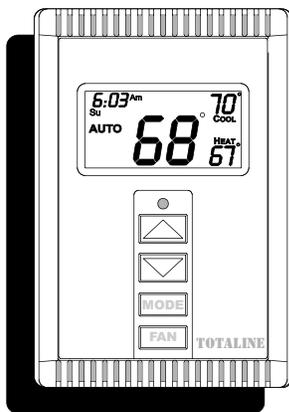# Wireless Programmable Digital Thermostat

- Wireless Operation
- 7-Day Programmable
- 4 Time Periods Per Day
- Programmable Fan
- Large, Easy to Read Display
- Thermoglow™ Backlight
- Auto-Changeover
- Dual Setpoint
- 2 Heat and 2 Cool Stages

TOTALINE®
Wireless

ENERGY STAR

2 Stage Heat & Cool or Heat Pump

Replacement Components Division © Carrier Corporation 03/07

Table Of Contents

CAUTION Follow *Installation Instructions* carefully.

DISCONNECT POWER TO THE HEATER - AIR CONDITIONER <u>BEFORE</u> REMOVING THE OLD THERMOSTAT AND INSTALLING THE NEW THERMOSTAT.
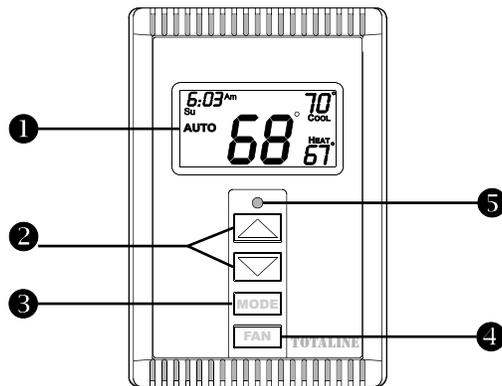
WARNING

P/N P474-1100RF

❶ **Liquid Crystal Display**
with Thermoglow™

❷ **Up/Down Buttons**

❸ **Mode Button**

❹ **Fan Button**

❺ **Transmission Indicator**
Blinking Green = Communicating
with the Receiver

Display
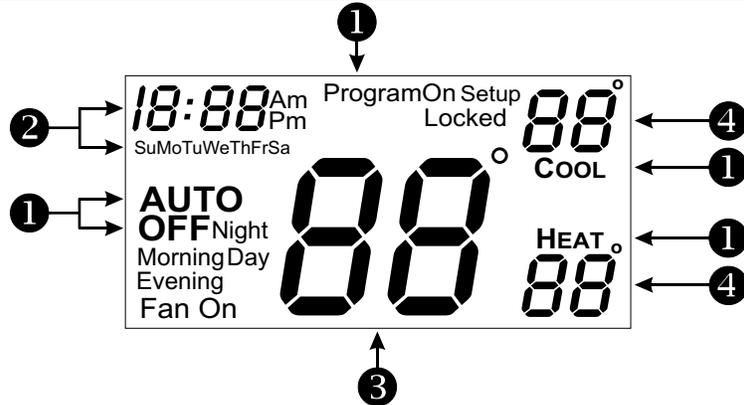
❶ Mode Indicators - *Page 6*
   Selects the operational mode of the equipment.
   HEAT - Indicates the heating mode.
   COOL - Indicates the air conditioning mode.
   AUTO - Indicates the system will automatically
      changeover between heat and cool modes
      as the temperature varies.
   PROGRAM ON - Indicates the time period
      program is enabled to run.
   OFF - Indicates heating and cooling are turned off.

❷ Clock with Day of the Week - *Page 5*
   Indicates the current time and day. This clock is
   also used to program the time period schedules.

❸ Room Temperature Display
   Indicates <u>current</u> room temperature.

❹ Desired Set Temperature - *Page 7*
   Indicates <u>desired</u> room temperature(s).

Display

18:88 Am Pm
SuMoTuWeThFrSa

AUTO
OFF Night
Morning Day
Evening
Fan On

ProgramOn Setup
Locked 88°
COOL

HEAT °
88

❺ **Morning, Day, Evening** & **Night** icons - *Pages 8-10*
Indicates the day part of the time period program.

