

A black MXR Phase 90 phaser pedal is shown from a top-down perspective, resting on a dark, textured surface. The pedal features a large black rotary knob with a white pointer and a scale from 0 to 10. To its right is a small silver toggle switch. Below the knob is a silver foot pedal. The text "MXR" is embossed in a rectangular frame in the center, and "phase 90" is printed in a script font at the bottom right. Input and output jacks are visible on the sides, labeled "INPUT" and "OUTPUT".

MXR PHASE 90

**SCRIPT MOD
INSTRUCTIONS**

 **StewMac[®]**



THIS MOD GIVES YOU TWO SOUNDS FROM YOUR STOCK PHASE 90.

With the flick of a switch you can have your stock “block” sound and the coveted vintage “script” sound that you’ve heard on thousands of recordings. It’s like getting two pedals in one.

If you run into issues with this modification, a StewMac tech advisor is a click or call away: **stewmac.com/contactus or 1.800.848.2273**

MXR is a registered trademark of Dunlop Manufacturing Inc.

PARTS LIST

- [1] **Black and white pushback wire**



- [2] **1/8" heat shrink - 2" length**



- [1] **Mini toggle switch**



- [1] **MXR Phase 90 Script Mod instructions**



TOOLS YOU'LL NEED

- Fine-gauge Wire Stripper**

#1606



- Wire Cutter**

#1607



- 1/4" Drill Bit**

#4850



- Solomon SR-965 Soldering Station**

#0501



- Guitar Tech Screwdriver and Wrench Set**

#3693



- Hammer & metal punch or nail**



- Kester Pocket-Pak Solder**

#0505

- Solder Sucker**

#0503

- Solder Wick**

#0504

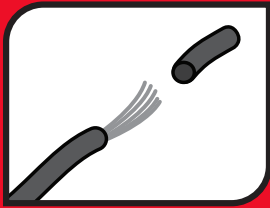


CONNECTING THE NEW SWITCH

For your new switch to be connected properly, an understanding of tinning and soldering is necessary.

TINNING

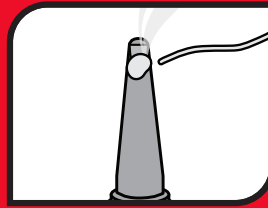
Tinning is an important part of the soldering process as it helps to make stronger solder joints. Tinning a wire is done by heating the wire with a soldering iron and then melting a layer of solder on it. If the wire you plan to tin is made up of many strands of wire, follow all of the steps below.



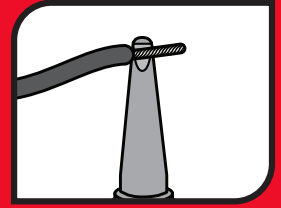
1. Strip roughly 1/4" of the wire sheathing from the end of the wire you intend to solder.



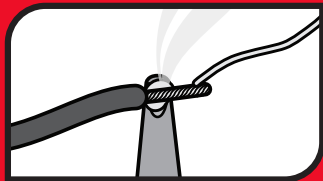
2. Twist the wire strands of the exposed wire firmly. ***Don't twist solid core wires.***



3. Dab a tiny amount of solder onto the end of your soldering iron.

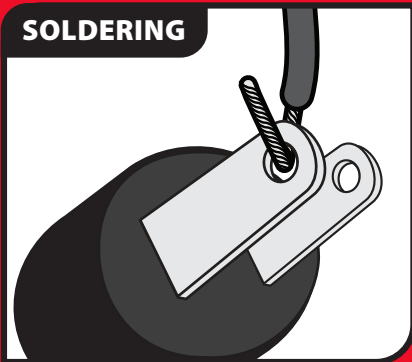


4. Touch the soldering iron with its dab of solder to the exposed wire closest to the sheathing. This will help to hold the iron in place as it heats the exposed wire. Wire will heat within a few seconds.

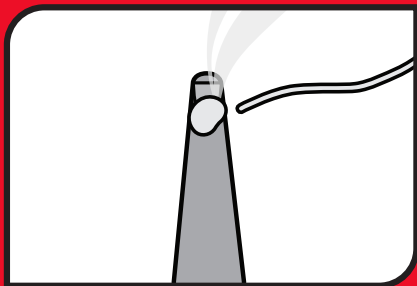


5. With the iron still touching the wire, take a length of solder and touch it on the exposed end of the wire and slide it along the wire slightly towards the sheathing and iron. The solder will find its way into the braids of the exposed wire.

