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gofanco®

User's Guide

1 YEAR WARRANTY   RoHS   FC   C€

Congratulations for owning a gofanco product. Our products aim to meet all your connectivity needs wherever you go.

Have fun with our products!

Please read this manual carefully before first use.

If you need more information about our products, please visit www.gofanco.com.

For technical support, please email us at support@gofanco.com.

For drivers/manuals download, please go to http://www.gofanco.com/download.

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1. Safety and Notice

Please read all of these instructions carefully before you use the device. Save this manual for future reference.

The **PRO-PatternGen 12G/6G/3G/HD/SD-SDI Pattern Generator** has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipments, the PRO-Pattern-Gen should be used with care. Please read and follow the safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

*   Follow all instructions and warnings marked on this unit.
*   Do not attempt to service this unit yourself, except where explained in this manual.
*   Provide proper ventilation and air circulation and do not use near water.
*   Keep objects that might damage the device and assure that the placement of this unit is on a stable surface.
*   Use only the power adapter and power cords and connection cables designed for this unit.
*   Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.

2. Introduction

The **PRO-PatternGen** **12G/6G/3G/HD/SD-SDI Pattern Generator** is an advanced SDI pattern generator with multi-format (12G/6G/3G/HD/SD) and multi-pattern support. Besides still and moving video test patterns, other features such as audio (SMPTE-291M) are also provided. PRO-PatternGen can support up to 8 channel AES compliant audio with 48KHz sample rate. PRO-PatternGen is equipped with four buttons and LCM screen to ease the control. This device provides a cost effective way to calibrate and test SDI enable video devices and displays.

3. Features

- **Supported output resolution**
  NTSC 525@60, PAL 625@50,
  720p@23.98/50/59.94/60,
  1080i@50/59.94/60,
  1080p@23.97/24/25/29.97/30/50/59.94/60,
  4K2K@23.97/24/25/29.97/30/50/59.94/60

- **Bit Rate**
  2.97 Gbps, 2.967 Gbps, 1.485 Gbps, 1.4835 Gbps, 5.94Gbps, 5.934Gbps, 11.88Gbps, 11.868Gbps,270 Mbps

- **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, SMPTE291M

- **Control**
  By LCM & panel buttons

- **Video Output**
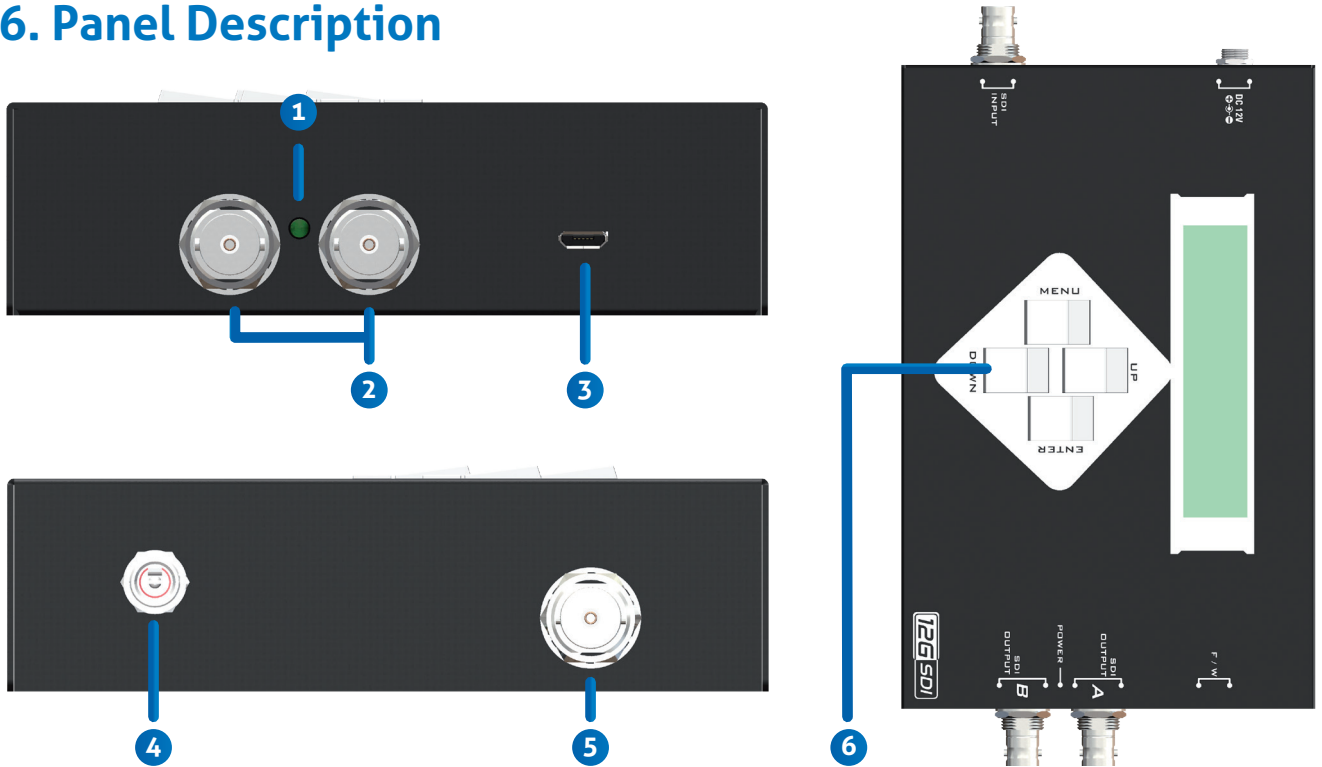 SDI output (SDI, HD-SDI, 3G-SDI, 6G-SDI, 12G-SDI)

