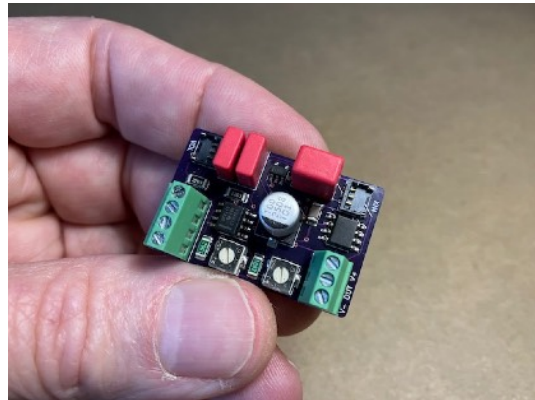
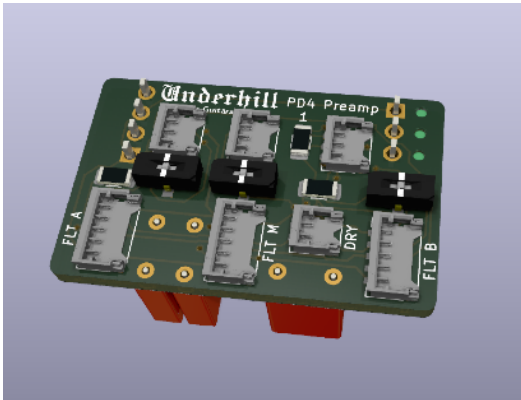


User Manual

PD5 Dual Preamp

Overview

The PD5 Dual Preamp is a two channel bass preamp with independent pickup buffers and an active mixing (blend) section. With just a volume and blend pot, the PD5 can be used as a stand-alone preamp for a clean and natural sound with the advantage of active blending (no interaction between pickups), and no tone degradation with low volume or long cables. Each input has a 0-6dB gain adjustment for boosting and matching pickup output.



There are three filter connectors on the PD5, one for each pickup and one for the blended signal. These connections provide power and signals to external filter boards like the FS5, FV5, and FT5. The dry signal from both pickups is also available to external filters like the FT5 via a two wire connector. All three filter connections have an onboard bypass switch and corresponding connector for an external bypass switch.

Jack Connections (Fig. 1)

V- is the system ground. This should be connected to the actual ground on the bass, preferably the SLEEVE terminal on the jack. The battery minus wire should be connected only to the RING terminal of a stereo jack. This connects the battery minus to the instrument's ground only when a plug is inserted in the jack, so that the preamp is powered off when the plug is removed.

V+ is the positive wire from the battery or batteries. This should be directly connected to the preamp if the power switching is done with the jack.

OUT is the final signal from the preamp that is connected to the jack tip and sent out the cable.

The blend potentiometer (CX1) is connected to the three wire MIX connector on the jack end of the board.

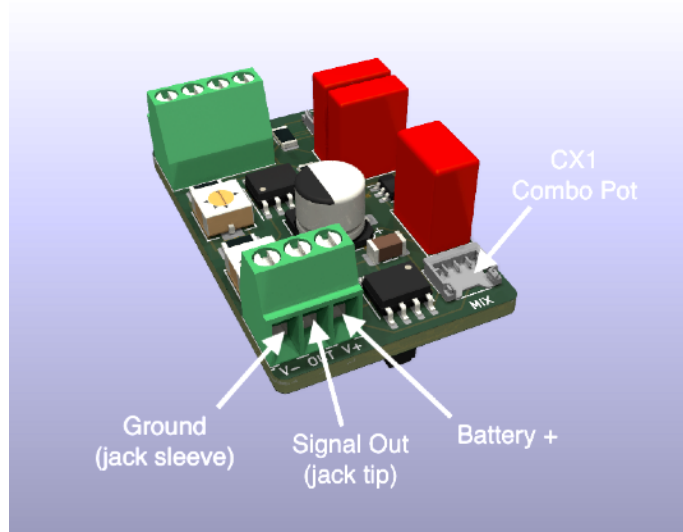


Fig. 1 - Jack Connections

Pickup Connections (Fig. 2)

The A and B pickup connections are identical, but the blend control will select the A pickup when turned clockwise, so the neck pickup should be connected to A on a right handed bass. Reverse A and B for a left handed bass.