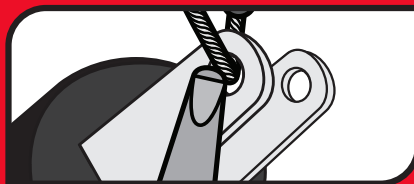
SOLDERING



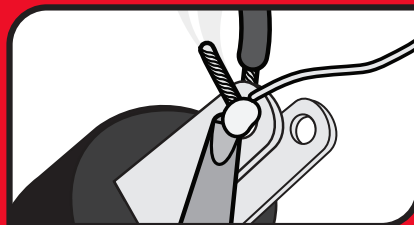
1. Insert tinned wire through lug hole before soldering and bend to secure.



2. Melt a small amount of solder onto the tip of the iron ("tinning" the iron).



3. Hold the tip against the connection until the connection reaches soldering temperature. This should take just a few seconds.



4. Feed solder to the connection, not to the iron. Stop feeding solder once the lug hole is filled. Keep the iron on the connection for a second longer; this pause gives time for all of the flux to cook out of the joint. After the joint has cooled, trim away the excess wires.

MORE HELPFUL SOLDERING TIPS AND TRICKS

- *Keep your soldering tip clean by wiping it often on a damp sponge.*
- *Also keep it tinned by occasionally melting a little solder onto it.*
- *Don't blow on the hot solder or touch anything until the joint has cooled completely. A good solder joint is shiny – a sign that it was left to cool undisturbed.*
- *Plan so each joint is only soldered once. Resoldered joints are messy and more likely to fail.*

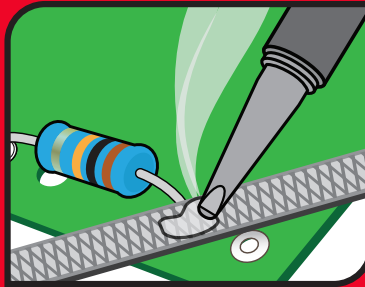
DESOLDERING

Much like soldering, you run the risk of damaging the circuit board while desoldering. If too much heat is applied to a circuit board the solder pad can pull away from the board, breaking its electrical connection. A solder sucker and solder wick are your best friends when desoldering. Here are a few tips on how to use them:



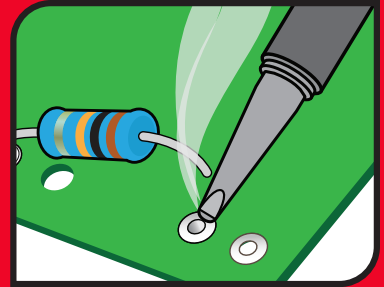
1. USE A SOLDER SUCKER

Depress the plunger on the solder sucker to prepare it. Tin your soldering iron, apply it to the solder joint, and hold the solder sucker a fraction of an inch away. Within a few seconds, the joint will liquefy. As soon as it does, push the button on the side of the solder sucker and remove the soldering iron from the joint. Inspect the solder joint and repeat the process until all of the solder is removed.



2. USING SOLDER WICK

Solder wick is a flat, braided wire that can be used to remove solder from a joint. Simply place the wick on the solder joint and press your soldering iron against the wick, heating the joint through the wick. The solder will liquefy and absorb into the wick. Keep inching the wick down as it absorbs solder so it does not become saturated.

