PRO1®

Pro1 Technologies

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Hours of Operation: M-F 9AM - 6PM Eastern

T715

Thermostat Application Guide

Description	
Gas or Oil Heat	Yes
Electric Furnace	Yes
Heat Pump (No Aux. or Emergency Heat)	Yes
Heat Pump (With Aux. or Emergency Heat)	No
Multi-Stage Systems	Yes
Heat Only Systems	Yes
Heat Only Systems - Floor or Wall Furnace	Yes
Cool Only Systems	Yes
Millivolt	Yes

Power Type

Battery Power
Hardwire (Common Wire)
Hardwire (Common Wire) with Battery Backup

A trained, experienced technician must install this product.

Carefully read these instructions. You could damage this product or cause a hazardous condition if you fail to follow these instructions.

Una version en español de este manual se puede descargar en la pagina web de la compañia.

## Table of Contents   Page

Specifications

The display range of temperature ... 41°F to 95°F (5°C to 35°C)
The control range of temperature.... 44°F to 90°F (7°C to 32°C)
Swing (cycle rate or differential) ...... Heating is adjustable from 0.2° to 2.0°
                                                          Cooling is adjustable from 0.2° to 2.0°
Power source ....18 to 30 VAC, NEC Class II, 50/60 Hz
                                                          for hardwire
                                                          Battery power from 2 AA Alkaline
                                                          batteries
Operating ambient .... 32°F to +105°F (0°C to +41°C)
Operating humidity .... 90% non-condensing maximum
Dimensions of thermostat .... 4.7"W x 4.4"H x 0.8"D

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Installation Tips

Wall Locations

The thermostat should be installed approximately 4 to 5 feet above the floor. Select an area with average temperature and good air circulation.
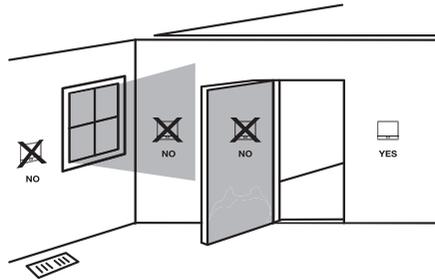
Do not install thermostat in locations:

• Close to hot or cold air ducts
• That are in direct sunlight
• With an outside wall behind the thermostat
• In areas that do not require conditioning
• Where there are dead spots or drafts (in corners or behind doors)
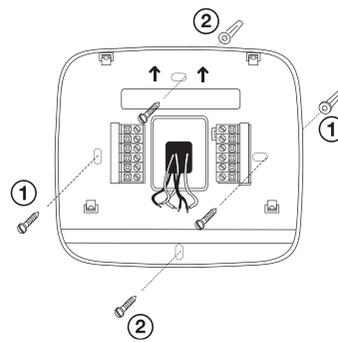• Where there might be concealed chimneys or pipes

Installation Tip

Pick an installation location that is easy for the user to access. The temperature of the location should be representative of the building.

Subbase Installation

① Horizontal Mount
② Vertical Mount

For vertical mount put one screw on the top and one screw on the bottom.
For horizontal mount put one screw on the left and one screw on the right.

Installation Tip: Electrical Hazard

Failure to disconnect the power before beginning to install this product can cause electrical shock or equipment damage.

Mercury Notice

All of our products are mercury free. However, if the product you are replacing contains mercury, dispose of it properly. Your local waste management authority can give you instructions on recycling and proper disposal.


Mount Thermostat

Align the 4 tabs on the subbase with corresponding slots on the back of the thermostat, then push gently until the thermostat snaps in place.
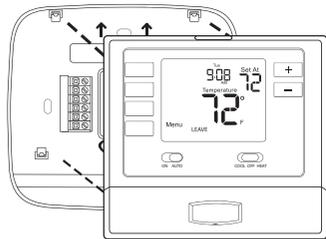

Battery Installation

Battery installation is recommended even if thermostat is hardwired (C terminal connected). When thermostat is hardwired and batteries are installed, the thermostat will activate a compressor delay of 5 minutes when the thermostat detects a power outage from the hardwired power supply.
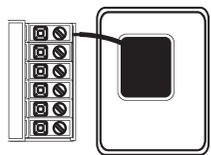
Important:

