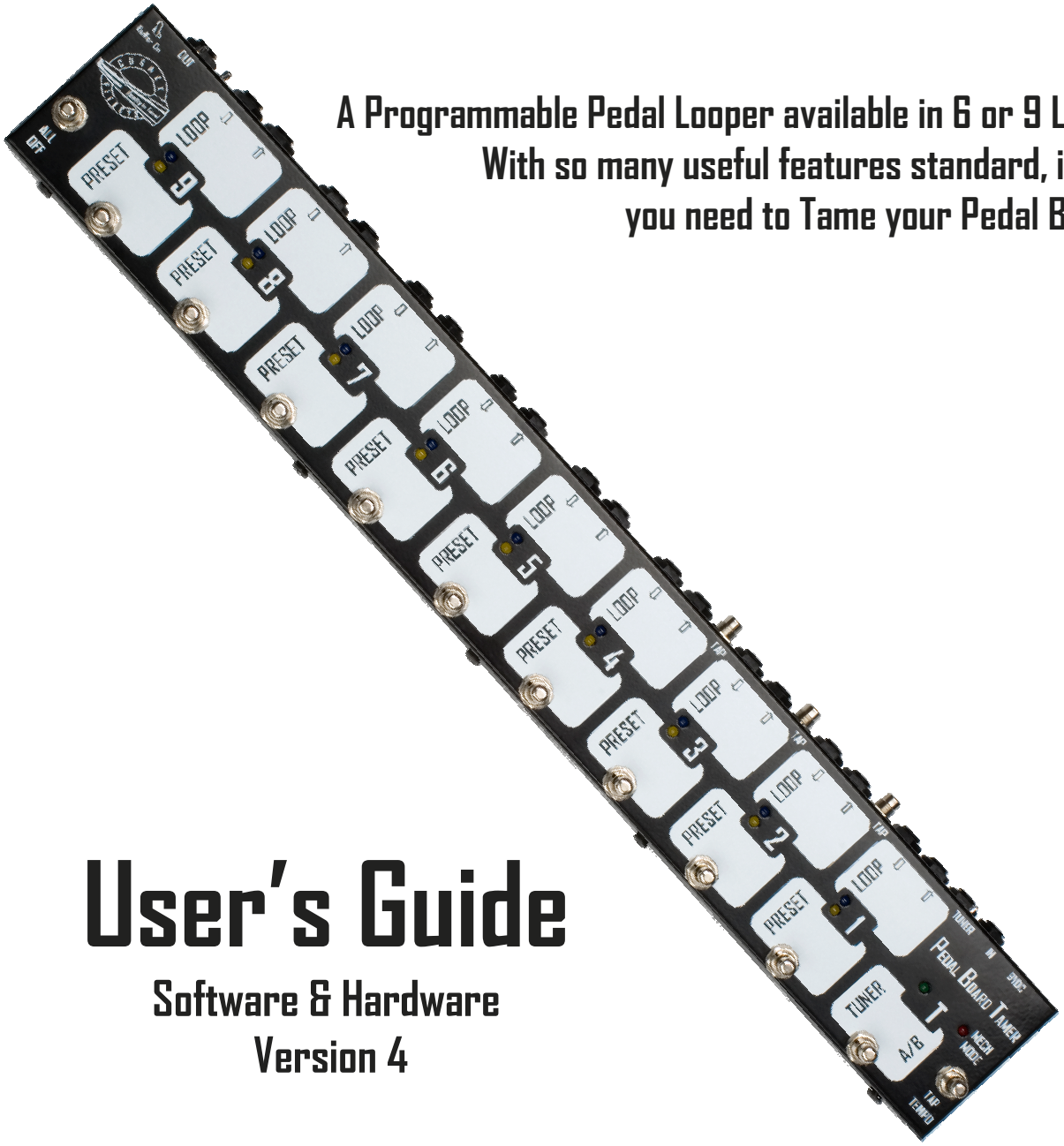
PBT

Pedal Board Tamer



A Programmable Pedal Looper available in 6 or 9 Loops. With so many useful features standard, it's all you need to Tame your Pedal Board!