4. Specifications

Item	Description
Technical	
Role of usage	Pattern generator
SDI standards	12G/6G/3G/HD/SD-SDI
Auto SDI rate detection	Yes
Supported protocols	SMPTE 259M (270Mbps / 360Mpbs) SMPTE 292M / HDTV (1.485 & 1.485/1.001Gbps) SMPTE 424/425M (2.97 & 2.97/1.001Gbps) SMPTE ST-2081 (5.94&5.94/1.001Gbps) SMPTE ST-2082 (11.88&11.88/1.001Gbps)
Video support	11.88Gpbs
Audio support	143 / 270 / 1483 / 1485 / 2967 / 2970 / 5934 / 5940 / 11868 / 11880 Mbps
Resolution support	[12G] 4K2K@50/59.94/60 [6G] 4K2K@23.97/24, 25, 30 [3G] 1080p@50/59.94/60 (4:2:2) [HD] 720p@50/59.94/60, 1035i@50/59.94/60, 1080p@24/30, 1080i@50/59.94/60 [SD] NTSC@59.94Hz, PAL@50Hz
PCB stack-up	SMPTE-292M / 259M / 424M / ST-2081 / ST-2082
Input	75π
Output	[12G-SDI] up to 50m (165ft) / [6G-SDI] up to 100m (330ft) / [3G-SDI] up to 200m (660ft)
HDMI Input selection	Yes
IR remote control	6-layer board [impedance control — differential 100π ; single 75π]
HDMI connector	2x BNC [SDI]
RJ-45 connector	75π interlocking socket
RS-232 connector	Amplitude: Within 800mV <10%Long time jitter <1.0 UI Rise overshoot: Less than 2% Timing jitter <1.0 UI Fall overshoot: Less than 2% Alignment jitter <0.2 UI

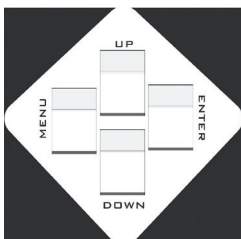| Mechanical		
Housing		Metal enclosure
Dimensions [L x D x H]	Model	340 x 123 x 44mm [1'1" x 4.8" x 1.7"]
	Package	494 x 225 x 70mm [1'6" x 8.9" x 2.8"]
	Carton	510 x 380 x 252mm [1'7" x 1'2" x 10"]
Weight	Model	1181g [2.6 lbs]]
	Package	1837g[4 lbs]
Fixedness		Wall-mounting case
Power supply		5V 4A DC
Power consumption		12 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]

