

Technomad PowerChiton

Application Guide

Today's audio consumer expects high quality audio in any environment and for any application. With the PowerChiton weatherproof amplifier series, Technomad has introduced a new approach to all environment sound system installation. Instead of having to provide secure, protected sites for audio electronics, amplifiers and input/control systems can be put where they are needed. With a large variety of configuration and deployment options, the PowerChiton series can solve almost any environmental challenge.



Core PowerChiton Features:

All PowerChitons share the following features:

- Balanced line level input
- Unbalanced line level input
- Integrated crossover filters - full range, 85Hz high pass, 350Hz high pass, 85Hz low pass.
- Integrated limiter circuit
- Ducking circuit
- Highly efficient switching amplifier module design
- Weatherproof, polycarbonate enclosure

Options and Accessories:

All models have the following available options:

- BreakOutBox™ outdoor audio interface unit
- BreakoutBox XL™ interface with expansion bays
- FieldBox portable source interface
- DesktopBox install audio interface
- 2.4Ghz wireless audio link
- Bluetooth™ receiver module
- Wifi access point integration
- RDL™ TwistedPair™ receiver module
- Integrated Apple AirPlay™ receiver module
- Pole mount adaptors (for 2", 3", 4", 8-10" dia. poles)
- 70V output transformer
- Internal ethernet distribution option
- Metal enclosure option



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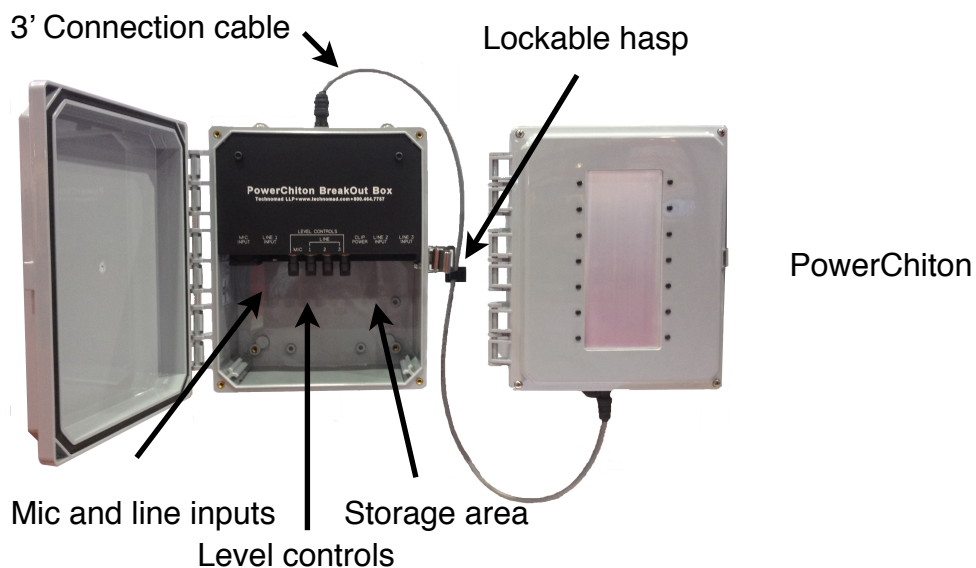
BreakOutBox™

With the BreakOutBox interface unit, users can now access audio inputs and level controls even in a location where there is no protected location for the equipment. The unit connects to the associated PowerChiton using a weatherproof PowerChiton Accessory cable. This cable carries DC power from the PowerChiton to the BreakOutBox and audio from the BreakOutBox to the PowerChiton. The standard cable connectors are weatherproof RF45 jacks - this format allows installers to more easily source longer length cables when needed. The weatherproof enclosure features a stainless steel latch with a lockable hasp for security. The unit has one combination microphone input / balanced input and three line level inputs. The enclosure features space for storage of a small microphone or MP3 player.

Typically the BreakOutBox is mounted in proximity to the PowerChiton to keep cable loss and noise to a minimum but a cable run of up to 100' is feasible. The BreakOutBox is designed so that it can be used in precipitation with all controls and input connectors mounted in a protected location. When not in use, the unit locks shut and is IP68 rated. When equipped with an optional internal AC power supply and appropriate audio distribution module, the BreakoutBox can be installed remotely from the PowerChiton.

Because the BreakOutBox only uses one input to the mixer in the PowerChiton, a BreakOutBox can be used in conjunction with a different PowerChiton audio source such as the Ethernet Receiver or Wireless Receiver options.

