

Installation Instructions

Part No. 48MA900041

NOTE: These instructions apply to 48MA/50ME units starting with serial number B7-----. For units with earlier serial numbers, use 48MA-14SI.

INSTALLATION

General — The accessory remote control panel package contains:

- 1 — Remote control panel with decorative trim
- 1 — Air pressure switch (indicates clogged filters)
- 1 — Transformer (115/24-volt, 20-wa)
- 2 — Relays (plug-in type, HN61KK604)
- 1 — Relay (plug-in type, HN61KL023)
- 1 — Fastener package (4 screws, 5 wires)

Use 24-volt Class II control wires between base unit and remote control panel. Use control power opening in bottom of base unit.

Refer to base unit Service Label, Label Diagrams and Service Instructions, as required.

Remote Control Panel — Locate as required to provide central station control of base unit. Install as described in instructions packed with this item.

Base Unit Preparation — Remove power and condensing control box panel, zone control and thermostat panel cover and filter access panel from left side of unit.

Set control circuit service switch at OFF to shut down unit. *Do not* shut off unit main power supply circuit breakers.

Remove cover at right of zone control and thermostat panel to expose zone transformers.

→ **Air Pressure Switch (APS)** — This differential switch is to be used on base unit with standard return air filters only. Do not use APS on unit with accessory roll filter. If optional roll filter is used, install filter media runout switch (FRS).

Install APS on underside of spacer on top filter rack as shown in Fig. 1. Engage locating pin and plastic nozzle through the 2 holes in this panel so that switch will sense air pressure drop across filters (nozzle opening on downstream side of filter). Slip friction clip over nozzle to hold APS in place. Two screws shipped with APS are not required and may be discarded.

Route long wire shipped with remote control panel from terminal labeled Clogged Filter Indicator to air pressure switch terminal no. 2 (APS2) or to filter media runout switch terminal no. 2 (FRS2) as shown in Fig. 2 and 3. Air pressure switch is adjustable from 0.1 to 0.7 in. wg. Adjust to sense pressure drop across filters as desired.

Transformer — Install transformer in space below zone transformers using 4 screws and holes provided.

Connect primary windings (115 volt) to terminals H1 and H2 labeled 115V to Tran. Connect secondary windings of transformer to terminals X1 and X2 labeled Tran 24V. See Fig. 4 or 5. Use remaining 4 wires provided.

→ **Base Unit Zone Control and Thermostat Panel Modifications**

BASE UNIT WITHOUT OPTIONAL ECONOMIZER — Perform modifications to base unit wiring as described below. Terminals and components are shown in Fig. 4.

1. Under VENTILATION CONTROL knob, remove jumper from terminals no. 1 and 2. Discard this jumper.
2. Under VENTILATION CONTROL knob, remove jumper from terminals no. 4 and 6 and discard.
3. Under VENTILATION CONTROL knob, relocate jumper from terminals no. 7 and 9 to terminals no. 8 and 9.
4. Remove jumpers from terminals MC, MH and MU at right of MHR receptacle.
5. Install the two HN61KK604 relays in receptacles marked MCR and MHR.
6. Install the HN61KL023 relay in receptacle marked MUR.
7. Install wires between remote control panel and base unit zone board as shown in Fig. 2.

BASE UNIT WITH OPTIONAL ECONOMIZER — Perform modification to base unit wiring as described below. Terminals and components are shown in Fig. 5.

1. On accessory board, remove jumper 1 to W1.
2. On accessory board, remove jumper 7 to 8.
3. On accessory board, remove jumper 4 to 6.
4. Install wires between remote control panel and base unit zone control board as shown in Fig. 3.
5. Follow steps 4 through 7 above.