5. Package Contents

- 1x PRO-PatternGen
- 1x 12V power supply unit
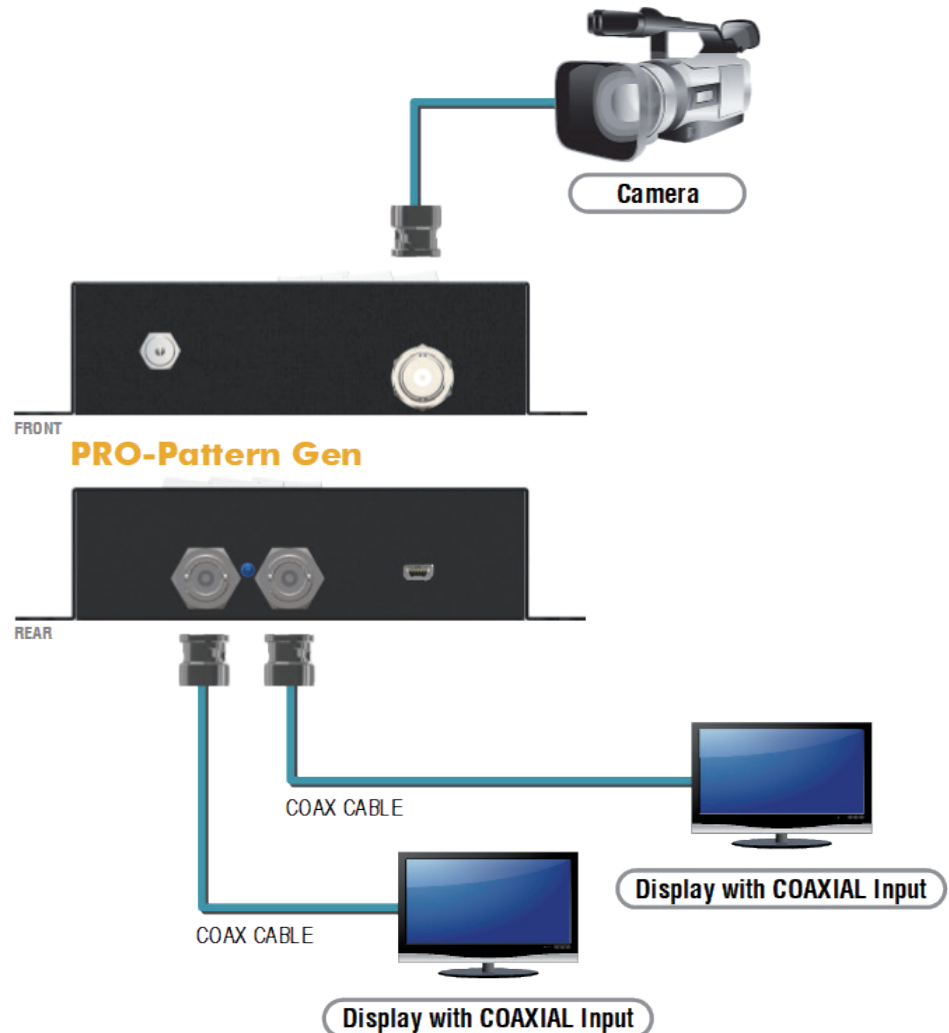- 1x User Manual

6. Panel Description

1. **POWER LED:** Power LED indicator
2. **SDI OUTPUT:** Connect to a SDI device for SDI signal output either from the chosen pattern or the SDI source signal
3. **Mini-USB:** F/W update
4. **+12V DC:** Connect to a 12V DC power supply unit
5. **SDI INPUT:** Connect to a SDI source
6. **PUSH BUTTON:**

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

7. Connection Diagram

8. Notice

1. In HDMI bypass mode, users must be aware of that the jitters coming from HDMI sources, such as DVD players, may be much higher than typical requirement according to SMPTE request on HD-SDI signals. This will result in SDI output with high jitters or even no SDI outputs!

2. Due to the high frequency bandwidth and low jitter requirement of 3G-SDI signals, it is strongly recommended to use just one SDI OUTPUT with one 75 ohm.

