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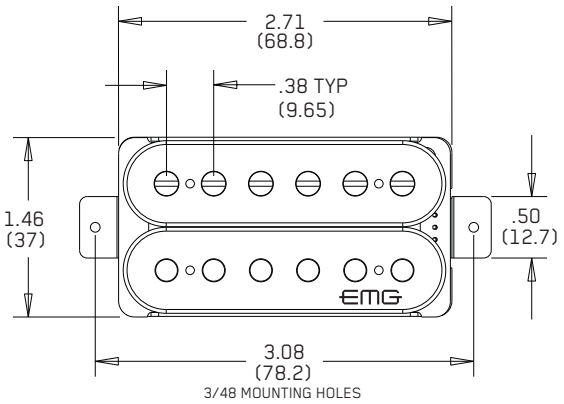
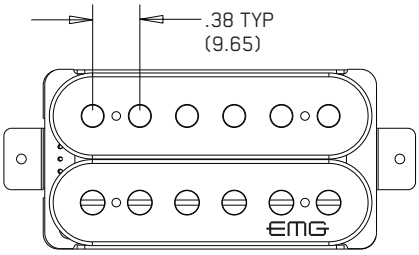
NECK MODEL
TUNE-O-MATIC SPACING



INSTALLATION INFORMATION
EMG MODEL: RETROACTIVE HOT 70 SET

BRIDGE MODEL
TUNE-O-MATIC SPACING



SPECIFICATIONS:

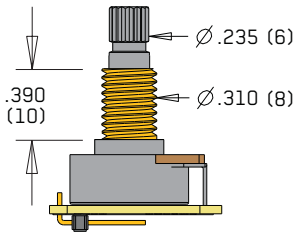
	MODEL: RA-350A Neck	RA-370C Bridge
Magnet Type	Alnico 5	Ceramic
Resonant Frequency (KHz)	3.0	2.33
Output Voltage (String)	4.50	4.0
Output Voltage Max (Strum)	8.0	8.0
Output Noise (60 Hz)	-106	-96
Output Impedance (Kohm)	3.1	3.1
Current @9V (Microamps) (Set)	350	
Battery Life (Hours)(Set)	1400	
Maximum Supply (Volts DC) (Set)	27	

GENERAL INFORMATION:

The RetroActive HOT 70 Set is a matched set of Active Humbucking Pickups using traditionally designed coils and a new "plug-on preamp". The pickups have similar tone qualities of a passive pickup, but with the benefits of active design. The tone is clear and powerful because the coils are treated separately by the preamp rather than in series typical of a passive pickup. Each Preamp is voiced for several different coil and magnet combinations. These pickups are truly unique because they have the presence of a typical humbucking pickup, but gone is the usual mid-range bump that makes the pickup muddy sounding. Now you can have the clarity that a humbucking pickup was designed to have in the beginning. The output of the pre-amp is low-impedance so the benefits are plentiful, there is virtually no hum, buzz or added noise to get in the way. Richness, clarity and just plain beautiful tone. All plug-on-preamps use a discrete component FET op-amp with lots of headroom and are extremely low-noise.
Since the pickups are active, a 9 Volt battery is required and 25KA Ohm Controls are used for volume and tone, typical of EMG Active Pickups.

INCLUDED IN THE HOT 70 SET:

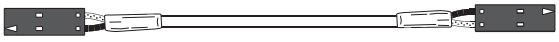
2 VOLUME CONTROLS (25K)
2 TONE CONTROLS (25K)



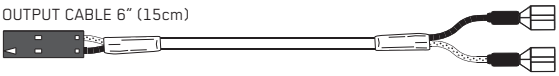
ADJUSTMENT
SCREWS & SPRINGS (2 pr)

2 PICKUP CABLES 15" (38cm)

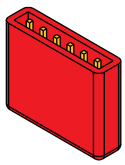
3 CONNECT CABLES 5.5" (14cm)



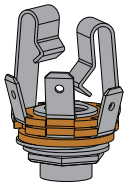
OUTPUT CABLE 6" (15cm)



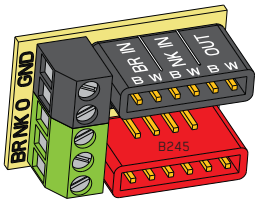
BATTERY
BUSS



STEREO OUTPUT
JACK



2 PICKUP IN/ OUT
BATTERY BUSS



BATTERY CABLE 7" (18cm)

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. If upon examination the pickup is determined to be defective, a replacement will be made. 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.

