



ATLONA
HD/SD-SDI PATTERN GENERATOR
AT-HDSDI500

USER MANUAL

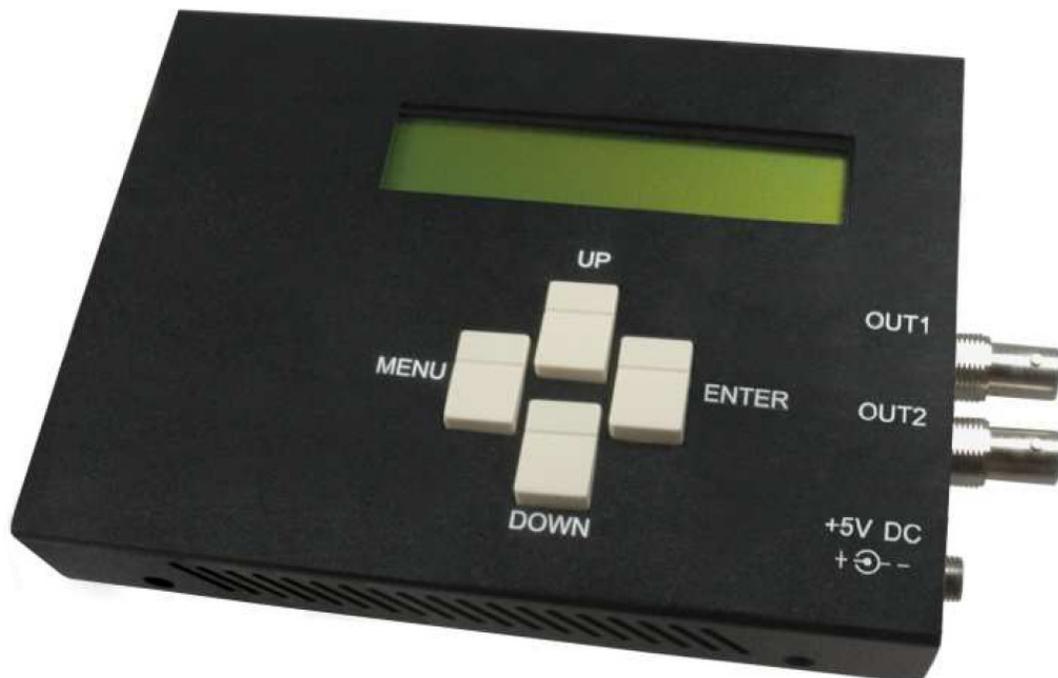


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INTRODUCTION

Atlona's AT-HDSDI500 SDI pattern generator with multi-format (HD/SD) and multi-pattern support. Besides still and moving video test patterns, other features such as Closed Caption (CC) (EIA-608) and VANC (SMPTE-334M) are also provided. With portable size, the AT-HDSDI500 is equipped with four buttons and ease to control LCM screen. This device provides a cost effective way to calibrate and test SDI enable video devices and displays for many applications.

FEATURES:

- Supported output resolution
NTSC 525@60, PAL 625@50, 720p@23.98, 720p@24, 720p@25, 720@29.94, 720p@30, 720p@50, 720p@59.94, 720p@60, 1080i@50, 1080i@59.94, 1080i@60, 1080p@23.97, 1080p@24, 1080p@25, 1080p@29.97, 1080p@30
Bit Rate: 1.485 Gbps, 1.4835 Gbps, 270Mbps
Resolution: 10bit
- Video Patterns
100% Color Bars, Borderline, Random Noise, Check Field, Black, Vertical Lines, Black / White alternate fields, Full Grey / Full White, Black to White Gradient, Random Generator for all still patterns, moving squares White noise, Inverse effect with still pattern, Scrolling Title (see Appendix for illustrations)
- Save Settings to Memory Option
- ANC Data
EDH (RP-165), SMPTE 352M, SMPTE 334M, EIA-608, SMPTE-12M
- Control
LCM & Panel Buttons
- Video Output
Dual SDI Output

