlaced	74.1758MHz	2200	1125	NTSC	274M
1920	1080	25	Interlaced	74.25MHz	2640	1125	PAL	274M
1920	1080	25	Interlaced	74.25MHz	2376	1250	PAL	295M
1035I Formats								
Active Samples	Active Lines	Frame Rate(Hz)	Format	Frequency	Samples	Total Lines	Standard	Smpte
1920	1035	30	Interlaced	74.25MHz	2200	1125	NTSC	240M
1920	1035	29.97	Interlaced	74.1758MHz	2200	1125	NTSC	240M