High quality alkaline batteries are recommended. Rechargeable batteries or low quality batteries do not guarantee a 1-year life span.
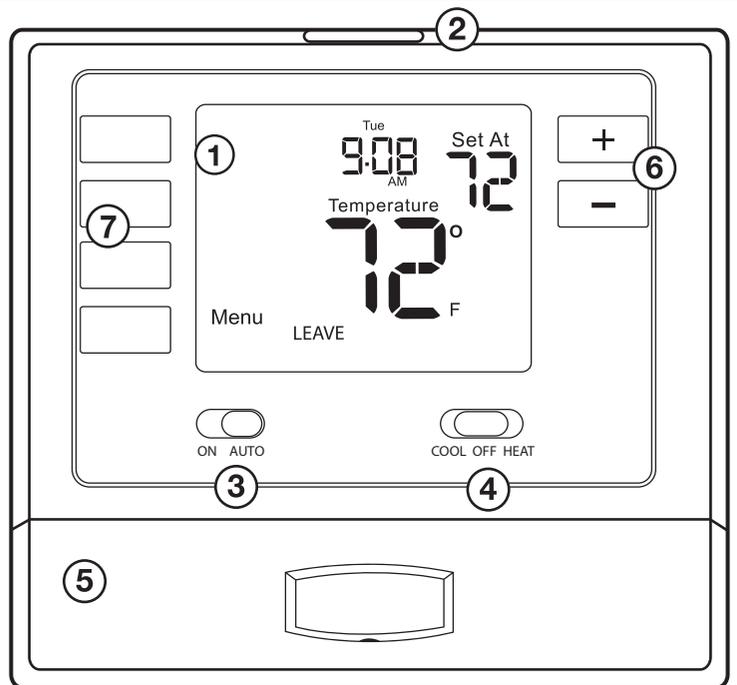
Insert 2 AA Alkaline batteries (included). High quality alkaline batteries are recommended.
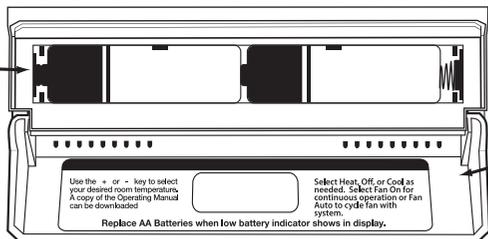
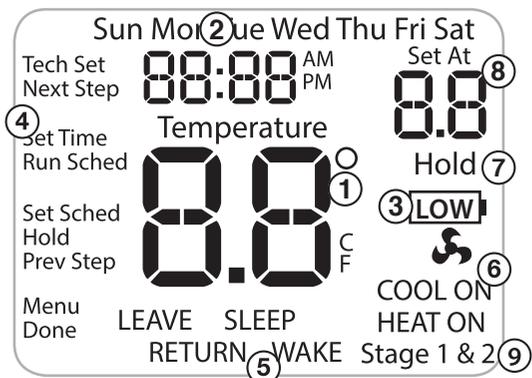Simple operating instructions are found on the back of the battery door.

Getting to know your thermostat

① LCD Display

② Glow in the dark light button

③ Fan Switch

④ System Switch

⑤ Easy change battery door

⑥ Temperature Setpoint Buttons

⑦ User Buttons

Getting to know your thermostat

Sun Mon ②ue Wed Thu Fri Sat

Tech Set
Next Step

Set Time
Run Sched

Set Sched
Hold
Prev Step

Menu
Done

88:88 AM PM

Temperature

Set At

Hold ⑦

③ LOW

LEAVE   SLEEP

RETURN   WAKE

COOL ON
HEAT ON
Stage 1 & 2 ⑨

① Indicates the current room temperature

② Time and day of the week

③ **Low Battery Indicator:** Replace batteries when this indicator is shown.

④ **Button Options**

⑤ **Program Time Periods:** This thermostat has 4 programmable time periods per day.

⑥ **System Operation Indicators:**
The COOL ON, HEAT ON or 🌀 icon will display when the COOL, HEAT, or 🌀 (fan) is on.

Note: The Compressor delay feature is active if these are flashing.

⑦ **Hold** is displayed when the thermostat program is permanently overridden.

⑧ **Setpoint:** Displays the user selectable setpoint temperature.

⑨ **Stages:** Indicates the stages of heat or cool that are active.

> **💡 Important**
>
> The low battery indicator is displayed when the AA battery power is low. If the user fails to replace the battery within 21 days, the screen will only show the low battery indicator but maintain all functionality. If the user fails to replace the batteries after an additional 21 days (days 22-42 since first "low battery" display) the setpoints will change to 55˚F (Heating) and 85˚F (Cooling). If the user adjusts the setpoint away from either of these, it will hold for 4 hours then return to either 55˚F or 85˚F. After day 63 the batteries must be replaced immediately to avoid freezing or overheating because the thermostat will shut the unit off until the batteries are changed.