The A- and B- terminals are connected to the actual bass ground. If your pickups have a separate shield wire, connect it to one of these terminals. Some pickups have the shield connected to one of the two signal wires, and you should connect that side to A- or B-. The signal polarity can be swapped as long as the shield can be connected to the minus side. The three wire cable from the volume pot is connected to the VOL connector in Fig. 2.

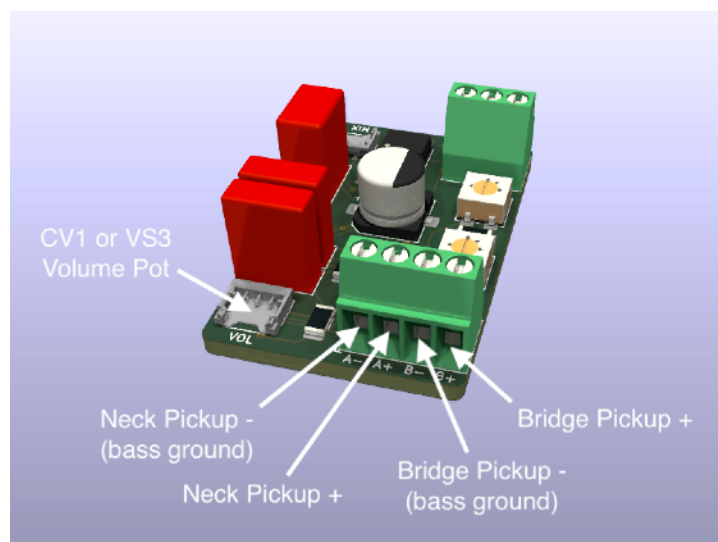


Fig. 2 - Pickup Connections

Gain Adjustment

Gain is independently adjustable from 0-6 dB for each pickup (Fig. 3). Use a small screwdriver to carefully turn the adjustment pots. The primary purpose of the gain adjustment is to balance the output of the two pickups, allowing them to be set at the desired distance from the strings but have equal output. It is recommended that the trimmer on the louder pickup be left all the way down, and the output matched by turning up the weaker pickup. If the basses output is weaker than normal (i.e. with low output pickups) then you can turn both trimmers up to increase output. Make sure to test your gain settings thoroughly with a fresh battery and any installed filters set to maximum boost levels.

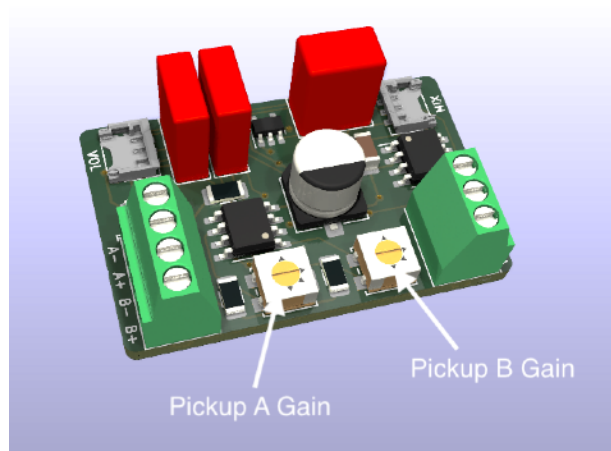


Fig. 3 - Gain Adjustment

Bypass Configuration (Fig. 4)

The PD5 has a flexible filter bypass system that can be used in many different ways with external bypass switches. You can quickly switch off all filtering for recording or using outboard equipment. Or you can carefully craft a tone with the filters, then quickly switch between an uncolored tone and the filtered tone without disturbing the filter settings. The treble boost switch for the FT5 Filter simply operates the bypass for the filter slot it is plugged into.

