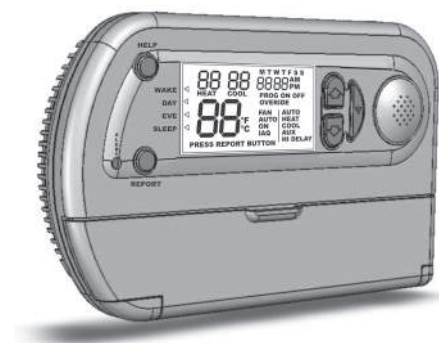


# Talking Thermostat™ Model VT3000 *User's Guide*

SmartWay Solutions, Inc.  
US Patent 6,608,560 & 7,162,253

**For Quick Set-Up  
go to Page 14**

Model VT3000, a universal thermostat for use on most Gas or Electric, Conventional or Heat Pump / Dual Fuel (Hybrid) Systems including:



Single Stage Heat / Single Stage Cool	(1H / 1C)
Single Stage Heat / Two Stage Cool	(1H / 2C)
Two Stage Heat / Single Stage Cool	(2H / 1C)
Two Stage Heat / Two Stage Cool	(2H / 2C)
Three Stage Heat / Two Stage Cool	(3H / 2C)

*Note: Operates on Heat Pump/Dual Fuel Systems with 1 or 2 Stage Compressors & Auxiliary Heat (2H/2C and 3H/2C)*

The VT3000 is a battery powered digital thermostat for controlling single and multi-stage heating and cooling systems. Unique audio playback assists user in setting up and maintaining precise indoor temperature management.

## FEATURES

### Heating & Cooling System Compatibility

Operates on 1 or 2 stage gas, oil or electric heating systems; 1 or 2 stage cooling systems; or 1 or 2 stage heat pump systems with auxiliary gas (dual fuel), oil or electric heating.

### Audio Capability

Audio playback assists user in setting Day / Time and Programmable Operation; and reporting Indoor Temperature, Temperature Settings, Alert Conditions and Service Company's name & phone number.

### Alert Messages

When an Alert Condition (Check Filter, Call For Service, Low Batteries or UV Light) occurs, the red light on the case flashes, and the specific Alert Condition & **PRESS REPORT BUTTON** messages appear on the display screen. When the **REPORT** button is pressed an audio message plays back the exact Alert Condition.

## Programmable Operation

- ◇ 5 Day / 2 Day (Weekend / Weekday) Programmable Operation: automatically changes temperature to preprogrammed settings four times per day. Weekday and Weekend settings can be programmed different from each other.
- ◇ Off Wall Programmable Set Up: detachable front plate allows user to set up thermostat away from the wall mounted sub base.

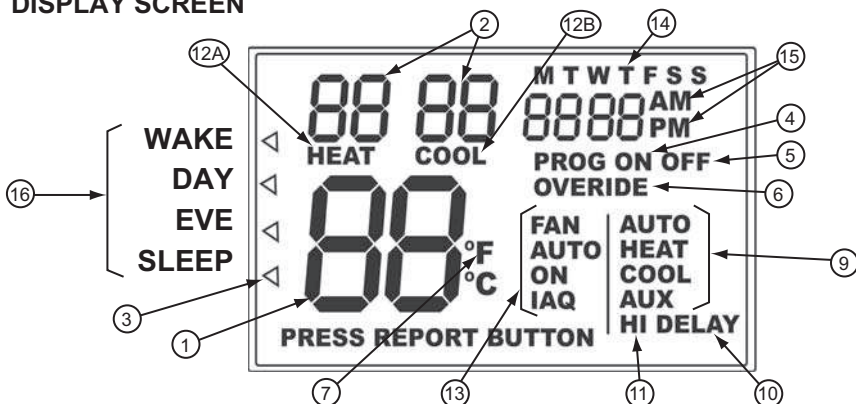
## Optional Operation Settings

- ◇ Manual (Conventional) Operation: runs only at the manually set temperature
- ◇ Programmable Lock Out: locks out (prevents) running in Programmable Operation.
- ◇ System Lock Out: locks in current settings to prevent unauthorized changes. Only the **REPORT** and **HELP** buttons function when in "System" lock out.
- ◇ Auto Change-Over Mode: automatically changes between heating and cooling as indoor temperature requires.
- ◇ Indoor Air Quality Fan Run Time: fan runs each hour for a programmed number of minutes.

## Miscellaneous

- ◇ Silent Instructions: option to turn off audio when setting up Day/Time and Programmable Operation
- ◇ Temperature Setting Audio: option for audio play back with each degree change when the **UP** or **DOWN** keys are pressed
- ◇ Battery Powered (4 "AA" Alkaline)
- ◇ Fahrenheit (F) or Celsius (C) Operation (range 40° F / 4° C to 90° F / 32° C)
- ◇ Freeze Protection: automatically turns on heat if indoor temperature falls below 40° F / 4° C

## DISPLAY SCREEN



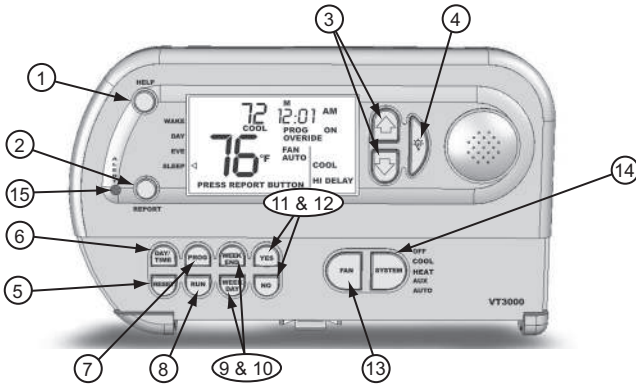
*Note: Above graphic shows all display characters illuminated. During normal operation only the actual operating characters are illuminated.*

1. Large two digits: Indoor Temperature
2. Smaller two digits: (above #1) Temperature Settings for **HEAT** and **COOL**
3. Arrows (►): point to the programmable operation time periods (WAKE, DAY, EVE and SLEEP)
4. **PROG ON**: in programmable operation
5. **PROG OFF**: in manual (conventional) operation
6. **OVERRIDE**: temporary override of programmable operation (*stays at manual temperature setting until next programmed time period occurs*)
7. **°F** or **°C**: degrees Fahrenheit or Celsius temperature
8. **PRESS REPORT BUTTON**: press this case button to hear the Indoor Temperature, Temperature Set Point and specific Alert Condition
9. System Settings (*all below appear right of the vertical line, in right corner; except **OFF** appears at Temperature Setting location*).