Wiring

1. If you are replacing a thermostat, make note of the terminal connections on the thermostat that is being replaced. In some cases the wiring connections will not be color coded. For example, the green wire may not be connected to the **G** terminal.

2. Loosen the terminal block screws. Insert wires then retighten terminal block screws.

3. Place nonflammable insulation into wall opening to prevent drafts.

> **⚠ Caution:**
> **Electrical Hazard**
>
> Failure to disconnect the power before beginning to install this product can cause electrical shock or equipment damage.

> **⚠ Warning:**
>
> All components of the control system and the thermostat installation must conform to Class II circuits per the NEC Code.

Terminal Designations

C	Common wire from secondary side of cooling system transformer	**RH**	Transformer power for heating
O	Heat pump changeover valve energized in cooling	**RC**	Transformer power for cooling
B	Heat pump changeover valve energized in heating	**G**	Fan relay
W	Heat relay Stage 1	**Y**	Compressor relay Stage 1
W2	Heat relay Stage 2	**Y2**	Compressor relay Stage 2

Wiring Tips

C Terminal

The C (common wire) terminal does not have to be connected when the thermostat is powered by batteries.

Wire Specifications

Use shielded or non-shielded 18-22 gauge thermostat wire.

> **💡 Installation Tip:** Do not overtighten terminal block screws, as this can damage the terminal block. A damaged terminal block can keep the thermostat from fitting on the subbase correctly or cause system operation issues.   **Max Torque = 6in-lbs.**

Features

Private Label Badge

Temporary and Permanent Hold Feature   (If using programming)

When cool or heat is turned on, the thermostat will display **HOLD** and **RUN SCHED** on the left of your screen when you press the [+] or [−] button.

Temporary Hold: At this time if you do nothing, the temperature will remain at this setpoint until next scheduled time period.

Permanent Hold: If you press the **HOLD** key on the left of your screen, you will see **HOLD** appear below the setpoint temperature in the display. The thermostat will now permanently stay at this setpoint and can be adjusted using the [+] or [−] keys.

To Return to Running Schedule: Press the **RUN SCHED** button on the left of your screen to exit either temporary or permanent hold.

Filter Change Reminder

If your installing contractor has configured the thermostat to remind you when the air filter needs to be changed, you will see **FILT** in the display when your air filter needs to be changed.

Resetting the filter change reminder: When **FILT** reminder is displayed, you should change your air filter and reset the reminder by holding down the second button from the top left side of the thermostat for 3 seconds.

Hold down for 3 seconds, to reset filter reminder.
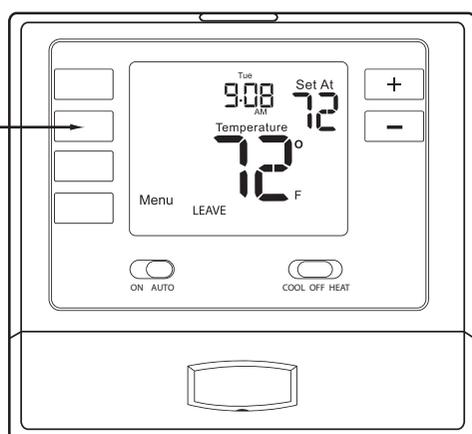
About The Badge

All of our thermostats use the same universal magnetic badge. Visit the company website to learn more about our free private label program.

Use the bevel on lower ridge
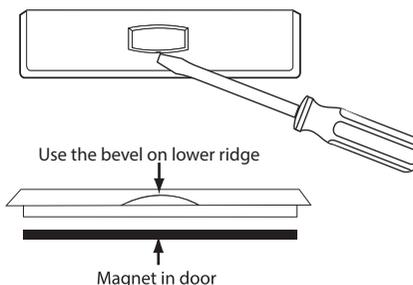
Magnet in door

Gently slide a screwdriver into the bottom edge of the badge. Gently turn the screwdriver counter clockwise. The badge is held on by a magnet in the well of the battery door. The badge should pry off easily. **DO NOT USE FORCE.**

① Power supply

② Optional 24 VAC common connection when thermostat is used in battery power mode