Installation Instructions:

General Notes:

Every attempt has been made to make this a solderless installation.
There are some instances where this is not possible;

1) If your instrument uses the long panel output jack and you had passive pickups you will need a new stereo output jack, the Switchcraft 152B is recommended. Soldering to the new jack will be required, see diagram #4 below.
2) Some instruments may already have a battery holder installed and in that case soldering may be required to the battery buss, see diagram #5 below.
3) Instruments with two pickups may need soldering to the selection switch in some installations.

If you are installing only one pickup use the instructions on this page.
If you are installing two pickups go to page 3 and begin there.

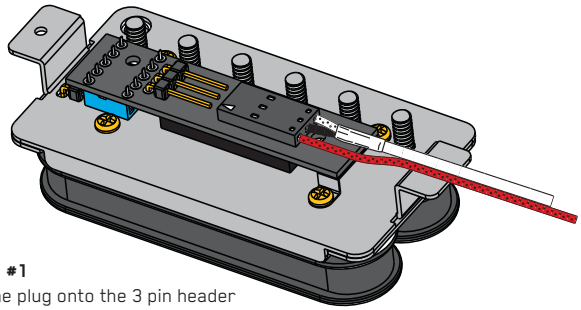


Diagram #1
Insert the plug onto the 3 pin header of the pickup as shown above.
Note the orientation arrow.

Installation (One Pickup Guitars):

1) Plug the pickup cable onto the EMG Pickup header as shown in diagram #1 and route the cable to the control cavity. If the cable is too long, wind up the excess and keep it under the pickup if possible.

Master Volume control only

2) Refer to diagram #2. Plug both the Pickup cable and the output cable onto the Volume control as shown, then go to step 4.

Master Volume and Tone control

3) Refer to diagram #3. Plug the Pickup cable onto the Volume control as shown. Plug a coax cable from the Volume control to the Tone control. Plug the output cable onto the tone control as shown.
4) Connect the wires of the output cable to the output jack by pushing the connectors on as shown.
WHITE wire to the TIP (T) contact,
BLACK wire to the SLEEVE (S) contact
BLACK Battery Negative wire to the RING (R) contact.
5) Using the battery buss, insert the RED wire of the pickup, and the battery RED wire. Extra pins can be used for EMG Accessories.
6) Put the battery in the insulating foam piece provided and place it securely in the control cavity.
We suggest that you plug in the instrument and test it before closing the control cavity.

