BZB2GEAR®

BG-DA-12GS1X4

1x4 12G/6G/3G/HD/SD-SDI Distribution Amplifier with Reclocking

User Manual

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INTRODUCTION

The **BG-DA-12GS1X4 1x4 12G/6G/3G/HD/SD-SDI Distribution Amplifier with Reclocking** receives one SDI input, duplicates it, and re-transmits four SDI outputs for real time multi-viewing. It reliably splits a SDI, HD-SDI, 3G-SDI, 6G-SDI, or 12G-SDI video source to four SDI compliant displays at the same time.

FEATURES

- 12G/6G/3G/HD/SD-SDI distribution
- Four separately buffered and reclocked outputs*
- Cable equalization and signal retiming
- LED indication of signal lock and video rate
- Passes ancillary data and embedded audio
- Provides automatic input cable equalization (Belden 1694A) up to 180m (594ft)@3G, 100m (330ft)@6G and 70m(230ft) @12G
- Reclocking SDI signals for cascading and extending transmission distance
- Inter-locked power supply for a more secure connection

> ⚠ • Due to the high frequency and low jitter requirement for 12G SDI signals, for best performance it is strongly recommended to use one 75 ohm terminator if the paired SDI is not in use.
> Please see the following table for 12G SDI output pairing.

Table #1

	Output Port
Pair A	Output 1 & 2
Pair B	Output 3 & 4

PACKAGE CONTENTS

- 1x BG-DA-12GS1X4
- 1x 5V power adapter
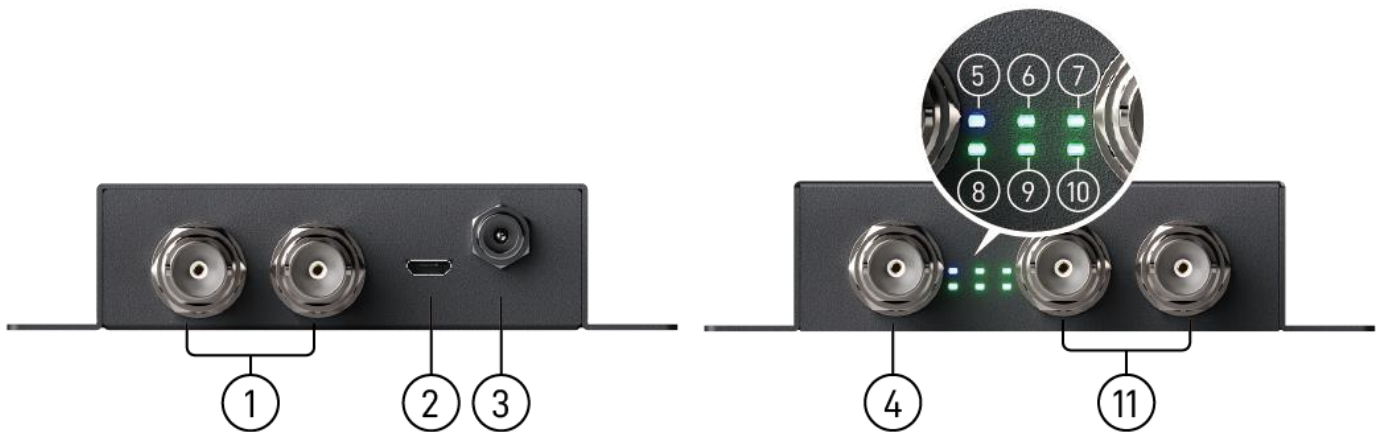- 1x BNC 75 ohm terminator
- 1x User Manual