PACKAGE CONTENTS

1. 1x AT-HDSDI500
2. 1x 5V power adapter
3. 1x User Manual

SPECIFICATIONS

| Technical | | |
|---|---|--|
| Role of usage | Pattern generator | |
| SDI standards | SD-SDI & HD-SDI | |
| Auto HD/SD-SDI detection | Yes | |
| Supported protocols | SMPTE 259M (270Mbps / 360Mbps), DVB ASI (270Mbps) SMPTE 292M / HDTV (1.485Gbps and 1.485/1.001Gbps) | |
| Video bandwidth | 1.485Gbps & 1.485/1.001Gbps | |
| Data rates | 143 / 270 / 1483 / 1485 Mbps | |
| Video support | [HD] 720p50/59.94/60, 1035i50/59.94/60, 1080i50/59.94/60, 1080p24/30 [SD] NTSC@59.94Hz, PAL@50Hz | |
| SDI signal type | SMPTE-292M, SMPTE-259M, DVB-ASI | |
| Output impedance | 75Ω | |
| Cable (Belden 1294A) equalization / transmission | [HD-SDI] up to 150m (500ft) [SD-SDI] up to 300m (1000ft) | |
| Audio support | No | |
| PCB Stack-up | 4-layer board [impedance control — differential 100Ω; single 50Ω] | |
| Input | None | |
| Output | 2x BNC [SDI] | |
| BNC connector | 75Ω interlocking socket | |
| Eye pattern characteristics | Amplitude: Within 800mV ±3% (<10%); Rise overshoot: Less than 2% (<10%); Fall overshoot: Less than 2% (<10%); Long time jitter: 0.195μ (<1.0μ); Timing jitter: 0.195μ (<1.0μ); Alignment jitter: 0.127μ (<0.2μ) | |
| Mechanical | | |
| Housing | Metal case | |
| Dimensions [L x W x H] | Model | 160 x 110 x 20mm [6.3" x 4.3" x 0.8"] |
| | Package | 330 x 200 x 95mm [1'1" x 7.9" x 3.7"] |
| | Carton | 495 x 440 x 380mm [1'7.5" x 1'5.3" x 1'3"] |
| Weight | Model | 325g [11.5oz] |
| | Package | |
| Fixedness | Interlocking power supply | |
| Power supply | 5V 4A DC | |
| Power consumption | 10 Watts [max] | |
| Operation temperature | 0~40°C [32~104°F] | |
| Storage temperature | -20~60°C [-4~140°F] | |
| Relative humidity | 20~90% RH [no condensation] | |

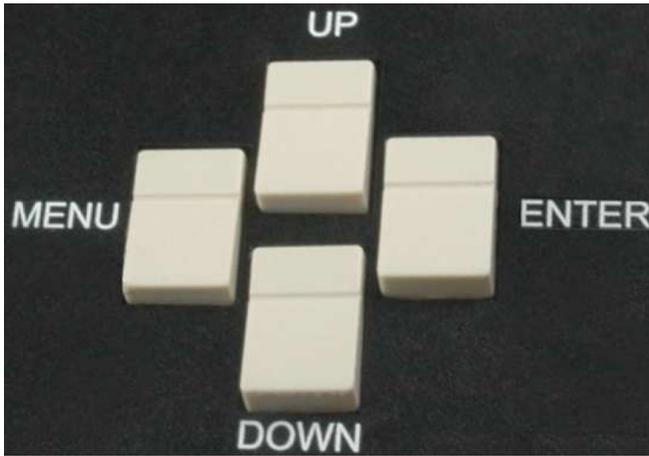
Note: The measurement results are from Tektronix WFM-7120 with SDI through 1m (3.3ft) long Belden 1694A.

MENU OPERATION

| Menu | Items | |
|-----------|------------|---------------|
| 01 Format | Resolution | NTSC |
| | | PAL |
| | | 720p |
| | | 1080p |
| | | 1080i |
| | Frequency | 60 |
| | | 59.94 |
| | | 50 |
| | | 30 |
| | | 29.97 |
| | | 25 |
| | | 24 |
| | | 23.98 |
| Output | YCbCr 422 | |
| 02 Video | Patterns | SMPTE Bar |
| | | 100% Bar |
| | | Check Field 1 |
| | | Check Field 2 |
| | | Check Field 3 |
| | | Gradient R1 |
| | | Gradient G1 |
| | | Gradient B1 |
| | | Gradient R2 |
| | | Gradient G2 |
| | | Gradient B2 |
| | | Gradient R3 |
| | | Gradient G3 |
| | | Gradient B3 |
| | | Gradient R4 |
| | | Gradient G4 |
| | | Gradient B4 |
| | | Red Level 1 |
| | | Red Level 2 |
| | | Green Level 1 |
| | | Green Level 2 |
| | | Blue Level 1 |
| | | Blue Level 2 |
| | | 100% Red |
| | | 100% Green |
| | | 100% Blue |
| | | 100% White |
| | | 70% Gray |
| | | 40% Gray |
| | | Black |

