

Notice

This manual provides general information, preparation for use, installation and operating instructions for the Black Lion Audio B172A.

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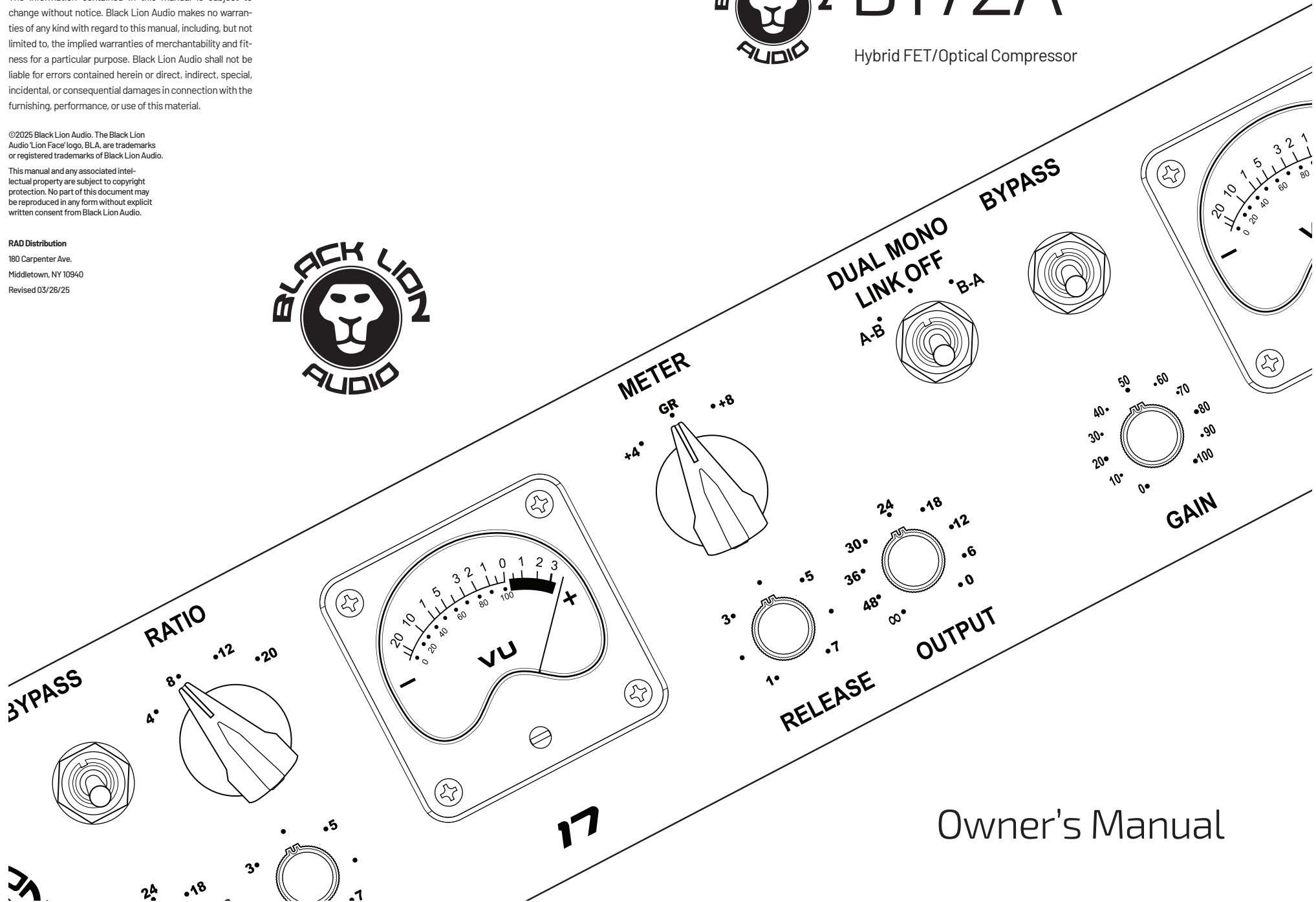
Middletown, NY 10940

Revised 03/26/25



B172A

Hybrid FET/Optical Compressor



Owner's Manual

IMPORTANT SAFETY INSTRUCTIONS

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. If the power cord becomes frayed, stop using immediately.
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 power inlet on the product is used as the disconnect device, so the disconnected device shall remain readily operable when reconnected.
18. Any changes or modifications not expressly approved in this manual could void your authority to operate this apparatus.