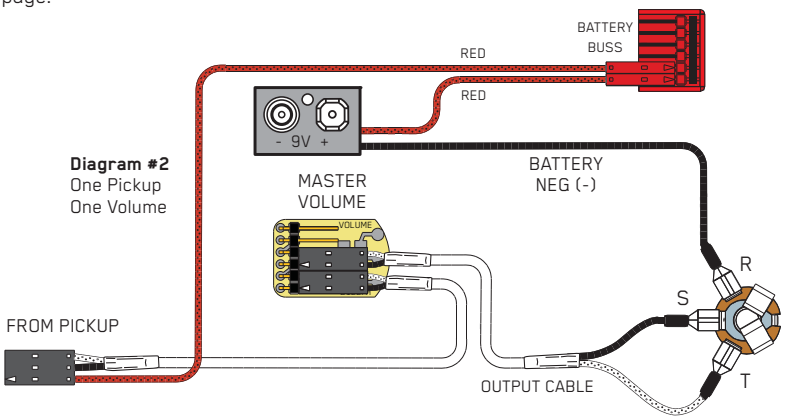


Diagram #2
One Pickup
One Volume

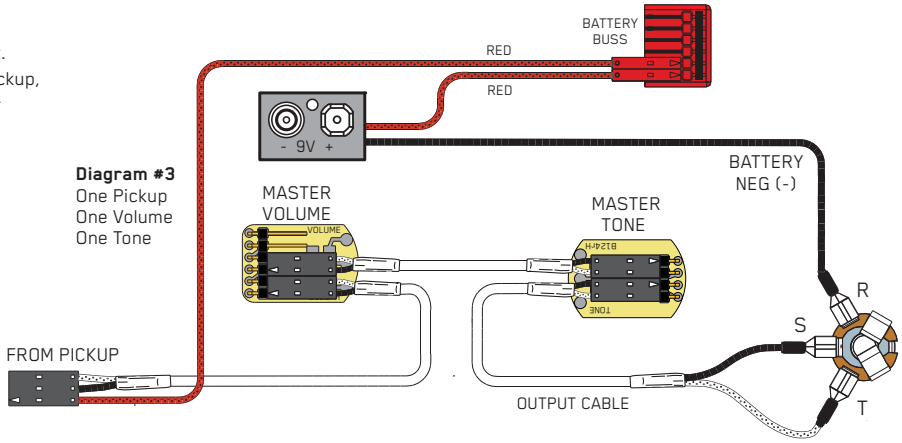


Diagram #3
One Pickup
One Volume
One Tone

Diagram #4

Soldering to the 152B Panel Jack:

If your instrument has a long Panel Jack like the one below you will have to solder the output cable as shown.
Ground (Black) to the sleeve
Signal (White) to the Tip
Battery Negative (Black) to the Ring

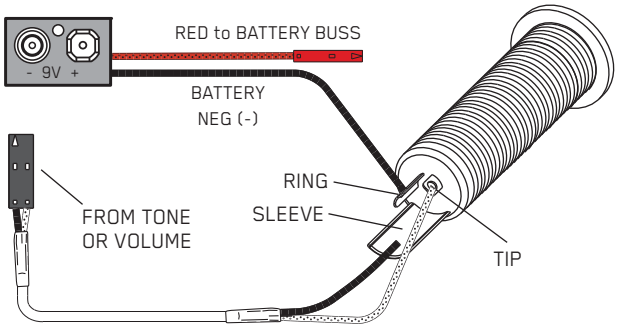
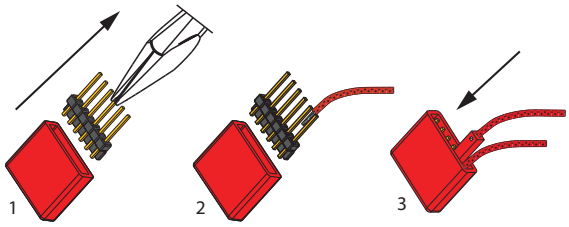


Diagram #5

Soldering to the battery buss:

If your instrument has an older EMG Pickup you can solder the pickup RED wire to the buss. Simply use some needle nose pliers, pull out the V+ header and solder the RED Wire from the pickup(s) to any of the pins and then re-insert the header into the housing.



Solder the RED wire from the Battery Holder and/or pickups and re-insert the Header into the insulation cover

Installation Instructions:

Two Pickup Guitars with Selection switch:

Guitars with two pickups and a selection switch will use the EMG B245 Pickup Buss. The Pickup Buss is a convenient way to wire your guitar without soldering. There is a separate sheet attached to these instructions that describes the Pickup Buss in detail.

In all installations it's best to find a place to mount the Pickup Buss in the control cavity before starting. Then, after the cables are routed use the velcro to mount it securely.