3. The features including new timings and patterns may increase without notice after the firmware is updated! This may affect the menu items, but will keep the same framework for users!
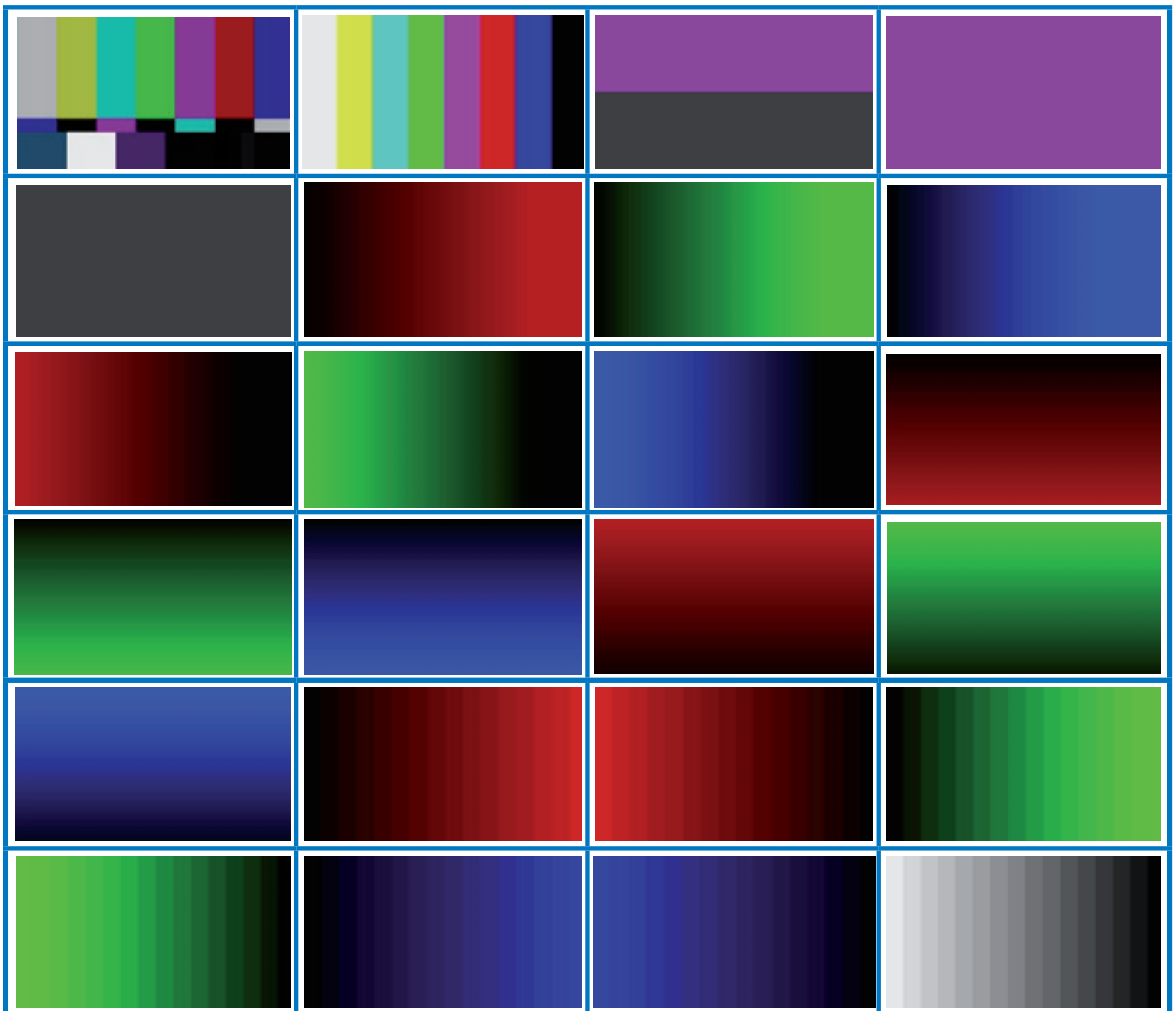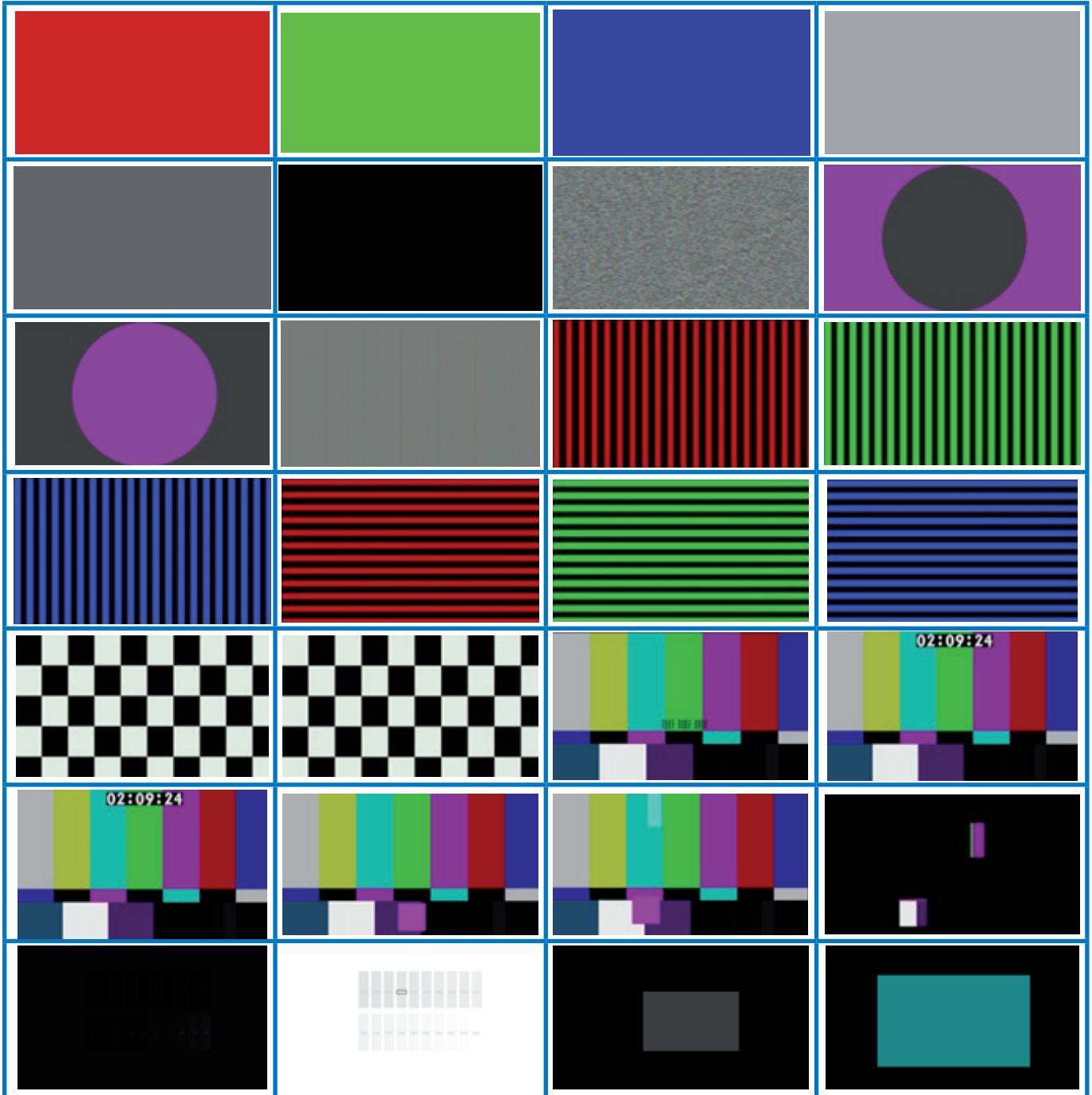
9. Appendix