IMPORTANT !

Be sure to use a three prong AC cable that properly fits the power source. Please use the correct fuse designated 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.

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.

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.

LIMITED 3 YEAR WARRANTY

Black Lion Audio's B172A 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

T7 Attack	Continuously variable 20 uS to 800 uS
T7 Release	Continuously variable 50 mS to 1200 mS
T7 Ratio	Rotary selected 4:1, 8:1, 12:1, 20:1
2A Attack	Program dependant
2A Release	Program dependant
Frequency Response	+/- 1 dB, 15 HZ TO 20KHZ
Gain	Up to 40 dB ±1 dB
Voltage	115 VAC, 230 VAC rear panel switchable
AC Mains Input	IEC320-C14 standard plug
Fuse	50 Hz uses F2AL; both are 20 mm x 5 mm
Dimensions	Width: 438 mm(19") Height: 88 mm(3.5") Depth: 250 mm
Weight	8 kg

CONNECTIONS AND SETUP

The B172A requires two inputs and two outputs on your device to function correctly.

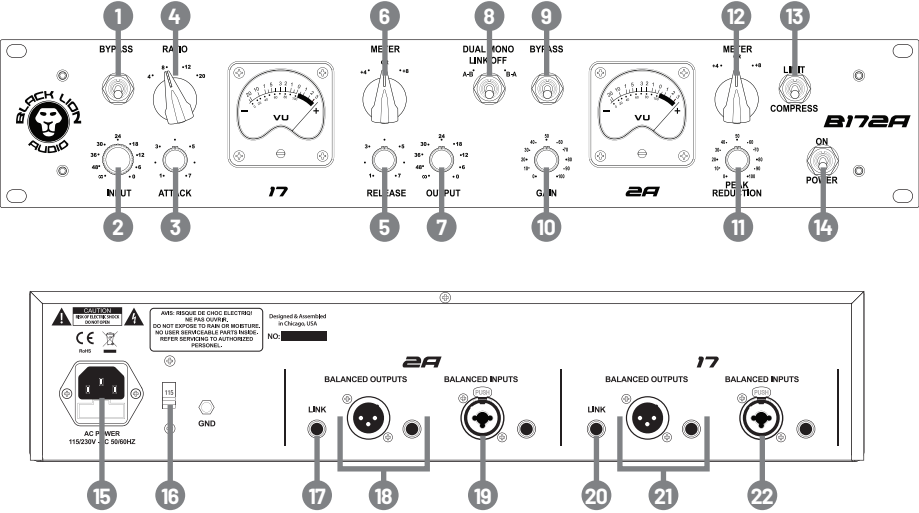
Mute your studio monitors. Using balanced XLR or TRS cables, connect your B172As inputs and outputs to your interface, mixer, or patch bay.

If you are using two B172As in parallel (or stereo), connect the two units via the LINK jacks using two 1/4" TRS cables.

Set all controls to full counter-clockwise position. Set the Bypass switches to the bypass position, and apply power.

Seventeen:

Set the Input, Output, Attack, and Release controls to about 12 o'clock, select RATIO 4, and switch the bypass switch off. Increase the INPUT



Front Panel

1. **Bypass:** Bypasses the compression circuit of the 17 side.
2. **Input:** Controls input level & amount of compression of 17 compressor
3. **Attack:** Controls speed at which compressor engages of 17 compressor
4. **Ratio:** Controls amount of compression compared to signal level of 17 compressor
5. **Release:** Controls speed at which compressor disengages of 17 compressor
6. **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
7. **Output:** Controls gain to compensate for gain reduction and signal loss of 17 compressor
8. **Signal Routing Switch:** Controls the signal routing between the 17 and 2A compression circuits
9. **Bypass:** Bypasses the compression circuit of the 2A side.
10. **Gain:** Controls gain to compensate for gain reduction & signal loss of 2A compressor
11. **Peak Reduction:** Controls input level & amount of compression of 2A compressor

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 off. Increase the INPUT until the meter is deflecting a few dB. Again, verify signal is passing through the unit.

Once you've verified that signal is passing through both sides of the B172A, you're done!