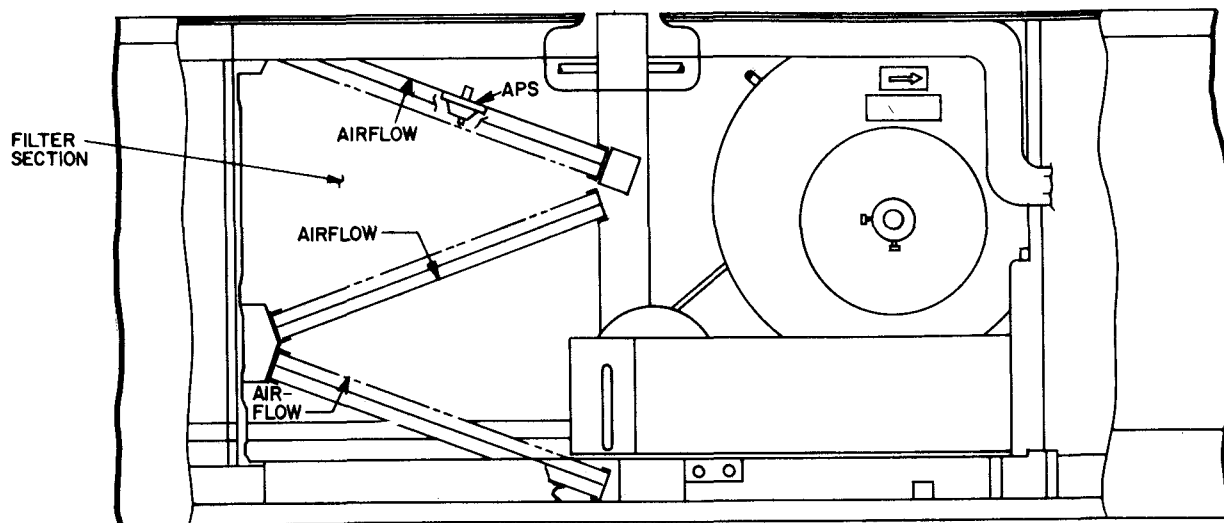


Fig. 1 — Air Pressure Switch (APS) Installation

START-UP

After installation of accessory remote control package and unit modification is complete, set control circuit service switch at ON. Replace all unit access panels.

Start up base unit in accordance with base unit instructions.

Check accessory remote control panel operation as described below.

OPERATION

System Switch Settings

OFF — In this position the master unit relay (MUR) is energized. This opens a set of normally closed MUR contacts, interrupting power to the control circuit with the exception of the following: the remote panel accessory, the roll filter accessory, the damper motor, the convenience outlet and the crankcase heaters. The MUR also closes a set of normally open MUR contacts which close the outside air damper.

COOL — In this position the master heating relay (MHR) is energized, opening a set of normally closed MHR contacts, interrupting power to the heating control section (heating is locked out).

HEAT — In this position the master cooling relay (MCR) is energized, opening a set of normally closed MCR contacts, interrupting power to the cooling section (cooling is locked out).

AUTO. — In this position, the zone thermostats are in control of the unit modules.

Outside Air Control Knob — The outside air damper control knob on the front of the remote control panel replaces the function of the VENTILATION CONTROL knob in the base unit zone control and thermostat control panel. Damper may be fully open, → set to any intermediate position or fully closed. When unit is in cooling mode and outside air temperature is below the setting of the economizer thermostat, control of the outside air damper shifts to the mixed air thermostat.

Day-Night Switch — This switch closes the outdoor air damper when at the NIGHT position. The outdoor air damper automatically returns to the preset position when set at DAY setting.

When a night setback system is used, this switch normally will override the night setback if set at DAY. The night setback system operates automatically when set at NIGHT setting.

Filter Light — Reduced airflow due to clogged filters will illuminate this light when the air pressure switch (APS) and standard filters are used. To reset APS, turn reset knob on front of APS.

The light will be illuminated if the filter runout switch (FRS) is used to indicate that roll filter media has been expanded.

