



## B172A | User Manual

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# B172A

## 2 Channel FET/Optical Hybrid Compressor

### INTRODUCTION

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Thank you for purchasing the **Black Lion Audio B172A** 2 channel fet/optical hybrid compressor. The B172A is a 2 channel compressor, 1 channel a FET compressor based off of Black Lion's own Seventeen compressor and the other channel is an all new Opto compressor featuring Black Lion's T4BLA optical cell. This unit combines the two separate '76 and 2A circuits into a single unit that allows you to route the signal in any order you like to be able to provide this very useful compression technique.

This product was designed and engineered by Black Lion Audio in Chicago, IL USA. All units are assembled and tested at our shops in Chicago and New York.

At Black Lion Audio, we believe in putting sound quality first. We strive to offer mind-blowing products at incredible prices. We are committed to continuously innovating in pursuit of the perfect sound. We live and breathe gear and can't imagine doing anything else. We hope you enjoy this product and share in our passion for all things audio.

Please be sure to follow the safety instructions on the following pages. We want you around to purchase more gear!

### ENGINEERING OBJECTIVE

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Every so often, two incredible things, wholly enjoyable on their own, combine to form a pair so sweet and complementary, that it becomes hard to think of one without the other... Sonny & Cher, Lennon & McCartney, Snoop Dogg & Dr Dre and perhaps the greatest and most literal "dynamic duo" of all time – the 1176 and LA-2A!

The 1176 and LA-2A when used together, have become a studio stable for decades, often wired in series with each other so that one catches the audio's peaks and the other does the heavy compression. Black Lion Audio, having hit the mark with the widely adored Seventeen compressor, has struck again, combining the Seventeen's F.E.T. circuitry with a worthy optical section in the B172A! This unit combines the two separate '76 and 2A circuits into a single unit that allows you to route the signal in any order you like to be able to provide this very useful compression technique.

The Seventeen's success put pressure on BLA to pair the already proven F.E.T. side with an equally formidable optical mate. The challenge was met on the B172A through the creation of a custom T4B "opto" element called the "T4BLA". BLA's lengthy experience in modifications lent designers the proper patience and mindset to tweak subtleties in the optical element until it was a supreme asset in the design. With a heavy attention to detail and design, the T4BLA is designed to be the single best T4B optocell available today.

Flexibility was a main goal of the B172A since its initial concept. While many engineers agree on the benefits of using both compression types, the order in which to do so is still debated. The AB-BA switch on the B172A allows for quick internal routing of the signal. The two compressors can also be used completely independent of each other when utilizing the 3rd position (link off) on the AB-BA switch. Each circuit also has stereo linking so a pair of B172A's can be used in stereo.

As always, a painstaking amount of time has been spent on choosing the best possible transformers needed for the circuit. Featuring a Cinemag input transformer on the LA-2A side, BLA's own Chicago-wound output transformers on both circuits, high-grade signal path and decoupling capacitors, the B172A gives studio owners ultra convenient access to a pair of high quality dynamics processors that have stood the test of time while also providing a tool never before available in a single box.

## PACKAGE CONTENTS

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- B172A
- IEC cable
- 4x desktop feet & screws

## QUICK START GUIDE

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- On your sound system, mute your monitors and then using balanced XLR cables, connect your B172A to your mixing bus or patch bay. If you are using two B172As in parallel (or stereo), connect the RCA's between the two units on both channels.
- Set all controls to full counter-clockwise position, and all pushbuttons deselected or in the off position. Set the Bypass switches to the bypass position, bypassing the unit, and apply power.
- Unmute the monitors, and verify that signal is passing to and from the unit.

## SEVENTEEN

- Set the INPUT, OUTPUT, ATTACK and RELEASE controls to about 12 o'clock, select RATIO 4, and switch the bypass switch away from bypass. Increase the INPUT until the meter is deflecting a few dB. Again, verify signal is passing through the unit.

