

STN701W

Instruction Manual

THERMOSTAT QUICK REFERENCE

Thermostat Applications 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	No
Heat Only Systems	Yes
Heat Only Systems - Floor or Wall Furnace	Yes
Cool Only Systems	Yes
Millivolt Conventional Systems	No
Two Transformer Systems	Yes

Table of Contents

Page

Thermostat Quick Reference	2-4
Installation Tips	5-12
Wiring Diagrams	13-15
Technician Setup	16-17
Programming	18
Specifications	19
Wifi Application Description	20-26

Power Type

Hardwire (Common Wire)

IMPORTANT SAFETY INFORMATION WARNING:

- Always turn off power at the main power source by unscrewing fuse or switching circuit breaker to the off position before installing, removing, cleaning, or servicing thermostat.
- Read all of the information in this manual before installing or programming this thermostat.
- This is a 24V AC low voltage thermostat. Do not install on voltages higher than 30V AC.
- All wiring must conform to local and national building and electrical codes and ordinances.
- Do not short (jumper) across terminals on the gas valve or at the system control to test installation. This will damage the thermostat and void the warranty.

Getting to know your thermostat

① LCD Display

See page 6 for details about this display read out.

② Fan button

Select **ON** or **AUTO**. **ON** will run the fan continuously. **AUTO** will cycle the fan on only when the heating or cooling system is on.

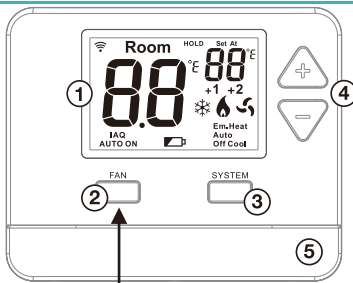
③ System button

Selects the operation mode on your **HEAT** system. Selecting **HEAT** turns on the heat mode. Selecting **COOL** turns on the cool mode. Selecting **OFF** turns both heating and cooling off.

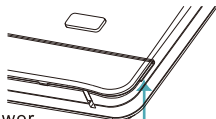
④ Temperature Setpoint Buttons

Press the + or - buttons to select the desired room temperature.

⑤ Easy to change the face door

**Restore factory Settings:**

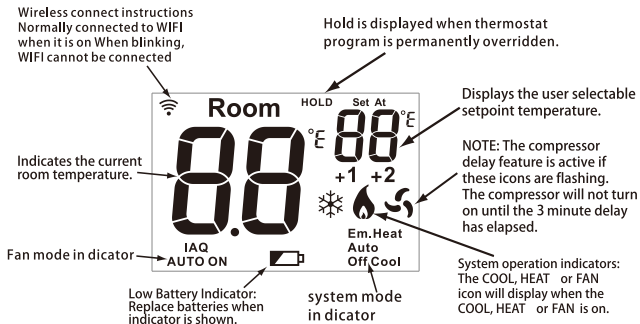
Hold down the FAN key to switch on the 24V power supply. When the display is normal, all Settings of the product will be restored to factory Settings



Use the finger bevel on the lower portion of the thermostat to open the easy access face door.

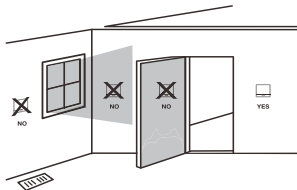
THERMOSTAT QUICK REFERENCE

Getting to know your thermostat



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



Installation Tip

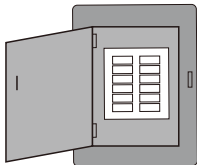
Pick an installation location that is easy for the user to access. The temperature of the location should be representative of the building.