❻ **Setup** icon - *Pages 12-14*
Indicates the thermostat is in the setup mode.

❼ **Fan On** icon - *Page 7*
Indicates constant, continuous fan operation.
When **Fan On** is not lit - indicates the fan will only
operate when necessary to heat or to cool.

❽ **Locked** icon - *Page 18*
Indicates the keypad has been locked.

MODE

FAN

Press the MODE button. While holding MODE, press the FAN button for two seconds to enter Setup screens.

During Setup & Programming:

Pressing the UP or DOWN button will modify the flashing selection.

Setting the Clock

12:00 Am   Setup 1

Tip: To change hours quickly, press and hold the FAN button, then press the UP or DOWN button.

To adjust the Clock or Day use

buttons.

Setting the Day

Press

MODE

Setup 2

Su

Press the MODE button. While holding MODE, press the FAN button for two seconds to enter Setup screens.

MODE

FAN

The thermostat is preprogrammed from the factory to operate one or two stage equipment* without the need for further programming. To optimize the installation of this thermostat, follow the instructions in the Advanced Setup section.

   * *The thermostat is not preprogrammed from the factory to operate electric heat or heat pump systems. To control these systems, follow the instructions in the Receiver manual.*

Selecting the Heat or Cool Mode

Select Mode by Pressing the MODE Button

Heating Only

The **HEAT** setting indicates the temperature the room has to reach before the furnace will turn on to heat the room.

12:00 Pm
Mo
70 °
HEAT °
68

Press
MODE

Cooling Only

The **COOL** setting indicates the temperature the room has to reach before the air conditioner will turn on to cool the room.

12:00 Pm
Mo
76 °
COOL
70 °

Press
MODE

Heating or Cooling

AUTO will automatically select heat or cool based on room temperature demand.

12:00 Pm
Mo
76 °
COOL
AUTO
70 °
HEAT °
68

Press
MODE

Time Schedule for Heating or Cooling

The **Program On** setting will activate the time period programming for the cooling or heating setpoint ONLY (Morning, Day, Evening & Night Periods).

12:00 Pm
Mo
ProgramOn
76 °
COOL
70 °
Day
HEAT °
68

Press
MODE

Off

OFF indicates both heating and air conditioning systems are turned off.

12:00 Pm
Mo
70 °
OFF

Basic Operation

Selecting Your Desired Temperature
(adjusting the setpoints)

AUTO OR PROGRAM MODE

Pressing the UP or DOWN button in Auto **or** Program mode will
adjust **both** the heat and cool set temperatures simultaneously.

```
12:00 Pm
Mo                    76°
                      COOL
AUTO  70
                      HEAT°
                      68
```

Adjust the desired
set temperature with the

buttons.

HEAT OR COOL MODE

Pressing the UP or DOWN button in Heat **or** Cool mode will
adjust only the heat **or** cool set temperature.

```
12:00 Pm
Mo                    76°
                      COOL
      70
```

Adjust the desired
set temperature with the

buttons.

Using the Fan Button

Press

FAN

```
12:00 Pm
Mo                    85°
                      COOL
      65
                      HEAT°
Fan On                55
```

Fan On indicates constant fan
operation. You may turn the fan
on even if the thermostat is in the
Off mode. Pressing the FAN button
toggles this feature on or off.

Page 7

Programming a Daily Schedule   *(Unit # 1 only)*

Press the MODE button. While holding MODE, press the UP button for two seconds to enter time period programming*.

Use the Programming Worksheet on the back cover to help with this section.

Select the day of week.

(Mo - Su)

Mo

Press
MODE

Adjust the start time for Morning.

*6:00*Am   Start
Mo

Morning

Press
MODE

Adjust the cooling setpoint for Morning.

(35°- 99°)

*6:00*Am   78°
Mo   COOL

Morning

Press
MODE

Adjust the heating setpoint for Morning.