## 2A

- Set the INPUT and OUTPUT controls to about 12 o'clock and switch the bypass switch away from bypass. Increase the INPUT until the meter is deflecting a few dB. Again, verify signal is passing through the unit.

**IMPORTANT NOTE ON ROUTING AND SETUP:** The routing switch switches both the input jack and the output jack of the unit when in A-B/B-A modes. This means that in A-B mode, the input signal goes into A's input and B's output and vice versa in B-A mode. Because of this, BOTH channels need an input signal and both channels need an output signal so that both routing options work properly. If one channel is bypassed, the signal has no way to route from one channel's input to the others output, this will cause the unit to be silent and not pass signal.

**Your B172A is now ready for use!**

## LIMITED 3 YEAR WARRANTY

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Black Lion Audio's Bluey is warranted by Black Lion Audio to be free from defects in materials and workmanship for the period of THREE (3) YEARS to the original purchaser. In the event of such defects, the product will be repaired without charge or, at our option, replaced with a new one if delivered to Black Lion Audio prepaid, together with a copy of the sales slip or other proof of purchase date. The warranty excludes problems due to normal wear, abuse, shipping damage or failure to use the product in accordance with the specifications.

All parts and labor are covered under this Limited Warranty. However, if it is determined by Black Lion Audio that the device was damaged or made defective through abuse, we reserve the right to charge the customer for the cost of the repair.

Black Lion Audio shall not be liable for damages based upon inconvenience, loss of use of the product, loss of time, interrupted operation or commercial loss or any other damages, whether incidental, consequential or otherwise. This warranty gives you specific legal rights, and you may have other rights, which will vary from state to state.

This warranty is not transferable.

## SPECIFICATIONS

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### **Voltage:**

115VAC, 230VAC rear panel switchable

### **AC Mains Input:**

IEC320-C14 standard plug.