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 TIPS

1 Turn Off the Power of Your Heating/Cooling System



Circuit breaker
box

or



Heating/cooling system
power switch



Caution: Electrical Hazard

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

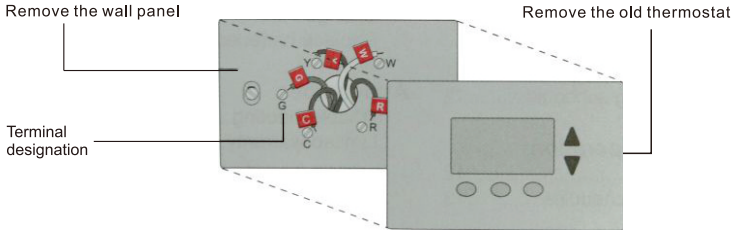


Warning:

All components of the control system and the thermostat installation must conform to Class II circuits per the NEC Code.

2 Remove Old Thermostat -(If Any)

Remove the old thermostat, Remove the old thermostat, Remember the function of the cable or port before disconnecting, and then remove the wall panel



INSTALLATION TIPS

3 Label Wires with Tags

Label the wires using the supplied wire labels as you disconnect them.

Wiring Labels

Apply these wiring labels to each wire with the appropriate terminal designation as you remove it from the existing thermostat.

B	B	Y2	Y2	C	C	E	E	F	F
G	G	H	H	L	L	O	O	P	P
R	R	RC	RC	RH	RH	T	T	U	U
V/VR	V/VR	W	W	W1	W1	W2	W2	W3	W3
X	X	X1	X1	X2	X2	Y	Y	Y1	Y1
AUX	AUX								

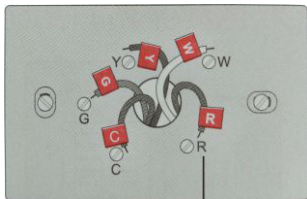
Étiquettes de fils

Lorsque vous retirez les fils des bornes du thermostat existant, collez ces étiquettes sur chaque fil correspondant à la lettre de la borne.

Rótulos para los cables

Coloque estos rótulos, con la designación de las terminales, en cada cable al remover los cables del termostato actual.

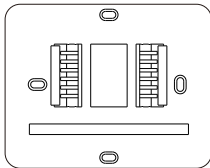
Wire Labels



Terminal designation

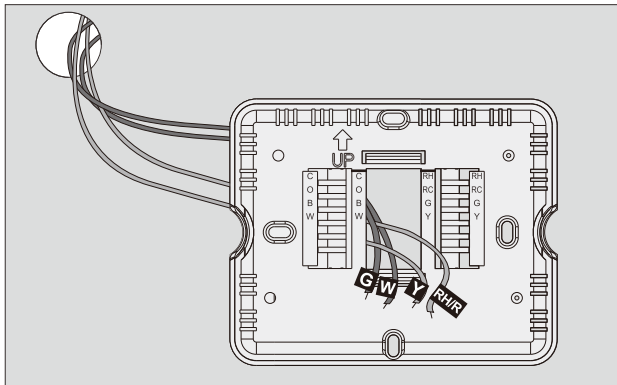
4. Remove the old wall panels

Remove the old wall panels so that the new ones can be installed.



5 Mount New Wallplate

Mount the new wallplate using the included screws and anchors.



Drill 3/16-in. holes for drywall

Drill 3/16-in. holes for plaster

INSTALLATION TIPS

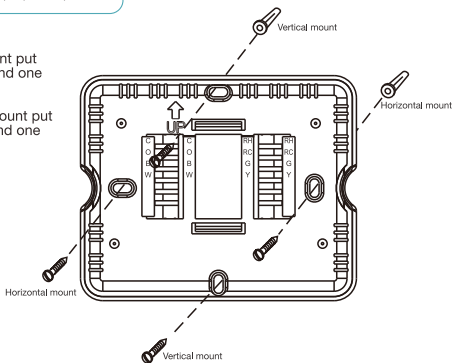


Mercury Notice:

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.