(35°- 99°)

*6:00*Am   78°
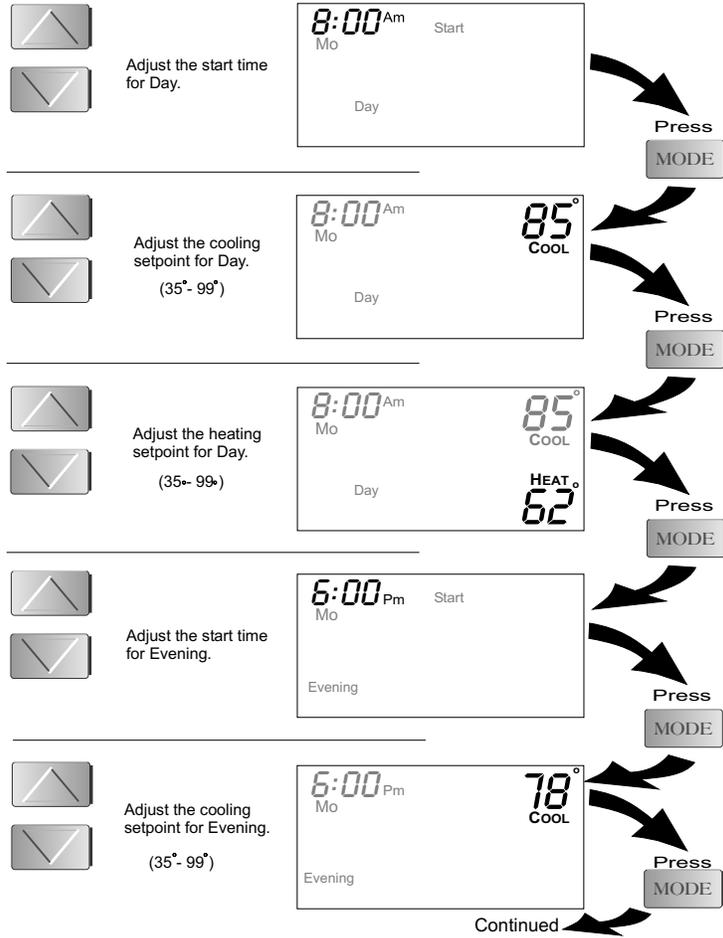Mo   COOL

Morning   HEAT °
                 70

Press
MODE

Continued

*Time period programming is only available on Unit Number 1.

Page 8

Adjust the start time for Day.

8:00 Am
Mo   Start

Day

Press
MODE

Adjust the cooling setpoint for Day.

(35° - 99°)

8:00 Am
Mo   85°
                      COOL

Day

Press
MODE

Adjust the heating setpoint for Day.

(35°- 99°)

8:00 Am
Mo   85°
                      COOL

Day   HEAT °
                      62°

Press
MODE

Adjust the start time for Evening.

6:00 Pm
Mo   Start

Evening

Press
MODE

Adjust the cooling setpoint for Evening.

(35° - 99°)

6:00 Pm
Mo   78°
                      COOL

Evening

Press
MODE

Continued

Adjust the heating setpoint for Evening.

(35°- 99°)

*6:00*Pm
Mo

78°
COOL

Evening

HEAT °
70

Press

MODE

Adjust the start time for Night.

*10:00*Pm   Start
Mo

Night

Press

MODE

Adjust the cooling setpoint for Night.

(35°- 99°)

*10:00*Pm
Mo

82°
COOL

Night

Press

MODE

Adjust the heating setpoint for Night.

(35°- 99°)

*10:00*Pm
Mo

82°
COOL

Night

HEAT °
62

Press

MODE

Continued

The copy command becomes available after
programming the entire previous day.

Yes

Select Yes to copy the
previous day's program
to the day displayed.

No

```
no
Tu
CO py
```

If No is selected:

If Yes is selected:

Press
MODE

Selecting Yes, then pressing MODE will copy the
previous day's program. If yes is selected again,
or each time, this routine will repeat.
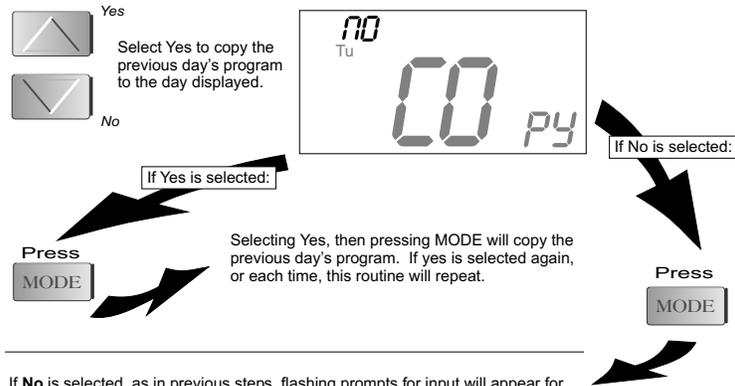
Press
MODE

If **No** is selected, as in previous steps, flashing prompts for input will appear for
the four time periods for the next day.