- **Data Identification Word of Ancillary Data Packet**

ANC Data	DID	SDID/DBN
352M	0x41	0x01
RP-165-EDH*	0xF4	0x00

* Data Type 1(SMPTE-291M)

- **Built-in Video Patterns**

10. Limited Warranty

The SELLER warrants the **PRO-PatternGen 12G/6G/3G/HD/SD-SDI Pattern Generator** to be free from defects in the material and workmanship for 1 year from the date of purchase from the SELLER or an authorized dealer. Should this product fail to be in good working order within 1 year warranty period, The SELLER, at its option, repair or replace the unit, provided that the unit has not been subjected to accident, disaster, abuse or any unauthorized modifications including static discharge and power surges.

Unit that fails under conditions other than those covered will be repaired at the current price of parts and labor in effect at the time of repair. Such repairs are warranted for 90 days from the day of reshipment to the BUYER. If the unit is delivered by mail, customers agree to insure the unit or assume the risk of loss or damage in transit. Under no circumstances will a unit be accepted without a return authorization number.

The warranty is in lieu of all other warranties expressed or implied, including without limitations, any other implied warranty or fitness or merchantability for any particular purpose, all of which are expressly disclaimed.

Proof of sale may be required in order to claim warranty. Customers outside Taiwan are responsible for shipping charges to and from the SELLER. Cables are limited to a 30 day warranty and cable must be free from any markings, scratches, and neatly coiled.

The content of this manual has been carefully checked and is believed to be accurate. However, The SELLER assumes no responsibility for any inaccuracies that may be contained in this manual. The SELLER will NOT be liable for direct, indirect, incidental, special, or consequential damages resulting from any defect or omission in this manual, even if advised of the possibility of such damages. **Also, the technical information contained herein regarding the PRO-PatternGen features and specifications is subject to change without further notice.**

Disclaimer

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We reserve the rights to make changes without prior notice to a product or system described herein to improve reliability, function, or design.

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