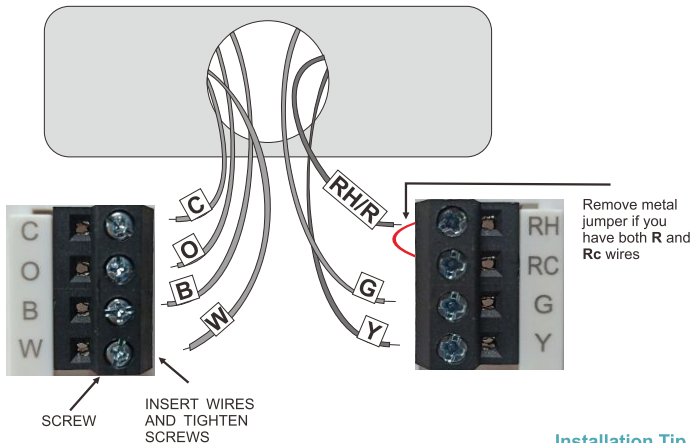
For vertical mount put one screw top and one screw bottom.

For horizontal mount put one screw left and one screw right.



6 Connect Wires

Simply match wire labels to the letters on the thermostat.



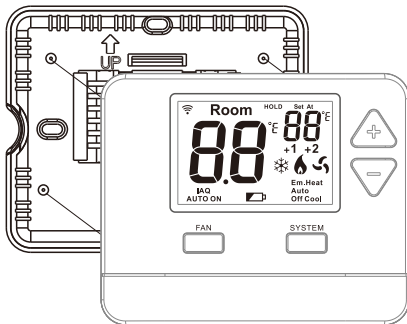
Installation Tip

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.

INSTALLATION TIPS

7 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



Terminal		1 Heat 1 Cool Conventional System	
RC	COOL=RC to Y O	FAN=RC TO G	
RH	24VAC(system power supply)	HEAT=RH TO W B	
C	COMMON 24VAC (system power supply)		
B	REVVALVE HEAT		
O	REVVALVE COOL		
G	FAN RELAY		
W	HEAT RELAY		
Y	COOL RELAY		

Wiring Tips

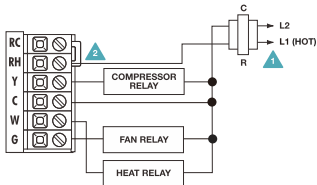
Wire Specifications

Use 18- to 22-gauge thermostat wire. Shielded wire is not required.

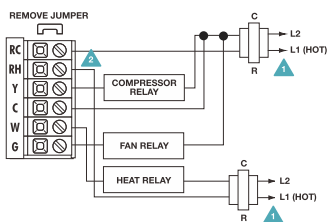
WIRING DIAGRAMS

- 1 Power supply
- 2 Factory-installed jumper. Remove only when installing on 2-transformer systems.
- 3 Use either O or B terminals for changeover valve
- 4 Use a small piece of wire (not supplied) to connect W and Y terminals
- 5 Set fan operation switch to electric

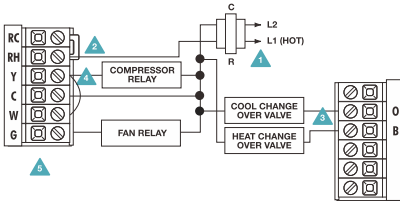
Typical 1H/1C system: 1 transformer



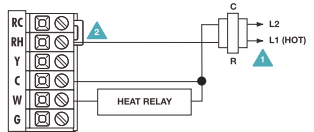
Typical 1H/1C system: 2 transformer



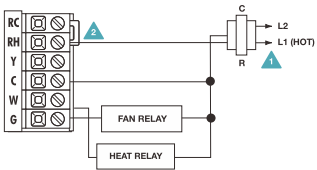
Typical 1H/1C heat pump system



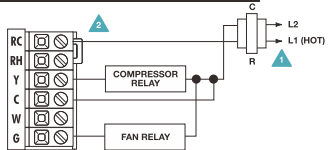
Typical heat-only system



Typical heat-only system with fan



Typical cool-only system



TECHNICIAN SETUP

1. Press + and - at the same time for 3 seconds to enter the technical Settings menu
2. Use the + and - keys to select the desired Settings for each option.
3. Press "FAN" to go to the next menu.
4. To exit the technical Settings menu, press SYSTEM or wait 30 seconds to exit.