MODE

After programming for all seven days is complete, press
the MODE and UP buttons at the same time for two seconds
to leave the Setup screens. If no buttons are pressed, the
display will leave the setup screens after 30 seconds.
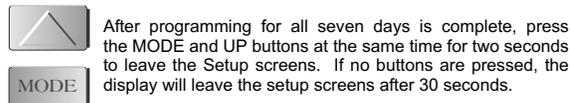
Advanced Setup

MODE *Press the MODE button and release.*

MODE
FAN *Immediately press the MODE button again. While holding the MODE button, press the FAN button. When this screen appears*

`12:00Am  Setup  1`

DO NOT RELEASE THE BUTTONS. Continue holding the MODE and FAN buttons for an additional seven seconds to enter Setup screens beyond step #2.

NOTE: Each step # is located at the top right corner of the display for easy reference.

Adjust the time of day clock.

Tip: To change hours quickly, press and hold the FAN button, then press the UP or DOWN buttons.

`12:00Am   Setup  1`

Press
MODE

Select the day of the week.

`Mo   Setup  2`

Press
MODE

On
Leave this setup step set to OFF.
Off

`OFF 20   Setup  3   nE`

Press
MODE

Continued

Page 12

Advanced Setup

Select the House Code number. *The Receiver must also use this same number for proper operation.*
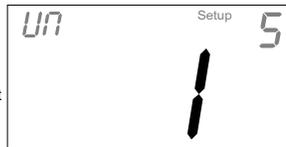
(0 - 63)

HC Setup 4
0

Press
MODE

Select the Unit ID number. If more than 1 thermostat is used, each will need a different Unit ID number.

(1 - 4)

UN Setup 5
1

Press
MODE

Adjust the deadband for the 1st stage.

(1° - 6°)

Note: Available only on Unit ID #1.

db Setup 6
2

Press
MODE

Adjust the minimum *difference* between cooling & heating setpoints.

(0° - 6°)

d IF Setup 7
2 COOL

HEAT

Press
MODE

Select the Cycles Per Hour limit:
d=Cycles Per Hour limit defeated
d1=d + defeat 5 min. compressor lockout

(d1, d, 2 - 6)
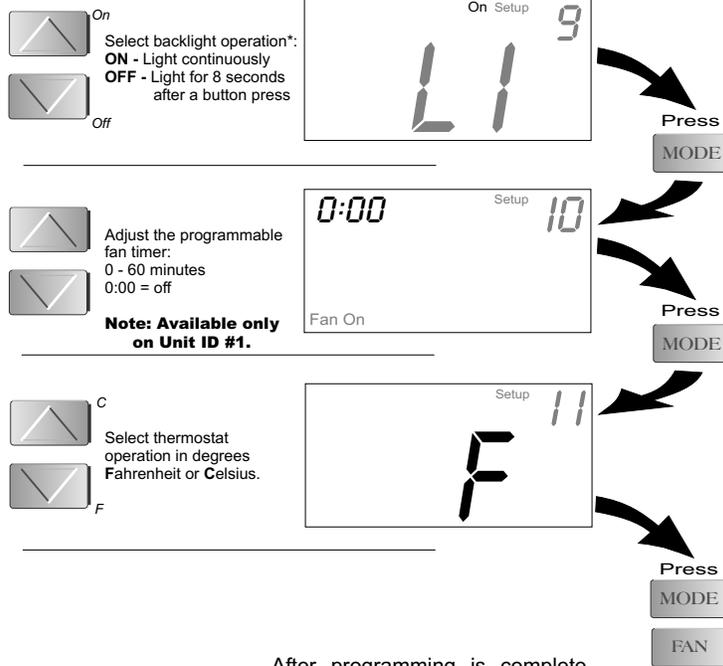
Note: Available only on Unit ID #1.