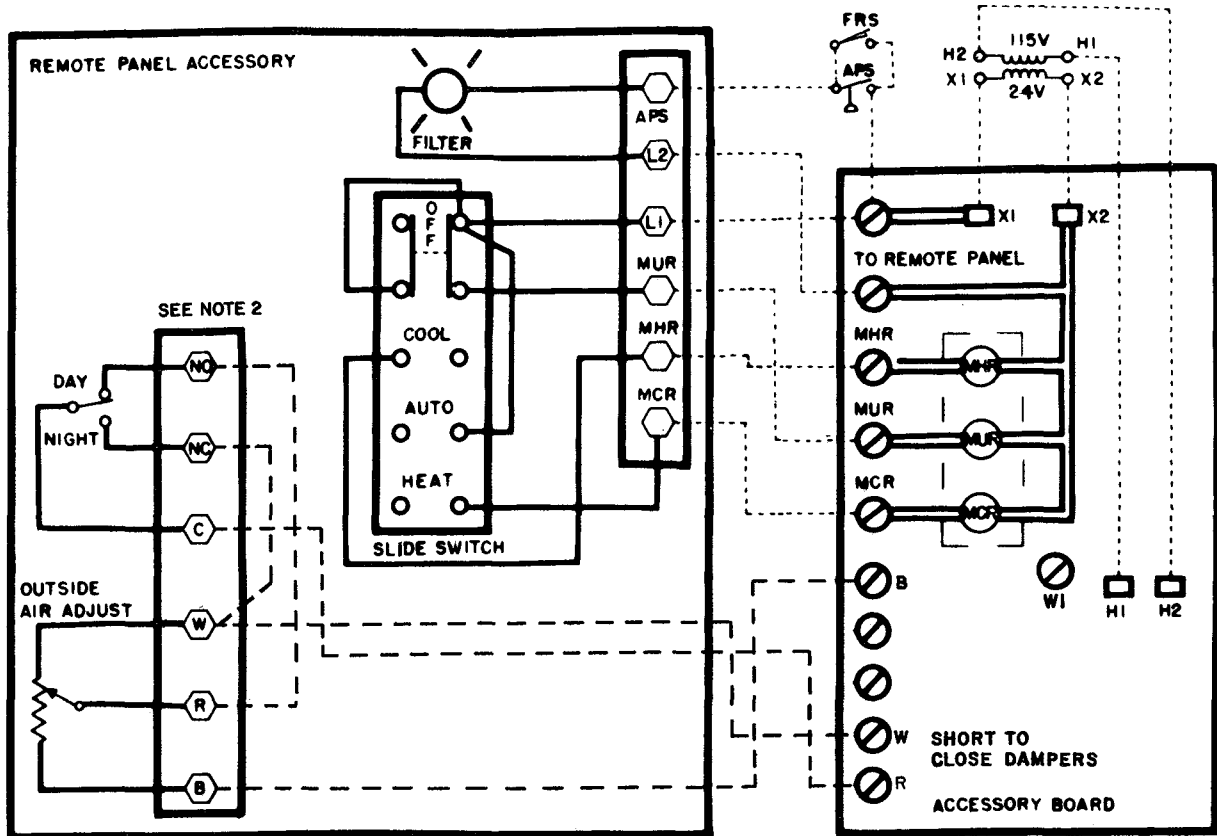
To replace filters, refer to base unit service instructions or accessory roll filter service instructions as required.

LEGEND

APS — Air Pressure Switch
 CL — Switch, Cooling Lockout
 ECT — Economizer Thermostat
 FRS — Filter Media Runout Switch
 IFC — Indoor Fan Contactor
 J — Jumper
 LLS — Liquid Line Solenoid

MCR — Master Cooling Relay
 MHR — Master Heating Relay
 MUR — Master Unit Relay
 NC — Normally Closed
 NO — Normally Open
 NS — Night Setback
 Sw — Switch