Technical setting Steps		LCD Will Show	Adjustment Options	Default
Room Temperature Calibration	This feature allows the installer to change the calibration of the room temperature display. For example, if the thermostat reads 70° and you would like it to read 72° then select +2.	0°F CA	You can adjust the room temperature display to read up to 3° above or below the factory calibrated reading.	0°F
Cooling Swing (SYSTEM COOL)	The swing setting, often called "tcycle rate", "differential" or "anticipation" is adjustable. A smaller swing setting will cause more frequent cycles and a larger swing setting will cause fewer cycles.	0.4°F CO	The cooling swing setting is adjustable from 0.2° to 2°. Foreexample: 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	0.4°F

Technical setting Steps		LCD Will Show	Adjustment Options	Default
Heating Swing (SYSTEMHEAT)	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	03°F HE	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.	03°F
F or C	Select for Fahrenheit temperature read out select C for Celsius read out.	OF	F for Fahrenheit C for Celsius	OF
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.	EL	Use the + or – key to select GAS or ELEC	EL
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.	00 CD	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.	00

PROGRAMMING

Set PROGRAM operation in APP

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

Specifications

The display range of temperature	32°F to 99°F (0°C to 40°C)
The control range of temperature	41°F to 90°F (5°C to 32°C)
Humidity display range	0%-99%
Load rating	1 amp per terminal, 1.5 amp maximum all terminals combined
Display accuracy	± 1°F
Swing (cycle rate or differential)	Heating is adjustable from 0.2°F to 2.0°F Cooling is adjustable from 0.2°F to 2.0°F
Power source	18 to 30 VAC, NEC Class II, 50/60 Hz for hardwire (common wire)
Operating ambient	32° to +105° (0° to +41°C)
Operating humidity	90% non-condensing maximum
Dimensions of thermostat	4.72"W x 3.86"H x 0.98"D
WIFI	Supporting 802.11 B/G/N Standards

WIFI APPLICATION DESCRIPTION

Descarga y registro de la APP



Scan the QR code and download the app for Android and iOS devices, or search for **Smart Life** in the app store



Application Notes

With the **Smart Life** app, your current thermostat can be fully managed. Simple interface, intuitive programming operation, fast response.

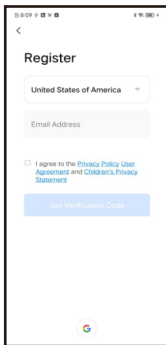
Register account

After downloading, open the **Smart Life** APP. On first use, you must register to obtain credentials for subsequent access.

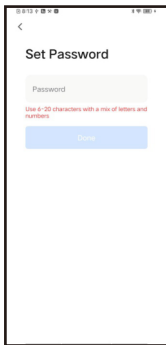
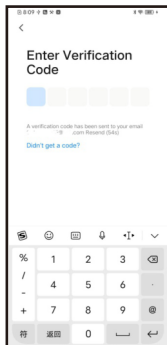
WIFI APPLICATION DESCRIPTION

Descarga y registro de la APP

Press **"Sign Up"** to register a new account
Read the privacy policy and press **"I agree"**
Enter your email address **"Verification Code"**. If you already have Credentials, press **"Login"** Use existing account.



Enter the 6-digit code received via email.
(Please also check your spam box)
Set a password, which must be at least 8 characters long and contain at least 1 letter and 1 number

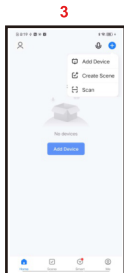


WIFI APPLICATION DESCRIPTION

Device binding

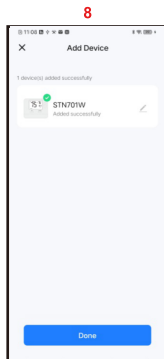
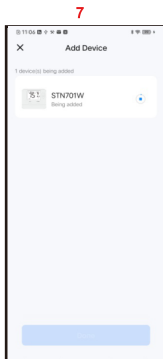
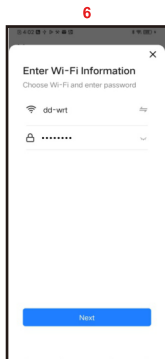
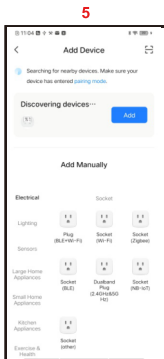
NOTE: Since the app does not report if the Wi-Fi password is incorrect **you must ensure that you enter the correct password**. Most connection problems (provisioning failures) depend on entering the wrong password.

