

# Instructions for Seagull Potentiometer and Wiring Kit



Rev A2, Oct. 2025

<https://seagullelectronickits.com/>

Thank you for buying the Seagull Potentiometer and Wiring Kit. This kit will save you trips to the hardware store and parts/shipping costs from specialized suppliers. These notes supplement the PCB instructions with notes and installation tips for the pieces contained in the kit, and a complete wiring diagram is shown in Figure 10.

For the best results, we recommend doing the following:

- Watch our retrofit video. (<https://youtu.be/UbzPoQOolzY>) It shows the entire retrofit and includes many tips and tricks.
- Read the [Kit Instructions](#). They contain details not shown in the video.
- Read these notes. They show how to wire all the components.
- Plan your retrofit before you start. If you need help, send email and we'll help you.
- Retrofit your radio. Hopefully you'll enjoy the process as much as we do!

You can download [these instructions](#) and the [Kit Instructions](#) at [www.seagullelectronickits.com](http://www.seagullelectronickits.com). The hyperlinks in these documents will save you time scrolling through them.

## Important Notice

If you are working in a low-humidity environment, and you are feeling sparks when you touch doorknobs or other metal surfaces, you need to take precautions to prevent static damage to the PCB. If the humidity is low, the risk of damage is lower.



When you handle the PCB, follow these guidelines to protect it from static electricity:

- Leave the PCB in its anti-static bag until you are ready to install it.
- Discharge yourself to a metal surface such as the legs of your workbench before touching the PCB or wires connecting to it.

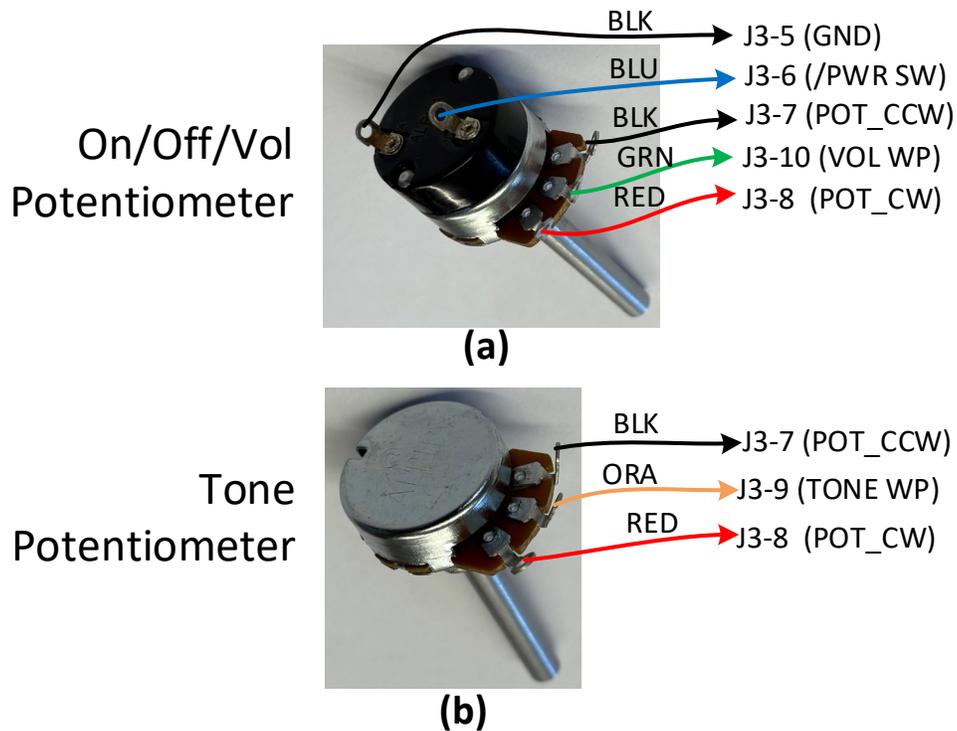


*Figure 1 - Kit contents*

Wiring to the Terminal Blocks J1 and J3 – When connecting stranded wire to terminal blocks, do NOT tin the wire with solder – tinned connections can loosen over time. Tighten the screws to 3.1 – 3.5 in-lb.

