

# Two-Speed Fan Control Kit For Wall Thermostat Model Packaged Terminal Air Conditioners

Cancels: IIK 84-07-10

IIK 84-07-12  
3/15/04

## Installation Instructions

### SAFETY CONSIDERATIONS

Only trained, qualified personnel and service mechanics should modify and install any electrical accessories on packaged terminal air conditioners or heat pumps.

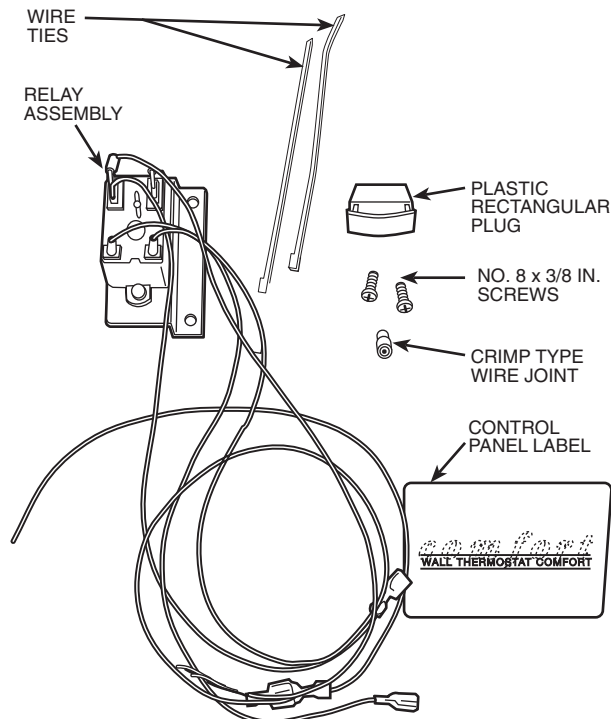
### PACKAGE CONTENTS

ITEM	QUANTITY
Relay Assembly	1
Screws (no. 8 x 3/8 in.)	2
Plastic Rectangular Plug	1
Crimp Type Wire Joint	1
Wire Ties	2
Blank Out Control Panel Label	1

### INTRODUCTION

These instructions cover the installation of a second fan speed control relay inside the unit control box (of an RC or RP unit), to provide two-speed fan control from a wall thermostat. See Fig 1.

The two-speed fan control kit provides full fan speed control of the PTAC (packaged terminal air conditioner) unit from a wall thermostat.



**Fig. 1 — Two-Speed Fan Control Kit for Wall Thermostat Models**

### ⚠ WARNING

Disconnect all power to unit to avoid possible electrical shock during installation.

### INSTALLATION

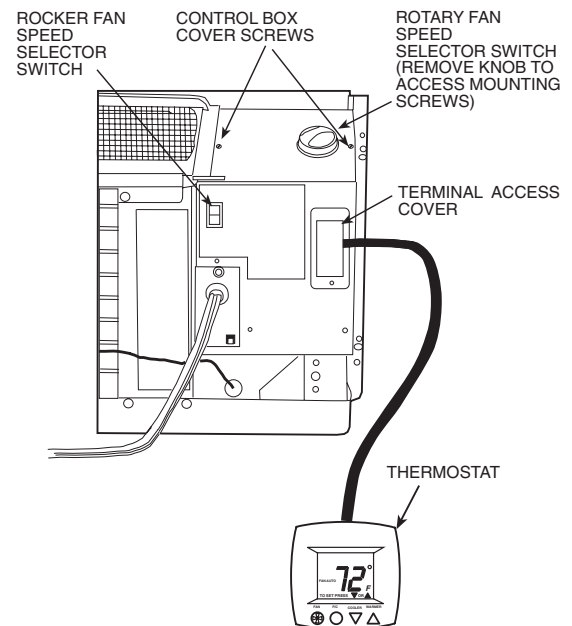
NOTE: This kit can only be installed on wall thermostat units (RC or RP models).

#### Prepare Unit

1. Check to be sure the unit is off and power to unit is disconnected.
2. Remove the unit's front panel by grasping it firmly near the bottom of both sides, then pulling panel forward and upward to release magnetic latches and partition hooks.

