

## SIGNAL FLOW IN YOUR TRS PATCHBAY

The flow of signal through a patchbay module is affected by both physical connections and mode setting (Normaled or Half-Normaled.) The most common configuration for a patchbay is for signals to come in to the patchbay from the top rear connections, and out of the patchbay from the bottom rear connections. Conversely, on the front of the patchbay, the top row connections are outputs and the bottom row connections are inputs.

With jacks connected to the top rear and bottom rear of a single patchbay module, signals coming into a top rear connection are passed directly through to the output on the bottom rear, as shown here. This connection style should be used for your hardware's "default" configuration - the way you want your signals to flow on a day-to-day basis.

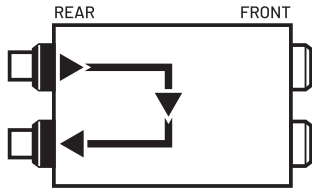


Fig. 1

When no jacks are connected to the top connections of a module, a signal from the front bottom input is passed through to the rear bottom output.

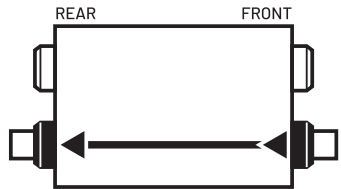


Fig. 2

When all four jacks are connected to a patchbay module, a signal connected to a rear top input of the patchbay is passed to the front top output, while signal from the front bottom input is passed to the rear bottom output.

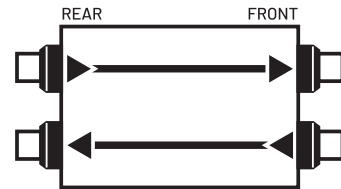


Fig. 3

## NORMALED OPERATION

When a module is set to Normaled and connections are made to the top rear and top front jacks, the signal is passed through from the top rear to the top front - breaking the connection shown in figure 1.

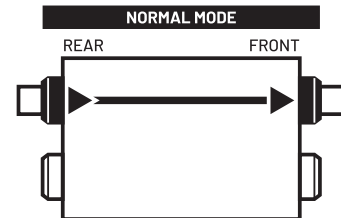


Fig. 4

A Normaled configuration allows you to run several devices in series by using patch cables on the front of the patchbay to interconnect several of your devices. For example, you could run a signal from a preamp, to a compressor, and finally to a reverb. A cable inserted into the bottom rear will have its connection broken when a cable is inserted into the top front.

## HALF-NORMALED OPERATION

When a module is set to Half-Normaled and connections are made to the rear top, rear bottom, and front top jacks, the signal is passed through from the top rear to the top front - **without breaking the connection** shown in figure 1.

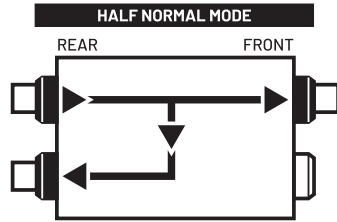


Fig. 5

This allows you to use the patchbay as a mult (splitter), sending the signal coming into the patchbay to two different destinations; very useful for parallel processing of your signal and monitoring applications. Inserting a cable in to the front bottom jack of a half-normaled module will break the connection between the rear jacks.

## TRS PATCHBAY TIPS

We advise against connecting a single device, interface, or outboard processor to a single module's vertically-connected set of patch points. In other words, don't connect both the Input and Output of a delay unit on module 1 of your patchbay - that would create a feedback loop. Use separate modules for a single device's inputs and outputs.

Furthermore, doing so severely limits the convenience of a patchbay. It also forces you to use more patch cables, and increases the minimum length of the signal chain. In reality it is more convenient to wire the normalizing scheme around the way that your particular studio is wired and will most commonly be used, and to modify those connections by breaking patches from the front of the patchbay when something other than the "standard" configuration for your studio is desired.

Based on our experience, basing patchbay wiring on thru connections (without internal normalizing) is quick and easy. That said, we've found that using a normaled or half-normaled configuration based on the most commonly-used processing chains in your studio saves a lot of time in the long run.

### On phantom power in TRS patchbays

We advise against running phantom power through your TRS patchbay, as this makes it possible to send phantom power to a device not designed to handle it; expensive damage could result!

If you decide to route phantom power through your TRS patchbay, **always** ensure that your phantom power source is turned off before changing any connections.

Failure to do so can cause unbalanced shorts when a TRS plug is inserted or removed, damaging input transistors of hardware processors, or damaging the transformer or ribbon of a ribbon mic.