User's Guide

Software & Hardware
Version 4

Updated 6/26/11

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Operating the PBT

Input Buffer: The Input Buffer is connected between the Input and Loop 1. With the toggle to the right, there is no buffer, and the input section is completely True Bypass. With the toggle to the left, there is a buffer between the input and Loop 1. *Note: The Tuner Output is NOT on the buffer, so the Tuner Out will always be connected directly to the guitar pickups*.

Output Buffers: The Output Buffers are connected to the stereo output jack. With the toggles to the right, there is no buffer, and the output is True Bypass. With the toggle to the left, there is a buffer on the output. These may be selected independently.

Tap Tempo Switch: The Tap Tempo Switch is a momentary switch that connects to three RCA Tap Jacks on the back of the unit. These are each pulled to ground by the switch through a diode. The three outputs can be routed to most effects that have an external Tap Tempo input, such as the Tap-A-Whirl, Tap-A-Phase, etc.

"*Tap Tempo On the Bus" configuration option:* In programming mode, a Tap Tempo can be set and stored with a Preset. The Mech Mode LED will flash the tap tempo going out. A Preset's Tap Tempo setting can be overridden anytime by using the Tap switch to set a new one. See the "Configuring Options" for more.

"*Mech Mode on Tap Switch" configuration option:* The Tap switch will turm Mech Mode on and off instantly. See the "Configuring Options" for more information.