Setup 8
6 CY

Press
MODE

Continued

Page 13

Advanced Setup

On

Select backlight operation*:
ON - Light continuously
OFF - Light for 8 seconds
after a button press

Off

On Setup 9

L1

Press

MODE

Adjust the programmable
fan timer:
0 - 60 minutes
0:00 = off

**Note: Available only
on Unit ID #1.**

0:00 Setup 10

Fan On

Press

MODE

C

Select thermostat
operation in degrees
Fahrenheit or **C**elsius.

F

Setup 11

F

Press

MODE

FAN

After programming is complete,
press the MODE and FAN buttons
at the same time for two seconds
to leave the Setup screens. If no
buttons are pressed, the display
will leave the setup screens after
30 seconds.

*For increased battery life the backlight should be set to OFF unless
the P474-0800 RF power supply adaptor is used to power the thermostat.*

Page 14

Advanced Setup

Advanced Setup Table

Step #	Description	Range	Factory Default
1	Time of Day	24 hour	12:00 am
2	Day of the Week	Mo - Su	Mo
3*	Zoning System	Off / On	Off
4	House Code	0 - 63	0
5	Unit ID Number	1 - 4	1
6**	Deadband/Temp. Swing 1st Stage	1° - 6°	2°
7	Minimum Heat/Cool Differential	0° - 6°	2°
8**	Cycles Per Hour	d, d1, 2 - 6	6
9***	Thermoglow Backlight	0:00 - 0:60	0:00
10**	Programmable Fan	Off / On	On
11	Fahrenheit or Celsius	F / C	F

*For proper operation this setup step should remain in the off position.
**These setup steps are only available on the thermostat programmed as Unit ID Number 1.
***For increased battery life the backlight should be set to OFF unless the P474-0800 RF power supply adaptor is used to power the thermostat.

About Advanced Features & Operation

� CALIBRATION - Under normal circumstances it will not be necessary to adjust the calibration of the temperature sensor. If calibration is required, please contact a trained HVAC technician to correctly perform the following procedure.

❶ Press [MODE] [FAN] Place the thermostat in the OFF mode.

12:00 Pm
Su
OFF   **70°**

❸ Press [MODE] Press the MODE button at the same time **twice**. The thermostat temperature will be displayed and may be calibrated using the UP or DOWN buttons

12:00 Pm
Su
OFF   **70°**

❷ Press [MODE] [⬇] Press and hold the MODE button. While holding the MODE button, press and hold the DOWN button for 5 seconds. All of the icons will appear on the display.

18:88 Am Pm
SuMoTuWeThFrSa
ProgramOn Setup
Locked   **88°**
COOL
AUTO
OFF Night
Morning Day
Evening
Fan On   **88°**   HEAT°
88

❹ Press [MODE] After calibration is complete, press the MODE button **once** to save your changes and return to normal operation.

12:00 Pm
Su
OFF   **70°**

✖ DEADBAND OPERATION - Controls up to two Heat and two Cool stages (please see the diagram below).
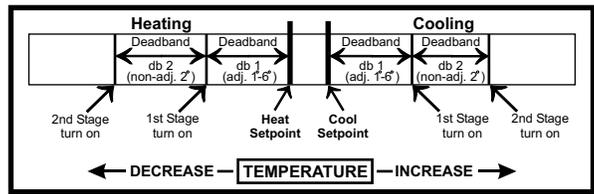
The **1st Stage** of heat or cool is turned on when:
(**A**) The temperature spread from the setpoint is equal to or greater than: *the setpoint plus the 1st stage deadband (step #6, page 13).* This 1st stage deadband is adjustable from 1-6 degrees and the default is two degrees.

The **2nd Stage** of heat or cool is turned on when:
(**A**) The 1st Stage has been on for a minimum of *two minutes*.

And

(**B**) The temperature spread from the setpoint is equal to or greater than: *the setpoint plus the 1st stage deadband (step #6, page 13), plus the 2nd stage deadband.* This 2nd stage deadband is fixed at two degrees and is not adjustable.