Athletic fields • Theme parks • Campuses • Resorts • Stadiums • Institutions



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BreakoutBox XL

The BreakoutBox XL is a variation of the BreakOutBox large enough to accommodate several audio source modules in the protected enclosure. Like the BreakoutBox, the BreakoutBox XL connects to the associated PowerChiton using an included 3' weatherproof PowerChiton Accessory cable. This cable carries DC power from the PowerChiton to the BreakoutBox XL and audio from the BreakoutBox XL to the PowerChiton. The weatherproof enclosure features a stainless steel latch with a lockable hasp for security. The BreakoutBox XL can accommodate up to three wireless microphone receivers or a single Schedulon MP3 player module.

Typically the BreakoutBox XL is mounted in proximity to the PowerChiton to keep cable loss and noise to a minimum, but with the use of shielded twisted pair cabling, longer cables can be used. When equipped with an optional internal AC power supply and appropriate audio distribution module, the BreakoutBox can be installed remotely from the PowerChiton. It is not recommended to use the unit with the door open in heavy rain. When not in use, the unit locks shut and is IP68 rated.

Because the BreakOutBox only uses one input to the mixer in the PowerChiton, a BreakOutBox can be used in conjunction with a different PowerChiton audio source such as the Ethernet Receiver or Wireless Receiver options.

Typical Applications:

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**BreakoutBox XL with optional Shure™
PGX wireless microphone receiver.**

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2.4 Ghz Wireless Receiver Option

When audio needs to be wirelessly transmitted from a source location to a PowerChiton, Technomad offers the 2.4 Ghz Wireless Receiver Option. Using a closed system, 2.4 Ghz band digital wireless transmitter and receiver set, high quality audio can be transmitted at distances up to 1/2 mile depending on line of sight, site topography, antenna configuration and available frequency bands. As this solution operates in an open band, checking for available clear frequencies in the 2.4 Ghz range is important prior to specifying and installing a wireless system. Multiple receivers can all be set to receive audio from the audio transmitter. The wireless receiver is mounted in an accessory enclosure and the two units are connected with the standard 3' PowerChiton Accessory Cable. If the wireless receiver needs to be installed at better location for improved reception, the wireless receiver enclosure can be located up to 50' from the PowerChiton.

If longer transmission distances are required, the standard antenna on the receiver can be upgraded to higher gain, powered antenna with a 1/2 mile range. Typical standard distance is 500' line of sight. The antenna connection is a weatherproof SMA-RP jack.

Application examples:

- Point to Point. e.g. Audio from press box streamed 'live' to concession stand PA
- Star e.g. Audio from Administration office streamed live to bus pickup area, stadium PA system, and patio area (one source, three targets)
- Wide Area e.g. Audio from Town Hall streamed live to 80 light-pole audio systems, to provide background music and paging.



PowerChiton with standard 2.4 2dBI antenna option

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Bluetooth™ Receiver Option

A Bluetooth receiver module can be integrated into either the PowerChiton or the BreakoutBox XL. In the case of the PowerChiton, the module will be wired into one of the two available inputs. In the BreakoutBox XL, the module will be wired to one of the unbalanced line level inputs, leaving the other three inputs available for other sources.

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Integrated AirPlay™ Option

The Apple™ AirPort Express™ offers wireless audio playback from any compatible iOS™ device such as an iPod or iPhone. The AirPort is integrated into the PowerChiton and connected to one of the available audio inputs. The AirPort provides a wifi network local to the PowerChiton. After the local iOS devices are on the network, audio can easily be streamed from the device(s) to the AirPort and then played over the speakers connected to the PowerChiton. The WAN port of the AirPort is connected to an external weatherproof RJ45 jack for local network connection if required.

The AirPlay option is an excellent way to allow users to play music over a Technomad system without the use of any cabling or interface units.