2 Pickups / Toggle Select Switch / Master Volume and Tone

1) Install the Pickups and route the Pickup cables to the control cavity.
   If the cables are too long, wind up the excess and keep it under the pickup.
2) Mount the Volume and Tone controls into the body.
   Plug both Pickup cables onto the Pickup Buss (BLACK Shroud) as shown,
   Refer to diagram #6a
   Bridge Pickup to position 1
   Neck Pickup to position 2.
3) Plug a coax cable from the Pickup Buss (position 3) to the Master Volume control as shown in diagram #6b.
4) Plug a coax cable from the Master Volume to the Master Tone as shown.
5) Strip the insulation from the switch wires and Insert them into the GREEN Terminal Block and tighten the screws with a small screwdriver.
   The Bridge pickup goes to the BR Terminal
   The Neck pickup goes to the NK Terminal
   The Output of the switch goes to the O Terminal
   If there is a ground wire coming from the switch, insert it into one of the black terminals on the terminal block.
6) Plug the output cable onto the Master Tone control and connect the output wires to the output jack by pushing the connectors on as shown.
   WHITE wire onto the TIP (T) contact,
   BLACK wire onto the SLEEVE (S) contact
   BLACK Battery Negative wire onto the RING (R) contact.

******Tips and Tricks**** Start your installation by:**

1) Determine which type output jack your instrument has.
A Stereo 12B type is included, but if you have a long panel jack a SwitchCraft 152B Long Panel Jack will be required.
2) Remove the strings, remove any existing Pickups and controls (remember the order and function of each control)
3) Determine a good spot for the Pickup Buss and make sure the cable or wires from the selection switch will reach the Pickup Buss,
4) Install the EMG Volume and Tone Controls and tighten them in.
5) Then install the pickups keeping any excess cable under the pickup rather than in the control cavity.
6) IMPORTANT: EMG Active pickups do not require a string ground wire! DO NOT Reconnect the string ground, it is unnecessary.

7) Plug the RED Wires of the pickups onto the V+ Supply Buss (RED Shroud) along with the RED of the battery clip.
   Extra pins on the V+ Supply Buss are for EMG Accessories.
8) Put the battery in the insulating foam piece provided and place it securely in the control cavity.
   We suggest that you plug in the instrument and test it before closing the control cavity.

Diagram #6a

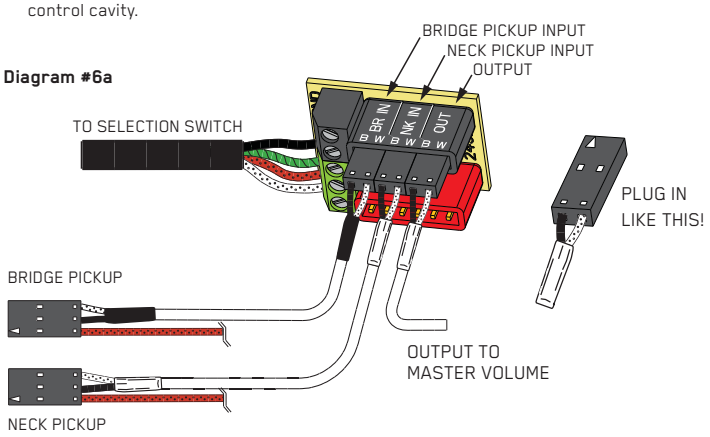
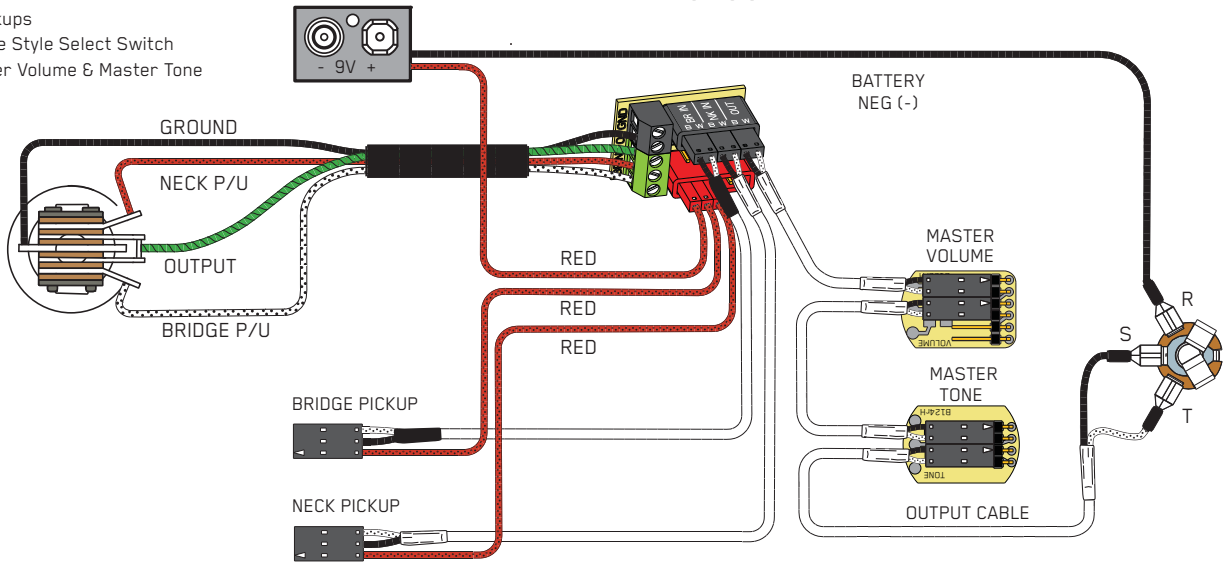