PBT— Output & Last Stereo Loop Section

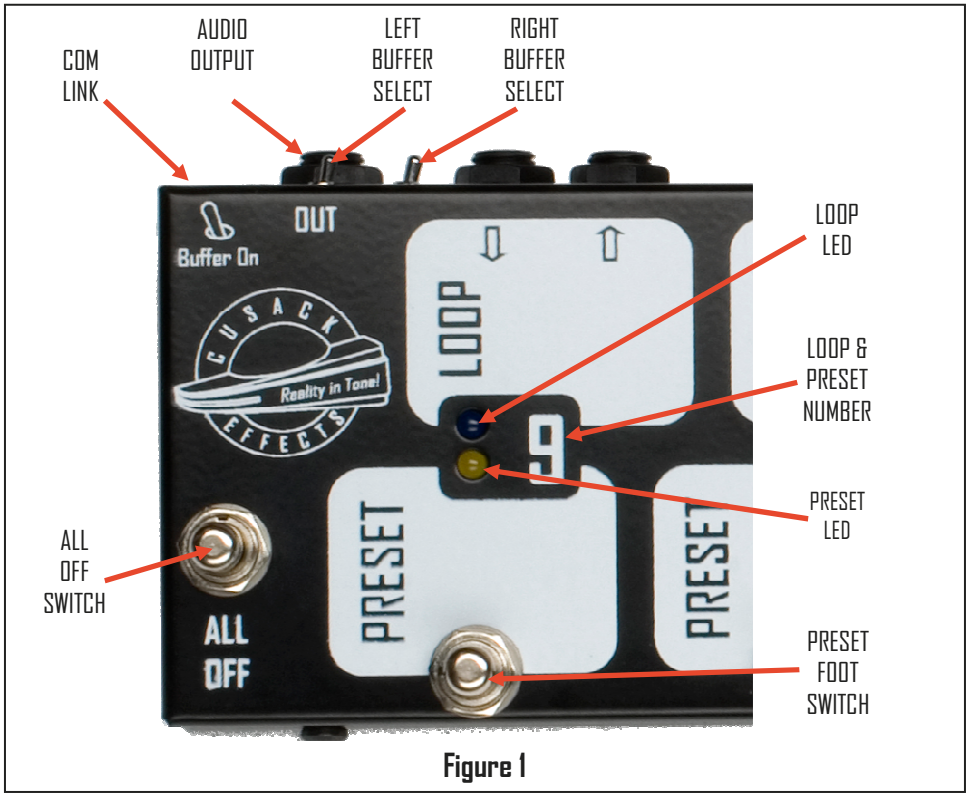


Figure 1

Tuner Mode (mono in): At power-up the Tuner LED is off and the Guitar (A) is routed to Loop 1. The Tuner switch will toggle the Tuner LED on and then Guitar (A) is routed to the Tuner Out, and the output to Loop 1 is muted. Although the output to Loop 1 is muted, any effects that remain on will continue to be on. For example, a delay would still be repeating whatever you had just played.

"*Tuner On the Bus" configuration option*: The Tuner can be configured to bypass all loops when the Tuner switch is pressed. See the "Configuring Options" section for more details.

Tuner-A/B Mode (stereo in): Use a "Y" cable to connect two Guitars into the stereo input; Tip is Guitar "A" and ring is Guitar "B". At power-up the Tuner LED is off and Guitar "A" is routed to Loop 1, while Guitar "B" is routed to the Tuner Out. The Tuner switch will toggle the Tuner LED on and then Guitar (A) is routed to the Tuner Out, and Guitar "B" is routed to Loop 1. To use Tuner Mute with two guitars, make sure the guitar not in use has its volume turned down.

All Off Switch: The "ALL OFF" Switch will turn off all Loops when pressed. In Preset Mode, it will also deactivate the current Preset.

"*All Off Turns Tuner Off" configuration option:* The Tuner can also be turned off by the All Off switch, if desired. See the "Configuring Options" section for more details.

"*Mech Mode on All Off Switch" configuration option:* The All switch will turn Mech Mode on and off instantly. This also disables the All Off functionality. See the "Configuring Options" for more information.