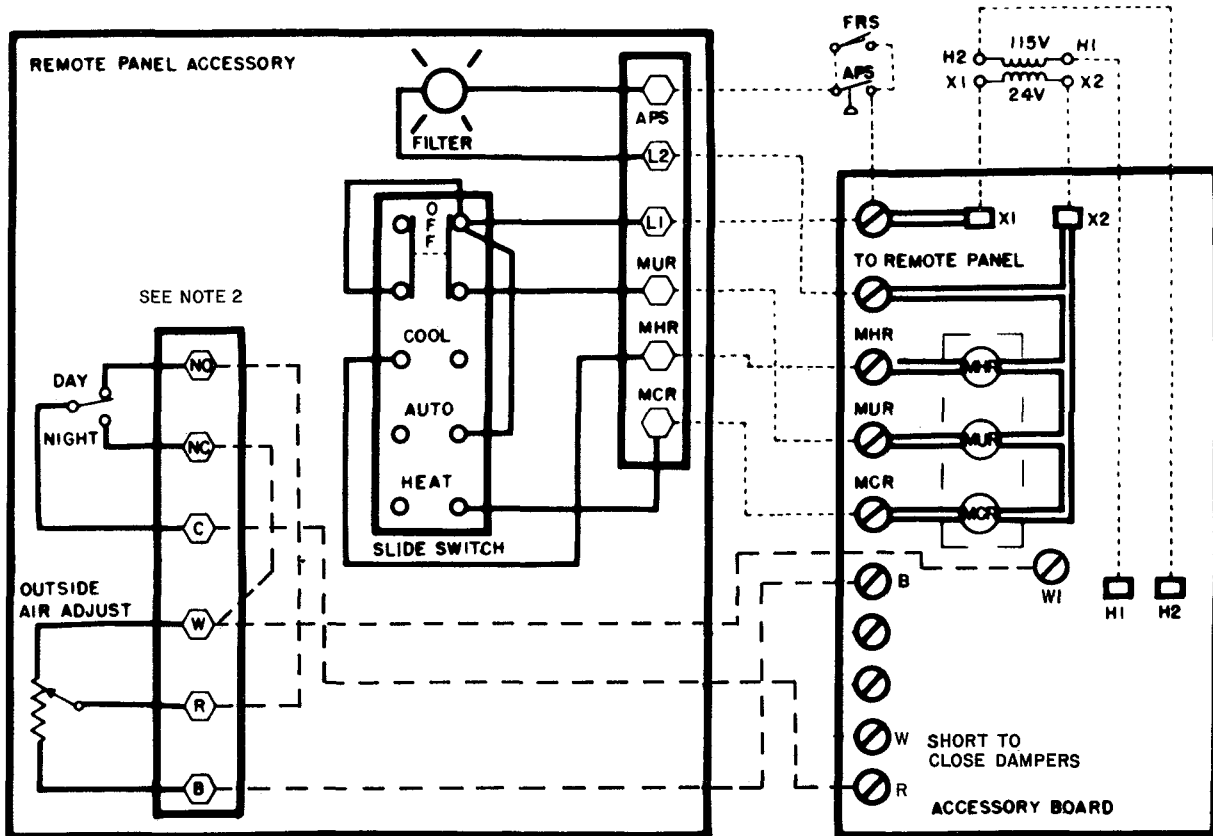
⊗ — Circuit Board Terminal
 ⊕ — Terminal, Marked
 ———— Factory Wiring
 - - - - - Field Wiring
 = = = = = Circuit Board Run



NOTES:

1. Remote panel has knockouts for additional indicator lights (example: COMPRESSOR-ON), which are not shown
2. Before making remote panel field wiring connections, remove remote panel jumpers (if installed) from NC to R and C to W.

Fig. 2 — Remote Control Panel Connections without Optional Economizer



NOTES:

1. Remote panel has knockouts for additional indicator lights (example: COMPRESSOR-ON), which are not shown.
2. Before making remote panel field wiring connections, remove remote panel jumpers (if installed) from NC to R and C to W.