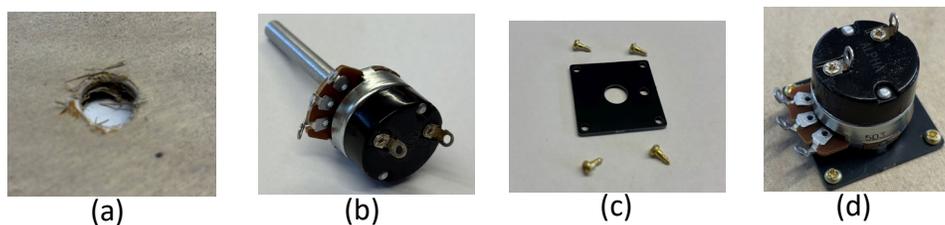
On/Off/Volume Potentiometer – Figure 2a shows how to connect it to the PCB. If you use this potentiometer, make sure to install Jumper C1 as shown in the PCB instructions. Also, zip tie the old potentiometer securely in the underside of the chassis because someone may wish to restore it someday.

Tone Potentiometer – Older radios may not have a tone potentiometer, but you’ll probably want to use this one. You can remove the original band switch and replace it with the tone potentiometer. Figure 2b shows how the tone potentiometer connects to the PCB. When using the new potentiometer, make sure you do NOT install Jumper C2. Also, make sure to save the old band switch by securing it securely in the underside of the chassis.



*Figure 2 - Volume and tone potentiometers and connections*

Potentiometer Mounting Plates – Use as shown in Figure 3 when it is not possible to mount your potentiometers to the original radio chassis. The [Retrofit Video](#) shows how to mount them.



*Figure 3 - Installation of potentiometer mounting plates. (a) shows the shaft hole in the radio cabinet for potentiometer (b). (c) shows the mounting plate and screws. (d) shows the potentiometer secured to the back of the cabinet using the mounting plate.*

Note about cutting the potentiometer shafts – The long shafts on these potentiometers will work for most radios, but they will need to be shortened, and you may need to use a file to create a flat side to match your radio’s knobs. (if you need a longer shaft you’ll need a [shaft extender](#)) See Figure 4 to avoid errors.

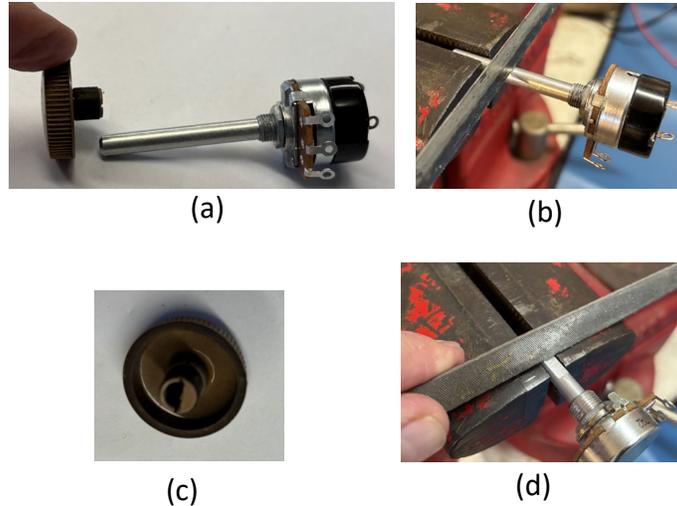


Figure 4 - Cutting potentiometer shafts. (a) Make sure to measure how far the shaft extends into the knob. (b) When cutting the shaft, clinch the discarded end in the vise. (c) Example of a knob with a flat side. (d) Make sure to file only what is necessary – otherwise press-fit knobs can slip off.

**Dial Lights and Sockets** – The kit contains two BA9S sockets, two incandescent Type 47 bulbs, and two 6.3V LEDs. You’ll only need these if your radio chassis is missing. (If the chassis/dial is missing, a piece of grille cloth over the dial opening will diffuse the light and create a good visual effect) Wire the sockets as shown in Figure 5, and note that one of the terminals is connected to the housing of the socket.

LED or incandescent? Many customers prefer the glow of the incandescent bulbs, but they only last for about 1000 hrs. The LEDs will not need replacement. If you use more than one LED, you will have to connect PCB shunts as shown in the PCB instructions.