PBT— Input & First Loop Section

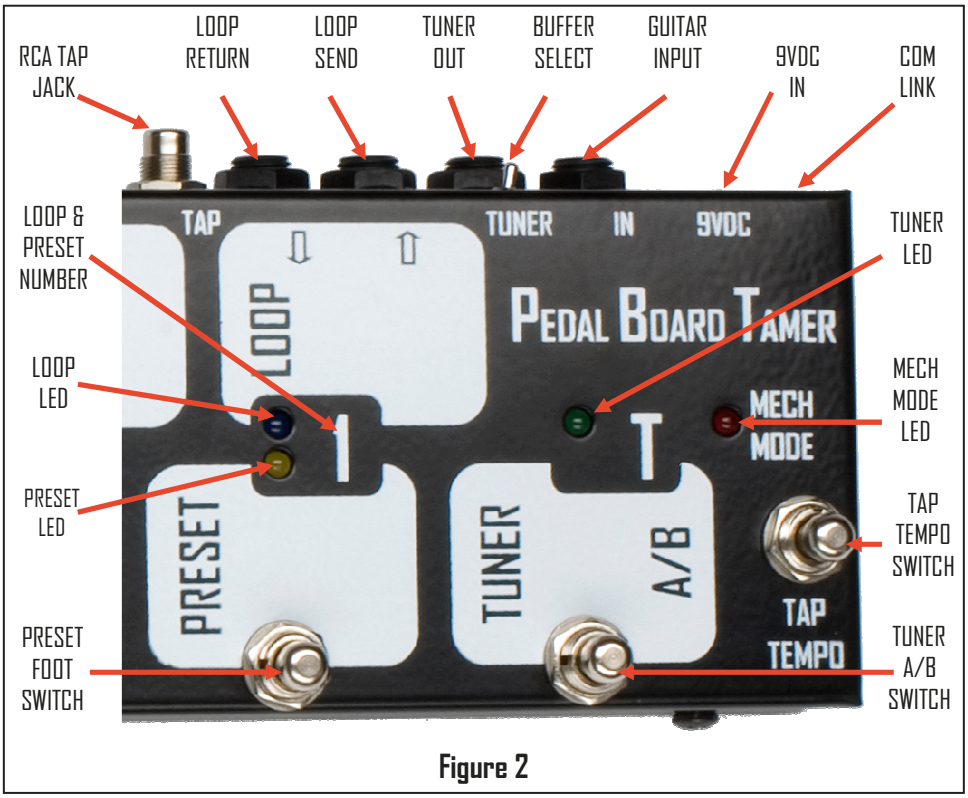


Figure 2

Operating the PBT Continued

Loops & Presets: There are 6 or 9 Loop/Preset boards in the PBT depending on the model purchased. A "Loop" is associated with the send and return jacks which are connected to an individual effects pedal. A "Preset" is associated with the foot switch which can directly activate its corresponding Loop when in the Mech Mode, or activate any or all Loops when in the Preset Mode.

Mech Mode: Mech Mode allows the Pedal Board Tamer to mimic the function of a standard Mechanical Looper. While in Mech Mode, each Loop acts as an independent loop. The associated Foot Switch will directly turn the Loop on and off. When active, the Blue Loop LED will illuminate . The Amber Preset LEDs will not illuminate in this mode, since Presets are not applicable. To activate Mech Mode, hold the ALL OFF switch until the Red Mech Mode LED lights up (about 4 seconds).

Note: The controlling of Mech Mode can be configured to a single press of the All Off Switch or the Tap Switch, see the "Configuring Options" for more information.

Preset Mode: Preset Mode allows you to use preset programs for combinations of effects. In this mode, the Preset Switch does not specifically link to the Loop is it associated with. To access Preset Mode while in Mech Mode (Mech Mode LED is lit), hold the "ALL OFF" switch until the Mech Mode LED is off (about 4 seconds). Now pressing any of the Preset Switches will activate that preset program, the Loops that are assigned to that Preset, and also the Tap Tempo will change if one is set for the preset. The Amber Preset LED corresponding to the Preset Switch selected will illuminate, as well as the Blue Loop LEDs of the Loops that are active in that Preset.

Programming Presets: Programming Presets is a simple process:

A. Press and hold both the "ALL OFF" and "TUNER" switches until all the Amber Preset LEDs start to flash in 3 sec.

B. Press the Preset Switch to be programmed; The selected Preset LED will illuminate, along with the currently selected Loops for that preset program.

C. Use the Preset Switches as Loop Switches, to turn on or off the Loops needed for the preset.

D. *"Tap Tempo on the Bus" configuration option:* Optionally you may use the Tap Tempo Switch to set a tap tempo for the preset. The Mech Mode LED flashes with the tap switch. If you want to cancel the tap tempo on a preset, hit the tap switch once and wait 5 seconds for the Mech Mode LED to blink by itself and clear the set time.

E. Press the "ALL OFF" switch once to program another Preset Switch, or <u>twice to exit</u> Programming Mode.

F. Rock On!

Com Link: Two or more PBT devices can be chained together. See the section "Linking Multiple PBT devices" for details on how to setup and configure such a system.

Other Ways to Use Your PBT

Individual Loop Mech Mode: Setting any loops address Dip Switch to "0" (All Dips Off), will put that individual loop into constant Mech Mode. In this mode, all other loops will act with changes in Presets, but the Mech Mode Loop will act as a standalone loop. This might be useful for a Boost Pedal for instance. If you tend to turn your boost on and off a lot, then changing Presets would not affect the setting of the Boost Pedal. The Boost Pedal will stay in its current state no matter what Preset is on. "ALL OFF" will still turn this loop off.

A/B Mode for a single guitar: This input is also useful for a single guitar that has an acoustic bridge. If you use a stereo cable to the guitar with the standard pickups wired to the Tip and the Acoustic Bridge wired to the Ring, you can select between them using the Tuner-A/B Function.