12. 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

13. **Limit/Compress:** Controls whether the 2A acts as a compressor or limiter

14. **Power:** Turns unit on/off

Rear Panel

15. **AC Power:** Power inlet to plug IEC cable into fuses located inside IEC jack
16. **Voltage Selector:** Set to correct voltage in country used in
17. **Link:** Used for linking detector circuits of 2A compressors between two B172A units
18. **Balanced Outputs:** Output of 2A compressor
19. **Balanced Inputs:** Input of 2A compressor
20. **Link:** Used for linking detector circuits of 17 compressors between two B172A units
21. **Balanced Outputs:** Output of 17 compressor
22. **Balanced Inputs:** Input of 17 compressor

USING THE B172A

The B172A is more than just “two compressors in one.”

Thanks to the versatile signal routing switch, you can process your signals in many ways:

- Processing a mono signal from 17 into 2A(series)
- Processing a mono signal from 2A into 17(series)
- Processing a dual-mono signal into the 17 and 2A independently of one another(parallel)
- Processing two separate mono signals into the 17 and 2A independently of one another
- (with two B172As)Processing a stereo signal as described above

Routing

The routing control switches **both** the input jacks and the output jacks of the unit when in A-B/B-A modes.

- In A-B mode the input signal goes into the 17's input and the 2A's output.
- In B-A mode, the input signal goes into the 2A's input and the 17's output.

Because of this, **both channels require both an input signal and an output signal in order for both routing options to work properly.**

If one channel is bypassed, the signal has no way to route from one channel's input to the other's output; this will cause the unit to pass no signal.

Stereo linking

When running a pair of B172As via a stereo link, start by setting both units to matched settings, as the detector circuits are the linked elements - not the controls. Note that due to design limitations of 76-style compressors, no two units will ever be 100% matched without an external battery-powered balancing box. If you don't have a balancing box, you may need to make slight alterations to the Input and Output controls to create perfect stereo matching.

The 76 Attack control

The Attack control on the 76 side of the B172A works a little differently than you may have encountered on other 76-style compressors. Turning the Attack knob to the left(counter-clockwise)will yield faster attack times; slower times result when turning to the right (clockwise). We've found this control scheme to be more intuitive; akin to a volume knob decreasing level to the left and increasing to the right.

- **Attack:** Continuously variable 20 uS to 800 uS
- **Release:** Continuously variable 1200 mS to 50 mS

The 2A Ratio, Attack, and Release

The ratio of the 2A side when set to Compress mode is around 3:1 but will also be affected by the level of the program material. When set to Limit, the ratio is effectively infinite.

Attack and Release times on the 2A are fixed.

Part of the allure of 2A-style compression is its ease of use, thanks in no small part to its hardwired attack and release settings. Expect it to sound great with no fuss.

Attack time is incredibly fast at around 10 milliseconds. About 1/40th the time it takes to blink.

Release time is dependent upon the amount of compression applied by the Peak Reduction control, and can range anywhere from half a second to five seconds for total release.