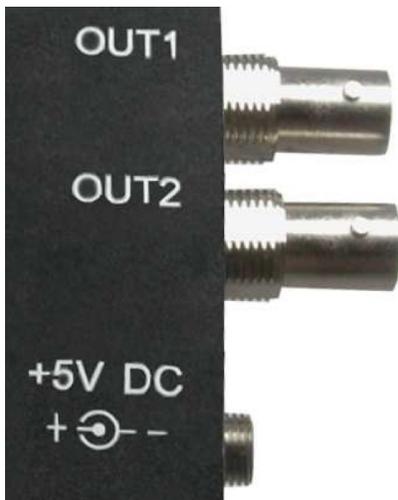
| | | |
|-------------|-----------------------------|------------|
| | | Noise |
| | | Circle 1 |
| | | Circle 2 |
| | | Moire |
| | | H Stripe R |
| | | H Stripe G |
| | | H Stripe B |
| | | V Stripe R |
| | | V Stripe G |
| | | V Stripe B |
| | | Chess 1 |
| | | Chess 2 |
| | Sequence | |
| | Text | Off |
| | | On-White |
| | On-Black | |
| Timer | Off | |
| | On-W/B | |
| | On-B/W | |
| 03 Audio | Not available in this model | |
| 04 Motion | Motion | No Motion |
| | | Square 1 |
| | | Square 2 |
| | | 2 Squares |
| | | Square Inv |
| | Speed | 1 |
| | | 2 |
| | | 3 |
| | | 4 |
| | | 5 |
| | 6 | |
| | 7 | |
| | 8 | |
| 05 ANC Data | CC | Off |
| | | On |
| | Time Code | Off |
| | | On |
| | VANC | Off |
| | | On |
| | SMPTE-352M | Off |
| On | | |
| EDH | On | |
| 06 System | Status | No Change |
| | | Factory |
| | | Now Save |
| | Version | V1.00 |

Top Panel



| Button | Function |
|--------|----------------------------|
| Menu | Trigger the menu operation |
| Enter | Enter the menu item |
| Up | Choose the last menu item |
| Down | Choose the next menu item |

Front Panel



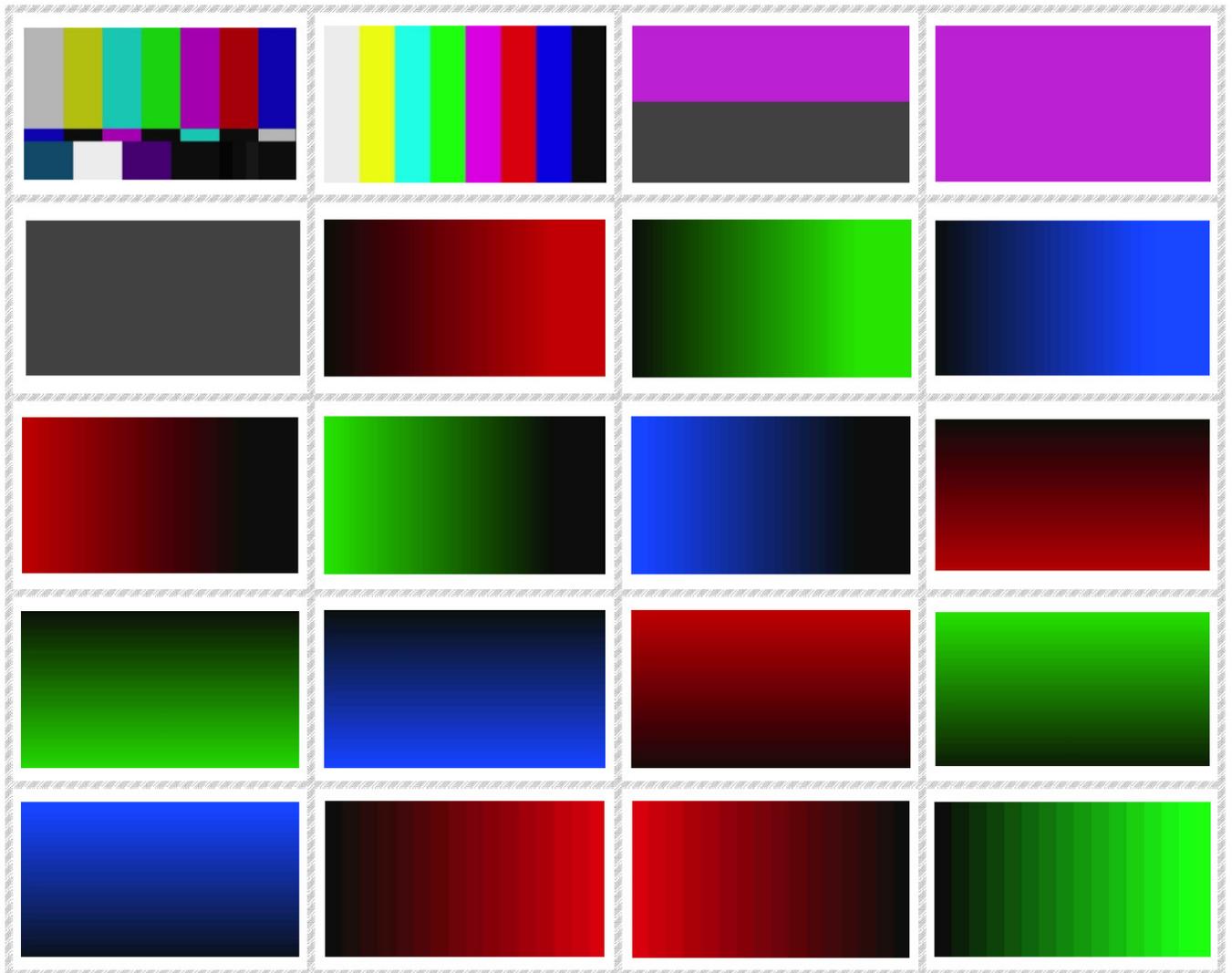
| Connector | Function |
|------------|------------------|
| OUT1, OUT2 | HD/SD SDI output |
| +5V DC | 5V Power input |