Multiple Amps: Any loop can be used to send the audio to a second amp. For example, if you connect the Send of Loop 9 to a second amp (return is not used), selecting Loop 9 will send audio to that amp and mute the main output of the PBT. The last 3 loops can be used for stereo amps.

Amp Control Output: The PBT can be optionally modified to convert audio loops into amp controls for channel switching and/or effects selecting. This will work with any amp looking for a grounded switch input. See "Configuring Options" Loop Board section for more details and also purchase the PBT Jumper Cables kit.

PBT as a Remote Control Switch: When you connect two PBT's together via the Com Link, one can act as a remote control for the other. You can have your pedals backstage and use another PBT for Preset Switches on stage. This setup is covered in the section "Linking and Configuring Multiple PBT's".

Configuring Options inside the PBT

This section covers the options as they apply to a single PBT; when connecting multiple PBT's refer additionally to "Linking and Configuring Multiple PBT's". The following configuration options may be performed by opening the back cover of the PBT after removing the screws retaining it . Please be careful when reinstalling the back cover not to pinch any of the wiring to the foot switches.

Input Board - Guitar Input Option Jumper

The Input Board has an internal jumper with a shunt that can be moved between two positions. See Fig. 3
Note: Guitar input is a Stereo 1/4" jack. Tip is Guitar A, Ring is Guitar B, Sleeve is Ground.

A/B Position (Factory Default):

Mono Input Cable - If using a single guitar (A), use a standard mono cable. When the Tuner LED is on the Guitar "A" is routed to the Tuner Out, and Loop 1 is muted ("B" is grounded through the sleeve of the input jack).

Stereo Input Cable - You can use the Tuner switch to select between two Guitars by using a "Y" cable to go to each guitar.

TAO Position:

Tuner Always On, Mono Input - Guitar "A" is always routed to the tuner. When the Tuner LED is on, Loop 1 is still muted. When the Tuner LED is off, the Guitar "A" is routed to both the Tuner and Loop 1.

Tuner Always On, Stereo Input - This mode would probably not be used in a two guitar set-up; if it were, when the Tuner LED is on then Guitar "B" is routed to Loop 1, and Guitar "A" is routed to the tuner. When it is off then Guitar "B" is not routed to the Tuner Out.

Input Board - Mech Mode Option Jumper

The Input Board has an internal jumper with a shunt that can be moved between three positions. See Fig. 3

Hold (Factory Default) - If you hold the "All Off" switch for about 4 seconds it will cycle between Preset Mode and Mech Mode.

Tap - Pressing the Tap Tempo switch will toggle Mech Mode. The Tap Switch will still output a Tap Tempo signal.

AO (All Off) - Pressing the All Off switch will toggle Mech Mode. This also defeats the All Off function.

Input Board - Options Dip Switches

Switch 5: All Off Turns Tuner Off

OFF (Factory Default) - Using the All Off switch will not turn off the Tuner.

ON, All Off Turns Tuner Off - The All Off switch will turn the Tuner Off

Switch 4: Tuner on the Bus

OFF (Factory Default) - Turning the Tuner function on will not change the Preset (or Loop in Mech Mode). Turning a Preset (or Loop) on will not turn off the Tuner.

ON, Tuner on the Bus - When the Tuner is selected the active Preset will turn off. The Tuner (or A/B Mode) can be added to a preset program in programming mode. Also, the Tuner acts similar to a Preset in that Loops and a Tap Tempo can be assigned to it during programming mode in case you want a delay to continue on while tuning. (Turning a Loop on in Mech Mode will not turn off the Tuner)