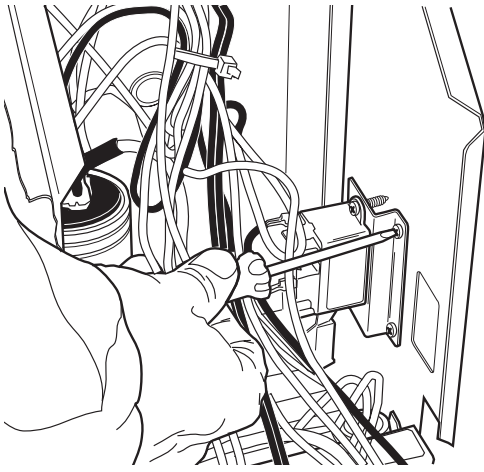
#### Install Second Fan Speed Control Relay

1. Remove the terminal access cover and save. See Fig. 2.
2. Open the control box by removing the 2 control box cover screws shown in Fig. 2. Swing the cover down to open. Save the screws.
3. Attach the relay assembly to the 2 holes in the right side of the control box as shown in Fig. 3, using two no. 8 x 3/8 in. screws included.



**Fig. 2 — Control Box Terminal Cover for Wall Thermostat Models**

Manufacturer reserves the right to discontinue, or change at any time, specifications or designs without notice and without incurring obligations.



**Fig. 3 — Mount Relay Assembly on the Right Side of the Control Box**

### Wire in Second Fan Speed Control Relay

1. Remove the gray fan speed selector wire by disconnecting it from the J2 terminal next to relay K3 on the PCB (printed circuit board) and the fan speed selector switch. See Fig. 4.

**NOTE:** The gray wire will either be connected to a rotary fan speed selector switch on top of the control box OR a rocker fan speed selector switch (as shown in Fig. 4) on the front of the control box cover.

2. Attach the gray wire from the relay assembly to terminal J2 next to relay K3 on the PCB. See Fig. 4.
3. Remove the black fan wire from the fan speed selector switch (rotary or rocker) and re-attach it to terminal 4 on the relay assembly. See Fig. 4 and 5.
4. Remove the red fan wire from the fan speed selector switch (rotary or rocker) and re-attach it to terminal 6 on the relay assembly. See Fig. 4 and 5.
5. Remove the fan speed selector switch.

For wall thermostat units with a rotary fan speed selector switch on top of the control box cover:

Remove the knob and rotary fan speed selector switch from the control box cover by removing the 2 screws located under the knob shown in Fig. 2. Discard the knob and switch.

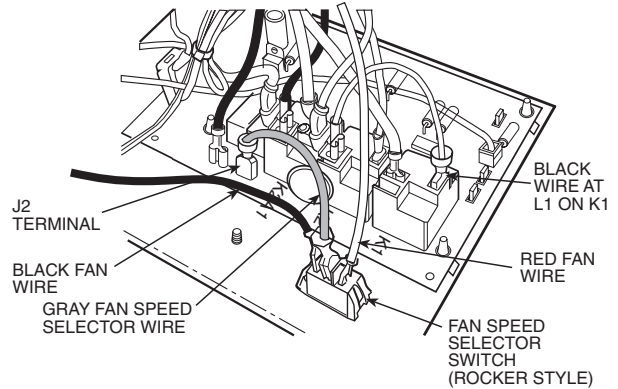
For wall thermostat units with a rocker fan speed selector switch on the front of the control box cover:

Remove the rocker fan speed selector switch from the control cover and replace it with the plastic rectangular plug provided in the relay kit. See Fig. 2 and 6.

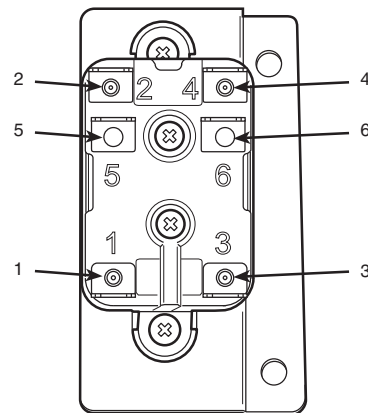
6. Remove the black wire from L1 on relay K1.
7. Connect the black wire from terminal 2 of relay assembly (with goal post terminal) to L1 on relay K1.
8. Re-attach the black wire (removed in step 6 above) to the open goal post terminal of L1 on relay K1. See Fig. 4.
9. Attach the green ground wire from terminal 1 of the relay assembly (with piggy back male terminal) to the green ground wire attached to the PE terminal on the corner of the PCB. Attach both wires back on to the PE terminal on the corner of the PCB. See Fig 7.
10. The blue wire connected to terminal 3 on the relay assembly is the second fan speed signal wire, for connection

to the thermostat. The blue wire has a quick connect/disconnect terminal for easy disconnect and removal of the unit. Route the blue wire out of the control box opening where the terminal access cover was removed. See Fig. 8.