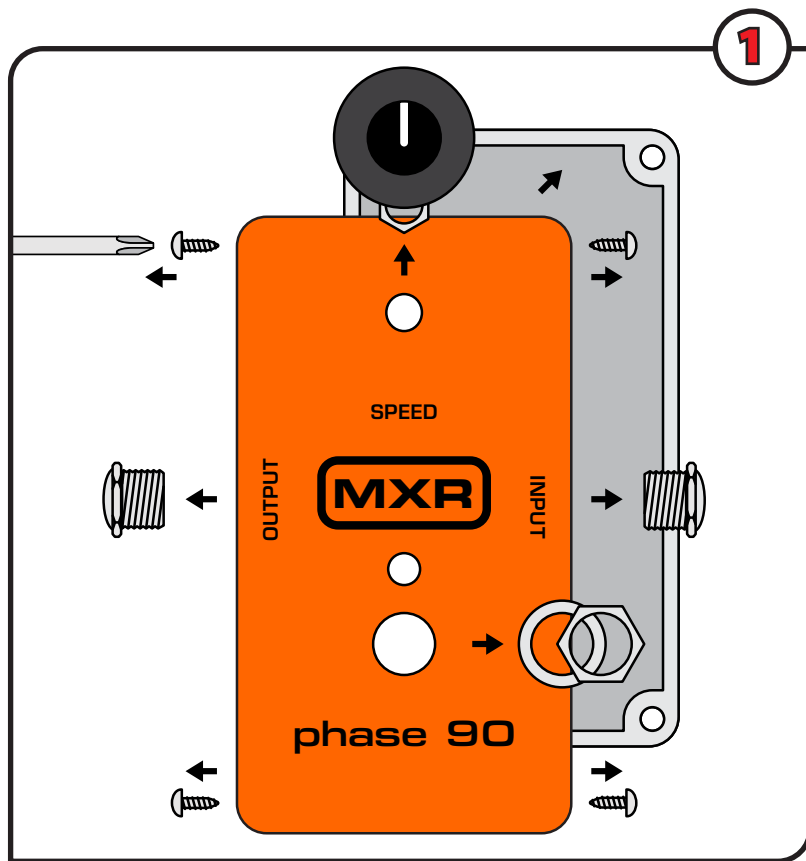


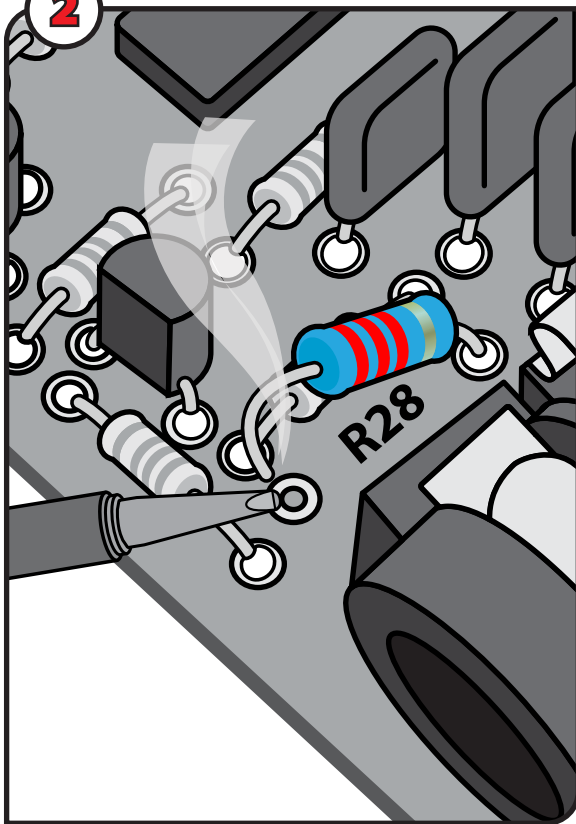
3. LIFT THE LEAD

Once the solder is removed from the joint, use a pair of pliers to lift the lead from the circuit board contact. If the lead doesn't want to come up, heat the solder joint up to liquefy the residual solder which will free the lead. Once the lead is lifted, use the solder sucker or solder wick to remove any leftover solder.

DISASSEMBLE THE PEDAL

Remove the four screws that secure the back of the pedal housing. Pull the knob off of the front of the pedal, unscrew the mounting nuts for the potentiometer and the switch, and unscrew the mounting nuts for the instrument and power jacks on the side panels. Gently push the switch and the pot shaft from the front of the enclosure and the board should come right out.