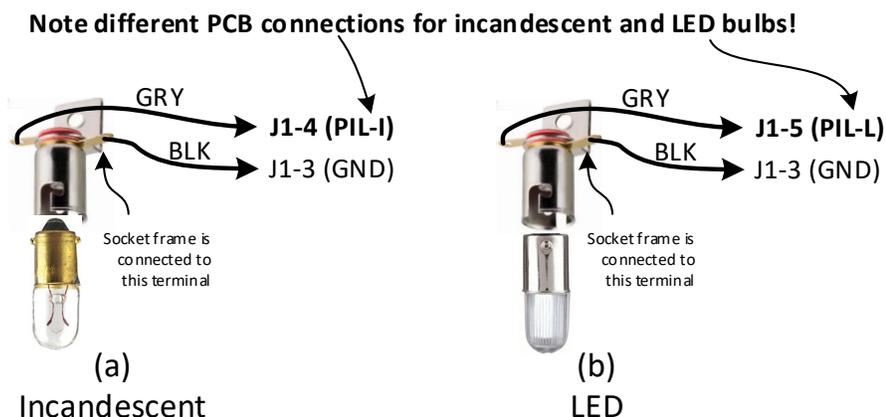
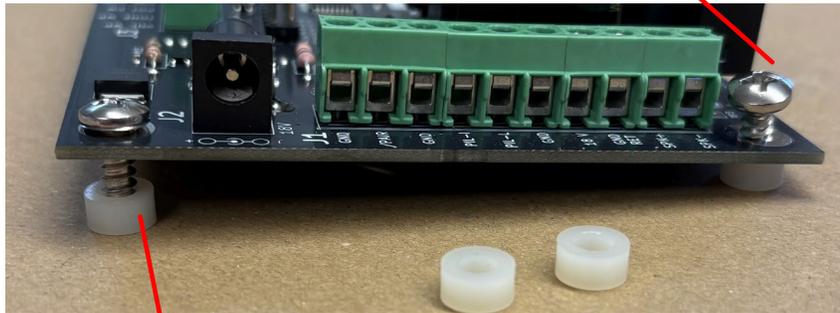


Figure 5 – Connections for incandescent and LED bulbs.

PCB Mounting Spacers – The kit contains 4 nylon spacers used for mounting the PCB. If you find that your radio cabinet is too thin for securing the PCB, the [Retrofit Video](#) shows how to cut a piece of plywood to make a mounting base.

You will need 4 ea. #6 or # 8 screws



Place the spacers between the PCB and the cabinet

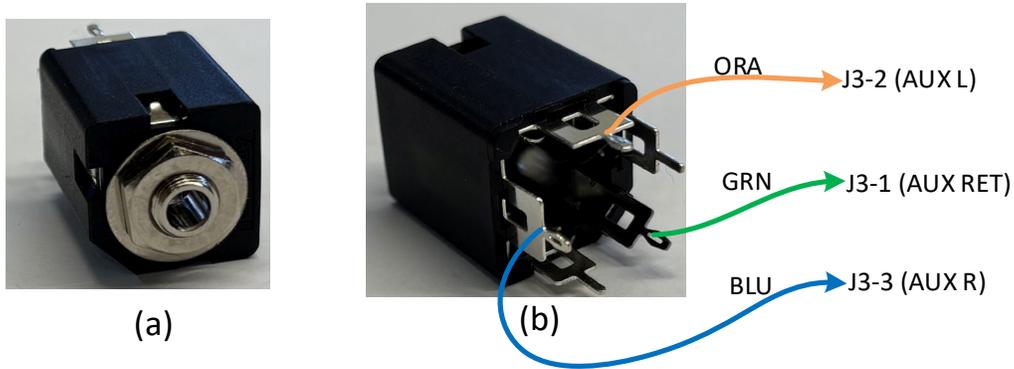
*Figure 6 - Showing spacer installation*

Toggle Switch – The toggle switch can be used to enable the Aux input from the 3.5 mm jack or as a pairing switch. The switch is typically secured to the chassis at the rear of the radio. Connect the switch as shown in Figure 7.



*Figure 7 - The toggle switch can be used to enable Aux audio (a) or used for a pairing switch (b).*

Aux Audio Jack – This jack accepts stereo analog signals from a CD player, computer, or turntable. The jack is typically secured in the chassis at the rear of the radio. Connect the jack as shown in Figure 8.



*Figure 8 - Aux audio jack – (a) front view. (b) connection details*

Hookup wire – The kit contains high quality, PVC insulated hookup wire. If you use the colors shown in the wiring diagram (Figure 10) there will be at least two feet of wire for each connection.

Shrink Tubing and Zip ties – Use the shrink tubing which you can use when splicing wires from the existing dial light sockets to the PCB. If you are not familiar with using shrink tubing, watch a YouTube video.