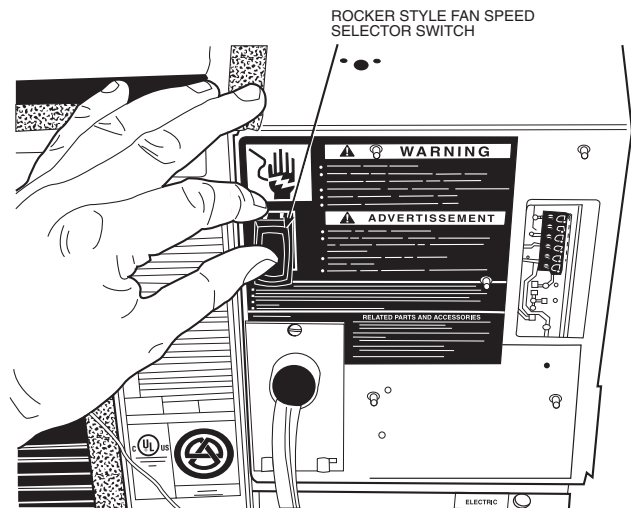
11. Dress the wires using the wire ties provided.
12. Close the control box door and secure it by re-attaching the screws saved earlier (take care not to pinch any of the wires when the control box cover is closed).



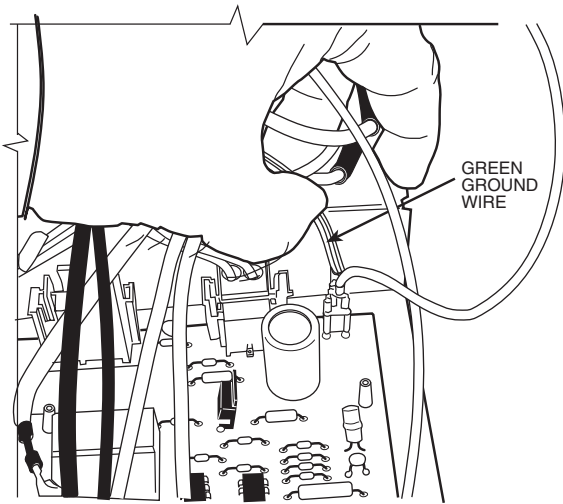
**Fig. 4 — Fan Speed Selector Wire**



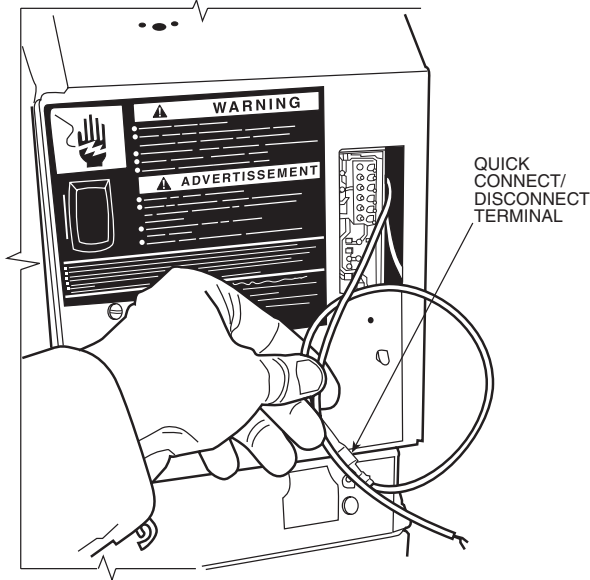
**Fig. 5 — Relay Assembly Connections**



**Fig. 6 — Remove Fan Speed Selector Switch**



**Fig. 7 — Ground Wire Connection**



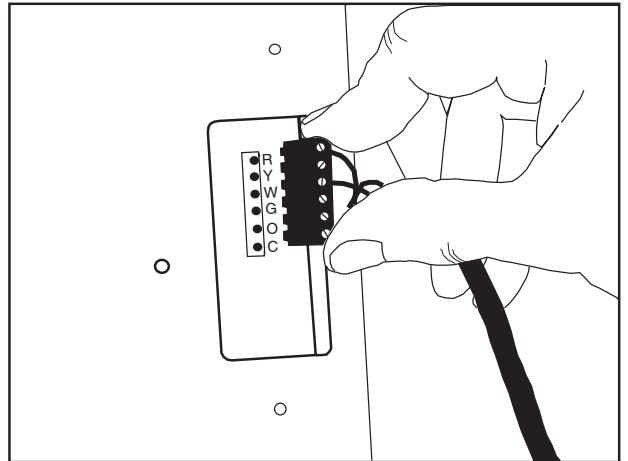
**Fig. 8 — Route Second Fan Speed Signal Wire Out of the Control Box**

### Connect Wall Thermostat

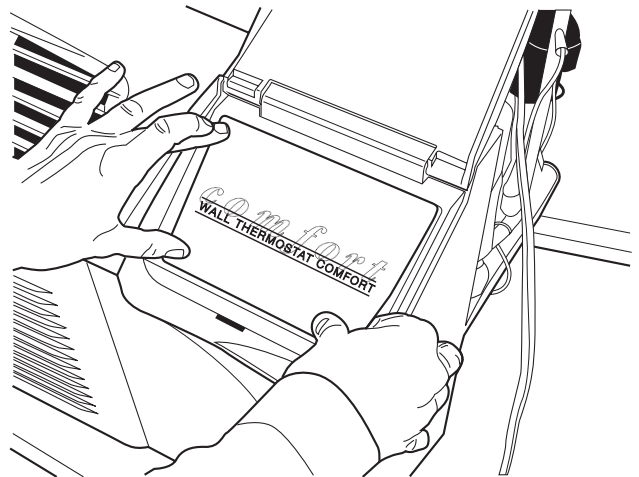
1. Mount the wall thermostat to the wall (install per mounting instructions included with the thermostat).
2. Remove the wall thermostat terminal block from the PTAC unit, accessible through the terminal access opening. See Fig. 9.
3. Wire the wall thermostat to the terminal block removed in the previous step. Refer to Wiring Diagrams section.

**NOTE:** Connect GH to the blue wire for second fan speed with the crimp-type wire joint included with the kit.

4. Re-install the fully wired wall thermostat terminal block to the PTAC unit through the terminal access opening. See Fig. 9.
5. Re-install terminal access cover. See Fig. 2.
6. Re-install the unit's front panel.
7. If a rotary speed selector switch was removed from the unit, there will be a hole in the front panel control section (where HI/LOW fan speed was selected). Cover the hole by replacing the existing control panel label with the blank out control label included. See Fig. 10.
8. Restore power to the unit.