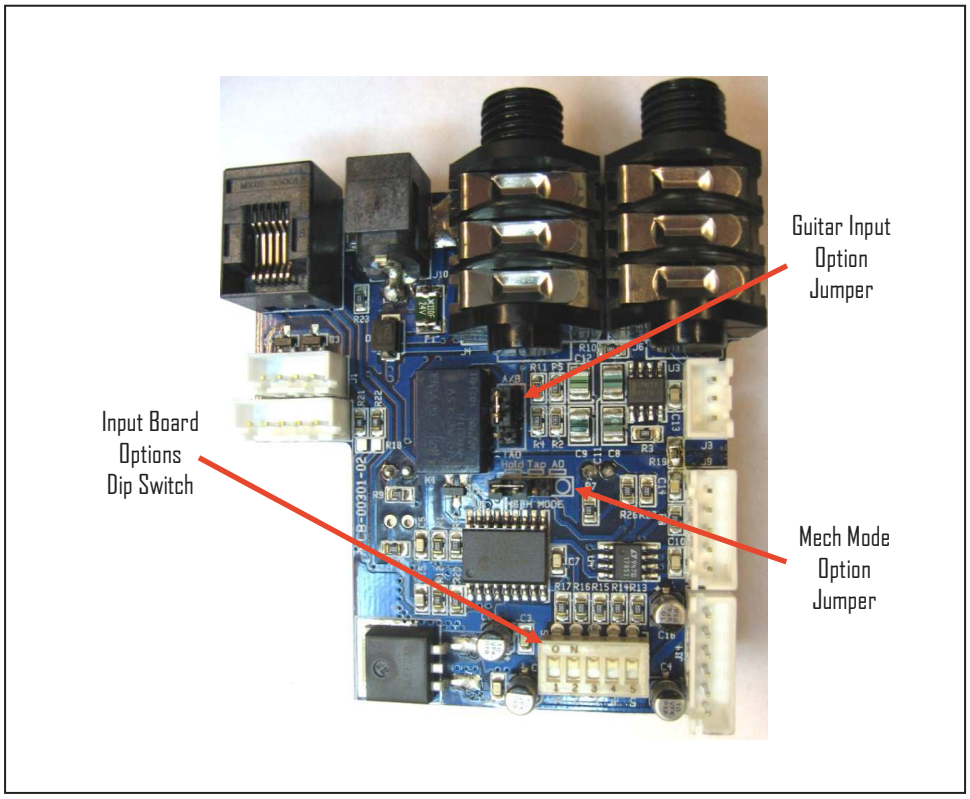
Switch 3: Tap Tempo on the Bus

OFF (Factory Default) - The Tap switch will only affect the 3 RCA jacks on the PBT.

ON, Tap Tempo on the Bus - In programming mode a Tap Tempo can be set and stored with a Preset. The Mech Mode LED will flash the tap signal going out when that Preset is activated.

Switch 1, & 2: (Factory Default OFF) These are applicable only to multiple linked PBT's.

PBT— Input Board



Configuring Options Continued:

Loop Board - Stereo Operation Jumper

The Loop Boards that are populated for the stereo option have internal jumpers with a shunt that can be moved between two positions. See Fig. 4

Mono (Factory Default): The last three loops are stereo capable and have stereo configuration jumpers. All stereo loops should have their jumpers set to "Normal" in order to pass mono audio through all loops.

Stereo Output: In order to use any loops as stereo, the first stereo loop (7 in a 9 Loop, Or 4 in a 6 Loop) in the chain must have its Stereo Jumper Block set to "MC" for Mono Combine. This sends the mono output from the previous loop through the Left channel to the Right Output of the loop. When the first stereo loop is active, the Left is sent out, and both Left and Right are returned. All other stereo loops following the "MC" loop should have the jumper set to "Normal". The additional stereo loops are sent both a Left and Right signal, and return both as well. When they are all bypassed, the Left signal from the last mono loop is sent to both the Left and Right output. In order to work properly, all pedals after the first stereo pedal must be stereo in and out.

Note: The factory can upgrade additional loops to stereo capable if required.

Loop Board - Preset Address Dip Switches

Each Loop Board has a Dip Switch that must be set to a unique address corresponding to the Preset Switch. At the factory the address is set to 1 for Preset 1, 2 for Preset 2, etc per the table below; a " 1 " is a switch in the ON position. You can set an individual Loop to Address 0 0 0 0 0 to configure it for Mech Mode only, with this address it no longer has a Preset and no Presets will affect it.

