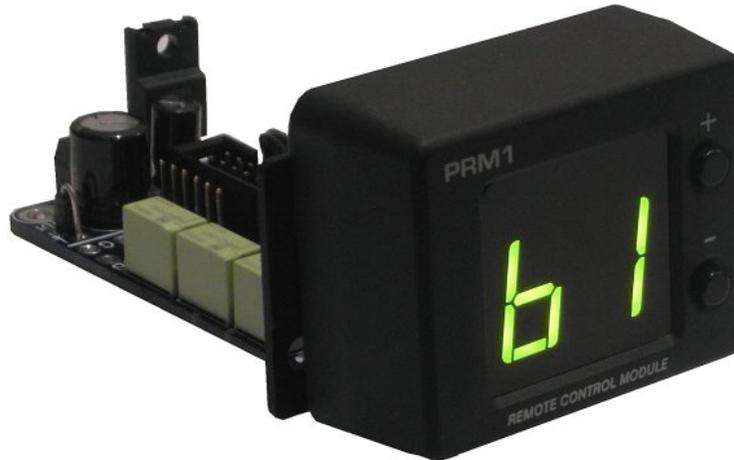


## **PRM-1 Solo**

### **61 Step Remote Passive Attenuator**



## **Introduction**

The PRM-1 Solo is a specific combination of two very handy TAP system modules. Together these modules make up a very easy to install 1db step size remote controlled attenuator. These parts come completely assembled and tested – you only need to apply power and wire into your system exactly as you would wire a traditional pot or stepped attenuator.

Outside of the front panel (or optionally flush mounted) is the PRM-1 controller. This unit is the 'front panel' for the system – accepting commands from the IR remote handset (or via included level up/down push buttons) and then displaying the current volume and other system status.

Inside the chassis is the Goldpoint BSA-1 attenuator module. This module is a 2 channel 1db step size 100% passive attenuator. This module also powers the PRM-1 display unit and provides a connection point for the optional input select PCB.

This document explains the mounting, connection, and operation of this system.

## Mounting Options

The PRM-1 Module simply mounts in a standard .375" Attenuator mounting hole – extremely easy for retrofit applications. Soon we will have a flush mount PRM-1 option – that will mount inside a rectangular front panel cutout.

There are 3 options for mounting the BSA-1 PCB:

### Mounting Option 1- Front Panel 'Deep Mount':

If you have 3" or more of distance behind the front panel then you may use the Narrow Mounting Plate to directly attach the BSA-1 PCB to the threaded shaft of the PRM-1 Module. This option requires approx 1.75" of width and 3" of chassis depth as measured from the inside of the front panel. An example of this is shown below.



---

### Mounting Option 2- Front Panel 'Wide Mount':

If you don't have the depth required in option 1 but width of 3" is no problem then you may use the Wide Mounting Plate to attach the BSA-1 PCB directly to the threaded shaft of the PRM-1 Module. This option requires approx 3" of width and 2" of chassis depth as measured from the inside of the front panel. An example of this is shown below.

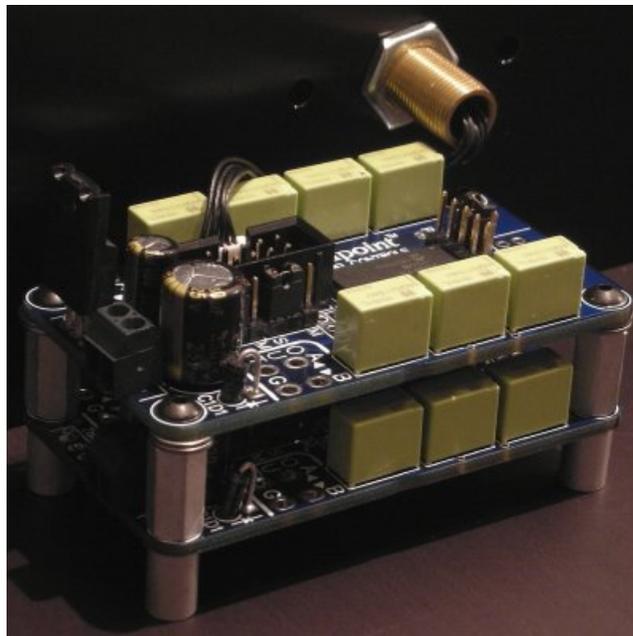


## Mounting Options - Continued

### Mounting Option 3 - Bottom Mount:

If the space at the front panel is not allowing option 1 or option 2 above then simply mount the PCB to the bottom plate of your chassis. The drawing at the end of this document shows the mounting hole dimensions and other information needed. Anywhere within reach of the PRM-1 Modules 6 pin cable is just fine.

Here is an example of a stacked pair (for balanced operation) of BSA-1 Modules.



Note the PRM-1 Module mount poking through to the inside of the chassis from the other side of the front panel.