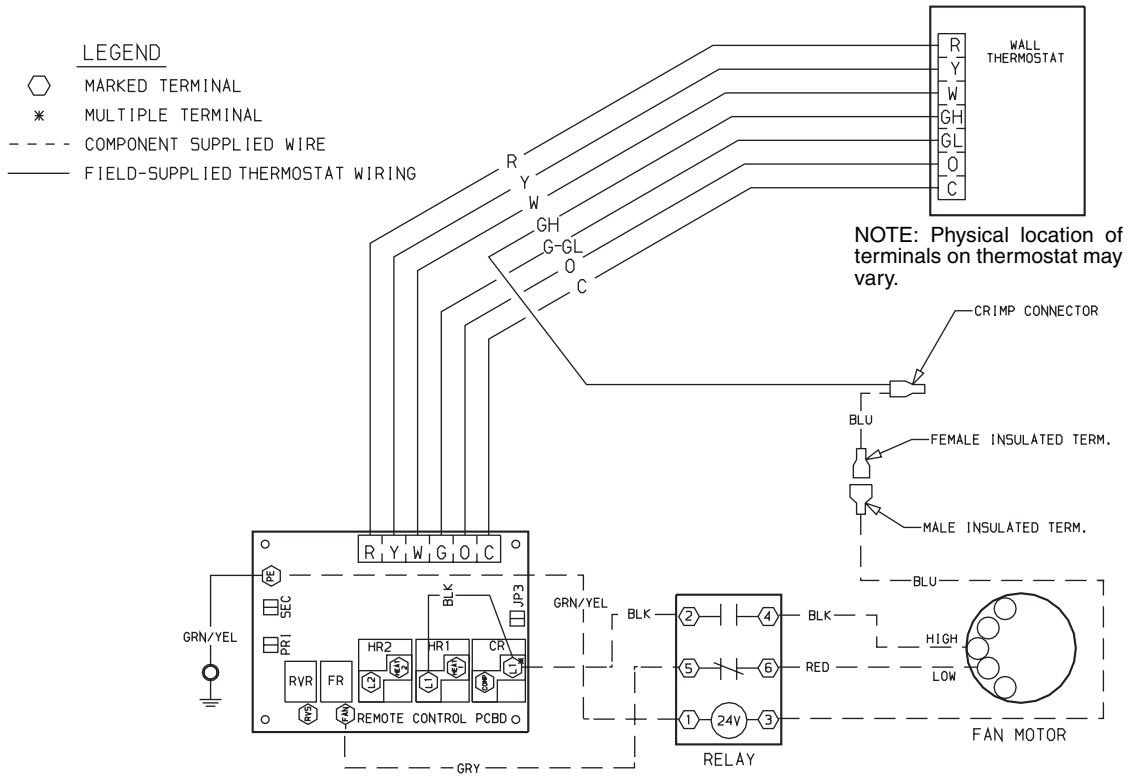


**Fig. 9 — Terminal Connector Removal and Replacement**

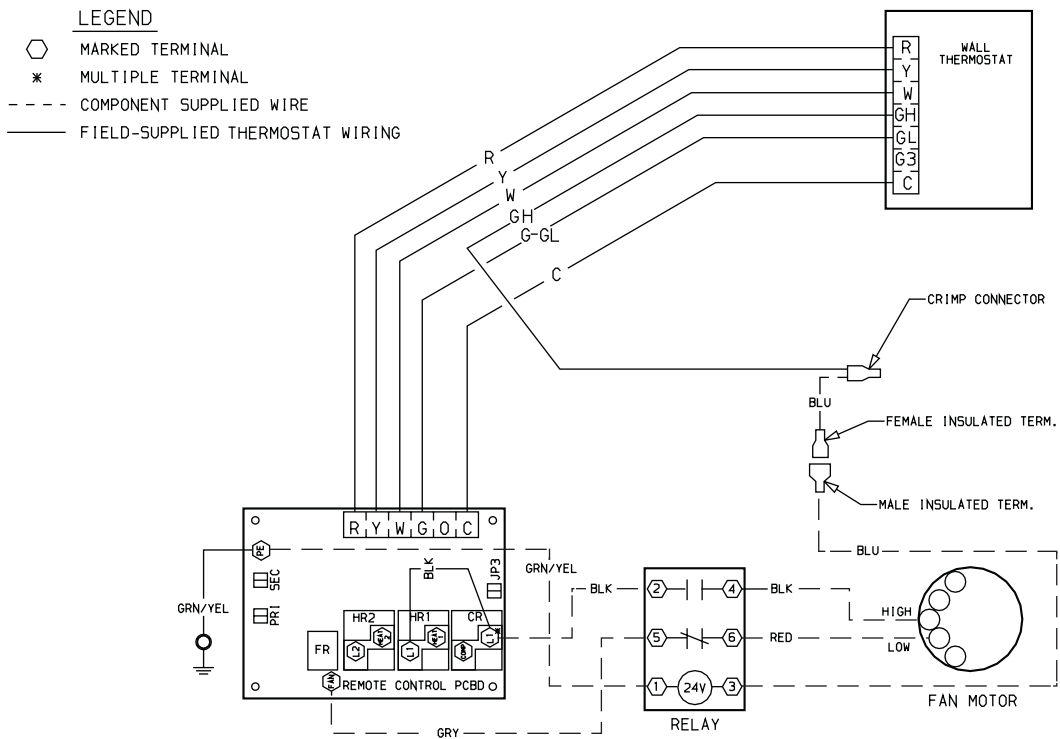


**Fig. 10 — Apply Blank Out Control Panel Label**

**Wiring Diagrams** — Use Fig. 11 and 12 to wire the 2-speed fan control to either a heat pump or a heat/cool unit.



**Fig. 11 — Thermostat Wiring Schematic (Heat Pump)**



**Fig. 12 — Thermostat Wiring Schematic (Heat/Cool)**