Address	1	2	4	8	16
1	1	0	0	0	0
2	0	1	0	0	0
3	1	1	0	0	0
4	0	0	1	0	0
5	1	0	1	0	0
6	0	1	1	0	0
7	1	1	1	0	0
8	0	0	0	1	0
9	1	0	0	1	0

Only when linking multiple PBT's together will these addresses need to be changed. See "Linking Multiple PBT Devices" if this is needed.

Loop Board - Amp Control Option

Note: This option requires purchasing the optional PBT Jumper Cables accessory.

The Loop Boards that are populated for the stereo option also have extra connectors that allow one, two or three loops to have the audio bypassed so they may be used for Amp controls. Cutting the 3 traces between these audio connectors (see figure 4) opens the audio path to that loop. The audio path is then reconnected with the longer jumper cable (from the accessory kit) to the Output Board of the PBT. Please see the instructions with the PBT Jumper Cables or the website for more details.

The Tip of the control loop send jack is grounded when the loop is off. Connect your amp control cable to the send of the loop and you are ready to test operation. The return jack for a control loop is not used. See "Individual Loop Mech Mode" if you want your control loops to be independent of Presets.

PBT– Stereo Loop Board

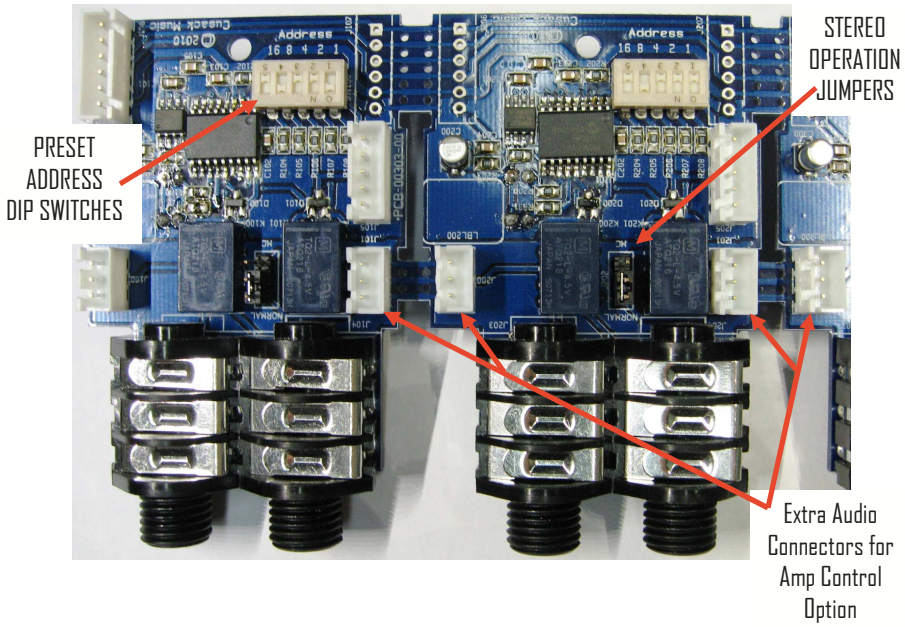


Figure 4

Linking and Configuring Multiple PBT Devices

By linking multiple PBT devices together you can create a system with up to 27 Presets and 27 Loops, plus have the ability for remote switching of a backstage pedal board.

Com Link: Two or more PBT devices can be chained together via the Com Link RJ-11 jacks. A standard four wire telephone cable will work to connect the devices from output end of one PBT to the input end of the next PBT. Also, when chained like this the Preset Address Dip Switches on the PBT's must be configured with a unique addresses for each of the Presets per the table in the configuration section.