### **Fuse:**

115VAC 60Hz uses T2AL; 230VAC 50Hz uses F2AL both are 20mmx5mm

### **Dimensions:**

438mm (19") x 88mm (2U) x 250mm D

### **Weight:**

8kg

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### **Attack:**

Continuously variable 20uS to 800uS

### **Release:**

Continuously variable 50mS to 1200mS

### **Ratio:**

Rotary switch selected 4:1, 8:1, 12:1, 20:1

### **THD:**

Less than 0.3% THD from 50 HZ TO 20 KHZ

## 2A

### **Attack:**

Dictated by T4BLA

### **Release:**

Dictated by T4BLA

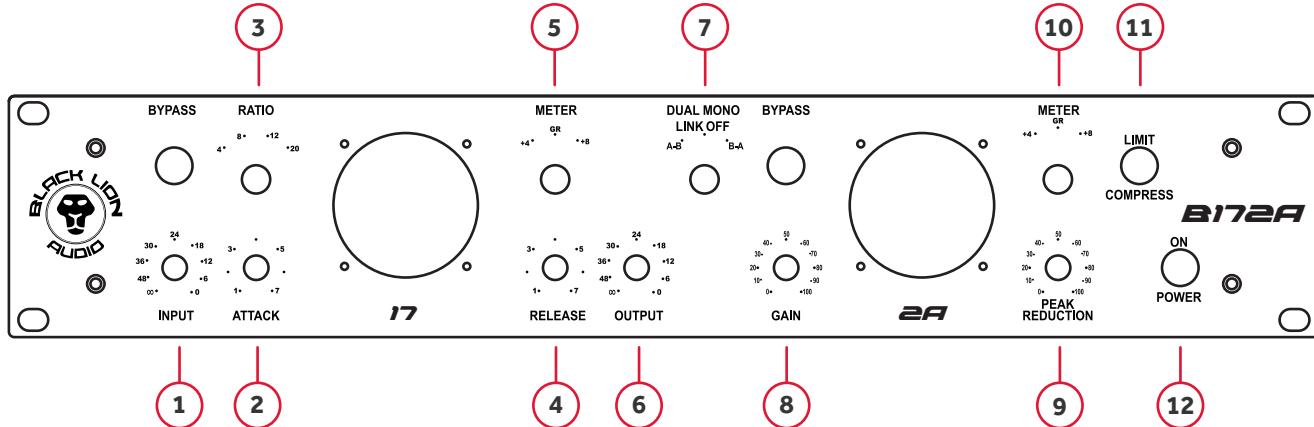
### **Frequency Response:**

+/- 1 DB, 15 HZ TO 20KHZ

### **GAIN:**

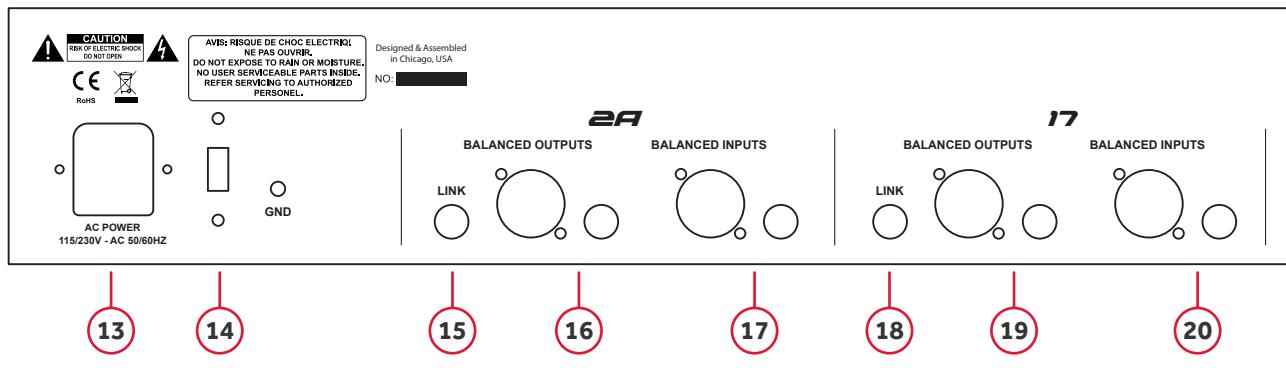
Up to 40 DB ±1DB.

# FRONT



1. **INPUT:** Controls input level & amount of compression of 17 compressor
2. **ATTACK:** Controls speed at which compressor engages of 17 compressor
3. **RATIO:** Controls amount of compression compared to signal level of 17 compressor
4. **RELEASE:** Controls speed at which compressor disengages of 17 compressor
5. **METER**
  - **GR:** Displays amount of gain reduction applied of 17 compressor
  - **+4:** Displays output level where a +4dB signal will read at 0 on meter of 17 compressor
  - **+8:** Displays output level where a +8dB signal will read at 0 on meter of 17 compressor
6. **OUTPUT:** Controls gain to compensate for gain reduction & signal loss of 17 compressor
7. **SIGNAL ROUTING SWITCH:** Controls the signal routing between A & B, see page 4 for notes
8. **GAIN:** Controls gain to compensate for gain reduction & signal loss of 2A compressor
9. **PEAK REDUCTION:** Controls input level & amount of compression of 2A compressor
10. **METER:**
  - **GR:** Displays amount of gain reduction applied of 2A compressor
  - **+4:** Displays output level where a +4dB signal will read at 0 on meter of 2A compressor
  - **+8:** Displays output level where a +8dB signal will read at 0 on meter of 2A compressor
11. **LIMIT COMPRESS:** Controls whether the 2A acts as a compressor or limiter
12. **POWER:** Power switch turns on & off unit

# BACK



13. **AC POWER:** Power inlet to plug IEC cable into fuses located inside IEC jack
14. **VOLTAGE SELECTOR SWITCH:** Set to correct voltage in country used in
15. **LINK:** Used for linking detector circuits of 2A compressors between two B172A units
16. **BALANCED OUTPUT:** Output of 2A compressor
17. **BALANCED INPUT:** Input of 2A compressor
18. **LINK:** Used for linking detector circuits of 17 compressors between two B172A units
19. **BALANCED OUTPUT:** Output of 17 compressor
20. **BALANCED INPUT:** Input of 17 compressor