Typical 2H/2C System: 1 Transformer

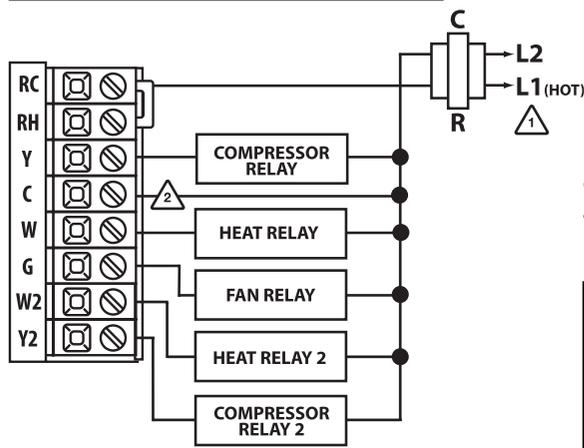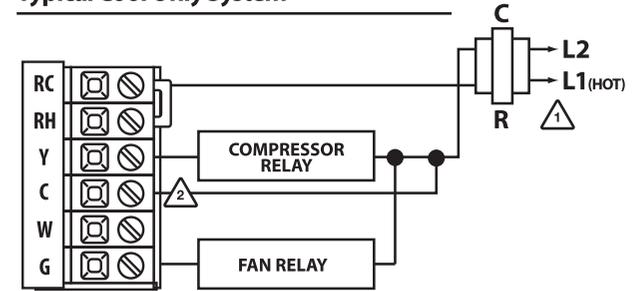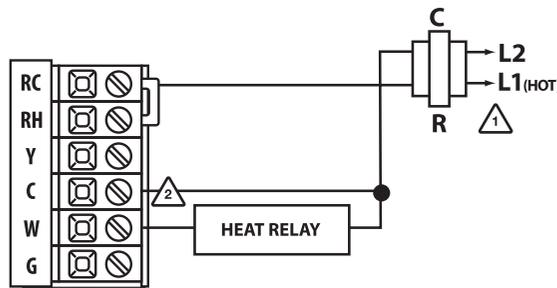**Note:** This thermostat is hardwire powered when the 24V transformer is connected to the Common and RC terminals of the thermostat.
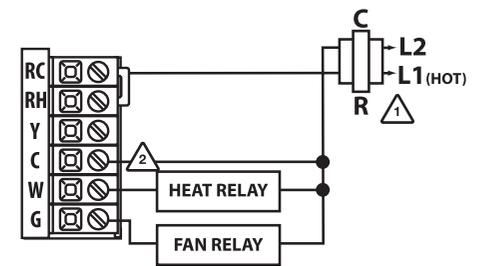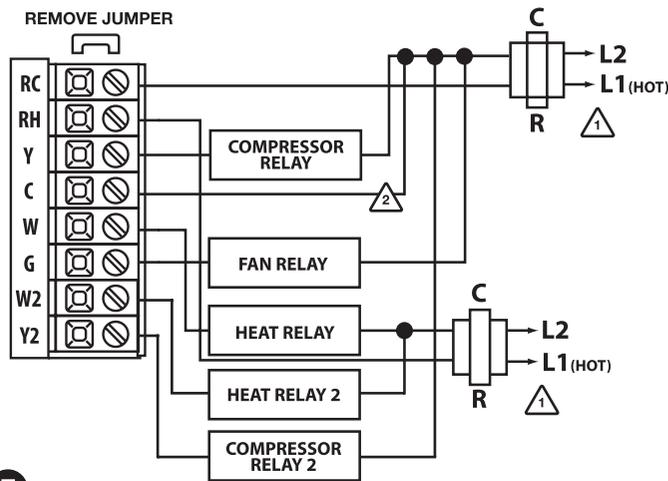
Typical Heat-Only System
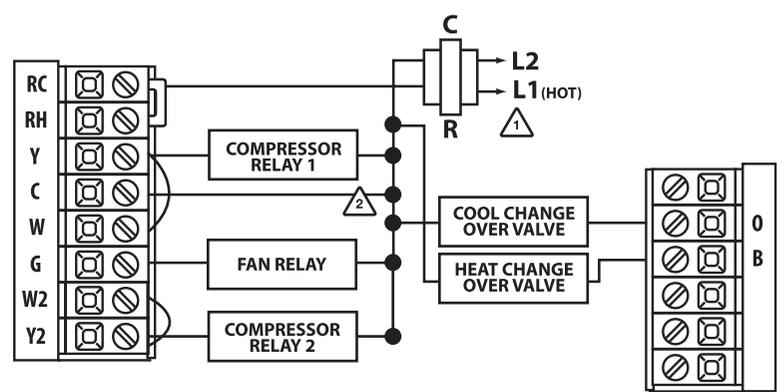

Typical 2H/2C System: 2 Transformer

REMOVE JUMPER

Typical Cool Only System

Typical Heat Only System With Fan

Typical 2H/2C Heat Pump System w/o Aux.