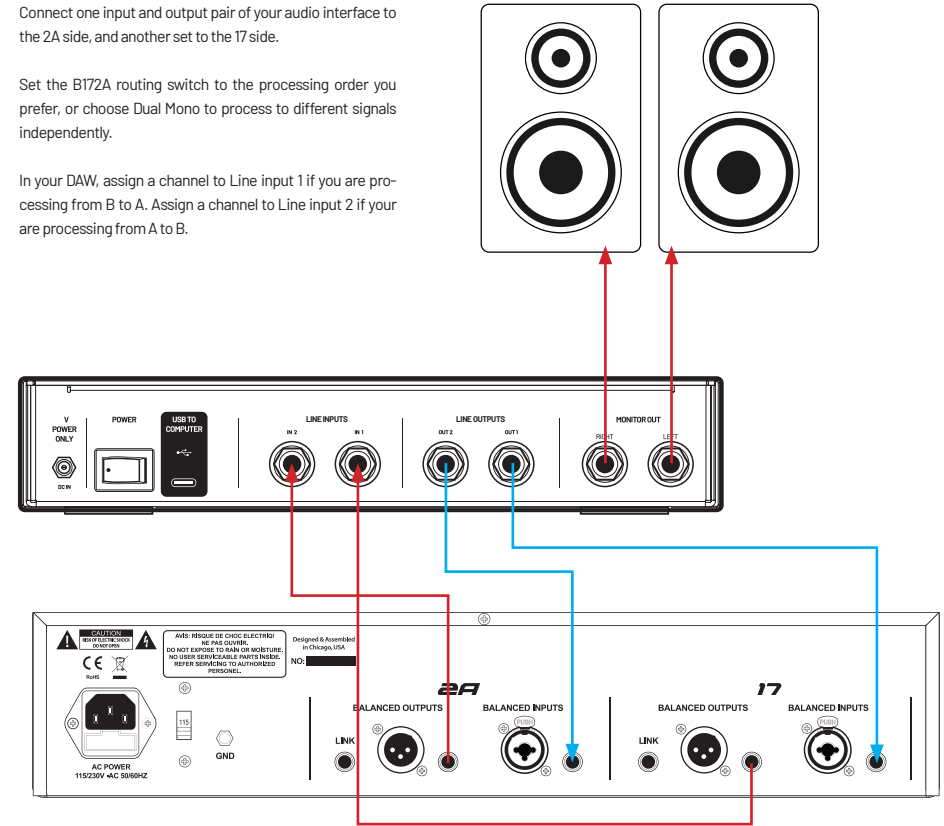
BASIC MIXING

Use this configuration for basic signal processing of mono material during mix sessions.

Connect one input and output pair of your audio interface to the 2A side, and another set to the 17 side.

Set the B172A routing switch to the processing order you prefer, or choose Dual Mono to process to different signals independently.

In your DAW, assign a channel to Line input 1 if you are processing from B to A. Assign a channel to Line input 2 if your are processing from A to B.



SINGLE-PREAMP TRACKING

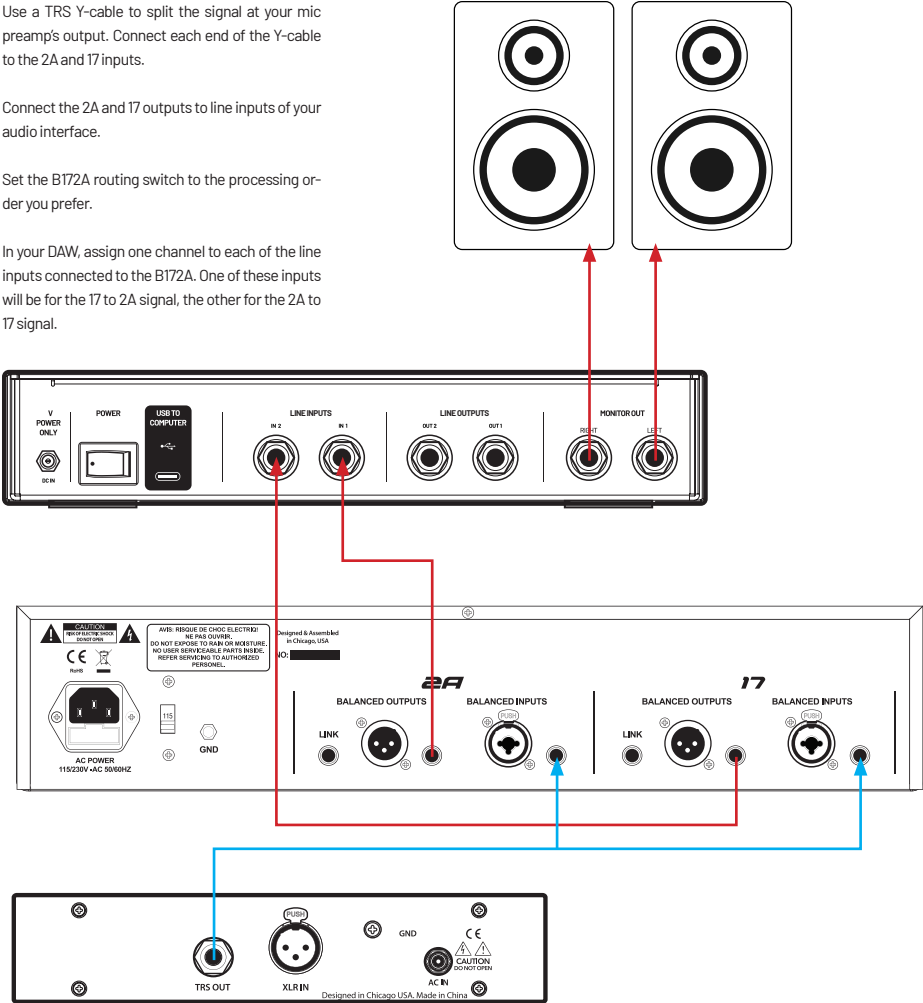
Use this configuration to commit a signal compressed by the B172A during tracking.

Use a TRS Y-cable to split the signal at your mic preamp's output. Connect each end of the Y-cable to the 2A and 17 inputs.

Connect the 2A and 17 outputs to line inputs of your audio interface.

