

# Technomad User Manual - BreakoutBox, BreakoutBox XL

Thank you for purchasing a **BreakoutBox** or **BreakoutBox XL**!

While intended for use with Technomad weatherproof PowerChiton amplifiers, the BreakoutBox and BreakoutBox XL can be used as an audio input interface for any amplifier which uses balanced audio inputs.

Both models share the same core mixer element. This mixer offers four separate audio inputs, each with level control. The mixer includes a three-way ducking switch option as well as internally accessible crossover points and a simple limiter circuit.

The BreakoutBox XL has three expansion bays where source options such as wireless microphones, wireless distribution modules, the Technomad Schedulon automatic audio player module and more. Most options are factory installed so please contact Technomad to discuss application requirements if the unit was not ordered with the needed optional module.

## Features

Four individual input channels  
    1x microphone/balanced line level  
    3x unbalanced line level  
Three way ducking circuit  
    Wired mic ducking, line level ducking, off  
Integrated limiter  
Integrated crossover filters  
    Full range, 85Hz high pass, 85Hz low pass, 350Hz high pass  
Lockable, weatherproof polycarbonate enclosure

## Power (standard)

12VDC, supplied by PowerChiton  
Option, 120/240VAC internal

## Audio Input Jacks (on control panel)

1x XLR- 1/4" TRS combo jack  
    XLR pins = mic. level  
    1/4" TRS pins = balanced line level  
1x 1/4" jack, unbalanced line level

## BreakoutBox:

2x RCA jack, unbalanced line level

## BreakoutBox XL:

2x unbalanced line level internal headers  
    (TE Connectivity PN 1375820-3)

## External Connector (to PowerChiton)

1x weatherproof RJ45

## Installation

The BreakoutBox series are designed to be installed onto a vertical surface. Each unit includes a set of mounting tabs which attach to the rear of the enclosure with included 10-32 flathead screws. These allow the unit to easily mounted using appropriate hardware. Alternately, the enclosure can be mounted using the four 10-32 inserts on the back of the unit to which the mounting tabs are bolted.

When purchased with a PowerChiton amplifier, the BreakoutBox / XL will include a 6' CAT5 cable with weatherproof RJ45 connectors on each end. This cable provides DC power from the amplifier and routes the summed output of the mixer component back to the amplifier. After connecting the cable connectors to the matching jacks on the two enclosures with included CAT5 accessory cable, the surrounding shroud on each end can be screwed down to ensure a tight, weatherproof connection. If a longer cable is required, single cable connectors can be purchased individually - see the Options section. After mounting the BreakoutBox / XL and connecting it to an amplifier, it is ready for use.

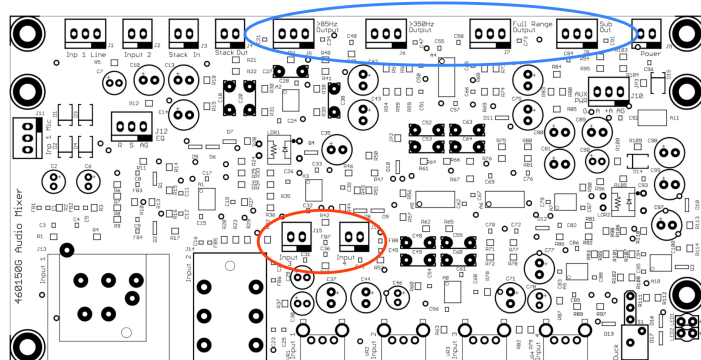
## Connecting Audio Sources

To connect an external device to the unit, use an appropriate adaptor cable for the input. While the BreakoutBox / XL is a mono device, an audio source with stereo output can be connected using the included 3.5mm to 1/4 adaptor on line input 1 or by using a splitter with adaptors to any two of the line

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level inputs. If the unit is a BreakoutBox XL with all three expansion slots being used, the 1/4" Line 1 input on the control panel will parallel the unit in the top expansion slot. If the front 1/4" jack is used simultaneously with the expansion bay module, both will be heard together and cannot be adjusted separately.

On a BreakoutBox XL, to connect a source module to the system after purchase, use the Line 3 and Line 4 headers on the mixer PCB (circled in red on the schematic). Access to these headers is gained by removing the lower two blanking panels or audio modules. This should only be done by a technician.



### Changing Crossover Filter

The mixer includes three optional crossover filters in addition to standard full range output - 85Hz high pass, 350Hz high pass and Sub Out (85Hz low pass). To change these, simply (and carefully!) move the cable connection from the full range output to the desired header. (Headers are circled in blue on the schematic above.)

### Operation

The BreakoutBox / XL provides four separate audio level controls, one for each channel. When setting levels for an audio channel be sure to monitor the 'Clip' LED to ensure that the mixer inputs are not being overdriven. Overdriving, or clipping, the input to the unit can lead to damage of the speakers connected to the system and should be avoided.

### Ducking Switch

The unit includes a three way switch which controls the ducking feature. When the switch is set to the 'Mic' setting, any input from the wired microphone connection will override (or duck) any active input on other channels. When the switch is to the 'W. Mic' setting, any input from Line Input 3 will override any active input on other channels.

### Available Accessories

Replacement 6' CAT5 PowerChiton connection cable: PN 2114  
Additional weatherproof RJ45 cable mount connector: PN 2115  
BreakoutBox XL internal input cables: PN 2116  
Pole Mount Adaptor: PN 1243

### Available Options (BreakoutBox XL)

Bluetooth receiver: PN 1775  
Shure PGX D handheld wireless mic system with mounting brackets: PN 1717  
Shure PGX D headset wireless mic system with mounting brackets: PN 2117  
Schedulon audio player module: PN 2034  
Accessory shelf: PN 2118

### Available Options (Factory Installed)

AC power, 120/240VAC, internal: PN 1755  
Source Splitter (for driving more than two PowerChitons from one BreakoutBox / XL): PN 1714