### Notice

This manual provides general information, preparation for use, installation and operating instructions for the Black Lion Audio PBR-Series Patchbays.

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.

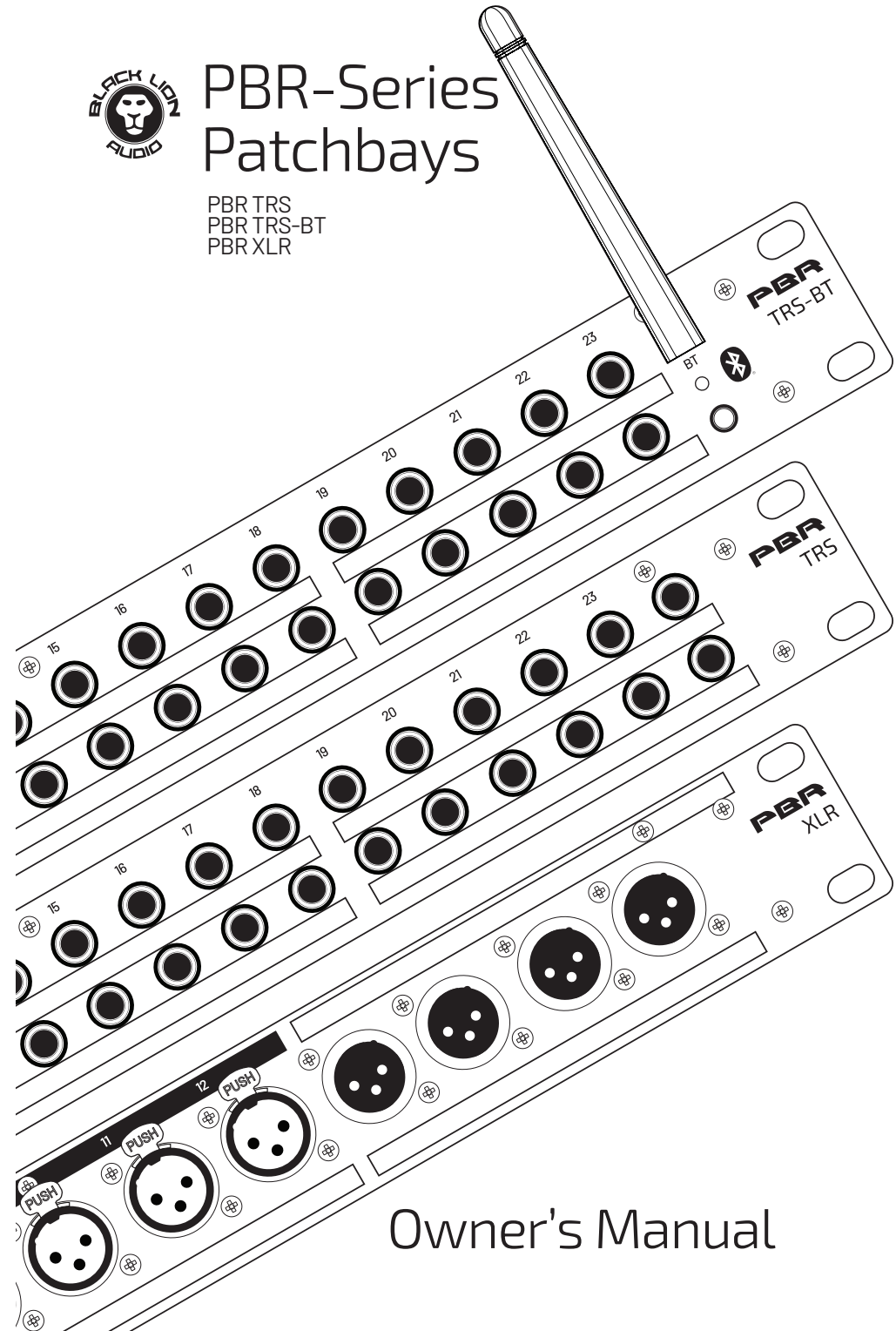
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# PBR-Series Patchbays

PBR TRS  
PBR TRS-BT  
PBR XLR



# 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. 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.
17. Any changes or modifications not expressly approved in this manual could void your authority to operate this apparatus.

### IMPORTANT!

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.

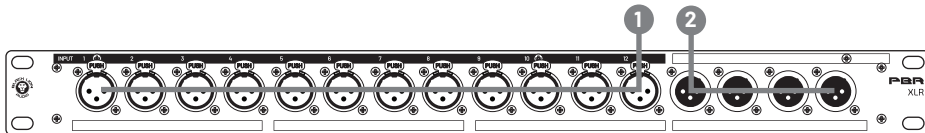
The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

This product complies with all international standards for safety and emissions including IEC62368 and FCC Part 15-B.