SPECIFICATIONS

Model Name	BG-DA-12GS1X4
Technical	
SDI standard	SD/HD/3G/6G/12G-SDI
Multi-Rate Support	Auto detection of SD, HD, 3G, 6G or 12G Signals
SDI Compliance	SMPTE 424M, SMPTE 292M, SMPTE 344M, SMPTE 259M, DVB-ASI, ST-2081(6G), ST2082(12G)
SDI Data rates	1.485 / 2.97 / 5.94 / 11.88 Gbps
Video bandwidth	[11.88Gpbs & 11.88/1.001Gbps]
Output impedance	75Ω
Reclocking	Yes
Cable equalization	[12G] up to 70m (230ft) [6G] up to 100m (330ft) [3G] up to 180m (594ft))
Audio support	Yes
RP-198 pathological patterns	Immune
PCB stack-up	4-layer board [impedance control — differential 100Ω; single 75Ω]
Input	1x BNC [SDI]
Output	4x BNC [SDI]
BNC connector	75Ω inter-locked socket
Eye pattern characteristics[12G]	Amplitude: Within 800mV (<10%) Timing jitter: <1.0 UI (10Hz to 1188MHz) Rise/Fall time: Less than 35ps Alignment jitter: <0.3 (100KHz to 1188MHz)

Mechanical		
Housing		Metal enclosure
Dimensions [L x W x H]	Model	92 x 42 x 28 mm [3.6" x 1.7" x 1.1"]
	Package	198 x 137 x 74mm [7.8" x 5.4" x 2.9"]
	Carton	420 x 400 x 300mm [1'4"x 1'3" x 11.8"]
Weight	Model	119g [4.2 oz]
	Package	346g [0.7 lbs]
Fixedness		Wall-mounting case
Power supply		5V 2A DC
Power consumption		2.5 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]

(!) The measurement results are from Phabrix QX with SDI through 1m (3.3ft) long Belden 1694A.
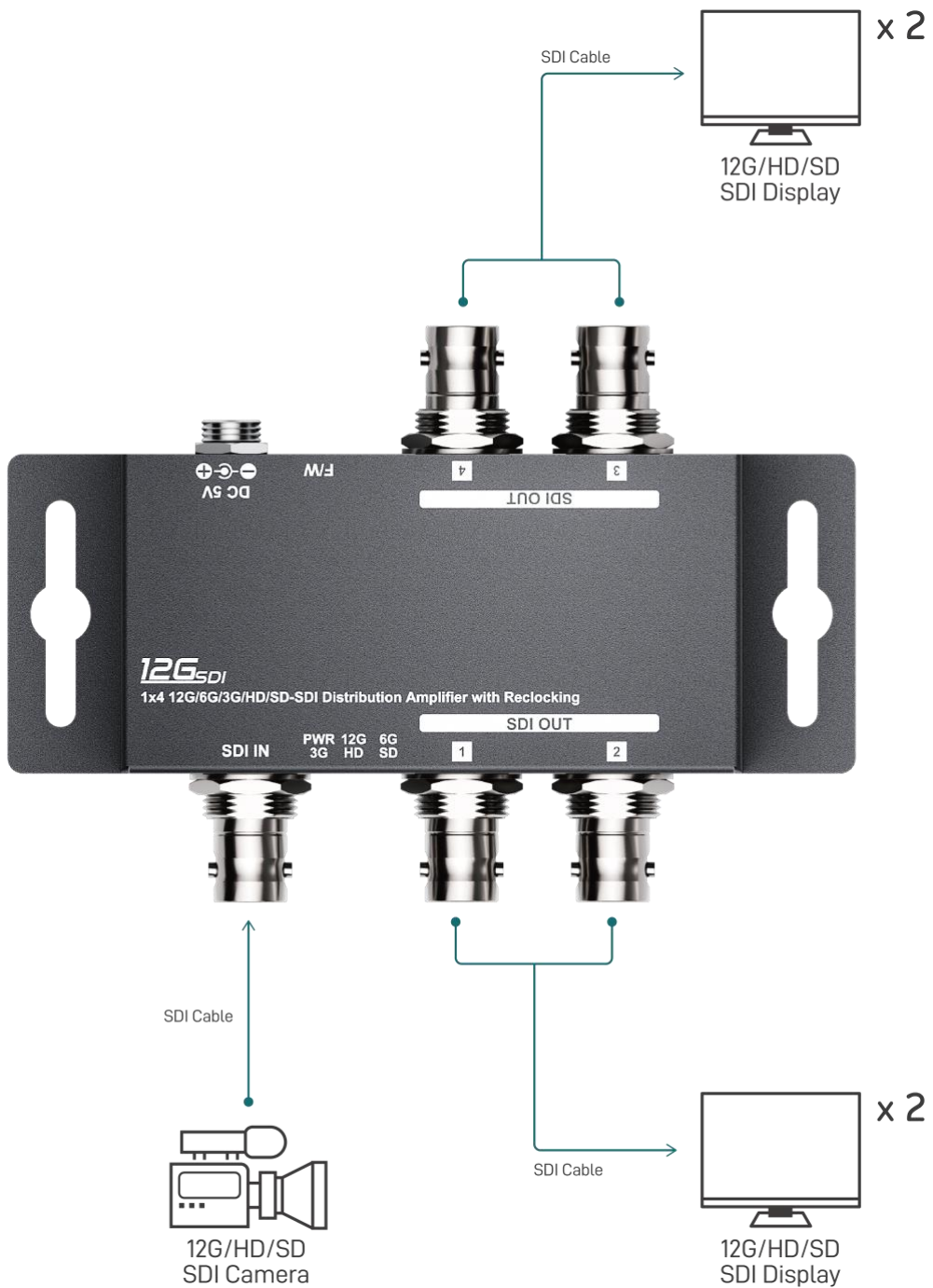
PANEL DESCRIPTIONS

