



INSTALLATION INFORMATION EMG MODEL 89 DUAL MODE

The EMG Model 89 is a DUAL MODE pickup. It can be switched from a single coil pickup to a humbucking pickup.

SPECIFICATIONS:

Logo Color Copper
 Output Impedance (Kohm) 10
 Current @ 9V (Microamps) 152
 Battery Life (Hours) 3290

	SINGLE COIL	HUMBUCKER
Resonant Frequency (Khz)	3.75	2.55
RMS Output Voltage	0.6	1.0
Peak Output Voltage	1.7	3.0
Output Noise (dBV)	-94	-99

IMPORTANT INSTALLATION NOTES:

- 1) When replacing a single coil pickup with the Dual Mode pickup, it may be necessary to modify the instrument. You may need to rout the guitar to accommodate the humbucker pickup. You may also need to enlarge the hole in the pickguard or purchase a new one from your dealer. If you buy one, make sure the holes in the pickguard line up with the routs in your guitar. Not all Strat* pickguards are the same.
- 2) You can use a DPDT mini toggle switch instead of the switch on the push/pull pot if you wish. Push/pull pots are deep and can make battery location difficult, especially in Strats. The push/pull pot will fit in a Strat, but it must be installed in the tone #2 position.

GENERAL INSTALLATION INFORMATION:

- 1) Only one battery is required per instrument. Additional active components such as the SPC, RPC, PI2, PA2, EXG, etc. do not require an additional battery.
 - 2) Use an alkaline battery, Mallory MN1604 or similar, for long life.
 - 3) The controls included with EMG Systems are 25K Ohm, Audio Taper. This value of control is required for the system to work correctly.
 - 4) These instructions are written under the assumption that you already have EMG pickups installed in your guitar. If you are installing other EMG's along with the Dual Mode, read both sets of instructions before installing the pickups. This should save you some steps.
 - 5) When installing EMG Pickups, DO NOT reconnect the bridge ground wire. This wire usually is soldered to a volume or tone control casing and goes to the bridge. This wire grounds the strings and uses them and your body as a shield against hum and buzz. It also creates a shock hazard. EMG Pickups are shielded internally and do not require string grounding. This greatly reduces the possibility of reverse polarity shock from microphones and the like.
 - 6) EMG Pickups have very little magnetism compared to High-Impedance type pickups. We recommend you adjust the pickups as close to the strings as is possible. Sustain and string movement will not be inhibited by close adjustment.
 - 7) If your installation is different from the diagrams in these instructions and you need additional diagrams, call or write to us. It is highly possible another EMG Installation Sheet will have the diagram you require.
- * Strat and Stratocaster are registered trademarks of Fender Musical Instruments. EMG Inc. is not affiliated with Fender.

WARRANTY:

All EMG Pickups and accessories are warranted for a period of two years. This warranty does not cover failure due to improper installation, abuse or damage. Interface electronics (controls, etc.) are not covered under this warranty. If at any time a pickup fails to work, return it postage pre-paid with proof of purchase. If upon examination the pickup is determined to be defective, a replacement will be made at no charge. Warranty replacement products are covered by this same warranty. This warranty covers only those pickups and accessories sold by authorized EMG Dealers. This warranty is not transferable.



INSTRUCTIONS FOR INSTRUMENTS WITHOUT PICKGUARDS

In this installation, the push/pull pot and tone control replace the existing controls.

- 1) Open the control cavity. Disconnect the pickup you want to replace and remove it from the guitar.
- 2) Disconnect any existing wires from its volume and tone controls and remove them from the guitar.
- 3) Install the push/pull pot and tone control into the guitar. Wire them as shown in diagram 5A, 5B, or 5C.
- 4) Mount the Dual Mode pickup into the mounting ring and install it into the instrument, routing the cable to the control cavity.
- 5) Select one of the two wiring options in diagram 1 and wire the dual mode pickup to the push/pull switch as shown.
- 6) Connect the red wire from the Dual Mode pickup together with the red wires from the existing pickups and battery clip. Cover this connection with heat shrink tubing.
- 7) Wrap the battery in foam and attach it to the battery clip.
- 8) Test the instrument by tapping on the pickups lightly with a screwdriver while plugged into an amp.