	Heating			Cooling	
	Deadband	Deadband		Deadband	Deadband
	db 2 (non-adj. 2°)	db 1 (adj. 1-6°)		db 1 (adj. 1-6°)	db 2 (non-adj. 2°)
2nd Stage turn on	1st Stage turn on	**Heat Setpoint**	**Cool Setpoint**	1st Stage turn on	2nd Stage turn on

← DECREASE — TEMPERATURE — INCREASE →

About Advanced Features & Operation

❊ FACTORY DEFAULTS - If, for any reason, you desire to return all the stored settings back to the factory default settings, follow the instructions below.

WARNING: This will reset all Time Period and Advanced Programming to the default settings. Any information entered prior to this reset will be permanently lost.

❶ Press **MODE** Place the thermostat in the OFF mode.

12:00 Pm Su	
OFF	70°

❸ Press **FAN** After all of the icons appear, release the MODE and DOWN buttons. Then press and hold the FAN button for 5 seconds.

Fd

❷ Press **MODE** **▽** Press and hold the MODE button. While holding the MODE button, press and hold the DOWN button for 5 seconds. All of the icons will appear on the display.

18:88 Am Pm SuMoTuWeThFrSa ProgramOn Setup Locked **88**° **COOL** **AUTO** **OFF** Night Morning Day Evening Fan On **88**° **HEAT** **88**°

❹ Press **MODE** After the letters **Fd** appear on the display (Factory Default), release the FAN button. Press the MODE button **twice** to return to normal operation.

12:00 Pm Su	
OFF	70°

❊ HEAT/COOL DIFFERENTIAL - The Heat and Cool setpoints will not be allowed to come any closer to each other than the value set in Advanced Setup *step #7, on page 13*. This minimum difference is enforced during Auto-changeover and Program On operation.

Note: To increase the spread between the heating and cooling setpoints, press the MODE button until only the heat setpoint is displayed; adjust to the desired setpoint. Press the MODE button until only the cool setpoint is displayed; adjust to the desired setpoint. Press the MODE button again to enter the Auto-changeover mode where both the heat and cool setpoints are displayed.

❊ MEMORY BACKUP - In the event of a power loss, the thermostat will retain the stored program settings without external power or batteries.

❊ PROGRAMMABLE FAN - This timer will start the fan at the top of each hour; and the fan will run for the number of minutes selected in step #10 on page 14.

About Advanced Features & Operation

❋ KEYPAD LOCKOUT - To prevent unauthorized use of the thermostat, the front panel buttons may be disabled. To disable, or 'lock' the keypad, press and hold the MODE button. While holding the MODE button, press the UP and DOWN buttons together. The LOCKED icon will appear on the display, then release the buttons.

Press all three buttons in the order outlined above for keypad lockout
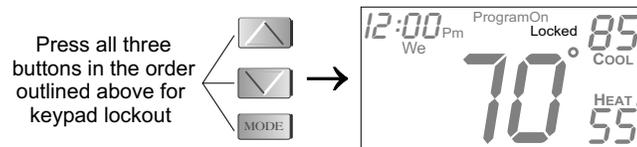
To *unlock* the keypad, press and hold the MODE button. While holding the MODE button, press the UP and DOWN buttons together. The LOCKED icon will disappear from the display, then release the buttons.

❋ BATTERY ELIMINATOR (optional accessory) - the P474-0800 RF power supply adaptor is used to power the thermostat and eliminate the need for replacing batteries each year. Use only the Totaline accessory P474-0800 for proper operation.

❋ LOW BATTERY WARNING - The two AA lithium batteries must be replaced at least once every 12 months to ensure proper operation. The "low battery" icon (fig. 1) will appear on the display when it is time to replace the batteries.

When the "low battery" icon is displayed the batteries must be replaced immediately. The manufacturer cannot be liable for improper operation of the thermostat if the batteries are not immediately replaced. Annual battery replacement is especially critical in locations subject to freezing temperatures. The thermostat will be unable to turn on the heating system if the batteries are exhausted.