1. **12G/6G/3G/HD/SD-SDI output**
2. **Micro-USB for F/W update**
3. **5V DC power jack**
4. **12G/6G/3G/HD/SD-SDI input**
5. **Power LED indicator**
6. **12G Signal LED indicator**
7. **6G Signal LED indicator**
8. **3G Signal LED indicator**
9. **HD Signal LED indicator**
10. **SD Signal LED indicator**
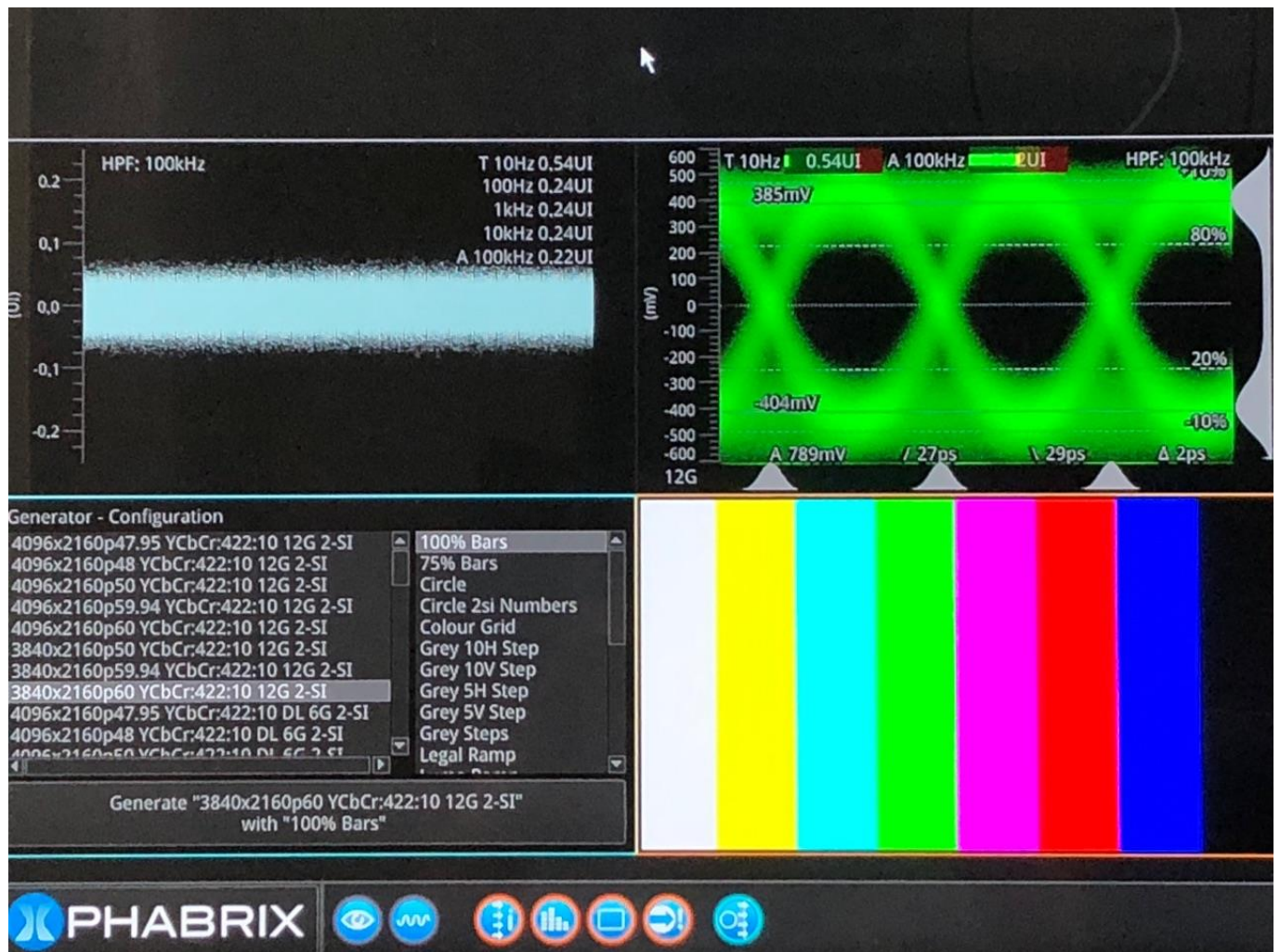11. **12G/6G/3G/HD/SD-SDI output**