*Figure 9 - Shrink tubing and zip ties will help you splice wires and then bundle them neatly*

Wiring Diagram – Figure 10 shows the full wiring diagram. The diagram shows separate ground (black) wires for each component. If you use the radio chassis, you can reduce the number of connections between the PCB and the chassis by connecting the black wires from the components to the radio chassis. Then connect a single black wire from the chassis to J1-3.

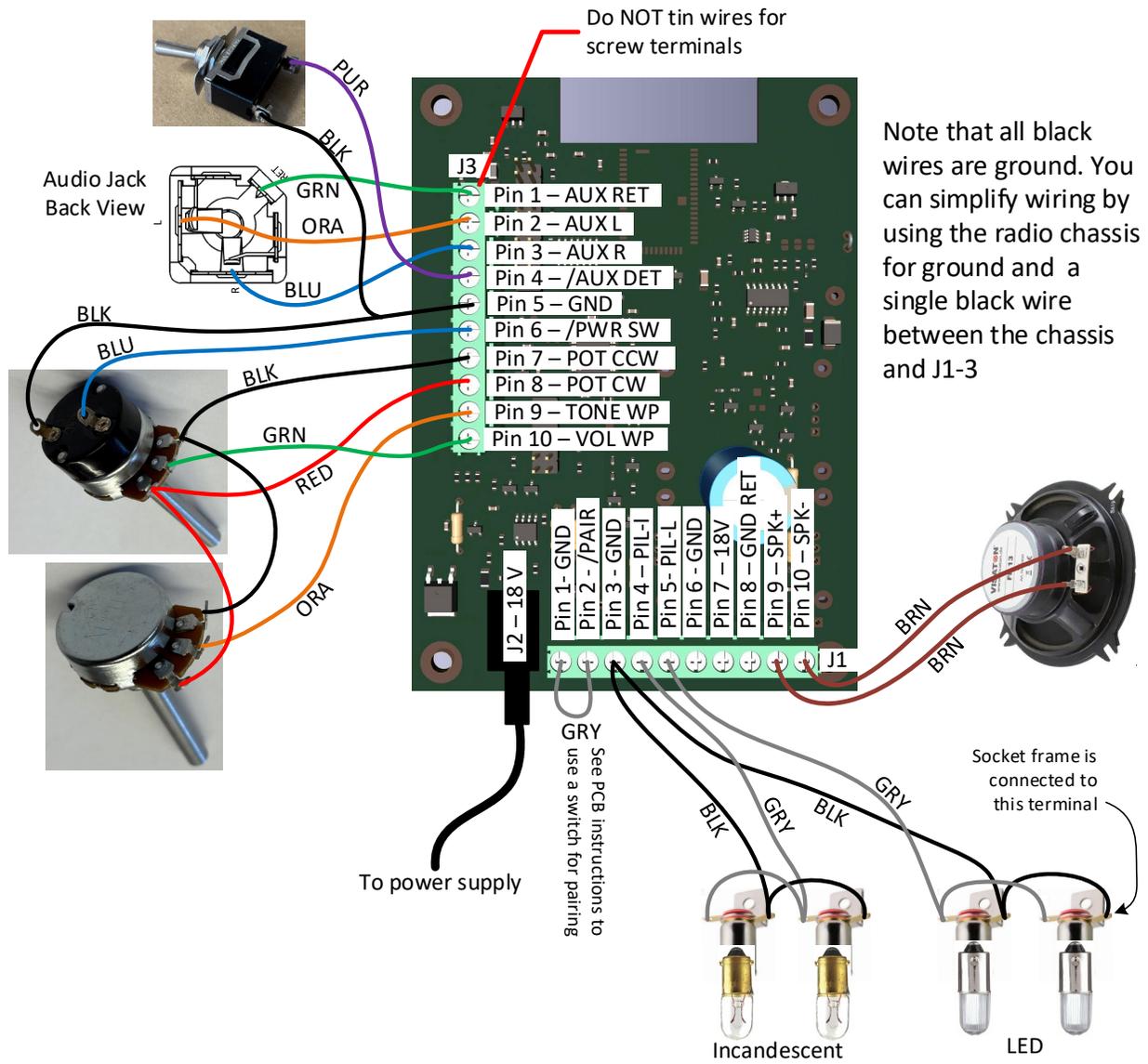


Figure 10 - Wiring Diagram