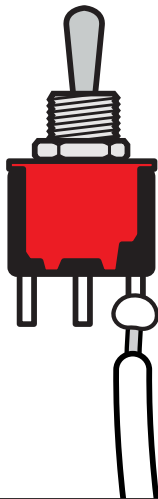


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LOCATE R28 ON THE PCB

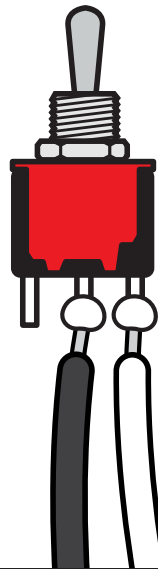
R28 is the resistor just above the output jack. Desolder and lift the leg of R28 that is closest to the edge of the board (pictured). If you are having trouble sufficiently heating the solder, flip the board over and desolder the back of the pad. After the solder has been removed from the pad, carefully lift the resistor leg from the pad. To do this you might need to heat the leg and the pad with your soldering iron. Be careful not to break the other leg of the resistor as you are lifting the left one.

In the next steps you will prepare the switch to attach to the R28 resistor. The switch will take the resistor in or out of the circuit, letting you change between the stock “block” sound and the vintage “script” sound.

3

INSTALL A WHITE WIRE ON THE SWITCH

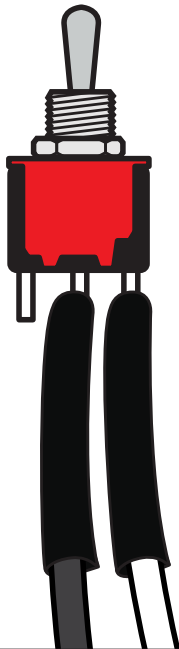
Cut one 2" section of white wire, strip roughly 1/4" of insulation from the end of it, and tin the freshly exposed wire. Wrap the wire through the eyelet of one of the outside solder lugs on the switch and solder it. Even though it's called "pushback wire" you must strip the insulation to make a solid solder connection.

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INSTALL A BLACK WIRE ON THE SWITCH

Cut one 2" black wire, strip roughly 1/4" of insulation from the end of the wire, and tin the freshly exposed wire. Wrap the wire through the eyelet of the middle solder lug on the switch and solder it.

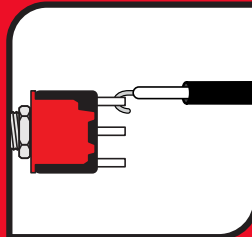
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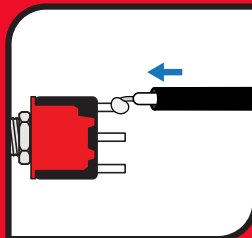
HEAT SHRINK SOLDER JOINTS

Add a 1" length of heat shrink to each solder joint and use a heat source to shrink the insulation over the solder joints and wires.

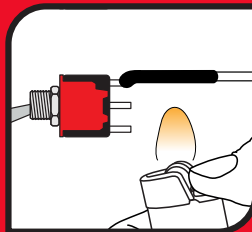
TIPS ON HEAT SHRINKING



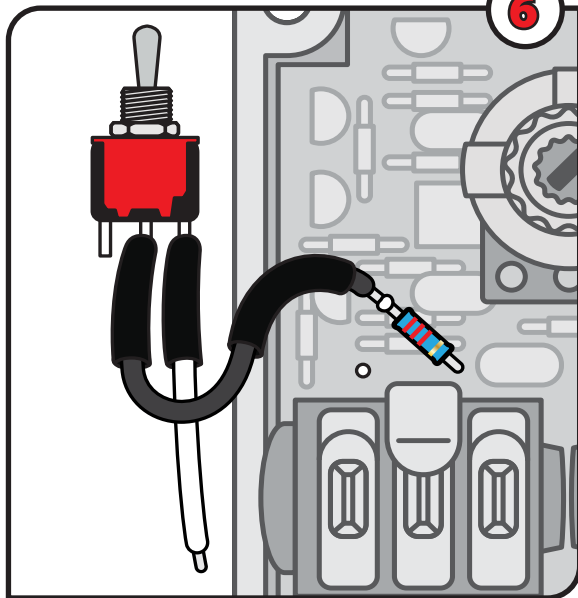
1. Heat shrink is used to insulate an electrical connection, like a solder joint, to prevent the connection from shorting.