DIAGRAM 5A
1 Volume, 1 Tone

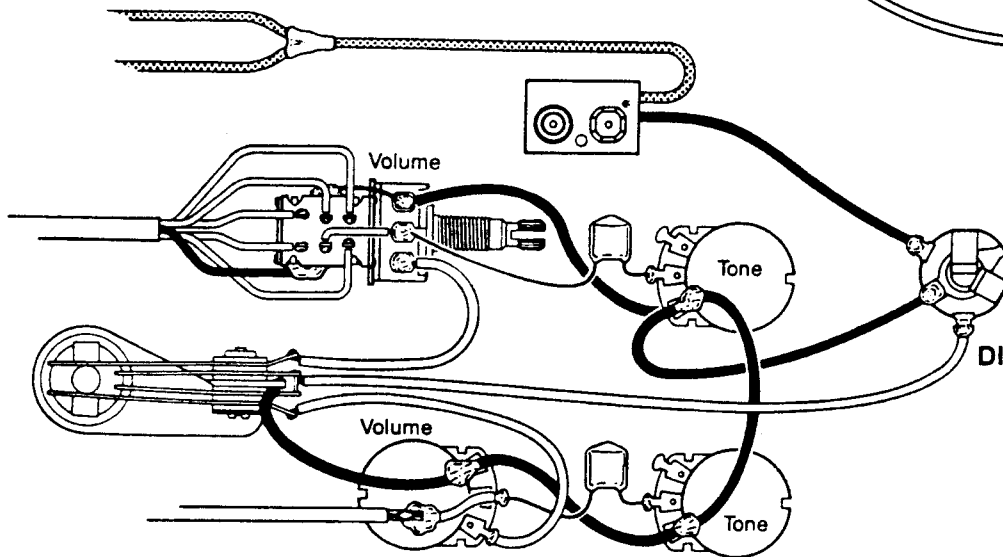
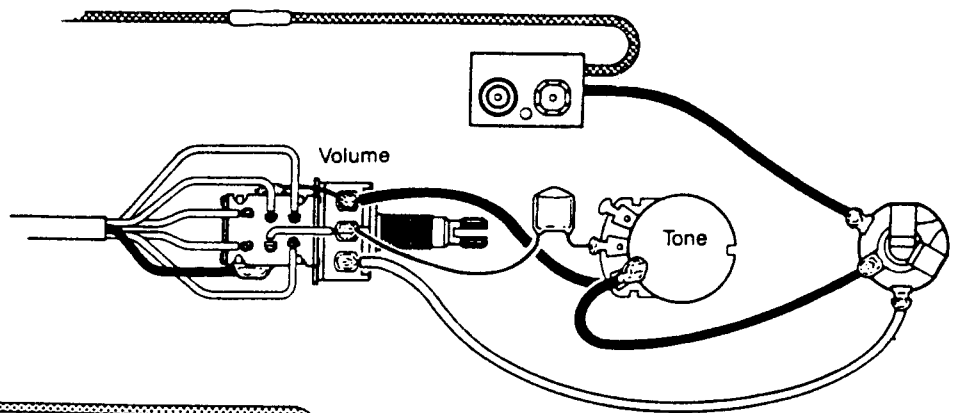
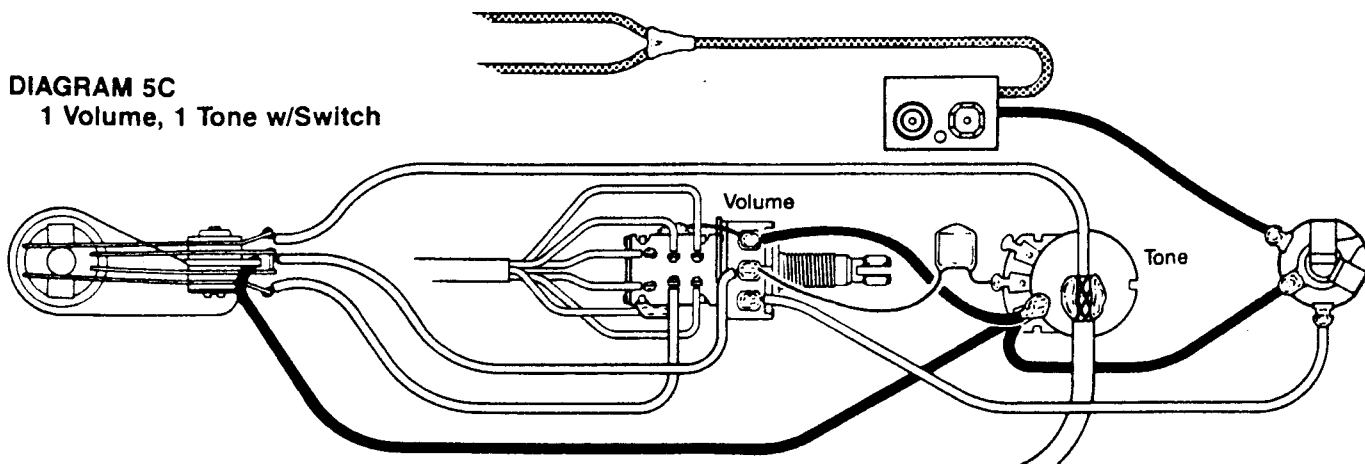


DIAGRAM 5B
2 Volumes, 2 Tones w/Switch
(Each Volume is independent)

DIAGRAM 5C
1 Volume, 1 Tone w/Switch



INSTALLATION INFORMATION FOR STRATS:

NOTE: The control cavity in a Strat is small. The push/pull pot is installed in the tone #2 position. Because it's being wired as a tone control, some modification of the push/pull pot is necessary.