Press the **SYSTEM** button (located inside panel door) for the following:

- A. **OFF**: System is turned off ( "**OFF**" appears where Temperature Set Point normally appears)
- B. **COOL**: Set for Air Conditioning operation
- C. **HEAT**: Set for Heating operation
- D. **AUTO**: Set for Auto Change-Over operation
- E. **AUX**: (only appears on Heat Pump Systems): Secondary or Emergency Heat running
10. **HI DELAY**: time delay before running 2<sup>nd</sup> Stage of Heating or Cooling
11. **HI**: System running in 2<sup>nd</sup> Stage Heating / Cooling
12. **HEAT** or **COOL** appears below Temperature Set Point:
  - A. **HEAT**: Heating is running
  - B. **COOL**: Air Conditioning is running
13. **FAN** (*appears left of the vertical line with **AUTO**, **ON** or **IAQ***)
  - A. **FAN AUTO**: Fan runs only when heating or air conditioning is running.
  - B. **FAN ON**: Fan runs all the time
  - C. **FAN IAQ**: Fan runs the programmed number or minutes every hour on the hour for 12 or 24 hours. Used for indoor air quality circulation.
14. Day of Week: **M, T, W, Th, F, Sa, Su** (*appears at top right of display*)
15. Time of Day: **AM / PM** (*appears below Day of Week*)
16. Programmable operation time period (arrow points to active period)

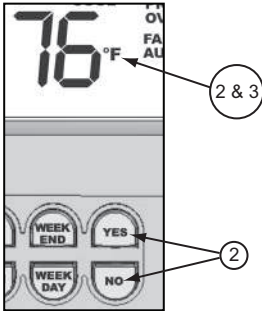
## CASE BUTTONS / ALERT LIGHT



1. **HELP:** press to hear Service Company's name and phone number (also appears on display screen).
2. **REPORT:** briefly press to hear Indoor Temperature, Temperature Setting and (if present) any Alert Condition.  
*Note: To hear a demonstration play back of all Alert audio messages, press and continue to hold down the **REPORT** button.*
3. ▲ (Up) and ▼ (Down): change Temperature and other Settings
4. ⚡ (Light): briefly press to illuminate display screen backlight  
*Note: buttons 5 through 14 (below) are located inside the panel door*
5. **RESET:** briefly press to escape Programmable Operation Set Up without making any changes
6. **DAY/TIME:** press to set up day and time
7. **PROG:** press to turn Programmable Operation On or Off (**PROG ON** or **PROG OFF** appears on display screen)
8. **RUN:** press to accept any changes (operates like the "Enter" key on a computer)
9. **WEEKEND:** press to set up Sat and Sun programmable operation settings
10. **WEEKDAY:** press to set up Mon through Fri programmable operation settings
11. **YES:** press to accept operation
12. **NO:** press to decline operation
13. **FAN:** press to run in **AUTO**, **ON** or **IAQ** Fan modes
14. **SYSTEM:** press to run in **HEAT**, **COOL**, **AUTO** (Change Over) or **AUX** (all appear lower right corner, right of the vertical line)  
*Note: **AUX** is secondary / emergency heat and appears only on Heat Pump systems.*
15. **ALERT LIGHT:** Flashes if an alert condition exists (press **REPORT** button to hear alert explanation)

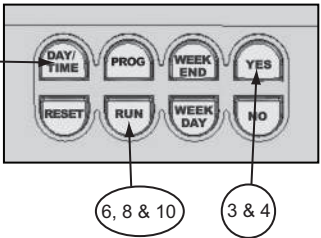
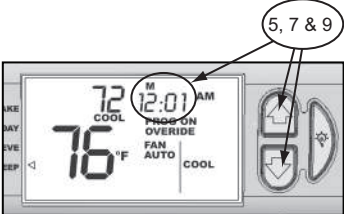
**Changing to Fahrenheit (F) or Celsius (C)**

- 1. Pull down the panel door
- 2. Press the **YES** and **NO** buttons together until temperature display changes from °F to °C
- 3. Repeat to change °C back to °F.



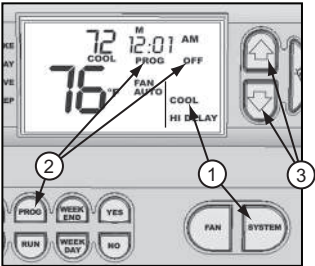
**Setting Day / Time**

- 1. Pull down the panel door
- 2. Press the **DAY/TIME** button
- 3. Press the **YES** button when asked if you want to change the Day or Time settings.
- 4. Press the **YES** button when asked if you want voice instructions (optional).
- 5. Press the ▲ (Up) or ▼ (Down) keys to change Minutes.
- 6. Press **RUN** to accept.
- 7. Press the ▲ (Up) or ▼ (Down) keys to change Hours. Be sure to correctly set **AM** or **PM**.
- 8. Press **RUN** to accept.
- 9. Press the ▲ (Up) or ▼ (Down) keys to change Day.
- 10. Press **RUN** to accept
- 11. Audio will play "Program Complete".