There are three on board micro-switches and switch connectors (corresponding to each filter connection) that configure the bypass modes. The switch settings (viewed as in Fig. 4) are as follows:

MODE	Micro Switch
Filter OFF, no external switch (or no filter installed)	LEFT
External switch installed.	CENTER
Filter ON, no external switch.	RIGHT

BE SURE TO SET THE SWITCH TO THE CENTER POSITION IF YOU HAVE AN EXTERNAL SWITCH INSTALLED, or the circuit may misbehave if the two switches are “fighting”.

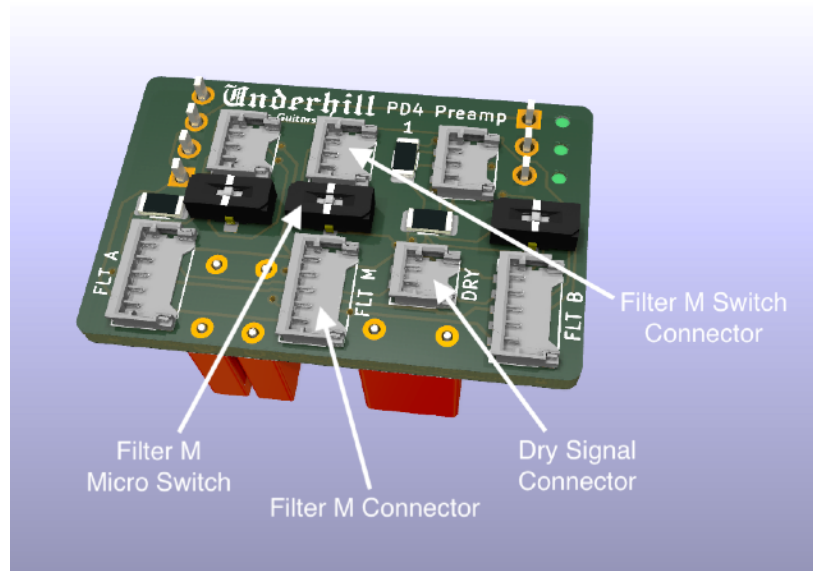


Fig. 4 - Bypass Connections

Installation

Connect all of the jack and pickup wires to the preamp according to Figs. 1 & 2 above. It may be a good idea to trim and tin the wire ends with solder. Tighten the screws *firmly* and tug on the wires to check the connections. Attach the volume and blend pot cables to the preamp.

At this point, it is a good idea to set all of the bypass micro-switches to the left (as in Fig. 4) and test the preamp. Plug in the bass and make sure the volume and blend are working. If nothing happens, push all of the connectors flat with a finger, or re-seat them. Check the battery voltage and jack connections, and verify the bypass switches are set LEFT. If you still can't get it to work, then contact us and we will help you troubleshoot. Otherwise, play with the blend and volume, and see how the active mixing lets you fine-tune the basic Jazz sounds!

Next, adjust the gain trimmers to balance the volume of the pickups. You may want to lower your bridge pickup a little (for playability) if you moved it close to the strings to balance a passive setup. You can then turn up the bridge gain to bring the volume up to the neck level. An easy way to balance the pickups is to play a low note like an open E, and roll the blend back and forth quickly. You can then hear if there is a big difference in volume. There is a lot of personal preference in fine tuning the balance, so you will probably want to revisit the trimmers after you play some music for a while.

Now set the micro-switches to the desired bypass positions and plug in the filters and bypass switches (if any). Follow the instructions in the filter’s user manual to configure and test the filters individually and troubleshoot their connections if there is a problem.

Finally, cut a piece of 3M “Command” refill material or double-stick foam tape and attach the preamp. Move it around to find a good location to attach it to the control cavity. The preamp board can be mounted horizontally to the side of the cavity, or vertically to the bottom of the cavity, using the large red capacitors on the board or the green screw terminals as an attachment surface. These components are flush with the board edge for that reason, and are quite robust as an attachment point. Make sure no soldered components are touching shielding or other metal parts. Check all the cable connections again by pushing them flat with your fingers.

Specifications

The PD5 Dual Preamp has the following specifications:

Supply voltage	9-18V DC
Input Impedance (each pickup)	220 kΩ
Channel Gain	0-6 dB
Idle Current	1.5 mA
Dimensions	35 x 22.5 x 14 mm