Fig. 1
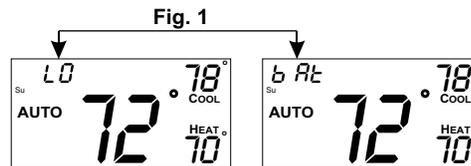
Important: *To assure proper operation use only AA <u>LITHIUM</u> batteries.*
Page 18

Warranty

Five-Year Warranty - This Product is warranted to be free from defects in material and workmanship. If it appears within five year from the date of original installation, whether or not actual use begins on that date, that the product does not meet this warranty, a new or remanufactured part, at the manufacturer's sole option to replace any defective part, will be provided without charge for the part itself provided the defective part is returned to the distributor through a qualified servicing dealer.

THIS WARRANTY DOES NOT INCLUDE LABOR OR OTHER COSTS incurred for diagnosing, repairing, removing, installing, shipping, servicing or handling of either defective parts or replacement parts. Such costs may be covered by a separate warranty provided by the installer.

THIS WARRANTY APPLIES ONLY TO PRODUCTS IN THEIR ORIGINAL INSTALLATION LOCATION AND BECOMES VOID UPON REINSTALLATION.

LIMITATIONS OF WARRANTIES – ALL IMPLIED WARRANTIES (INCLUDING IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE AND MERCHANTABILITY) ARE HEREBY LIMITED IN DURATION TO THE PERIOD FOR WHICH THE LIMITED WARRANTY IS GIVEN. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE MAY NOT APPLY TO YOU. THE EXPRESSED WARRANTIES MADE IN THIS WARRANTY ARE EXCLUSIVE AND MAY NOT BE ALTERED, ENLARGED, OR CHANGED BY ANY DISTRIBUTOR, DEALER, OR OTHER PERSON WHATSOEVER. ALL WORK UNDER THE TERMS OF THIS WARRANTY SHALL BE PERFORMED DURING NORMAL WORKING HOURS. ALL REPLACEMENT PARTS, WHETHER NEW OR REMANUFACTURED, ASSUME AS THEIR WARRANTY PERIOD ONLY THE REMAINING TIME PERIOD OF THIS WARRANTY.

THE MANUFACTURER WILL NOT BE RESPONSIBLE FOR:

1. Normal maintenance as outlined in the installation and servicing instructions or owner's manual, including filter cleaning and/or replacement and lubrication.
2. Damage or repairs required as a consequence of faulty installation, misapplication, abuse, improper servicing, unauthorized alteration or improper operation.
3. Failure to start due to voltage conditions, blown fuses, open circuit breakers or other damages due to the inadequacy or interruption of electrical service.
4. Damage as a result of floods, winds, fires, lightning, accidents, corrosive environments or other conditions beyond the control of the Manufacturer.
5. Parts not supplied or designated by the Manufacturer, or damages resulting from their use.
6. Manufacturer products installed outside the continental U.S.A., Alaska, Hawaii, and Canada.
7. Electricity or fuel costs or increases in electricity or fuel costs for any reason whatsoever including additional or unusual use of supplemental electric heat.
8. ANY SPECIAL INDIRECT OR CONSEQUENTIAL PROPERTY OR COMMERCIAL DAMAGE OF ANY NATURE WHATSOEVER. Some states do not allow the exclusion of incidental or consequential damages, so the above may not apply to you.

This warranty gives you specific legal rights and you may also have other rights which may vary from state to state.

Programming Worksheet

DAY	PERIOD	START TIME	COOL	HEAT	
MONDAY	Morning				
	Day				
	Evening				
	Night				
TUESDAY	Morning				Copy Mon→Tue
	Day				☐ No
	Evening				☐ Yes
	Night				
WEDNESDAY	Morning				Copy Tue→Wed
	Day				☐ No
	Evening				☐ Yes
	Night				
THURSDAY	Morning				Copy Wed→Thu
	Day				☐ No
	Evening				☐ Yes
	Night				
FRIDAY	Morning				Copy Thu→Fri
	Day				☐ No
	Evening				☐ Yes
	Night				
SATURDAY	Morning				Copy Fri→Sat
	Day				☐ No
	Evening				☐ Yes
	Night				
SUNDAY	Morning				Copy Sat→Sun
	Day				☐ No
	Evening				☐ Yes
	Night				