

# BG-DA-12GS1X2

1x2 12G/6G/3G/HD/SD-SDI Distribution Amplifier with Reclocking

User Manual



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## INTRODUCTION

The **BG-DA-12GS1X2 1x2 12G/6G/3G/HD/SD-SDI Distribution Amplifier with Reclocking** receives one SDI input, duplicates it, and re-transmits two SDI outputs for real time multi-viewing. It reliably splits an SDI, HD-SDI, 3G-SDI, 6G-SDI, or 12G-SDI video source to two SDI compliant displays at the same time.

## FEATURES

- 12G/6G/3G/HD/SD-SDI distribution
- Two 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 thus longer transmission
- Inter-locked power supply for better fixedness

## PACKAGE CONTENTS

- 1x BG-DA-12GS1X2
- 1x 5V power adapter
- 1x User Manual

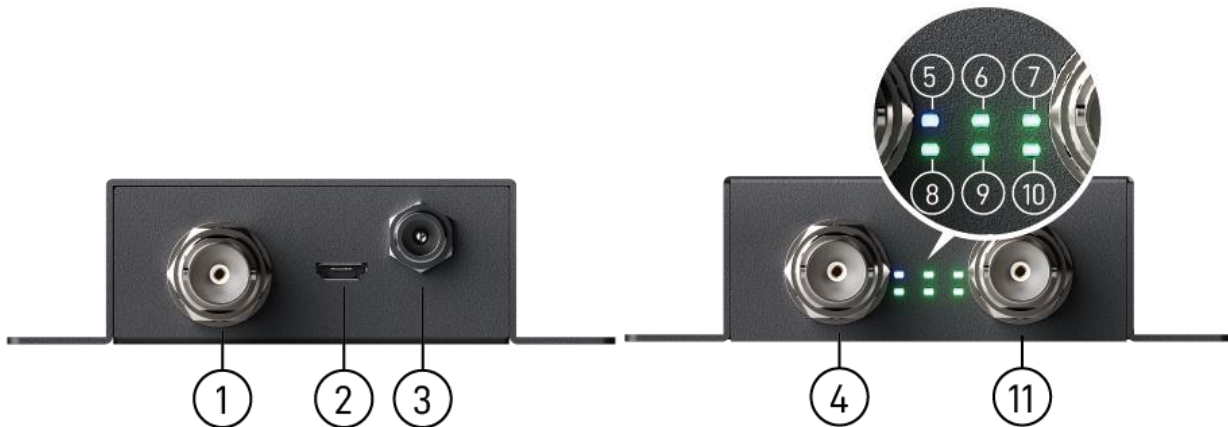
## SPECIFICATIONS

Model Name		BG-DA-12GS1X2
<b>Technical</b>		
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 & 11.88/1.001Gpbs]
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		2x BNC [SDI]
BNC connector		75Ω inter-locked socket
Eye pattern characteristics[12G]	Amplitude: Within 800mV (<10%) Rise/Fall time: Less than 35ps	Timing jitter: <1.0 UI (10Hz to 1188MHz) Alignment jitter: <0.3 (100KHz to 1188MHz)
<b>Mechanical</b>		
Housing		Metal enclosure
Dimensions [L x W x H]	Model Package Carton	77 x 42 x 28 mm [3" x 1.7" x 1.1"] 165 x 111 x 42mm [6.4" x 4.4" x 1.7"] 490 x 426 x 352mm [1'6" x 1'4" x 13.8"]
Weight	Model Package	89g [3.1 oz] 316g [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