**SYSTEM OPERATION**

**Manual Operation**

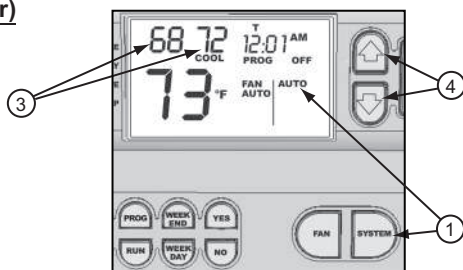


- 1. Press **SYSTEM** button until **HEAT** or **COOL** is displayed
- 2. Press the **PROG** button. Operation is manual when "Program is Off" is heard and "**PROG OFF**" is displayed
- 3. Press the ▲ (Up) and ▼ (Down) key to adjust temperature setting. **Note:** each press adjusts temperature one degree.

## Manual Operation (using Auto Change-Over)

Note: to operate in Auto Change-Over, **AC** must be programmed (see "Quick Set-Up Guide"- Step 3.

If **AUTO** does not appear **AC** was not programmed.

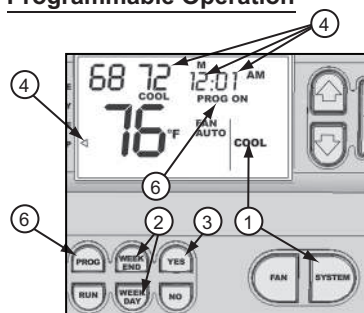


1. Press the **SYSTEM** button until **AUTO** is displayed (lower right corner).
2. Follow the same steps as "Manual Operation" (see previous section)
3. **HEAT** and **COOL** Set Point Temperatures will appear on display (**HEAT** is left of **COOL**)
4. Press the ▲ (Up) or ▼ (Down) Key to adjust **HEAT** and **COOL** set point temperatures. They will move in tandem together maintaining the "dead band" range (see Notes below).

### Notes:

- ◇ When adjusting temperature settings in **AUTO** mode, **HEAT** and **COOL** can not be set closer than the programmed "dead band" degrees (3°, 4°, 5°, 6°, 7°, 8° or 9° F).
- ◇ **HEAT** set point temperature can not be set higher than **COOL** set point temperature

## Programmable Operation



1. Press **SYSTEM** button until **HEAT**, **COOL** or **OFF** is displayed
2. Press the **WEEKDAY** button to program **M T W Thu Fri**  
Press the **WEEKEND** button to program **Sa Su**
3. Press the **YES** button when asked if you want voice instructions (optional).
4. The arrow (▶) will point to the **WAKE** time period to be programmed.

Follow the voice instructions to set **WAKE** time period. You'll be asked to program, in this order:

- ◇ **MINUTES** (flashing): press the ▲ (Up) and ▼ (Down) Key until at desired minutes setting and then press **RUN** to accept.
- ◇ **HOURS AM or PM** (flashing): press the ▲ (Up) and ▼ (Down) Key until at desired hours setting and then press **RUN** to accept. Be sure correct **AM** or **PM** is selected.
- ◇ **HEAT** Set Point Temperature (icon flashing at top of screen): press the ▲ (Up) and ▼ (Down) Key until at desired **HEAT** Set Point Temperature then press **RUN** to accept.
- ◇ **COOL** Set Point Temperature (icon flashing below two digits at top of screen): press the ▲ (Up) and ▼ (Down) Key until at desired **COOL** Set Point Temperature then press **RUN** to accept

5. Programmable Operation set up is completed when you hear, "Program completed".

The following table shows the factory default settings. Write down any custom settings for future reference.

WEEKDAY	TIME	DEFAULT SETTINGS		CUSTOM SETTINGS		
		HEAT F/C	COOL F/C	TIME	HEAT F/C	COOL F/C
WAKE	6 AM	70/21	78/26			
DAY	8 AM	62/17	85/29			
EVE	6 PM	70/21	78/26			
SLEEP	10 PM	62/17	85/29			
WEEKEND	TIME	DEFAULT SETTINGS		CUSTOM SETTINGS		
		HEAT F/C	COOL F/C	TIME	HEAT F/C	COOL F/C
WAKE	6 AM	70/21	78/26			
DAY	8 AM	62/17	85/29			
EVE	6 PM	70/21	78/26			
SLEEP	10 PM	62/17	85/29			

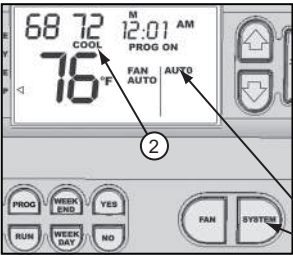
6. Press the **PROG** button. When you hear “Program is ON” and see “**PROG ON**” on the screen, your thermostat will automatically change temperature settings four times each weekday (M-F) and each weekend (Sat & Sun).

Notes:

- ◇ To review or skip each time period press the **NO** button at the beginning (when minutes are “blinking”) to quickly advance to the next time period.
- ◇ Programming setup can be discontinued at anytime by briefly pressing the **RESET** button. This voids any changes entered and your original program settings remain the same.
- ◇ Remember to program both **WEEKDAY** and **WEEKEND**

**Programmable Operation (using Auto Change-Over)**

Note: to operate in Auto Change-Over, **AC** must be programmed (see page 19, “Quick Set-Up Guide”- Step 3). If **AUTO** does not appear **AC** was not programmed.