Fig. 3 — Remote Control Panel Connections with Optional Economizer

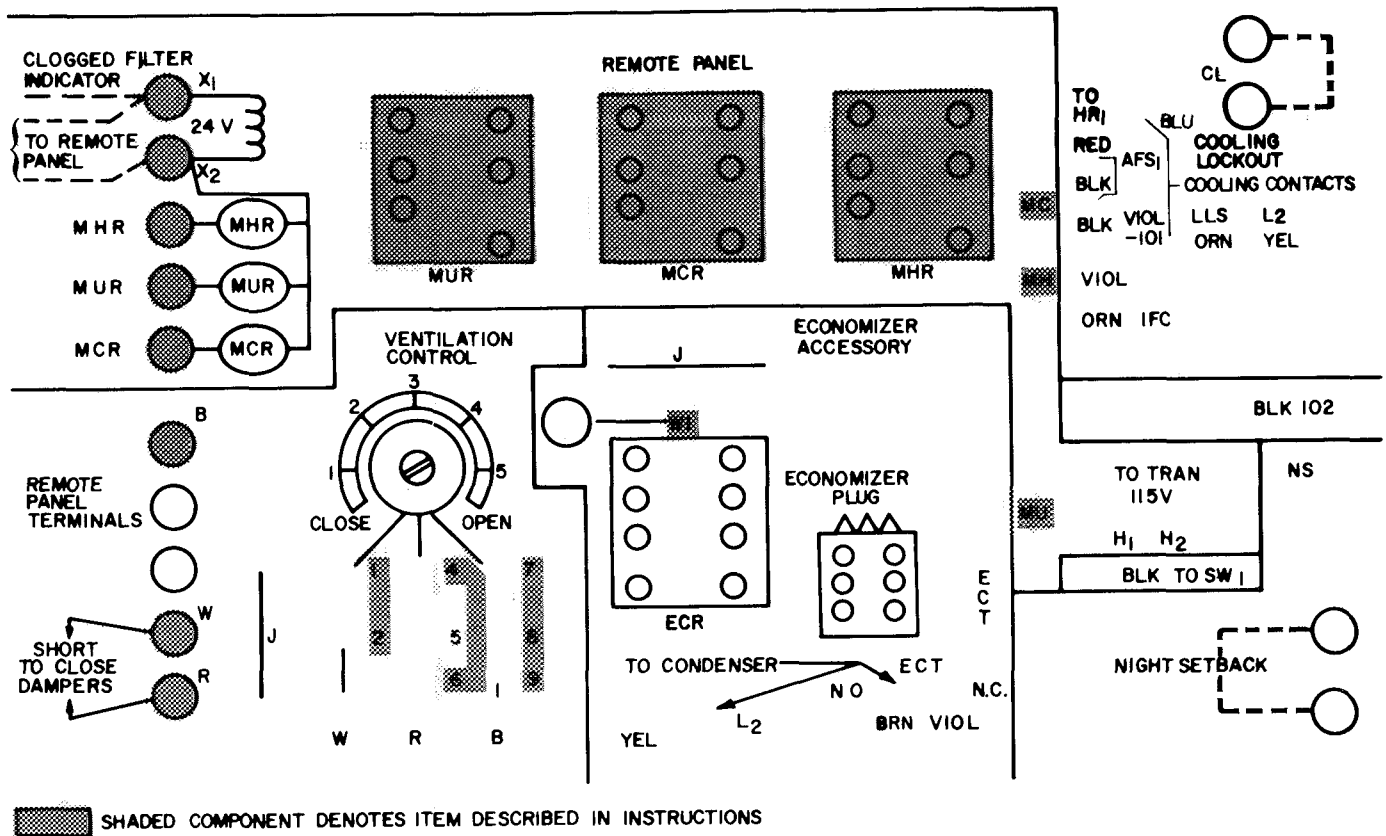


Fig. 4 — Base Unit without Optional Economizer, Zone Control and Thermostat Panel