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Technician Setup Menu

This thermostat has a technician setup menu for easy installer configuration. To setup the thermostat for your particular application:

1. Press the **MENU** button
2. Press and hold **TECH SET** button for 3 seconds. This 3 second delay is designed so that homeowners do not accidentally access the installer settings.
3. Configure the installer options as desired using the table below.

Use the [+] or [−] keys to change settings and the **NEXT STEP** or **PREV STEP** key to move from one step to another. **Note:** Only press the **DONE** key when you want to exit the Technician Setup options.

Tech Settings		LCD Will Show	Adjustment Options	Default
Filter Change Reminder	This feature will flash "FILT" in the display after the elapsed run time to remind the user to change the filter. A setting of "OFF" will disable this feature.	100 SE F1 (Next Step / Prev Step)	You can adjust the filter change reminder from OFF to 2000 hours of runtime in 50 hour increments. Tap the second button from the top left side of the thermostat to display the current filter elapsed runtime.	OFF
Room Temperature Calibration	This feature allows the installer to change the calibration of the room temperature display. For example, if the thermostat reads 70° degrees and you would like it to read 72° then select +2.	CAL 0 (Next Step / Prev Step)	You can adjust the room temperature display to read 4° above or below the factory calibrated reading.	0
Compressor Short Cycle Delay	The compressor short cycle delay protects the compressor from short cycling. This feature will not allow the compressor to be turned on for 5 minutes after it was last turned off.	Cd ON (Next Step / Prev Step)	Selecting "ON" will not allow the compressor to be turned on for 5 minutes after the last time the compressor was switched off. Select "OFF" to remove this delay.	ON
Cooling Swing	The swing setting often called "cycle rate", "differential" or "anticipation" is adjustable. A smaller swing setting will cause more frequent cycles and a larger swing setting will cause fewer cycles.	dFCO 0.5 (Next Step / Prev Step)	The cooling swing setting is adjustable from 0.2° to 2°. For example: A swing setting of 0.5° will turn the cooling on at approximately 0.5° above the setpoint and turn the cooling off at approximately 0.5° below the setpoint.	0.5

Tech Settings		LCD Will Show	Adjustment Options	Default
Heating Swing	The swing setting often called "cycle rate", "differential" or "anticipation" is adjustable. A smaller swing setting will cause more frequent cycles and a larger swing setting will cause fewer cycles.	dFHE 0.4 (Next Step / Prev Step)	The heating swing setting is adjustable from 0.2° to 2°. For example: A swing setting of 0.5° will turn the heating on at approximately 0.5° below the setpoint and turn the heating off at approximately 0.5° above the setpoint.	0.4
Heating Setpoint Limit	This feature allows you to set a maximum heat setpoint value. The setpoint temperature cannot be raised above this value.	HE L 90 (Next Step / Prev Step)	Use the [+] and [−] key to select the maximum heat setpoint.	90
Cooling Setpoint Limit	This feature allows you to set a minimum cool setpoint value. The setpoint temperature cannot be lowered below this value.	CO L 44 (Next Step / Prev Step)	Use the [+] and [−] key to select the minimum cool setpoint.	44
F or C	Select F for Fahrenheit temperature read out or select C for Celsius read out.	FC F (Next Step / Prev Step)	F for Fahrenheit, C for Celsius	F
12 or 24 Hour Clock	You can select either a 12 or 24 hour clock setting.	1224 12 (Next Step / Prev Step)	Use the [+] and [−] to select 12 or 24 hour clock.	12
Fan Operation	Select GAS for systems that control the fan during a call for heat. Select ELEC to have the thermostat control the fan during a call for heat.	FA GS (Next Step / Prev Step)	GAS - GS or ELEC - EL	GAS

Swing Setting Tip

Temperature swing, sometimes called differential or cycle rate, can be customized for this individual application. For most applications choose a swing setting that is as long as possible without making the occupants uncomfortable.