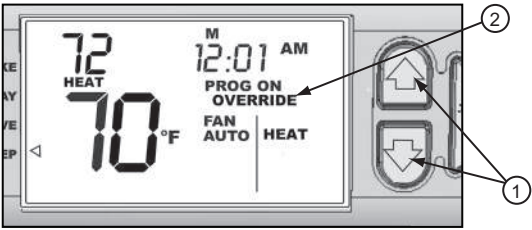


1. Press the **SYSTEM** button until **AUTO** is displayed (lower right corner).
2. **HEAT** and **COOL** Set Point Temperatures will appear on display (**HEAT** is left of **COOL**)
3. Follow the same steps as “Programmable Operation” (see previous section)

Notes:

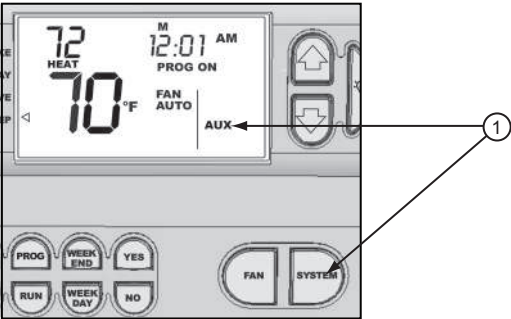
- ◇ When adjusting temperature settings in **AUTO** mode, **HEAT** and **COOL** can not be set closer than the programmed “dead band” degrees (3°, 4°, 5°, 6°, 7°, 8° or 9° F).
- ◇ **HEAT** set point temperature can not be set higher than **COOL** set point temperature

Temporary Program Override



1. Press the ▲ (Up) or ▼ (Down) button to temporarily override the programmed temperature setting.
2. “**OVERVERRIDE**” will be displayed and the system will run at the override temperature setting until next time period. Operation will then revert to the programmed temperature setting.  
*Note: the override temperature can be cancelled at anytime by pressing the **RUN** button.*
3. If set to **AUTO** (Auto Change-Over mode) the **HEAT** and **COOL** temperature setting will move together one degree with each press of the ▲ (Up) or ▼ (Down) button.

Activating Emergency Heat (Heat Pump Systems Only)



Should something go wrong with your Heat Pump, such as a broken fan blade, you can shut it down and operate on only Auxiliary (Emergency) Heat until service is available.

1. Press the **SYSTEM** button until only the **AUX** icon appears to turn on Emergency Heat. This shuts down the heat pump and only the Auxiliary Heat (Gas or Electric furnace) runs.
2. To turn off Emergency Heat press the **SYSTEM** button until the **AUTO** or **HEAT** icon is displayed.

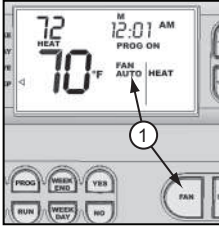
Note:

- ◇ When **AUX** appears with **HEAT** icon, operation is normal.
- ◇ When **AUX** appears without **HEAT** icon, operation is Emergency Heat.



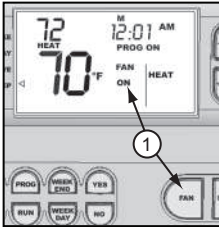
## Fan Operation

The **FAN** can operate in three modes (**AUTO**, **ON** and **IAQ**) as follow. To set each, pull down the panel door then:



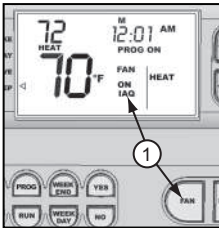
### AUTO

1. Press the **FAN** button until **AUTO** is displayed
2. Fan runs only when the heating or cooling is operating (**ON** will also appear on display while running).



### ON

1. Press the **FAN** button until **ON** is displayed
2. Fan runs continuously



### IAQ (Fan Run Time)

Note: To run **FAN IAQ**, **FH** must be programmed (see “Quick Set-Up Guide”- Step 3). If **IAQ** does not appear **FH** was not programmed.

1. Press the **FAN** button until **IAQ** and **FAN** are displayed
2. Fan runs for the programmed number of minutes each hour (on the hour).

Note: Fan also runs when heating or cooling is operating (**ON** will also appear on display while running).

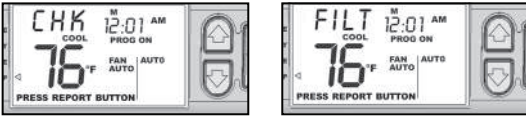
## Alert Messages

When an Alert Condition occurs:

- ◇ The red light on the case flashes
- ◇ The specific Alert Condition icon (**CHK FILT**, **CALL FOR SERV**, **LO BAT** or **UV LGHT**) alternates with the Set Point Temperature
- ◇ **PRESS REPORT BUTTON** messages appear on the display screen.
- ◇ When the **REPORT** button is pressed an audio message will advise you the specific Alert Condition
- ◇ If Low Battery Alert, a low battery audio message also plays when the ▲ (Up) and ▼ (Down) buttons are pressed

**Note:** Four types of Alert Conditions can appear as follows:

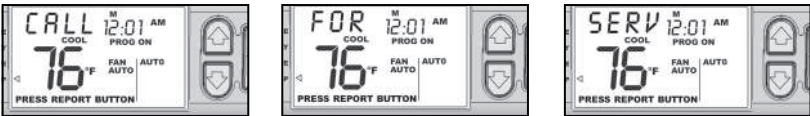
**1. Check Filter (“CHK FILT” displays)**



Appears when it's time to clean or replace the air filter.

Press **REPORT** button or press **YES** button for 6 seconds. Doing either one clears the alert and resets accumulated time to zero. But only when **YES** is pressed will **FP 0** briefly appear confirming accumulated time is reset to zero

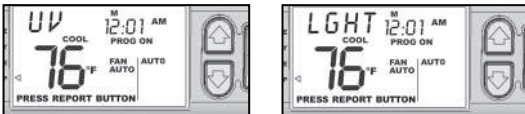
**2. Call For Service (“CALL FOR SERV” displays)**



Appears when it's time for routine system service.

Press **NO** button for 6 seconds to clear alert and reset accumulated time to zero. **SP 0** will briefly appear confirming accumulated time is reset to zero.

**3. UV Light (“UV LGHT” displays)**



Appears when it's time to replace the UV Light bulb (for air purification).

Press **YES** button for 20 seconds to clear alert and reset accumulated time to zero. **UV 0** will briefly appear confirming accumulated time is reset to zero.

Also resets Check Filter to **FP 0**.

