



# INSTALLATION MANUAL

## BP4FL ONBOARD BASS PREAMP (4-KNOB SYSTEM) for left-handed instruments

Master Volume / Balance / Vintage Tone Control (P/P) / Treble and Bass (Tandem)

The Sadowsky® Onboard Bass Preamp 4-Knob System can be used to upgrade almost any bass guitar with passive pickups. The system is pre-wired with all necessary components, including the output jack, and requires no soldering for installation. The set includes the famous Sadowsky preamp with volume and balance controls, controls for the passive Vintage Tone Control (VTC) and a tandem potentiometer for active EQ control with bass and treble boost. The push/pull function of the VTC pot allows the bass to be switched between active and passive mode. VTC works in both modes.

The wire lengths between the potentiometers are designed to fit any bass with 4 controls plus an output jack. The potentiometers can be mounted on control plates or in various arrangements from the electronics compartment through holes in the body. For J-style basses with a 4-hole metal control plate, we recommend the BP4K Sadowsky On board Preamp Assembly, which comes pre-installed on a control plate.

### Control functions

- **Volume control:** fully left = max. volume
  - **Balance control:** switches between the two pickups (end positions) or mixes the signal from both pickups (intermediate positions), middle position = 50/50 mix
  - **Bass / Treble:** only boost available, fully right = neutral position (no boost), fully left = 18 dB boost at 40 Hz / 4 kHz
  - **Vintage Tone Control (VTC):** passive treble cut (works in passive and active mode), fully left = no treble cut
  - **Push/Pull switch on VTC control:** switches between passive mode (preamp in bypass) and active mode
- Note:** Switching to passive does not turn off the battery. The battery is activated any time a cable is plugged into the output jack. Remove the cable during long breaks and when not using the bass.

### Specifications

- Frequency response ..... 5 Hz - 50 kHz
- Bass control ..... + 18 dB Boost at 40 Hz
- Treble control ..... + 18 dB Boost at 4 kHz
- Total Harmonic Distortion (THD) ..... 0,18% at 1 kHz
- Power source ..... one 9 V battery
- Current draw ..... 9 mA
- Battery life ..... up to 870 hours\*
- Input impedance ..... 1 MOhm
- Output impedance ..... 1 KOhm

\* **Note:** The battery drains as soon as a cable is plugged into the output jack. Switching to bypass does not extend battery life. With normal use, you can expect a battery life of around six months.

### Instrument requirements

- The preamp is designed for **two passive pickups** and is not compatible with active pickups that require anything other than a 250K or 500K volume or balance pot.
- The instrument must have holes for four potentiometers and an output jack, and there must be space in the electronics compartment of the instrument for the potentiometers, the electronics board and a 9 V battery. The length of the potentiometer thread is **9 mm** and the diameter is **10 mm**. Please consider this when installing the pots through the body wood. It may be necessary to ream the holes a little larger. You can get a reamer at any hardware store or take your instrument to an experienced technician.
- The electronics compartment should be shielded (shielding paint, copper foil) to shield the preamplifier from outside interference.

### The kit includes

- Pre-wired preamplifier circuit with PCB, potentiometers, battery clip and output jack
- **Note:** The included jack has METRIC threads and will not work with Imperial threaded jack plates.
- Instructions/circuit diagram
- All required potentiometer knobs
- Nuts and washers for mounting the potentiometers
- Allen wrench for attaching the knobs

### Tools required

- Screwdriver to access the electronics compartment / remove the control panel
- Small screwdriver for the terminal screws on the balance pot
- Socket wrench or spanner for loosening/tightening the nuts (12 mm and 13 mm for kit + appropriate size for old potentiometers)
- Possibly a soldering iron for unsoldering old components

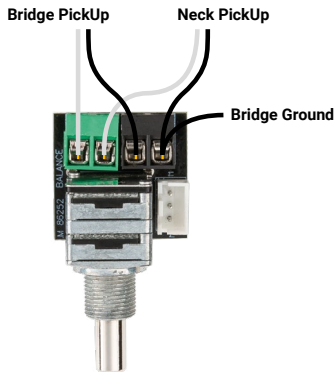
### Installation

No soldering is required to install the preamplifier kit. However, soldering may be required to remove the old electronics. All potentiometers are fitted with keyed connectors to prevent incorrect connection.