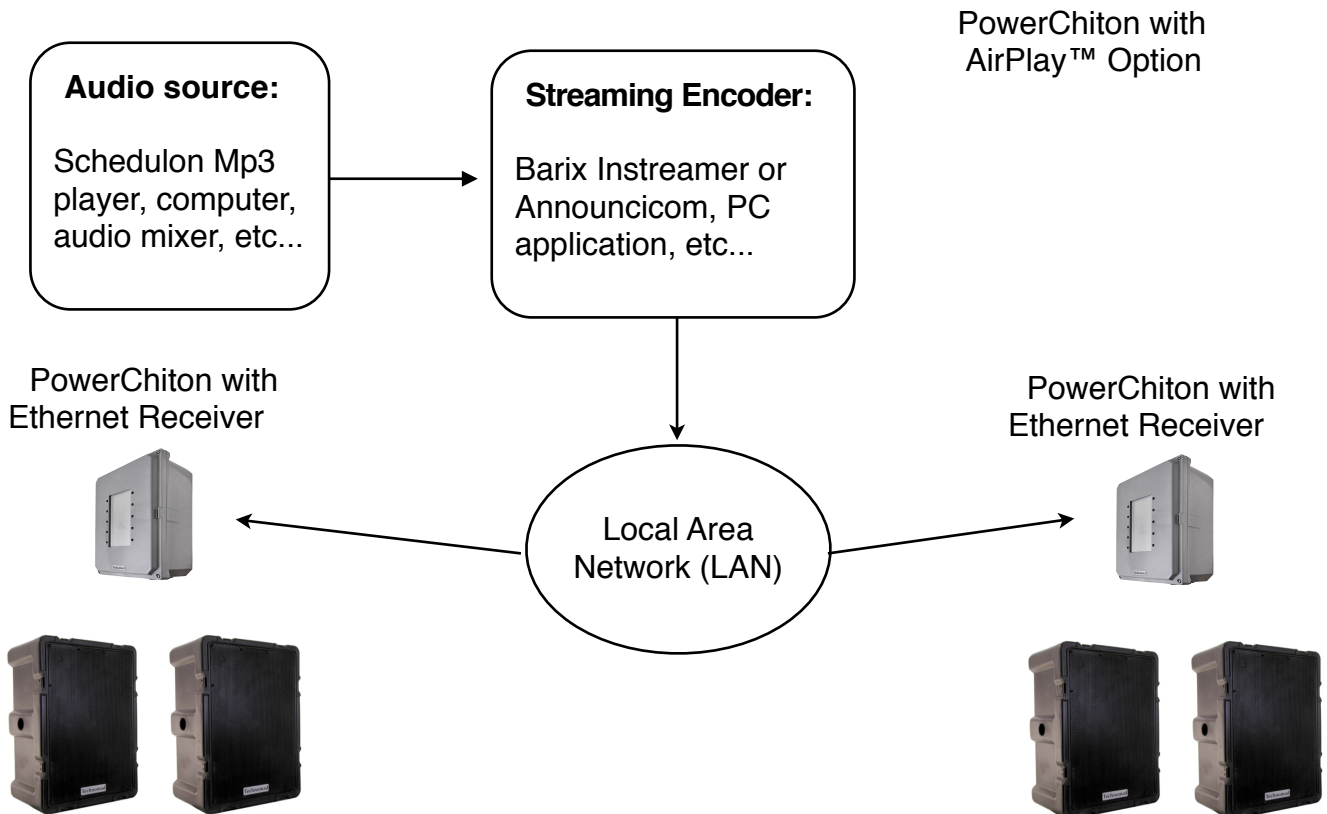
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Ethernet Receiver + Wifi Distribution Option

In applications where a local ethernet network is going to be used for audio distribution from a source to a PowerChiton, the Ethernet Receiver option is the solution. With this option, a Barix™ Exstreamer or Dante™ end point module is integrated into the PowerChiton and connected to one of the two amplifier inputs. A weatherproof ethernet jack installed on bottom of the PowerChiton provides a network connection point. The ethernet receiver option runs off of the amplifier module accessory power buss, so there is no need for a secondary power supply.

When deployed on a network, each Ethernet Receiver unit will need to be given a unique IP address. The streaming audio source will then be configured to stream audio to that address.

This same sender/receiver option can be used over a Wifi network with sufficient quality of service. PowerChitons can be ordered with an integrated POE adaptor for use with client supplied Wifi points or with complete Wifi receiver as an external option.



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Customization Options

The PowerChiton offers space on the interior panel for other source and processing options to be added by the integrator. Anything which is 5.5 x 4 x 1.6" can be fit into the unit. There is a 12VDC power available internally to run an internal module and 24VDC power is available as an option.

RDL Modules:

Radio Design Labs™ offers a wide range of accessory electronic products which expand the utility of the PowerChitons, including equalization, audio triggered relays, compression, gating, audio delays and much more. Visit www.rdl.net.com for more information. Technomad includes an internal 24VDC power supply with any RDL module option ordered.

70/100V Output Transformers:

Technomad offers 70/100V output transformers for the PowerChitons with the exception of the PowerChiton4. A compact toroidal transformer is mounted internally on the expansion area and is hard-wired to the PowerChiton output connectors.

Green Enclosures:

For orders of 50 or more pieces, Technomad can offer the PowerChiton and BreakoutBox enclosures in a landscape green color.