- 1) Refer to diagram 3. Remove the ground wire and the output wire. This completes the modification.
- 2) Remove the strings.
- 3) Unscrew and remove the pickguard. If possible, leave the wires going to the jack intact. Remove the battery from the clip.
- 4) Find the pickup you want to replace. Disconnect its wires and remove it from the pickguard.
- 5) Refer to diagram 4. Disconnect the tone #2 pot by cutting the silver buss wire (or ground wire) at the tone #1 pot. Note that the volume control and tone #1 are still connected via the buss (or ground) wire.
- 6) Unsolder (do not cut) the wires going to tone #2 and remove the control from the pickguard.
- 7) Install the push/pull pot into the pickguard. Solder the leg of the tone capacitor to the center solder lug of the pot. Solder the wire from the 5-way switch to the outer solder lug of the pot as shown in diagram 4. Solder a wire from the case of the push/pull switch to the case of tone pot #1.
- 8) Install the Dual Mode pickup into the pickguard.
- 9) Select one of the two wiring options in diagram 1 and wire the dual mode pickup to the push/pull switch as shown.
- 10) Connect the red wire from the Dual Mode pickup together with the red wires from the existing pickups and battery clip. Cover this connection with the heat shrink tubing.
- 11) Wrap the battery in foam and attach it to the battery clip.
- 12) Test the instrument by tapping on the pickups lightly with a screwdriver while plugged into an amp.

DIAGRAM 3

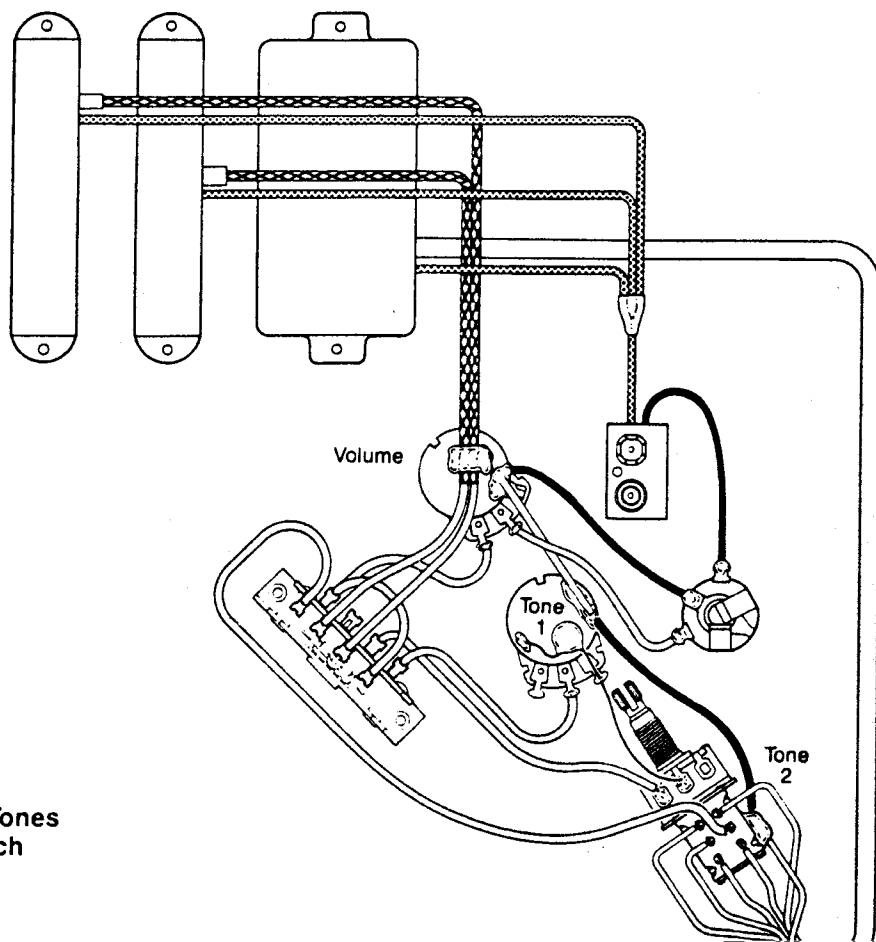
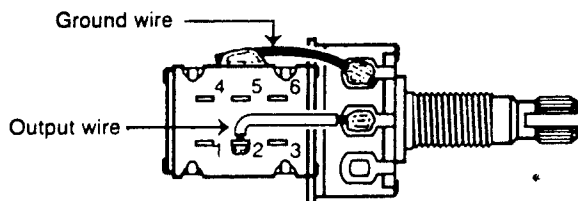