**4. Low Batteries (LOW bATT)**

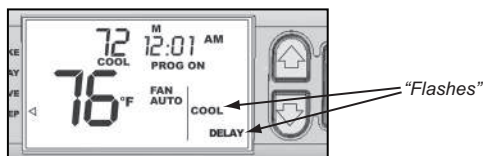


Appears when battery power is running low and it's time they be replaced. Remove the front plate and replace with four new AA alkaline batteries.

**Note: How to Open the Case to Replace the Batteries:**

- ◇ Place your thumb on the clasp located in the middle of the case's bottom edge.
- ◇ Press up (towards ceiling) on the clasp and then lift the lower part of the front plate upward until it separates from sub base.
- ◇ The batteries are located on the front plate's circuit board.
- ◇ To re-attach, align the pins at top of sub base to the holes at the top of the front plate.
- ◇ Swing the front plate down and snap into place.

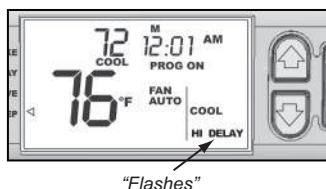
**Cool Delay / Heat Delay Icons Flashing (Compressor Short Cycle Protection)**



**COOL & DELAY** "flashes" when cooling is turned off and back on in less than 5 minutes. Cooling is delayed to prevent compressor damage.

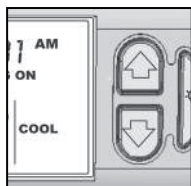
**HEAT & DELAY** (Heat Pump Systems Only) "flashes" when heating is turned off and back on in less than 5 minutes. Heating is delayed to prevent compressor damage.

**2<sup>nd</sup> Stage Heating or Cooling Delay**



The VT3000 operates in 1<sup>st</sup> Stage for a delay time before advancing to 2<sup>nd</sup> Stage. During this delay time, the **HI** and **DELAY** icons will "flash" if the indoor temperature requires increased heating or cooling from 2<sup>nd</sup> Stage.

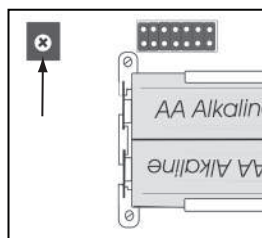
**Activate Audio when Changing Set Point Temperature**



When activated, audio will play each degree change while adjusting the Set Point Temperature with the **UP** or **DOWN** keys.

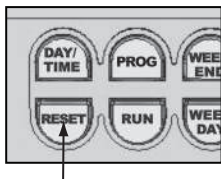
1. To turn on audio, press and hold the ▲ (Up) button for 8 seconds (until audio plays "One")
2. To turn off audio, press and hold the ▼ (Down) button for 8 seconds (until audio plays "Off")

**Audio Volume Control**



To adjust audio volume remove the front plate from wall mounted sub base (see *Low Batteries* section for removal instructions). In the upper left hand corner of the circuit board is a small Phillips head screw (inset in a blue plastic box). To increase volume, turn screw counterclockwise. To decrease volume, turn screw clockwise.

## Reset Key (Escape Program Mode)



Press the **RESET** button if you wish to quit while making changes to Program Operation Settings (WAKE, DAY, EVE and SLEEP). You will exit the programming set up without making any changes to your original settings. Pressing **RESET** also allows quick exit from *Operations Set-Up* and *Review*.

## Troubleshooting Information

Problem	Possible Solution
Display's blank, no audio	Check batteries. If bad, replace with new 4 AA Alkaline
Display has incorrect characters and/ or thermostat operates erratically	Check batteries. If bad, replace with new 4 AA Alkaline. If still operating erratically, restore the default factory settings. See " <i>Installer's Guide</i> " "Reset Key (Full Factory Reset to Restore Default Settings)" on pg 19
Display on, won't operate	Press <b>FAN</b> button until screen displays <b>FAN ON</b> . If no blower, check system for 24V power.
Display won't light up	Batteries are low. Replace with 4 AA Alkaline
Can't open case to replace batteries	See Low Batteries ( <b>LO BAT</b> ) section in " <i>User's Guide</i> ", pages 10 & 11
System won't turn on	Check wiring to thermostat. See wiring diagrams in " <i>Installer's Guide</i> ", pages 16 & 17
Fan runs occasionally when system is off	Fan is set to IAQ Fan run time for air quality. To disengage press <b>FAN</b> button until <b>IAQ</b> icon (under <b>FAN</b> icon) disappears.
Incorrect Indoor Temperature	Allow 30-40 minutes for thermostat to stabilize to room temperature. If still incorrect, calibrate temperature. See "Calibrate Indoor Temperature" in " <i>Installers Guide</i> ", page 17
Incorrect programmed times and temperature settings	Press <b>WEEKDAY</b> button to review each time period's setting. Press <b>NO</b> button when minutes flash, to quickly advance to next time period. Then press <b>WEEKEND</b> and repeat.
Doesn't follow programmed settings	Check if program is off ( <b>PROG OFF</b> displays). Check that <b>HEAT</b> , <b>COOL</b> and (if used) <b>AUTO</b> have been correctly programmed. Check if time settings are correct (especially <b>AM</b> and <b>PM</b> ).
Can't set to programmable operation	If audio plays "Program is Off" when the <b>PROG</b> button is pressed, programmable operation is locked off. To unlock see " <b>PL</b> " (Program Lock) in " <i>Installers Guide</i> " Step 3, page 18
Can't change temperature setting / no buttons work	If audio plays "Off" when any button is pressed, thermostat system operation is locked off. See " <b>SL</b> " (System Lock) in " <i>Installers Guide</i> "- Step 3 page 18

Cooling won't come on	<p>Alternatives:</p> <ol style="list-style-type: none"> <li>1) If <b>COOL</b> and <b>DELAY</b> icons are displayed, cooling will come on in about 4 minutes.</li> <li>2) Lower the temperature setting below indoor temperature. You should see the <b>COOL</b> icon appear below temperature setting and hear the relay "click".</li> <li>3) Check thermostat wiring and system for 24V power</li> <li>4) Press the <b>HELP</b> button for service information</li> </ol>
Heating won't come on	<p>Alternatives:</p> <ol style="list-style-type: none"> <li>1) If <b>HEAT</b> and <b>DELAY</b> icons are displayed, heating will come on in about 4 minutes</li> <li>2) Raise the temperature setting above indoor temperature. You should see the <b>HEAT</b> icon appear below temperature setting and hear the relay "click".</li> <li>3) Check thermostat wiring and system for 24V power</li> <li>4) Press the <b>HELP</b> button for service information</li> </ol>

#### Technical / Service Assistance

For assistance press the **HELP** button to hear how to contact your service company. Their phone number will also appear on the display screen.