Note: Be careful when choosing a cable so that is has 4 wires, not 2 or 6 wires since they do look similar. Also, a standard telephone cable is not pin 1 to pin 1. If your cable is 1 to 1, then connect the cable from input of one PBT to input of the next PBT (or output to output).

Input Board - Options Dip Switches

Switch 1 & 2: Input Board Address

Set each input board of a linked PBT Device to a different address per the following table; a " 1 " is a switch in the ON position.

Address	1	2
28	0	0
29	1	0
30	0	1
31	1	1

Loop Board - Preset Address Dip Switches

Each Loop Board has a Dip Switch that must be set to a unique address corresponding to the Preset per the table below; a " 1 " is a switch in the ON position. To chain two Pedal Board Tamers together, the second PBT should have its addresses changed to unique addresses. Starting the second PBT Preset 1 address at 10 is suggested and numbering them up to 18. The addressing allows up to 27 different Presets.

Address	1	2	4	8	16
1	1	0	0	0	0
2	0	1	0	0	0
3	1	1	0	0	0
4	0	0	1	0	0
5	1	0	1	0	0
6	0	1	1	0	0
7	1	1	1	0	0
8	0	0	0	1	0
9	1	0	0	1	0

Address	1	2	4	8	16
10	0	1	0	1	0
11	1	1	0	1	0
12	0	0	1	1	0
13	1	0	1	1	0
14	0	1	1	1	0
15	1	1	1	1	0
16	0	0	0	0	1
17	1	0	0	0	1
18	0	1	0	0	1

Address	1	2	4	8	16
19	1	1	0	0	1
20	0	0	1	0	1
21	1	0	1	0	1
22	0	1	1	0	1
23	1	1	1	0	1
24	0	0	0	1	1
25	1	0	0	1	1
26	0	1	0	1	1
27	1	1	0	1	1

Address 0 0 0 0 0 configures an individual Loop for Mech Mode only, with this address it no longer has a Preset and no Presets will affect it.

Setting up a Remote Switch:

For a PBT remote switch, duplicate the addresses of the Presets that you want to control remotely. They don't need to be in the same order and you can skip some if desired. The input board address should be the same as the address of the PBT that has your primary Tap Tempo preset settings.

Operating Linked PBT Devices

Here are some additional considerations when configuring and operating multiple linked PBT's:

All Off Turns Tuner Off Option:
The All Off switch will only turn off the Tuner for the PBT's which have Dip Switch 5 set to ON. It needs to be ON for all PBT's in order for a single All Off switch to turn all Tuners off on all PBT's.

Tuner on the Bus Option:
Dip Switch 4 can be set different on each PBT. For example, if you use the Tuner on your first PBT as an A/B Switch, you could set Dip Switch 4 to OFF to keep it off the bus, and the Tuner on your second PBT could be connected to a tuner and be on the bus.

Tap Tempo on the Bus Option:
When Dip Switch 3 is set to on for all the PBT's, pressing the tap switch on any PBT will cause all the RCA Jacks to go low. Also, holding the tap switch down, like for a brake function, will cause all the RCA Jacks to stay low.

When programming a Preset, the Tap Tempo can actually be set differently for each PBT by using the Tap Switch on that PBT, so that you can get two different tempos out for a given Preset. If only one PBT has a Tap Tempo setting, then all PBT's output the same Tap Tempo.

Dip Switch 3 does not need to be the same for all linked PBT's. If you want the RCA Jacks of one PBT to be un-affected by the others, then set it to OFF.

Mech Mode option jumper:
With the jumper in the Tap position, and if Tap Tempo is on the Bus, then the pressing the Tap Switch on any PBT will toggle Mech Mode for all PBT's. If the jumper is in the Tap position, and if Tap Tempo is NOT on the Bus, then only the Tap switch on the PBT with this option enabled will put all PBT's in Mech Mode.

With the jumper in the A0 position only the PBT tied to that All Off foot switch will toggle in and out of Mech Mode. All other All Off footswitches work normally.

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