DIAGRAM 4
1 Volume, 2 Tones
w/5-way Switch

DIAGRAM #1

These two diagrams show how the switch can be wired two different ways.

Diagram 1A shows the switch wired so that when the switch is up the humbucker is on and when the switch is down the single coil is on.

In diagram 1B, when the switch is up the single coil is on and when the switch is down the humbucker is on.

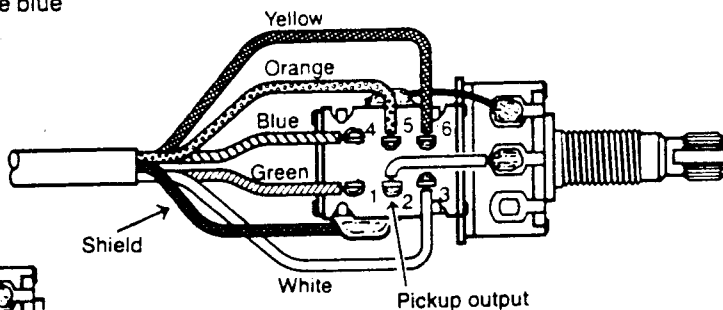
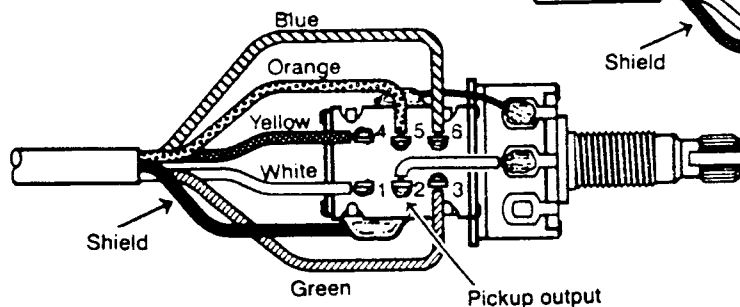
NOTE: The green wire is the output of the humbucker and the white wire is the output of the single coil. However, when rewiring the switch, the blue and yellow wires must also be moved. The green wire is dependent on the blue

wire and the white wire is dependent on the yellow wire for the pickup to work properly.

You can affect the outputs separately. For example, you can put an SPC on the single coil and an EXG on the humbucker. Simply connect the white wire from the pickup to the input of the SPC, and the output of the SPC to the switch where the white wire was connected. Connect the green wire of the pickup to the input of the EXG, and the output of the EXG to the switch where the green wire was connected. The possibilities are many and we encourage you to experiment.

DIAGRAM 1A

Switch up: Humbucker on
Switch down: Single coil on

**DIAGRAM 1B**

Switch up: Single coil on
Switch down: Humbucker on

INSTALLATION INFORMATION FOR 3 TOGGLE SWITCHES, 1 VOLUME 1 TONE

In this installation the push/pull pot and tone control replace the existing controls.

- 1) Unsolder the pickup cable braids from the case of the existing volume control being careful not to melt the insulation on the inner conductor.
- 2) Disconnect the switch and jack wires from the volume and tone control.
- 3) Remove the controls and the pickup you are replacing.
- 4) Install the push/pull pot and tone control into the guitar. Wire them to the toggle switches and jack as shown in diagram 2.
- 5) Mount the Dual Mode pickup into the mounting ring and install it into the instrument, routing the cable to the control cavity.
- 6) Select one of the two wiring options in diagram 1 and wire the dual mode pickup to the push/pull switch as shown.
- 7) Solder the braids of the other pickup cables to the case of the tone pot or the case of the push/pull switch. If you solder to the push/pull switch, be careful not to overheat it. This could damage the switch. If the cables will reach, I recommend you solder the braids to the tone pot.
- 8) Connect the red wire from the Dual Mode pickup together with the red wires from the existing pickups and battery clip. Cover this connection with heat shrink tubing.
- 9) Wrap the battery in foam and attach it to the battery clip.
- 10) Test the instrument by tapping on the pickups lightly with a screwdriver while plugged into an amp.

DIAGRAM 2

1 Volume, 1 Tone
3 Toggle Switches