Once mounted (and wired as described below) you simply plug the PRM-1 6 pin micro connector into the BSA-1. The 10 pin ribbon cable connector on the BSA-1 PCB is only needed if you are running other attenuator modules in the same chassis or if you are using the optional Input Select board.

## Goldpoint BSA-1 Board Connection and Setup

These modules are resistor based attenuators. Each BSA-1 module can adjust volume for 2 channels (for stereo) from -60db to 0db (unity gain) in 1 db steps. Each BSA-1 board is like a traditional 2 deck stereo attenuator and it connects very much like a traditional 3 wire pot or stepped attenuator would .

### The 3 connections are:

#### 1- 'INA and INB':

These are the connection point to the hot side of the input select switch or directly to the hot of the input rca jacks on a single input system. A and B can be assigned to either the Right or Left channels or in a balanced setup where one BSA-1 board is used for each channel then A is wired to the PIN2 side and B is wired to the PIN3 side of the balanced connection.

#### 2-'OUTA and OUTB':

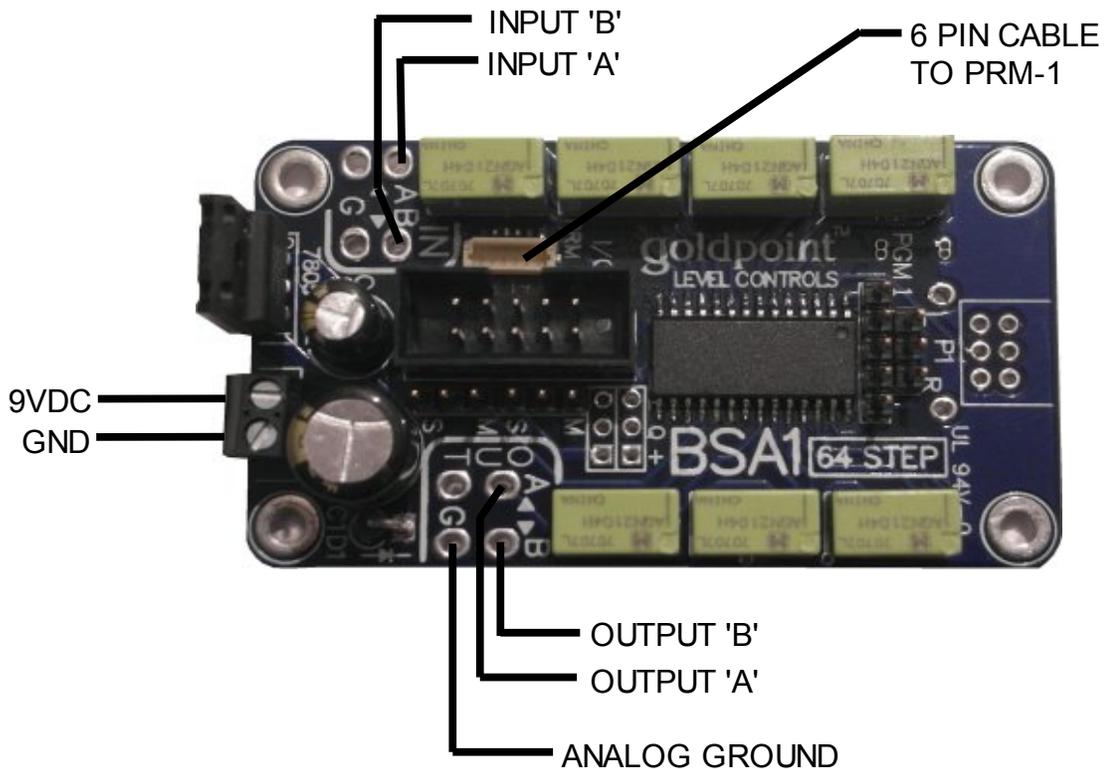
This is the connection to the hot side of the output RCA jack(s). A and B can be assigned to either the Right or Left channels or in a balanced setup where one BSA-1 board is used for each channel then A is wired to the PIN2 side and B is wired to the PIN3 side of the balanced connection.

#### 3- Ground:

This is the connection to the system ground point.

### Power Supply:

The BSA-1 has it's own 2 position terminal strip to connect DC power. The typical voltage is 9V but any voltage from 7.5V to 12V can be used.

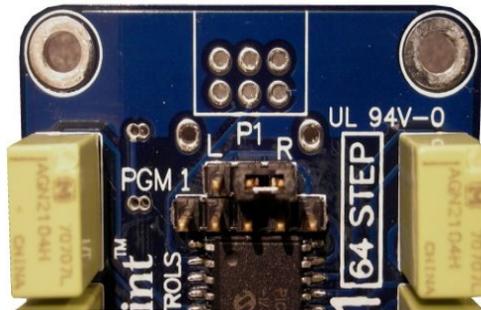


## Goldpoint BSA-1 Board Connection and Setup – Continued

There are a few user selectable jumpers on the top circuit board. These are:

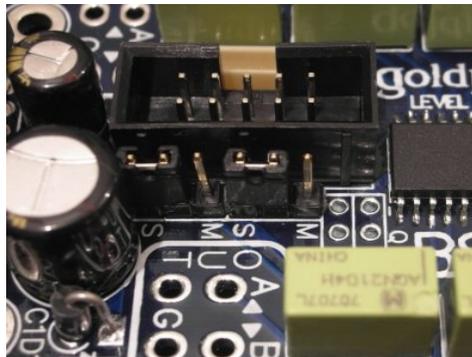
### Left / Right:

If using only a single BSA-1 in your system then leave these jumpers both off – the 2 channels of a BSA-1 always operate together and so they can not adjust up or down relative to each other. In this case right/left balance function is not possible. If you are using 2 BSA-1 Boards in a balanced system (XLR connections) then these 2 jumpers can be used to set the right/left balance function of the modules. If a jumper is inserted at the left 'L' position the module will become a left channel module. If one is inserted at the right 'R' position then the module is set to be a right channel module. As balance is adjusted the module will respond accordingly. If neither jumper is installed then the module is neither right or left and will not change level as right/left balance is adjusted.



### Master/Slave:

If using a BSA-1 in a PRM-1 Solo system then you must set both M/S jumpers to the Slave (S) position as shown in the picture below. This will set the board ready to receive commands from the PRM-1 front panel board and the remote handset. If using a BSA-1 stand alone as a non-remote control attenuator (via it's PCB mounted pot) then set both these jumpers to the Master (M) position.



## The PRM-1 Module Operation

The PRM-1 is a single 7 segment display along with 2 small push buttons – used for volume up and volume down. The IR remote receiver and 2 leds are also included. All TAP system functions like mute and source select are supported via remote control operation. Each function is described below:

### Volume Up:

Volume up can be run via the upper push button on the PRM-1 module or via the volume up button on the remote handset.

### Volume Down:

Volume Down can be run via the lower push button on the PRM-1 module or via the volume down button on the remote handset.

### Balance Right / Balance Left:

In systems using separate BSA-1 PCB's for the right and left channels (typically this would be true balanced systems) the right/left balance can be adjusted. Even though the PRM-1 only has a single 2 digit level display it can still adjust right/left balance using the < and > buttons on the remote handset. For user feedback of balance there are 2 small leds just above the display. If balance is centered then both displays are off. As balance is adjusted to the right the rightmost led will turn green then orange and finally red as the balance is adjusted further to the right side. The left led behaves the same way as balanced is adjusted to the left side. On single BSA-1 systems adjusting balance has no affect on system levels.

### Mute:

If the mute button on the remote handset is pressed the display will change to two dashes ('--') and the system will mute. Pressing the button again (or pressing a volume up or down button) will un-mute the system and the display will return to showing the volume level.

### Source Selection:

The remote handset is used to change the source selected. The display will show the source number selected preceded by an underscore (ie for source 5 it will show '\_5') and after a few seconds the display will return to showing the volume level. This is only of use if you have an optional source select PCB in the system.

## Remote Handset Functions

### Display On / Off (The Red button on the upper left corner):

Each button press toggles between the 2 display modes. When the display is 'on' the display stays on continuously. When the display mode led is 'off' the display will be on while you are using the pre-amp / remote functions and then after a short timeout the display turns off for dark listening.

### Mute (center of volume/balance grid):

This button toggle between mute and normal volume modes. When the mute is on the system is muted and the display will show double dashes '--'. The mute will be canceled when the volume is adjusted by the remote handset or by the volume buttons on the front of the pre-amp.

### Volume UP / Down ('+' and '-'):

The volume up and down buttons step the volume up or down 1 step (1db) per button press or if held down continuously they continuously adjust volume.

### Balance Left / Right ('<' and '>'):

On systems using separate BSA-1 pcb's for the right and left channels the right/left balance can be adjusted. The Balance Left / Right buttons step the volume to the adjust the balance to the left or the right 1 step per button press or if held down continuously they continuously adjust balance over to that side. A sliding / alternating balance is implemented where the level adjustment to move balance alternates from left or right, etc... This way the overall volume level of the system is maintained. Also you can slide balance over to one side and then slide it back to the original volume by pressing the opposite balance button. If you hold the button down constantly while moving back towards center then the balance will stop as it reaches center. This is handy when adjusting balance back to the middle point.

### Source Select Buttons:

The buttons labeled '1' through '6' on the bottom portion of the remote handset directly access each of the 6 source inputs on the TAP-X. These direct buttons (rather than next/prev) are used to make sure that macro functions programmed into a (user supplied) advanced programmable handset function repeatably. This is only of use if you have the optional source select pcb as part of your system.



4.5"L x 1.5"H x 1"D

## Mounting Dimensions



**PRM-1 Module With Enclosure**

**2"W x 1.625"H x 0.85"D**

The PRM-1 Case simply bolts in place in the same 0.375" hole as a traditional level control.

---

## PCB Mounting Dimensions