HARDWARE INSTALLATION

1. Connect a camera or other device equipped with 12G/6G/3G/HD/SD-SDI outputs to BG-DA-12GS1X4 12G/6G/3G/HD/SD-SDI input.

2. Connect devices equipped with 12G/6G/3G/HD/SD-SDI inputs (e.g. monitors or video processors) to BG-DA-12GS1X4 12G/6G/3G/HD/SD-SDI outputs.

3. Plug power adapter cable into 5V DC power jack.

CONNECTION DIAGRAM

SDI Cable

× 2

12G/HD/SD
SDI Display

F/W

DC 5V

4

3

SDI OUT

12G SDI

1x4 12G/6G/3G/HD/SD-SDI Distribution Amplifier with Reclocking

SDI OUT

SDI IN

PWR 12G 6G
3G HD SD

1

2

SDI Cable

12G/HD/SD
SDI Camera

× 2

12G/HD/SD
SDI Display

SDI Cable

SIGNAL MEASUREMENT

WARRANTY

BZBGEAR wants to assure you peace of mind. We're so confident in the quality of our products that along with the manufacturer's one-year limited warranty, we are offering free second-year warranty coverage upon registration*.

Taking advantage of this program is simple, just follow the steps below:

1. Register your product within 90 days of purchase by visiting BZBGEAR.com/warranty.

2. Complete the registration form. Provide all necessary proof of purchase details, including serial number and a copy of your sales receipt.

For questions, please call 1.888.499.9906 or email support@bzbgear.com.

For complete warranty information, please visit BZBGEAR.com/warranty or scan the QR code below.

*Terms and conditions apply. Registration is required.

MISSION STATEMENT

BZBGEAR manifests from the competitive nature of the audiovisual industry to innovate while keeping the customer in mind. AV solutions can cost a pretty penny, and new technology only adds to it. We believe everyone deserves to see, hear, and feel the advancements made in today's AV world without having to break the bank. BZBGEAR is the solution for small to medium-sized applications requiring the latest professional products in AV.

We live in a DIY era where resources are abundant on the internet. With that in mind, our team offers system design consultation and expert tech support seven days a week for the products in our BZBGEAR catalog. You'll notice comparably lower prices with BZBGEAR solutions, but the quality of the products is on par with the top brands in the industry. The unparalleled support from our team is our way of showing we care for every one of our customers. Whether you're an integrator, home theater enthusiast, or a do-it-yourselfer, BZBGEAR offers the solutions to allow you to focus on your project and not your budget.