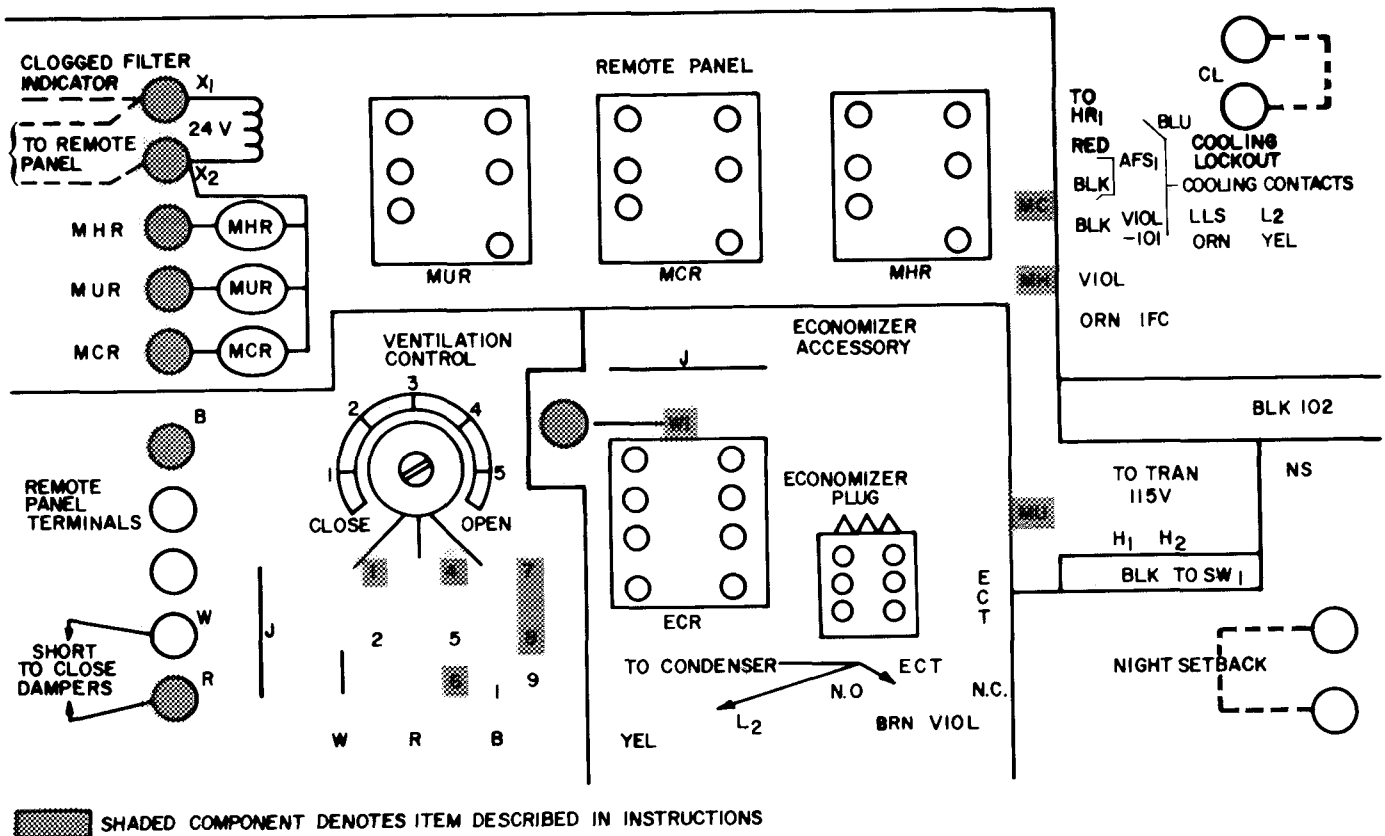


Fig. 5 — Base Unit with Optional Economizer, Zone Control and Thermostat Panel

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