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Tech Settings		LCD Will Show	Adjustment Options	Default
Pro Recovery	This feature will start heating and cooling early to bring the building temperature to its programmed setpoint by the begining of the WAKE or RETURN time period.	rEC / Next Step / On / Prev Step	Use the + and − key to turn ON or OFF.	ON
Program Options	You can configure this thermostat to have 7 Day, 5+1+1 programming or non programmable.	ProG / Next Step / Sd / Prev Step	Use the + and − key to select 7d for 7 Day, 5d for 5+1+1, or 0d for non programmable.	5d
Satisfy Setpoint	This feature allows the thermostat to keep multiple stages of heat or cool energized until setpoint is satisfied.	SS / Next Step / OF / Prev Step	Use the + or − key to turn ON or OFF.	OFF
Staging Delay	This feature allows a delay to occur when a second stage is needed. This allows the previous stage extra time to satisfy setpoint.	Sd / Next Step / OF / Prev Step	Use the + or − key to select OFF, 5, 10, 15, 30, 45, 60, or 90 minutes.	OFF

Set Time (If using programming)

1. With system switch set to OFF, press the **MENU** button
2. Press **SET TIME**
3. Day of the week will be flashing. Use the ⊞ or ⊟ key to select the current day of the week.
4. Press **NEXT STEP**
5. The current hour is flashing. Use the ⊞ or ⊟ key to select the current hour. When using 12-hour time, make sure the correct a.m. or p.m. choice is selected.
6. Press **NEXT STEP**
7. Minutes are now flashing. Use the ⊞ or ⊟ key to select current minutes.
8. Press **DONE** when completed.

Programming

All of our programmable thermostats are shipped with an energy saving pre-program. You can customize this default program by following the steps on page 15.

Your thermostat can be programmed to have all the weekdays the same, a separate program for Saturday, and a separate program for Sunday or 7 Days individually. There are four time periods for each program **(WAKE, LEAVE, RETURN, SLEEP).**

Factory Default Program				
Day of the Week	Events	Time	Setpoint Temperature (HEAT)	Setpoint Temperature (COOL)
Weekday	Wake	6 AM	70°F (21°C)	75°F (24°C)
	Leave	8 AM	62°F (17°C)	83°F (28°C)
	Return	6 PM	70°F (21°C)	75°F (24°C)
	Sleep	10 PM	62°F (17°C)	78°F (26°C)
Saturday	Wake	6 AM	70°F (21°C)	75°F (24°C)
	Leave	8 AM	62°F (17°C)	83°F (28°C)
	Return	6 PM	70°F (21°C)	75°F (24°C)
	Sleep	10 PM	62°F (17°C)	78°F (26°C)
Sunday	Wake	6 AM	70°F (21°C)	75°F (24°C)
	Leave	8 AM	62°F (17°C)	83°F (28°C)
	Return	6 PM	70°F (21°C)	75°F (24°C)
	Sleep	10 PM	62°F (17°C)	78°F (26°C)

Set Program Schedule 5+1+1 or 7 Day

To customize your program schedule, follow these steps.

1. Select **HEAT** or **COOL** with the system switch. **Note:** You have to program heat and cool each seperately.

2. Press the **MENU** button (If menu does not appear first press **RUN SCHED**)

3. Press **SET SCHED**. Note: Monday-Friday or **(Monday if in 7 Day)** is displayed and the **WAKE** icon is shown. You are now programming the wake time period for that day.

4. Time is flashing. Use the ⊞ or ⊟ key to make your time selection for that day's **WAKE** time period.

5. Press **NEXT STEP**

6. The setpoint temperature is flashing. Use the ⊞ or ⊟ key to make your setpoint selection for that day's **WAKE** time period.

7. Press **NEXT STEP**

8. Repeat steps 4 thru 7 for that day's **LEAVE** time period, **RETURN** time period, and **SLEEP** time period.

Saturday:
Repeat steps 4 through 7 for the Saturday **WAKE** time period, **LEAVE** time period, **RETURN** time period, and for the Saturday **SLEEP** time period.

Sunday:
Repeat steps 4 through 7 for the Sunday **WAKE** time period, **LEAVE** time period, **RETURN** time period, and for the Sunday **SLEEP** time period.

Set Program Schedule 5+1+1 or 7 Day (Continue...)

> 💡 If using 7-Day Programming use previous steps for every individual day.

You can also use these time saving functions. You must be in **Set Sched** Programming Mode (**Press Menu** >> **Press Set Sched**) for the following functions to work:

1) To copy ALL time periods and temperatures of current system and day to ALL days, Press and Hold 2nd button down on left until the Days and Time flash.

2) To copy ALL time periods (only times) for ALL days to the opposite system (Heat to Cool / Cool to Heat), Press and hold the Glow in the Dark Light button down until Set Time and Time flash.