Integrated Audio Player with remote trigger

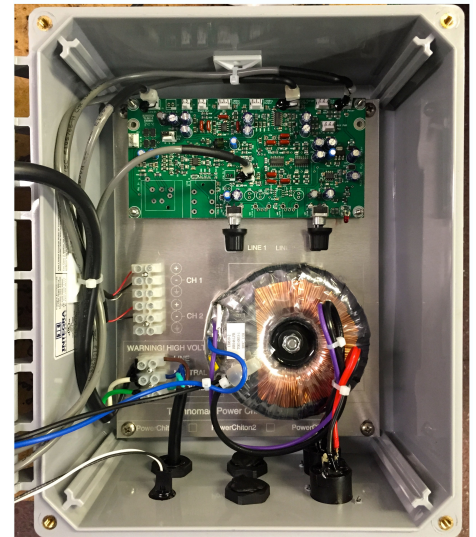
One popular option for outdoor attractions and exhibits is having a simple audio playback unit integrated into the PowerChiton. The module can be triggered by a remote wired button.

Metal Enclosures

Metal enclosures are available for PowerChitons amplifiers for installations where additional security is required.

SuperChiton

Multiple amplifier modules can be integrated into one larger weatherproof enclosure on request. This allows single point installation and easy distribution from a single audio source across multiple amplifier modules. Contact Technomad to discuss options - sales@technomad.com - 1 800 464 7757



Interior photo of PowerChiton with optional 70V output transformer

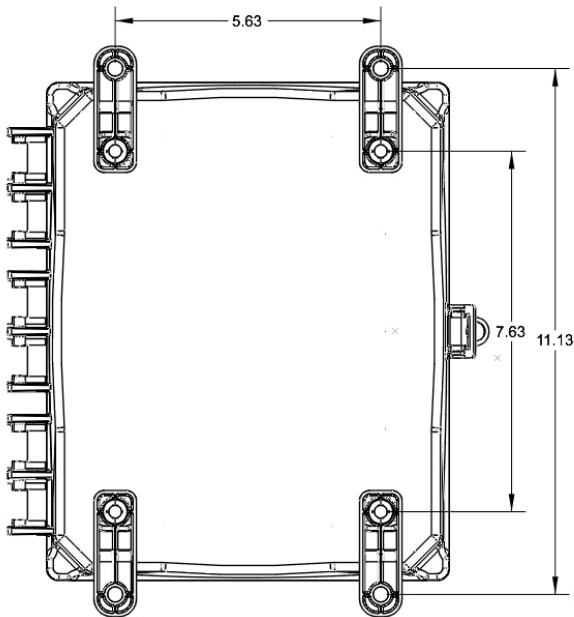
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Mounting Options

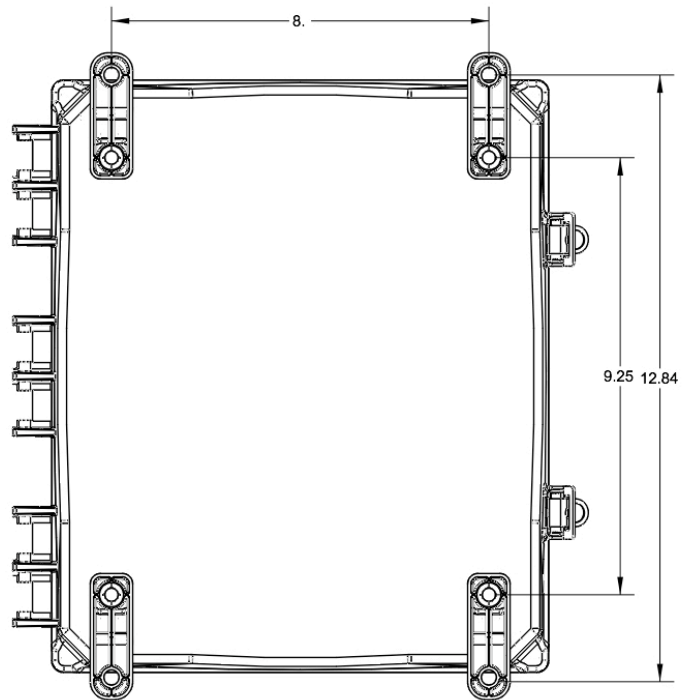
The PowerChiton, BreakoutBox, and BreakoutBox XL all feature similar weatherproof enclosures. The standard enclosure includes threaded inserts on the back of the enclosure. These can be used directly to mount the enclosure to a vertical surface by bolting through the surface or the included mounting tabs can be used to install the unit to a vertical surface from the front.

There are four sizes of pole mount adaptor for these enclosures. The adaptor kit bolts to the rear inserts on the enclosure and then either an appropriate sized U-bolt or banding kit is included.

Rear view with mounting tabs



**PowerChiton Nano, Micro, 1, 2, 3
BreakoutBox, BreakoutBox XL**



PowerChiton4