2. Slide the heat shrink all the way up to the switch, completely covering the solder joint and solder lug.

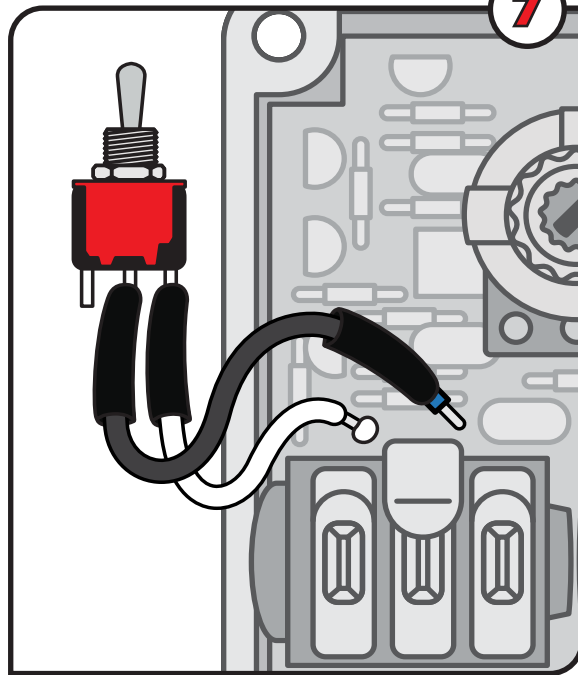


3. Wave the flame from a lighter or the tip of a soldering iron near the positioned heat shrink until the wrap constricts to a firm hold. Allow heat shrink to cool.

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INSTALL THE BLACK WIRE

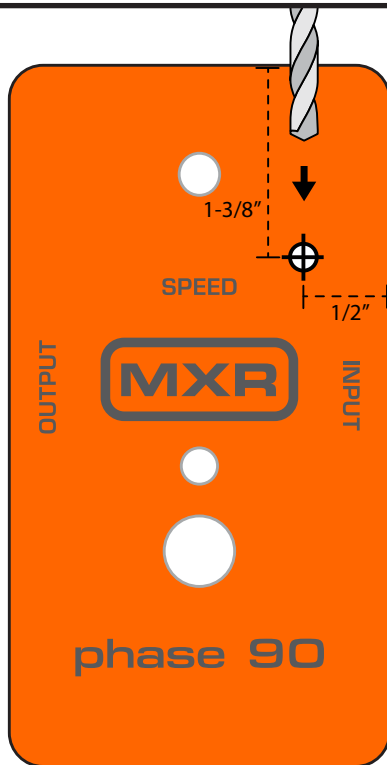
Slide another 1" length of heat-shrink over the black wire that you just soldered to the new switch. Solder the free end of the same black wire to the lifted leg of R28. Use a heat source to shrink the insulation over the joint you just soldered.

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INSTALL THE WHITE WIRE

Feed the free end of the white wire through the hole vacated by the lifted leg of R28. Solder this wire to the solder pad on the back of the circuit board.

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DRILL A HOLE FOR THE NEW SWITCH

Measure approximately 1-3/8" down from the top of the pedal enclosure and 1/2" over from the side of the enclosure. Mark this location with a nail or a center punch to help keep your drill bit in place while you start drilling the hole.

Use a 1/4" drill bit to drill a hole in the pedal enclosure where you just left a mark.

FINAL ASSEMBLY AND TESTING

To install the switch, guide it into its hole first, positioning the body of the switch so the switch will flip side to side and not up and down. Once the switch is secured, then reinstall the rest of the components back into the pedal housing.

Re-attach the back panel with the four mounting screws. Plug in your guitar and an amp, and take your MXR Phase 90 for a test drive. When the switch is engaged, the pedal should be noticeably warmer and less harsh. If you experience intermittent signal or other irregularities, pull the back panel off the pedal again and inspect your solder joints.



TECHNICAL SUPPORT:

If you have any questions before, during, or after attempting these modifications, please don't hesitate to reach out to our Tech Support Team. They are available by email at service@stewmac.com, and by phone M-F 9:00AM-5:00PM ET at 1-800-848-2273.

**MAKE IT
MOD IT
FIX IT**

DISCLAIMER: Performing the modifications outlined in these instructions will void any warranty on your pedal. StewMac is not responsible for any damage caused by attempting these modifications.



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