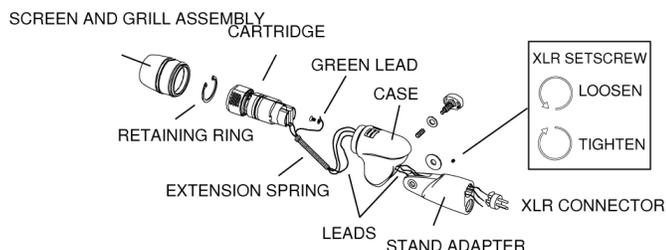


# R174

## R174 -- Replacement Cartridge

# R174 Replacement Cartridge

## General Description



## R174 Replacement Cartridge for BETA 56A Microphones

The Shure Model R174 is a direct replacement cartridge for Shure Model BETA 56A supercardioid dynamic microphone and offers the same high-quality performance as the original cartridge.

## CARTRIDGE REPLACEMENT

### Required Tools :

- 1/16" Allen wrench.
- Small Phillips-head screwdriver.
- Small flathead screwdriver.
- Snap-ring pliers with a 1"-2" ring range and .070" diameter tips (McMaster-Carr #5415A33 or equivalent).
- Soldering iron

## Replacing the Stand Adapter

1. Insert the BLUE, RED, and GREEN lead wires through the hole on the front of the stand adapter and out through the XLR connector chamber.
2. Insert the extension spring into the opening of the through-hole. Make sure the spring is pushed in until it bottoms out.
3. Using a 1/16" Allen wrench, secure the setscrew on the stand adapter to lock the extension spring in place.
4. Place the compression spring and metal washer over the threaded end of the knob screw. Place the rubber washer between the stand adapter and the inside of the flange. Make sure the rubber washer is on the groove side of the stand adapter. Secure the stand adapter to the case with the knob screw.
5. Solder the BLUE, RED, and GREEN lead wires to pins 2, 3, and 1 respectively.
6. Insert the XLR connector in the XLR connector chamber so the notch on the connector fits into the groove inside the chamber. Be careful not to pinch the lead wires.
7. Using a small flathead screwdriver, turn the XLR setscrew clockwise to secure the connector to the stand adapter.

## Removing the Old Cartridge

1. Unscrew and remove the screen and grille assembly.
2. Remove the cartridge retaining ring using a set of snap-ring pliers. Insert both needles of the pliers into each of the holes on the ring. Close the pliers so that the ring compresses slightly, then remove the ring.
3. Partially remove the old cartridge from the case, so the inside can be seen.

4. Using a small Phillips-head screwdriver, unscrew the terminal end of the GREEN lead wire from the back of the inside of the case.
5. Remove the old cartridge and attached leads from the case, pulling the BLUE, RED, and GREEN lead wires with it.
6. Remove the extension spring.
7. Remove the GREEN lead wire from the RED and BLUE wires and discard the old cartridge. Be sure to save the GREEN lead wire.

## Installing the New Cartridge

1. Hold the stripped end of the GREEN lead wire (not the terminal end) next to the stripped ends of the BLUE and RED lead wires of the replacement cartridge and twist them together for about one (1) inch.
2. Thread the twisted ends through the larger end of the extension spring.
3. Push the twisted ends through the hole in the bottom of the the case so the edge of the extension spring fits just inside the hole and the wire leads appear on the outside.
4. Untwist the BLUE, RED, and GREEN lead wires.
5. Pull the GREEN wire all the way through. The terminal end should pull the extension spring through in front of it. The extension spring should now be sticking out of the case.
6. Using a Phillips head screwdriver, secure the terminal end of the GREEN lead wire to the screw hole in the back of the inside of the case.
7. Place the new cartridge inside the case with the yellow tape strip facing up, aligned with the logo on top of the case. Make sure the wires rest in the intended groove so they are not pinched between the cartridge and case.
8. Reattach the screen and grille assembly.

## Replacing the Stand Adapter

1. Insert the BLUE, RED, and GREEN lead wires through the hole on the front of the stand adapter and out through the XLR connector chamber.
2. Insert the extension spring into the opening of the through-hole. Make sure the spring is pushed in until it bottoms out.
3. Using a 1/16" Allen wrench, secure the setscrew on the stand adapter to lock the extension spring in place.
4. Place the compression spring and metal washer over the threaded end of the knob screw. Place the rubber washer between the stand adapter and the inside of the flange. Make sure the rubber washer is on the groove side of the stand adapter. Secure the stand adapter to the case with the knob screw.
5. Solder the BLUE, RED, and GREEN lead wires to pins 2, 3, and 1 respectively.
6. Insert the XLR connector in the XLR connector chamber so the notch on the connector fits into the groove inside the chamber. Be careful not to pinch the lead wires.
7. Using a small flathead screwdriver, turn the XLR setscrew clockwise to secure the connector to the stand adapter.

## Alternative Installation Procedure

As a time-saving alternative, it is also possible to install the cartridge by carefully splicing and soldering the three leads between the cartridge and the case. If this option is chosen, be sure to trim unnecessary lead lengths and wrap the soldered connections carefully with tape to prevent shorts.