# SAFETY INSTRUCTIONS

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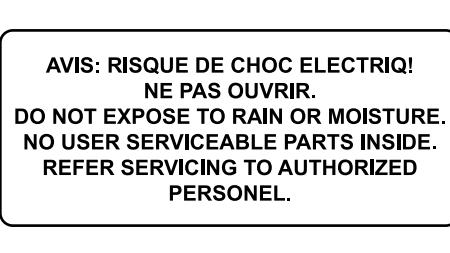
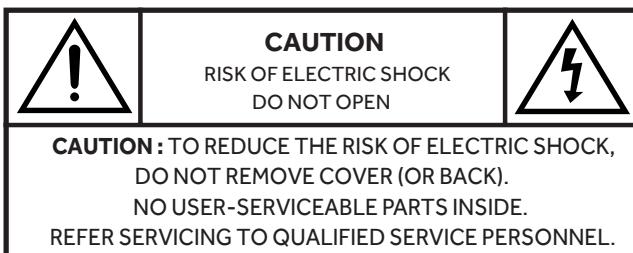
1. Read these instructions.
2. Keep these instructions
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Use only attachments/accessories specified by the manufacturer
12. Use only with a cart, stand, tripod, bracket or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. This apparatus shall not be exposed to dripping or splashing, and no object filled with liquids, such as vases, shall be placed on the apparatus.
16. Note that this apparatus is not completely disconnected from the AC mains service when the power switch is in the OFF position.
17. The mains plug or an appliance coupler is used as the disconnect device, so the disconnect device shall remain readily operable.
18. Any changes or modifications not expressly approved in this manual could void your authority to operate this apparatus.
19. Exposure to extremely high noise levels may cause permanent hearing loss. Individuals vary considerably in susceptibility to noise-induced hearing loss, but nearly everyone will lose some hearing if exposed to sufficiently intense noise for a period of time. Be sensible.

## WARNINGS

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### IMPORTANT !

Be sure to select the proper operating voltage (and install the correct fuse) on the rear panel before plugging in the power cord. Improper selection can result in damage to the unit that will not be covered under the warranty.



The lightning flash with an arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

# **DISCLAIMER**

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**The Black Lion Audio B172A complies with all applicable / RoHS/ WEEE European Union directives.**

**Do not attempt to service this unit yourself, as it will void your warranty. Please check your unit carefully upon receipt and return to place of purchase immediately if there are any problems with the product. After that, the standard Black Lion Audio 3 YEAR warranty will apply to defects in materials and workmanship.**

**(U.S.A.)** Should your Black Lion Audio product require service, please contact the Black Lion Audio Service Department. **+1 845 642 3697**-or-contact us on our customer service site: [www.blacklionaudio.com/contact](http://www.blacklionaudio.com/contact)

**You must obtain an RA # (Return Authorization number) from us before shipping a unit back to us. This RA # must be clearly written on the outside of the box.**

**Please safely pack the units...It is best to use the original packing materials. Black Lion Audio cannot be responsible for any damages incurred in shipping to us due to poor packaging. PLEASE PACK CAREFULLY and FULLY INSURE THE SHIPMENT.**

**(INTERNATIONAL)** For service or warranty assistance, please contact the Black Lion Audio distributor in your country through the dealer from whom you purchased this product.

# **NOTICE**

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This manual provides general information, preparation for use, installation and operating instructions for the Black Lion Audio B172A 2 channel FET/Optical Hybrid Compressor.

The information contained in this manual is subject to change without notice. Black Lion Audio makes no warranties of any kind with regard to this manual, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Black Lion Audio shall not be liable for errors contained herein or direct, indirect, special, incidental, or consequential damages in connection with the furnishing, performance, or use of this material.

# **TRADEMARKS**

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