

Version 2014June27

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This is a replica of the MXR<sup>™</sup> Phase 100<sup>™</sup> referred to as **P100** in these documents. This is a replica of the original, vintage, real MXR<sup>™</sup> unit, not the Dunlop<sup>™</sup> reissue. This is very versatile and unique sounding 10 stage phase shifter. An excellent set of sounds controlled by a 4-way switch that ranges from mild phase sounds to an intense phase that almost borders on chorus pedal sounds. The unique sound of this unit can be heard, used by Keith Richards of the Rolling Stones on their song "Shattered" on the "Some Girls" CD Among many other recorded examples of that time period.

Use the project documents provided, starting with the General Build Instructions. It will fit nicely in a 1590BB or 1590NS enclosure, with a little planning. We use a Lorlin (manufacturer name) PCB-mount 2-pole rotary switch that can be set to any number of positions up to 8. We chose the PCB-mount version to keep the profile low so the board would fit over it. We clipped off all the unused terminals and bent down the terminals that we soldered to. This kept the profile of the switch low enough to fit the board over it. Then we used double sided tape to hold the board in place and insulate the terminals of the rotary switch. The holes for the jacks need to be drilled as close to the top of the enclosure as possible and enclosed jacks should be used.

All the "jumpers" are included in the top layer of the PCB, so you don't need to add any jumpers to the components of the PCB.

When you install the capacitors, especially C7 if the radial capacitor is tall, make sure that you lay it down flat before you solder the leads. There's not much "head room" between the PCB and the bottom plate, so everything needs to be low as possible.



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You can also see this in the photo below.

The kit includes IC sockets. When we built this one, we decided not to socket anything. We're not against using sockets, but for whatever reason, we soldered the ICs straight to the PCB.

In some cases the P100 will oscillate on the "regenerated" settings. This can be fixed by replacing the 15k R1 resistor with a higher value resistor. The kits include a 15k resistor and also a 29.4k resistor to use in R1 if you encounter oscillation.

There are a couple of mistakes on the PCBs that need to be considered. The screen print on the top of the PCB shows the diode in the wrong direction. Follow the layout and look at the photo below for the correct installation of the diode. Also a last minute addition to the PCB to add the LED current limiting resistor (R59) is not correct, so you'll still need to add the 1k resistor inline with the LED wiring and don't add R59 to the PCB.

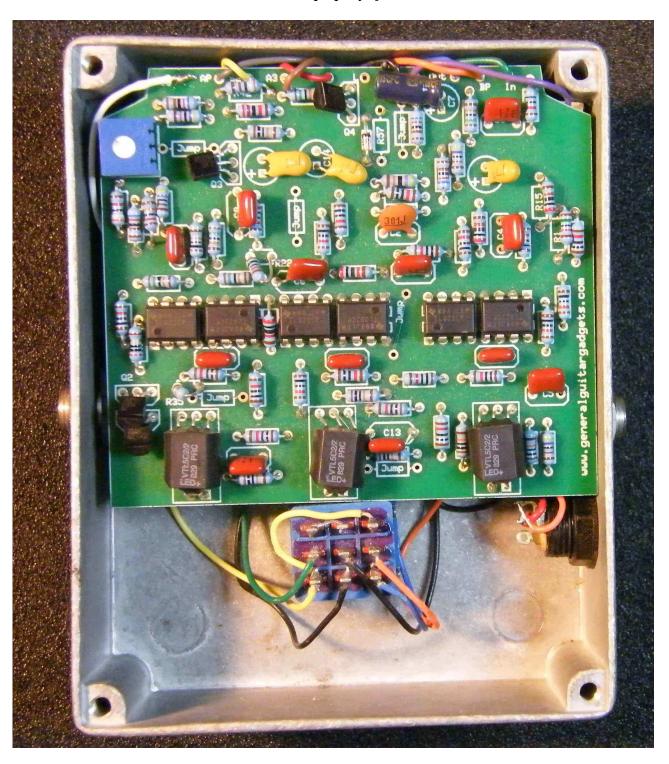


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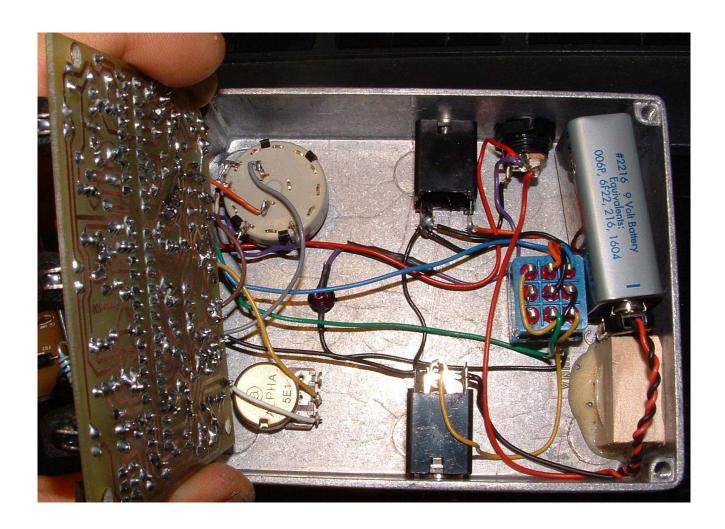


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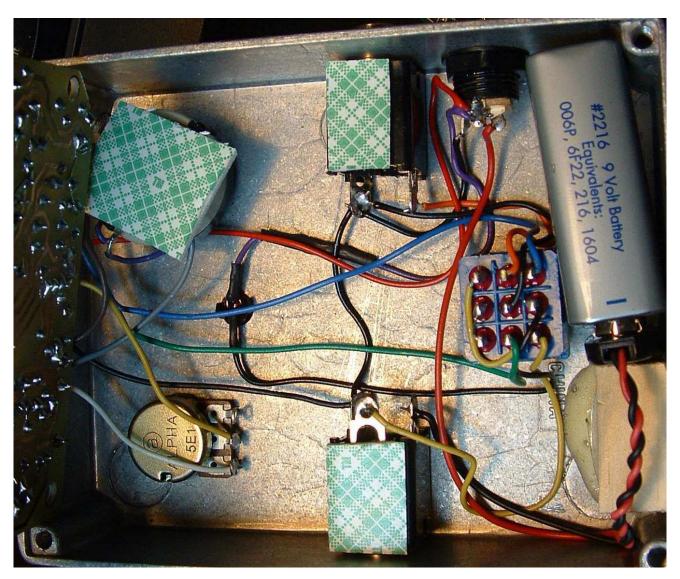


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The kit comes with a Lorlin adjustable rotary switch. The collar around the pole should be set in position 4 when the switch has been turned to the most counter clockwise position. The back of the switch has numbers and the poles are labeled with letters. The chart below describes the connections to the switch using the wire colors shown in the wiring diagrams.



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Pole A (Pad "AP")	Pole C (Pad BP)
1	7
2	8 (Pad "B2")
3 (Pad "A3")	9
4 (Pad "A3")	10 (Pad "B2")

Comments and questions are welcome and can be sent to info@generalguitargadgets.com