#### Manufacturers Warranty

##### **One Year Limited Warranty**

Smartway Solutions, Inc. warrants the original buyer of each new Smartway Solutions thermostat to be free from defects in material and workmanship under normal use for a period of one year from date of purchase. This warranty and our liability does not apply to batteries or damage caused by incorrect use or installation that is not in accord with Smartway Solutions instructions.

Smartway Solutions, Inc. agrees to repair or replace at its option any thermostat covered by this warranty provided it is returned within one year of purchase with copy of purchase receipt. Smartway Solutions, Inc. is not responsible for removal and reinstallation of the thermostat.

Repair or replacement is the sole remedy of the buyer. Smartway Solutions, Inc. is not liable for any incidental or consequential damages for breach of any liability, merchantability or fitness for a particular purpose, is limited to the duration of this warranty.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.



Smartway Solutions, Inc.  
1309 Dealers Avenue  
New Orleans, LA 70123  
[www.smartwaysolutions.com](http://www.smartwaysolutions.com)

Talking Thermostat™  
Model VT3000

Quick Set-Up & Installer's Guide



**Cautions!**

- ◇ To prevent electrical shock and/or equipment damage, turn off power at the main service panel by removing the fuse or switching circuit breaker to OFF position until removal of existing and installation of the Talking Thermostat is complete.
- ◇ This thermostat must be installed in conformance with all local and national building and electrical codes.
- ◇ Use only on single transformer systems.

**Step 1: Mount Sub Base & Connect Wiring**

- ◇ Mount sub base to wall using enclosed screws and anchors.
- ◇ Attach system wires to sub base terminals according to the system manufacturer's diagrams (Talking Thermostat suggested wiring diagrams on pages 16 & 17).

**! Note: Default Settings**

- 1 DIP Switch default settings: OFF, OFF, OFF, OFF (Conventional, Gas, 1 Stage Heat, 1 Stage Cool)**
- 2 Operation Settings, following default set OFF: UV Light Service Alert (UV) IAQ Fan Run Time (FH) and Auto Change-Over (AC)**

**Step 2: Set DIP Switches**

- ◇ Determine the type of heating and cooling system
- ◇ Locate DIP switches on circuit board immediately below the battery bracket, left of the RJ45 jack
- ◇ Set DIP switches for your type system according to chart (chart is shown right)

**Note:** for thermostat to operate correctly the DIP switches must be set to match the system

DIP Switch Selections			
HEAT PUMP	ELEC HTG	2 STG HEAT	2 STG COOL
ON	ON	ON	ON
SW 1	SW 2	SW 3	SW 4
OFF	OFF	OFF	OFF
CONV SYS	GAS HTG	1 STG HEAT	1 STG COOL
<b>! After DIP changes, must press RESET until back light appears</b>			

- ◇ For Heat Pump / Dual Fuel systems, the chart below might more clearly explain those DIP Switch settings:

**By Type of Heat Pump System - DIP Switch Settings**

	DIP Switch # / Position			
	# 1	# 2	# 3	# 4
All Heat Pump Systems	ON			
Dual Fuel Heat Pumps		OFF		
Electric Aux Heat Pumps		ON		
Heat Pump 1 Stage Compressor			OFF	OFF
Heat Pump 2 Stage Compressor			ON	ON

### Step 3: Program "Operation & Alert Settings"

- ◇ Press the **NO** and then **WEEKDAY** buttons together to change "Operation & Alert Settings". Each setting appears at the Temperature Set Point location
- ◇ Press the **UP** or **DOWN** button to change each setting
- ◇ Press the **RUN** button to accept each setting and advance to the next.

**Operation and Alerts Settings appear in the following order:**

*Tip! Fill in desired **User's Settings** before programming.*

Operation or Alert	Description	Factory Default	Options	User's Setting	Comments
<b>FP</b>	Filter Period Alert	1	0 to 24 months		0 (zero) disables
<b>SP</b>	(Call for) Service Period Alert	6	1 to 24 months		
<b>UV</b>	UV Light Service Period Alert	0	0 to 24 months		0 (zero) disables
<b>CR</b>	Cycle Rate	1	1, 2, or 3		1 = minimum (tightest) Cycle Rate 3 = maximum (widest) Cycle Rate
<b>2N</b>	2 <sup>nd</sup> Stage Differential*  *Only appears in 2 Stages of <b>HEAT, COOL</b> or HP Operation	5	1, 2, 3, 4, 5 or 6		<div> <div> 1 = .5°F / .025°C ON  2 = 1.0°F / .5°C ON  3 = 1.5°F / .75°C ON  4 = 2°F / 1°C ON </div> } -5°F / .025°C) OFF </div> <div> 5 = 1.0°F / .5°C ON  6 = 2.0°F / 1°C ON </div> } Runs until 1 <sup>st</sup> Stage Satisfied
<b>FH</b>	IAQ Fan Hours	0	0, 12 or 24 hours		0 (zero) disables (runs fan for 12 or 24 hours for clean air)
<b>FM</b>	Fan Minutes	15	15, 20, 25 or 30 minutes		Appears only when FH set to 12 or 24 hours (# minutes per hour fan runs for clean air)
<b>FS</b>	Fan Start Time	7:00 AM	Any hour		Appears only when FH set to 12 hours. Allows the 12 hour start time to be set.
<b>AC</b>	Auto Change-Over ("dead band")	0	3 to 9 degrees		0 (zero) disables (AUTO won't appear) Minimum # degrees between HEAT & COOL temperature set points
<b>Sd</b>	Stage delay	8	0-10 minutes		Time delay before running 2 <sup>nd</sup> Stage
<b>RV</b>	Reversing Valve	O	O or B		Heat Pump Systems: Set to "O" for fail safe heat. Set to "B" for fail safe cool. Conventional Systems: Optional Damper Control ("O" energizes in COOL and "B" energizes in HEAT).
<b>PL</b>	Programmable (Operation) Lock Out	N	Y or N		Y locks out programmable operation (audio plays "Program Off")
<b>SL</b>	System Lock Out	N	Y or N		Y locks out all operations except <b>HELP</b> and <b>REPORT</b> buttons (audio plays "Off")