Diagram #6b

2 Pickups
Toggle Style Select Switch
Master Volume & Master Tone



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2 Pickups / Toggle Select Switch / 2 Volumes and Master Tone

Refer to Diagram #7 (Next Page)

1) Install the Pickups and route the Pickup cables to the control cavity.
   If the cables are too long, wind up the excess and keep it under the pickup.
2) Mount the Volume and Tone controls into the body.
   Plug both pickup cables onto the Volume controls as shown.
   Plug a coax cable from the Bridge Volume control to the Pickup Buss (Position 1)
   Plug a coax cable from the Neck Volume control to the Pickup Buss (Position 2)
3) Plug a coax cable from the Pickup Buss (position 3) to the Master Tone control as shown.
4) Strip the insulation from the switch wires and Insert them into the GREEN Terminal Block and tighten the screws with a small screwdriver.
   The Bridge pickup goes to the BR Terminal
   The Neck Pickup goes to the NK Terminal
   The Output of the switch goes to the O Terminal
   If there is a ground wire coming from the switch, insert it into one of the black terminals on the terminal block.
5) Plug the output cable onto the Tone control and connect the wires to the output jack by pushing the connectors on as shown.
   WHITE wire onto the TIP (T) contact,
   BLACK wire onto the SLEEVE (S) contact
   BLACK Battery Negative wire onto the RING (R) contact.
6) Plug the RED Wires of the pickups onto the V+ Supply Buss (RED Shroud) along with the RED of the battery clip. Extra pins are for EMG Accessories.
7) Put the battery in the insulating foam provided and place it securely in the control cavity.
   We suggest that you plug in the instrument and test it before closing the control cavity.