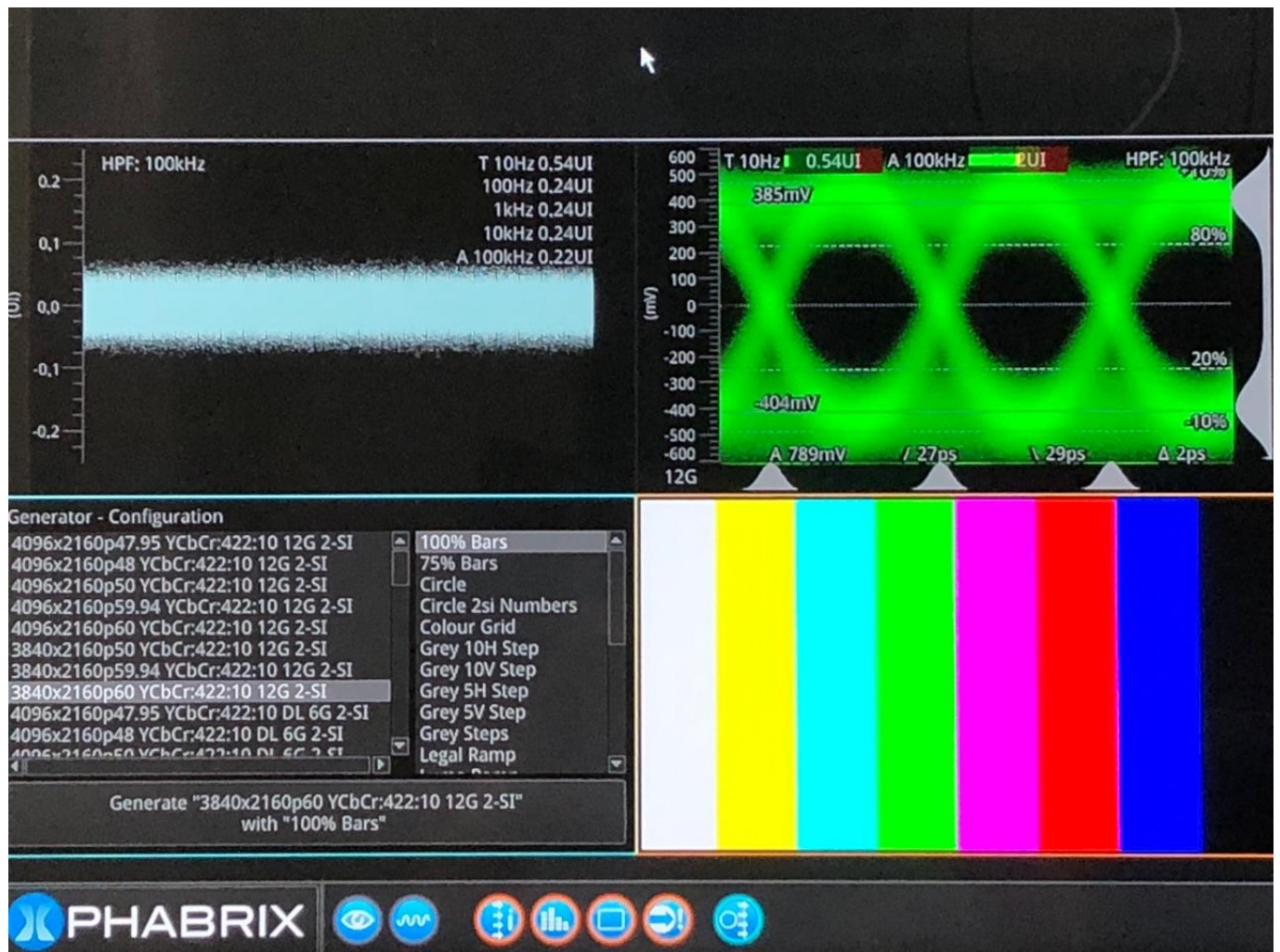
## HARDWARE INSTALLATION

1. Connect a camera or other device equipped with 12G/6G/3G/HD/SD-SDI outputs to BG-DA-12GS1X2 12G/6G/3G/HD/SD-SDI input.
2. Connect device equipped with 12G/6G/3G/HD/SD-SDI inputs (e.g. monitors or video processors) to BG-DA-12GS1X2 12G/6G/3G/HD/SD-SDI outputs.
3. Plug power adapter cable into 5V DC power jack.

# CONNECTION DIAGRAM



# 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](https://www.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](mailto:support@bzbgear.com).

For complete warranty information, please visit [BZBGear.com/warranty](https://www.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.