## PBR XLR

The PBR XLR patchbay offers 32 connection points for your equipment with XLR connections. Connecting your gear to the XLR patchbay will save a lot of time and frustration: no more getting behind your racks and reconnecting hardware every time you want to try some new routing!



1. **XLR female connection:** Accepts male XLR jacks for connecting your audio gear.
2. **XLR male connection:** Accepts female XLR jacks for connecting your audio gear.

**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 us on our customer service site: <https://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.

### LIMITED 3 YEAR WARRANTY

Black Lion Audio's PBR TRS Patchbays are 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.**

**RAD Distribution**  
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USA

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Simply connect the rear male jacks to the inputs of your racked hardware, and the outputs of your racked gear to the rear female jacks.

From there, you can use the convenient front panels to directly connect to any hardware connected to the rear of the patchbay.

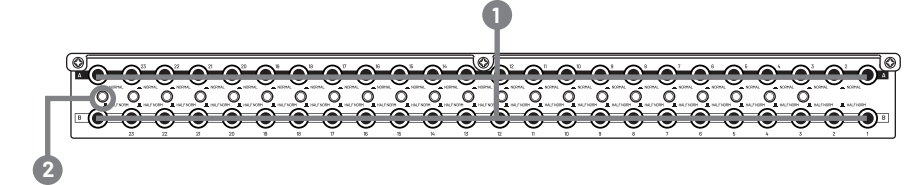
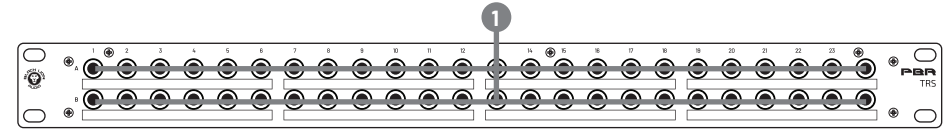
## PBR TRS AND PBR TRS-BT

The PBR TRS and PBR TRS-BT Patchbays both offer 96 points of connectivity for your studio gear, allowing for permanent installation and routing of your favorite hardware while still allowing for flexible and creative patching.

The PBR TRS and PBR TRS-BT Patchbays both offer Normalled and Half-Normalled operation, switchable from the rear of the unit on a per-module basis. A module, in this context, is any set of vertically-aligned jacks on the patchbay; front and back.

The functionality of the PBR TRS and PBR-TRS-BT are identical, apart from the Bluetooth connection available on the PBR TRS-BT, discussed below.

A typical patchbay configuration will have device outputs sent to the top rear row of patch points with device Inputs connected to the rear bottom row. For example, you would connect the Input of a delay unit or compressor to a rear bottom row connection of the patchbay, and its Output to a rear top row connection.



1. **Balanced 1/4" TRS connection:** Accepts 1/4" jacks for connecting and routing your audio gear. Accepts balanced (TRS) and unbalanced (TS) connections.
2. **Normal/Half-Normalled Switch:** Toggles the routing for the selected channel between Normal and Half Normalled operation. **Switch in = Normal, Switch out = Half-Normal.**

## PBR TRS-BT BLUETOOTH CONNECTION

Once you have installed your PBR TRS-BT where you need it, plug it in to an appropriate power source. **Note: The power supply is only needed for Bluetooth audio.**

Plug in your equipment to the correct outlets on the PBR TRS-BT.

Once the power supply is plugged into the power inlet, the PBR TRS-BT Bluetooth is active. To sync your device to the PBR TRS-BT, press and hold the Bluetooth Sync button.

Once the Bluetooth Status LED has started to blink, devices are able to find the PBR TRS-BT via Bluetooth connection.

To sync another device to the PBR TRS-BT, press and hold the Bluetooth Sync button.

1. **Power Inlet:** Connect power supply here. Power is only necessary for Bluetooth connection.
2. **Bluetooth Sync:** This button operates the Bluetooth Sync. Press and hold this button to set the PBR TRS-BT to 'sync mode', when connecting new devices.
3. **Bluetooth Status:** When this LED is blinking, the PBR TRS-BT is ready to be paired. When this LED is lit, the PBR TRS-BT is synced to a device.
4. **Bluetooth Left Output:** This TRS jack outputs the left channel of the Bluetooth audio.
5. **Bluetooth Right Output:** This TRS jack outputs the right channel of the Bluetooth audio.