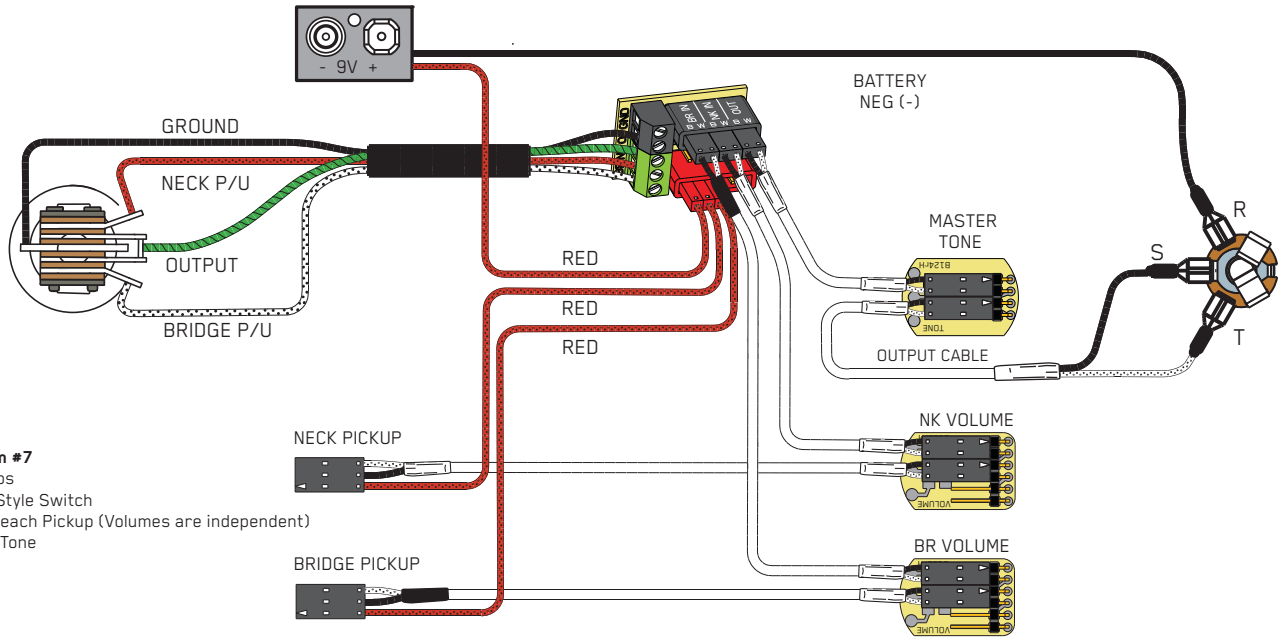

Diagram #7
2 Pickups
Toggle Style Switch
Volume each Pickup (Volumes are independent)
Master Tone

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2 Pickups / Toggle Select Switch / 2 Volumes and 2 Tones)
Refer to Diagram #8

1) Install the Pickups and route the cables to the control cavity.
   If the cables are too long, wind up the excess and keep it under the pickup.
2) Mount the Volume and Tone controls into the body
   Plug both Neck and Bridge pickup cables onto the Volume Controls as shown.
   Plug a coax cable from the Bridge (BR) Volume control to the Pickup Buss (Position 1).
   Plug a coax cable from the Neck (NK) Volume control to the Pickup Buss (Position 2).
3) Plug a coax cable from the Bridge (BR) Volume control to the Bridge (BR) Tone control as shown.
4) Plug a coax cable from the Neck (NK) Volume control to the Neck (NK) Tone control as shown.
5) Strip the insulation from the switch wires and Insert them into the GREEN Terminal Block and tighten the screws with a small screwdriver.
   The Bridge pickup goes to the BR Terminal
   The Neck Pickup goes to the NK Terminal
   The Output of the switch goes to the O Terminal
   If there is a ground wire coming from the switch, insert it into one of the black terminals on the terminal block.
6) Plug the output cable onto the Pickup Buss (Position 3) and push the connectors onto the jack as shown.
   WHITE wire onto the TIP (T) contact,
   BLACK wire onto the SLEEVE (S) contact
   BLACK Battery Negative wire onto the RING (R) contact.
7) Plug the RED Wires of the pickups onto the V+ Supply Buss (RED Shroud) along with the RED of the battery clip. Extra pins are for EMG Accessories.
8) Put the battery in the foam insulator provided and place it securely in the control cavity.
   We suggest that you plug in the instrument and test it before closing the control cavity.

Diagram #8
2 Pickups
2 Volume (either volume will act as a master)
2 Tone
Toggle Style Switch