### Step 4: Review Settings

*It's important to review Settings to confirm they're correct.*

- ◇ Press **NO** and then **WEEKEND** buttons together to view the Type of System Setting (set up by DIP Switches).
- ◇ Press the **DOWN** button to advance through each Operation & Alert Setting
- ◇ Press the **UP** button to return to a previous Setting
- ◇ For **FP** (Filter Alert), **SP** (Service Period) and the **UV** (UV Light Alert) the numbers displayed are elapsed months since each was reset to zero.

Examples:

FP 0 = less than one month since reset

SP 5 = 5 months since reset

UV15 = 15 months since reset

### Step 5: Test Thermostat

- ◇ Select **HEAT** or **COOL**
- ◇ Press the **UP** or **DOWN** buttons (raises or lower Set Point Temperature) to bring on heating or cooling.
- ◇ **HEAT** or **COOL** icon will appear below the set point temperature when system is running

### VT3000 Specifications

#### ◇ Heating & Cooling System Compatibility

Single Stage Heat / Single Stage Cool (1H / 1C)

Single Stage Heat / Two Stage Cool (1H / 2C)

Two Stage Heat / Single Stage Cool (2H / 1C)

Two Stage Heat / Two Stage Cool (2H / 2C)

Three Stage Heat / Two Stage Cool (3H / 2C)

*Note: Operates on Heat Pump/Dual Fuel Systems with 1 or 2 Stage Compressors & Auxiliary Heat (2H/2C and 3H/2C)*

#### ◇ Technical Features

5 Day /2 Day Programmable Operation

Optional Manual (Conventional) Operation

Single Transformer Systems

DIP Switch Settings for Conventional or Heat Pump Systems

Battery Powered (4 "AA" Alkaline - Do not connect common)

Dual Fuel / Hybrid System compatible (see "2<sup>nd</sup> Stage Differential Setting Table")

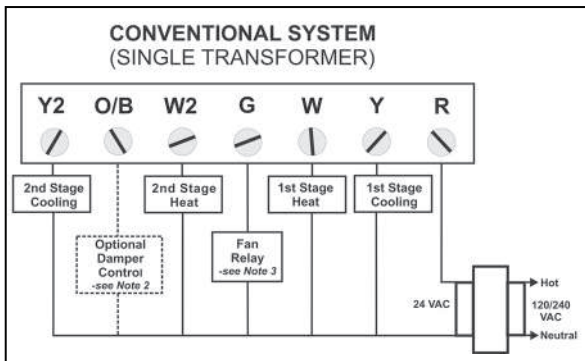
Adjustable IAQ Fan Run Time

Optional Auto Change-Over Operation

#### ◇ Wiring Diagrams



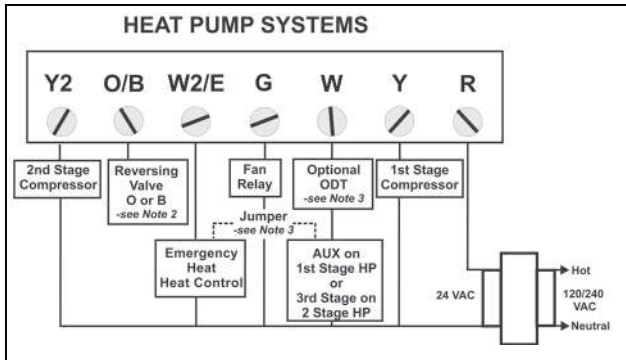
**CAUTION! Do not connect Common wire to terminal block! Doing so damages the thermostat! Cap Common wire with a wire nut.**



#### Conventional Systems Notes:

1. Common wire not required – battery operated.
2. O/B Reversing Valve terminal can be used to control a single damper. "O" is active when system is set to COOL and "B" is active when set to HEAT. O or B are selected during "Operations & Alert Settings" programming (see **RV** in **Step 3**, table, "Quick Set- Up Guide", page 15)
3. If using Electric Heat without an indoor blower control, set DIP Switch # 2 to "ON" position (see Step 2 in "Quick Set- Up Guide", page 14).





### Heat Pump Systems Notes:

1. Common wire not required – battery operated.
2. O/B Reversing Valve terminal can be changed during “Operations & Alert Settings” programming (see **RV** in **Step 3**, table, “Quick Set- Up Guide”, page 15). “O” (Fail Safe Heat) is active when system is set to COOL and “B” is active when set to HEAT (Fail Safe Cool).
3. If using an outdoor thermostat (ODT) to prevent energizing auxiliary heat, connect a jumper between W2/E and W at air handling unit. This will bypass the ODT in AUX/Emergency heat.
4. In Dual Fuel Systems, a call for AUX (W), Y and Y2 open, and the system operates on AUX (W) until first stage is satisfied. W2/E also closes to insure the ODT is bypassed.

