

TG-5000/A/B/AB User Guide



General

The Maxtron TG-5000 series of Dual-Format HD-SDI Pattern Generators are very cost effective, third-generation products which are available with and without embedded audio. The TG-5000 does NOT have any embedded audio, while the **TG-5000A** adds embedded audio tones and 16 channels of voice ID's. The test pattern in all versions is the SMPTE RP-219 HDTV Color Bars which was specifically chosen to expose system weakness and limitations. Overlaid over this test pattern is a traveling wizard that moves smoothly about the screen in a ping-pong fashion, very useful in revealing dropped or repeated frames or detecting frozen video. The "B" suffix indicates that the generator includes a factory installed internal Li-Ion battery, for true portable operation.

In the **TG-5000A** only, a circle overlay is added when the unit is in the 720p mode, to aid in checking for proper display aspect ratios.

Connections

The TG-5000/A has all the I/O connections clearly labeled on the top of the unit. Below is the birds-eye view of the TG-5000 Front Panel.



TG-5000A Only

Format:

This switch selects between 1080i59.94 (UP) and 720p59.94 (DN) format of the HD-SDI output.

Power:

Power toggle switch turns the unit ON and OFF. The green power LED confirms power to the unit and blinks rapidly when the unit is in the 1080i mode.

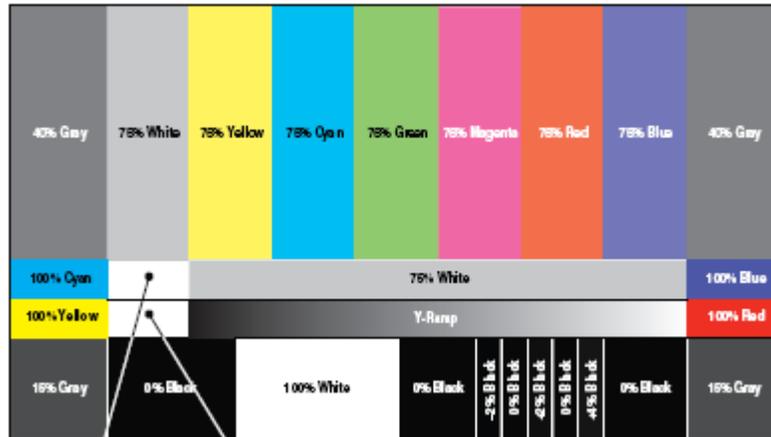
Note: The clip on the side of the unit is to be used for securing the power cord to prevent accidental pull-out; it is NOT to be used as a belt hook.

Pattern

SMPTE Recommend Practice HDTV Color Bars (RP219) is formatted for 16:9 aspect ratio and includes fixed gray levels and a Y-Ramp, as shown below. Included with this pattern is a traveling Wizard overlay, which changes direction and speed when it reaches the edge of the raster like the ball in the game Pong. This motion is useful for checking for

dropped frames as sometimes occurs with video compression schemes or in scaling engine malfunctions or to detect frozen video. The **TG-5000A** also adds a circle to this pattern to confirm proper aspect ratio when the format switch is in the 720p position.

The RP2129 pattern is shown below.



Audio Notes

The **TG-5000A** offers audio tones and channel voice ID's for all 16 stereo channels allotted in the HD-SDI specifications. The embedded voice repeats the channel ID every 15 seconds, leaving no doubts or confusion about the audio channel you're monitoring. Plus, in between the voice ID's are standard level 1kHz audio tone for the RIGHT and 440Hz audio tone for the LEFT within each group.

NOTE: The audio is always ON, there are no external means of turning off the voice and tones.

Battery Option – TG-5000B or TG-5000AB

The internal Li-Ion battery and its associated charger is a factory installed option only. Field modifications to upgrade to battery operation are not possible. Users wanting post sale upgrades must return their units to the factory. The following information applies to the battery models.

- The external power supply will operate and charge the battery at the same time
- Charge time is faster if the unit is turned OFF
- Typical Battery Run time is 4-5 hours when operated continuously
- A Battery Charging Red LED, located above the power switch, glows when the unit is charging and turns off when charging is complete. Overcharging is not possible.

Specifications & Features

- 1 - SMPTE 292M – 800mv output
- RP219 Color Bars with motion
- Dual formats 1080i59.94 and 720p59.94
- Full 20-bit pattern generation
- 16-Channel embedded audio with tones and *Voice ID
- Extremely small size - 4 x 2.5 x 1.25 inches
- 100-240VAC to 5V DC power supply included, Model PS-1512

Pattern:

- RP219 with Motion, plus *Circle

*TG-5000A only

Formats:

- 720p59.94
- 1080i59.94

Ordering Information

| | |
|------------|---|
| TG-5000 | Base model without audio |
| TG-5000B* | Base model without audio, with the internal Li-Ion battery, 4-5 hour run time |
| TG-5000A | Adds audio tones and channel Voice ID option to base model |
| TG-5000AB* | Adds audio tones and channel Voice ID option and internal Li-Ion battery, 4-5 hour run time |
| PS-1512 | Ultra Miniature power supply 5VDC, 1A, 100-240VAC, DC plug type EIAJ-2, 1.7mm x 4.0mm. This item is included with all the above models. |

*Please note that battery models are factory order only, non-battery models cannot be field upgraded.

Warranty

Maxtron warrants this product against defects in materials and workmanship for a period of three years from the date of purchase. In the event of malfunction during the warranty period attributable directly to faulty workmanship and/or materials, Maxtron will, at its option, repair or replace said products or components, to whatever extent it shall deem necessary to restore said product to proper operating condition, provided that it is returned within the warranty period, with proof of purchase and description of malfunction to the address found at our website. www.maxtronproducts.com

This Limited Warranty does not apply if the fault has been caused by misuse, improper handling, electrical or mechanical abuse, abnormal operating conditions or unauthorized modification to the product.

Units must be returned insured, with shipping charges prepaid. If not insured, shipper assumes the risk of loss or damage during shipment. Returned units must include a description of the problem, as well as the name of the person to contact in case there are any questions.

Maxtron makes no further warranties either expressed or implied with respect to the product and its quality, performance, merchantability, or fitness for any particular use. In no event will Maxtron be liable for direct, indirect, or consequential damages resulting from any defect in this product even if Maxtron has been advised of such damage.

Regulations & Compliance

Maxtron designs follow industry standard methods for minimizing the effects of EMI and RFI interferences as either the source or a victim of such interferences. However, there were no measurements made or required to indicate the degree of compliance to any standard or recommendation. Also, no warranties are made as to the public safety of the design as this

product uses a commercially supplied or specified power supplies and PCB materials. No Underwriters Laboratory approvals are suggested or inferred, except for the supplied power supply.

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