Set the B172A routing switch to the processing order you prefer.

In your DAW, assign one channel to each of the line inputs connected to the B172A. One of these inputs will be for the 17 to 2A signal, the other for the 2A to 17 signal.



DUAL MONO TRACKING

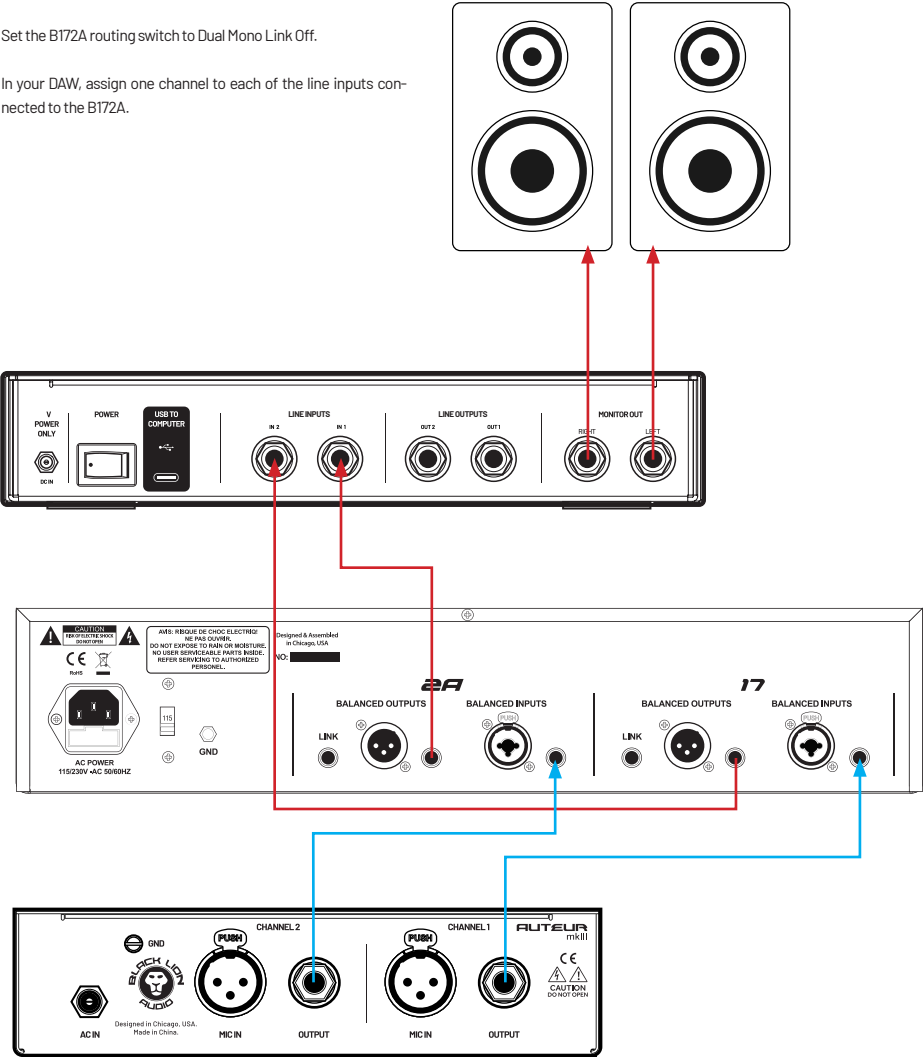
Use this configuration to use the B172A as two completely independent compressors to commit two separately-processed signals during tracking.

Connect the outputs of your preamps to the 17 and 2A inputs.

Connect the 2A and 17 outputs to line inputs of your audio interface.

Set the B172A routing switch to Dual Mono Link Off.

In your DAW, assign one channel to each of the line inputs connected to the B172A.



STEREO MIXING

Use this configuration to use two B172As in a linked stereo pair for signal processing of stereo material during mix sessions.

For the first B172A, connect one input and output pair of your audio interface to the 2A side, and another set to the 17 side.

Repeat the above for the second B172A.

Connect the Link jacks of both the 17 and 2A sides of each B172A to each other using a 1/4" TRS cable.

Set the B172A routing switch to the processing order you prefer. Alternatively, set both B172As to Dual Mono for four independent channels of compression!

In your DAW, assign a stereo channel to Line inputs 3/4 if you are processing from B to A. Assign a stereo channel to Line input 5/6 if you are processing from A to B.