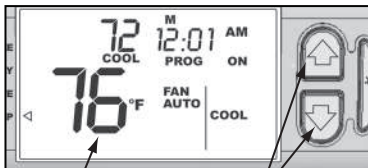
## Changing Operation & Alert Settings

- ◇ Press the **NO** and then **WEEKDAY** buttons together.
- ◇ Each setting appears at the Temperature Set Point location.
- ◇ Pressing the **UP** or **DOWN** button to change each Setting.
- ◇ Press the **RUN** button to accept each Setting and advance to the next.

## Reviewing All Operation & Alert Settings

- ◇ Press the **NO** and **WEEKEND** buttons together.
- ◇ Type of System appears at the Temperature Set Point location.
- ◇ Press the **DOWN** button to advance. Press **UP** button to go back.
- ◇ For Alert Settings: Filter Period, (Call for) Service Period and UV Light Service Period, review shows accumulated months. This is a useful way to see how long it's been since filters were checked, system was serviced and UV light bulb changed.
- ◇ Press **RESET** to quickly exit after reviewing accumulated months.

### Calibrate Indoor Temperature

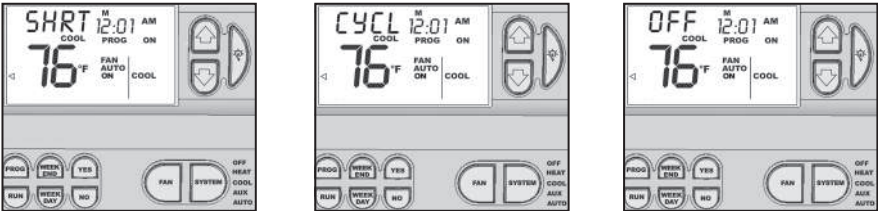


- 1 Press the **UP** and **DOWN** keys together and hold until Indoor Temperature starts to flash.
- 2 Release.
- 3 Press the **UP** or **DOWN** key to raise or lower Indoor Temperature to desired setting.
- 4 Press **RUN** when done.

“Flashes” (1) Press Together

**Note:** Indoor Temperature can be raised or lowered a maximum of 4° F / 2° C from the original Indoor Temperature. Therefore, the maximum calibration range is 8° F / 4° C.

**Disable Compressor Short Cycle Protection**

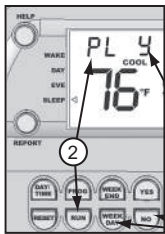


**Caution!** Disabling Compressor Short Cycle Protection can damage the compressor.

Press the **NO** and **LIGHT** buttons together until **SHRT CYCL OFF** appears at the Set Point Temperature location. Compressor lock out is disabled for 10 minutes.

Note: Pressing **NO** and **LIGHT** also bypasses 2<sup>nd</sup> Stage delay time.

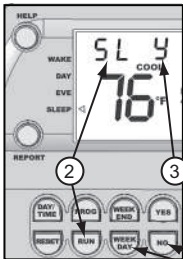
**Locking Out Programmable Operation**



- 1 Press **NO** and then **WEEKDAY** buttons together to enter “Operation & Alert Settings”
- 2 Press the **RUN** button until **PL** (Program Lockout) is displayed.
- 3 Press the **UP** or **DOWN** button until **Y** appears to the right of **PL**.
- 4 To unlock, press until **N** appears.

Note: When locked, the thermostat will not run in Programmable Operation. The audio will play “Program is Off” anytime the **PROG**, **WEEKEND** or **WEEKDAY** buttons are pressed.

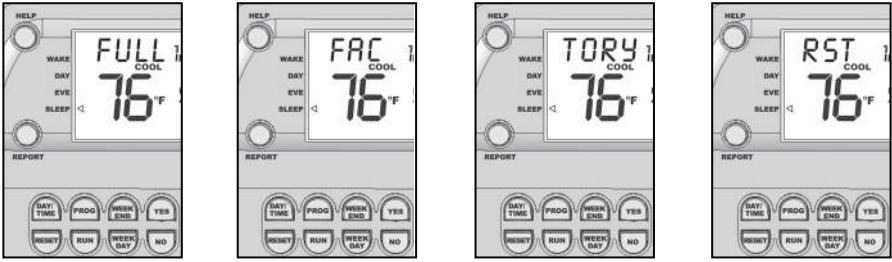
**Locking Out All System Operations**



- 1 Press **NO** and then **WEEKDAY** buttons together to enter “Operation & Alert Settings”
- 2 Press the **RUN** button until **SL** (System Lockout) is displayed.
- 3 Press the **UP** or **DOWN** button until **Y** appears to the right of **SL**.
- 4 To unlock, press until **N** appears.

Note: when locked, buttons will not operate and the audio will play “Off” when any button is pressed (except **REPORT** and **HELP** buttons)

Reset Key ("Full Factory Reset" to Restore Default Settings)




Static discharge can occasionally cause faulty thermostat operation or lock up. To correct:

- ◇ Press the **NO** and **RESET** buttons together until the red LED on the case lights up and the word **FULL** appears at the Temperature Set Point location.
- ◇ Release the buttons
- ◇ The display screen completely disappears and then reappears (briefly displaying all characters).
- ◇ The screen then reverts to a normal display, except the Indoor Temperature will flash for 2 minutes.
- ◇ Optional: Press the **UP** or **DOWN** key (while flashing) to calibrate Indoor Temperature (maximum adjustment is + or - 4° F / 2° C)
- ◇ Press the **RUN** button to accept the Indoor Temperature.

*Note: After performing a Full Factory Reset all custom Programmable Operation settings revert to default settings and have to be reprogrammed. DIP Switch settings do remain as before.*

Operating Software Version Number

Press the  (Light) button for 7 seconds for audio playback of the software version.

Technical Support

Press the **"HELP"** button to hear how to contact your service company and see their phone number on the display screen. Service company technicians can contact Smartway Solutions, Inc. if advanced technical support is required.

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