- Remove the old potentiometers and output jack from your instrument. If you need to keep the original output jack, it must be a stereo jack with three contacts (TRS), because the ring contact is used to close the circuit for the battery.
- Identify and mark the „hot“ and ground wires from the pickups and the string/bridge ground wire.
- When unsoldering the wires from the old components, make sure to leave a stripped and tinned piece of bare wire at the end that can be inserted into the screw terminals on the balance pot.
- **Note for humbucker pickups with serial/parallel switching:** If you have additional toggle switches on your instrument, leave all wires connected to these switches and use the wires running from the switch to the volume or balance control as „hot“ wires. Study the wiring of your pickups or ask an experienced technician for advice.
- Check that there is sufficient space in the electronics compartment for the new preamplifier electronics and a 9 V block battery. If there is no room for the battery, you will need a technician to install a separate battery compartment.
- If the compartment is not already shielded, you should shield it now (shielding paint or copper foil).
- Check that the four holes for the pots of the new preamplifier kit are suitable and test fit the pots to check the diameter. If necessary, carefully enlarge the holes with a reamer. Check that the potentiometer threads extend far enough through the wood to install a washer and a nut.
- Insert the potentiometers with a lock washer through the holes and from the top put a flat washer and a nut on them. Hand-tighten for now.

- Find a suitable position for the circuit board and the battery in the electronics compartment. The PCB has double-sided tape attached to its back. Plug in the connectors and secure the PCB in the electronics compartment with the double-sided tape.
- Align the potentiometers in a way that all the cables can run freely with some slack and make sure the potentiometer contacts do not touch any other components or the sides of the electronics compartment. Hold the potentiometers with one hand and carefully tighten the nuts with a 13 mm wrench. Do not use too much force - hand tight is sufficient.
- Turn the balance control to the centre position and all other controls to the far right. Place the knobs on the potentiometer shafts, align the markings, and carefully tighten the set screws by with the included Allen wrench. Do the same with both 'levels' of the stacked EQ pot.
- Turn the knobs all the way in both directions to check that they move smoothly and that the components inside the compartment do not shift.
- Install the pre-wired output jack from the kit in the position of the old jack (12 mm wrench).
- The **pickup cables** are connected to the balance control with screw terminals. Connect the ground wires to the black terminals and the hot wires to the **green terminals**.
- **Note: The wires in the green terminals can be swapped to change the working direction of the balance control.**
- The **bridge ground cable** can also be connected to one of the screw terminals for the ground contacts (black terminals), as these are large enough to accommodate two wires.
- Connect a **9 V battery** to the battery clip and insert the battery into the compartment. If necessary, use some foam to keep the battery in place.
- Plug an instrument cable into the output jack, connect an amplifier and test the function of the new electronics.
- Replace the electronics compartment cover.

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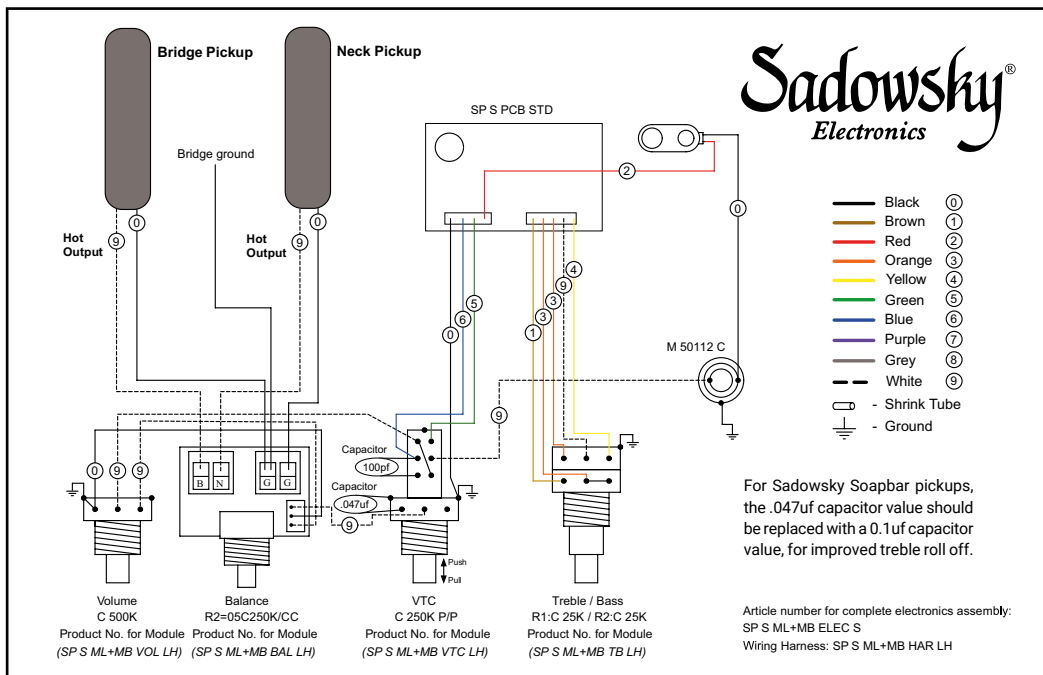


**Note:** Defects or damage caused by improper installation or the use of unsuitable tools are excluded from the warranty. This also includes cutting of cables and soldering in the kit.

Warwick GmbH & Co Music Equipment KG  
 Gewerbepark 46 • D-08258 Markneukirchen  
 www.sadowskybass.de | info@sadowskybass.de | www.w-distribution.de

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**Schematic diagram**



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