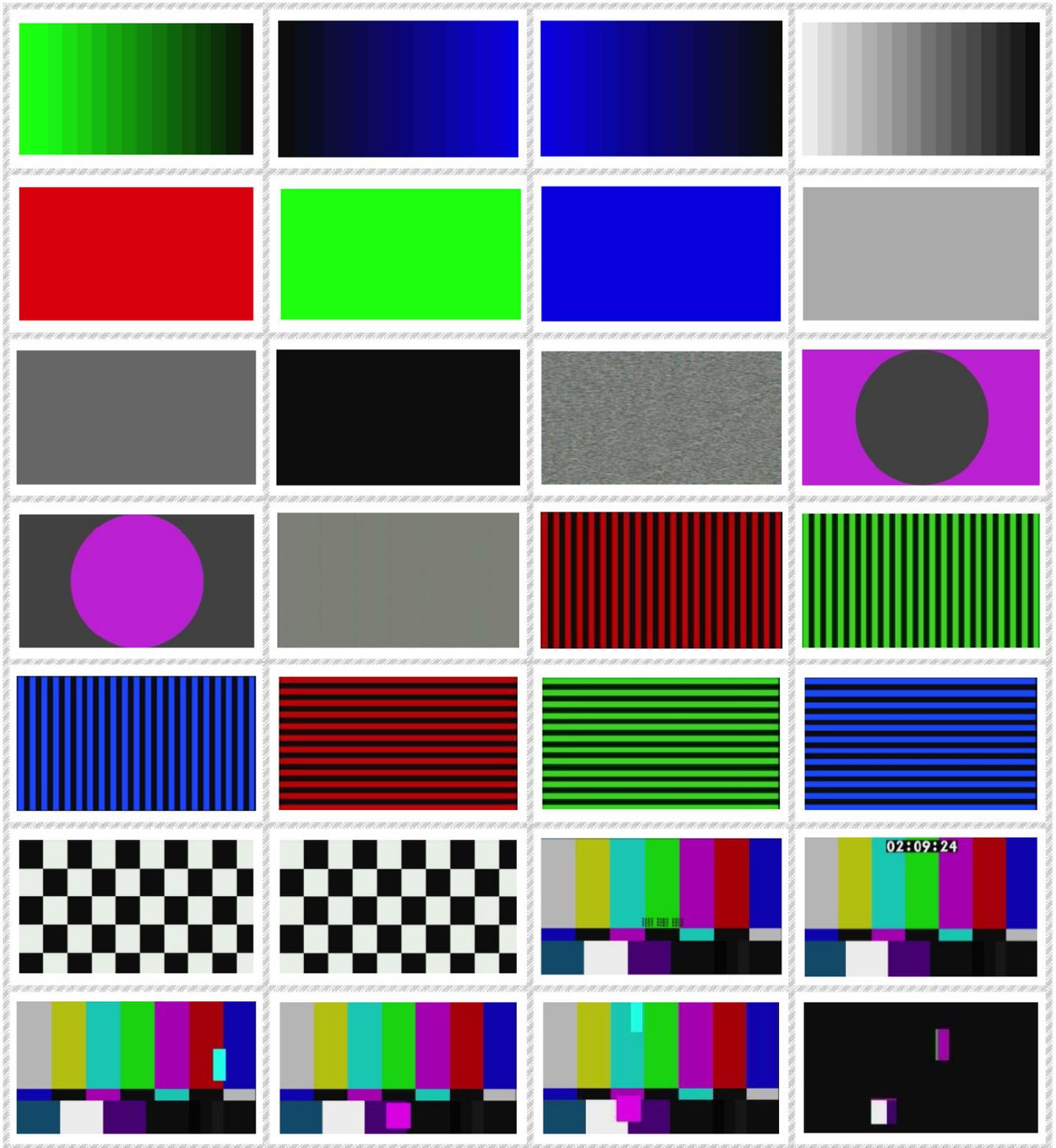
Data Identification Word of Ancillary Data Packet

| ANC Data | DID | SDID/DBN |
|-------------|------|----------|
| 334M-CC | 0x61 | 0x02 |
| 334M-VANC | 0x5F | 0xFA |
| 12M-TC | 0x60 | 0x60 |
| 352M | 0x41 | 0x01 |
| RP-165-EDH* | 0xF4 | 0x00 |

* Data Type 1(SMPTE-291M)

Built-in Video Patterns





Safeguards

To reduce the risk of electric shock, do not expose this product to rain or moisture.

If the wall plug does not fit into your local power socket, hire an electrician to replace your obsolete socket.

Do not modify the wall plug. Doing so will void the warranty and safety features.

This equipment should be installed near the socket outlet and the device should be easily accessible in case it requires disconnection.

Precautions

FCC Regulations state that any unauthorized changes or modifications to this equipment not expressly approved by the manufacturer could void the user's authority to operate this equipment.

Operate this product using only the included external power supply. Use of other power supplies could impair performance, damage the product or cause fires.

In the event of an electrostatic discharge, this device may automatically turn off. If this occurs, unplug the device, and plug it back in.

Protect and route power cords so they will not be stepped on or pinched by anything placed on or against them. Be especially careful of plug-ins, or cord exit points from this product.

Avoid excessive humidity, sudden temperature changes or temperature extremes.

Keep this product away from wet locations such as bathtubs, sinks, laundries, wet basements and swimming pools.

Use only accessories recommended by ATLONA to avoid fire, shock or other hazards.

Unplug the product before cleaning. Use a damp cloth for cleaning. Do not use cleaning fluid or aerosols, which could enter the unit and cause damage, fire or electrical shock. Some substances may also mar the finish of the product.

Never open or remove unit panels or make any adjustments not described in this manual. Attempting to do so could expose you to dangerous electrical shock or other hazards. It may also cause damage to your AT-HSDI500. Opening the product will void the warranty.

Do not attempt to service the unit. Instead disconnect it and contact your Authorized ATLONA reseller or contact ATLONA directly.

1. LIMITED WARRANTY

Atlona Technologies warrants that (a) its products (the “Product”) will perform substantially in accordance with the accompanying written materials for a period of 3 YEARS from the date of receipt and (b) that the Product will be free from defects in materials and workmanship under normal use and service for a period of 3 years. In the event applicable law imposes any implied warranties, the implied warranty period is limited to 3 years from the date of receipt. Some jurisdictions do not allow such limitations on duration of an implied warranty, so the above limitation may not apply to Customer.

2. CUSTOMER REMEDIES

Atlona Technologies and its suppliers’ entire liability and Customer’s exclusive remedy shall be, at Atlona Technologies’ option, either return of the price paid for the Product, or repair or replacement of the Product that does not meet this Limited Warranty and which is returned to Atlona Technologies with a copy of Customer’s receipt. This Limited Warranty is void if failure of the Product has resulted from accident, abuse, or misapplication. Any replacement Product will be warranted for the remainder of the original warranty period or 3 year, whichever is longer.

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