1. Is the device on the main page? **Pic.1**
2. Press and hold the **"SYSTEM"** button for five seconds until **"E2"** (**Pic2**)
3. Press the **"Add Device"** button or the **"+"** button in the upper right corner (**Pic3**)
Or click **"Scan"** to scan the QR code to display the binding steps. (**Pic4**)



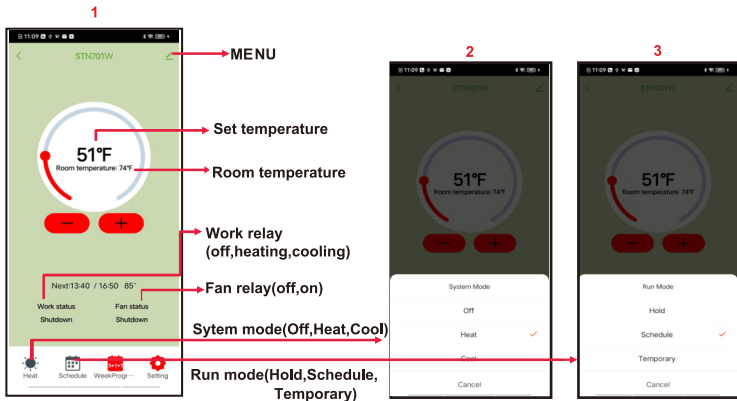
Device binding

4. When the device appears in the search field, press **"Add"** (Pic 5)
5. Select the wifi network and write the password of the same network, then press **"Next"** (Pic 6)
6. The device starts to configure the network (Pic 7)
7. Once the process is complete, click on the "pen" symbol to change the name of the thermostat, or keep the default name and press **"Done"** (Pic 8)



WIFI APPLICATION DESCRIPTION

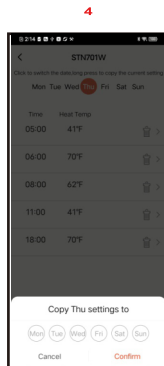
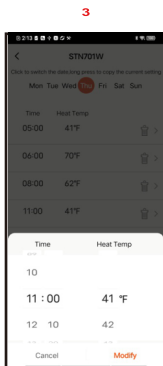
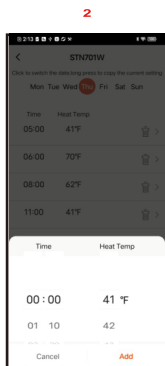
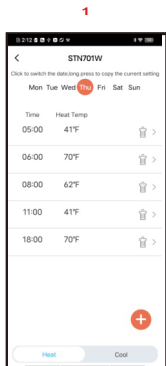
Use the Smart “Smart Life” app



Use the Smart “Smart Life”app

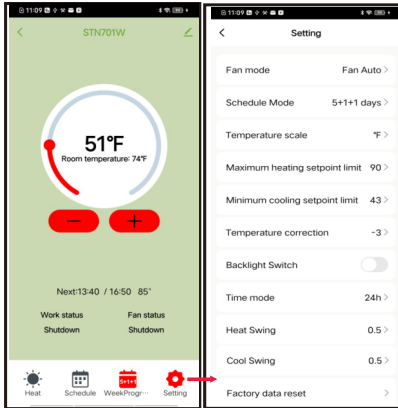
Weekly programming, phase setting

1. You can set 1-6 segments. Please press "+" in the lower right corner to add. The recycle bin on the right side of the list can be deleted. Press and hold for the day of the week to copy the program of the day.



WIFI APPLICATION DESCRIPTION

Settings



1. Fan mode(Fan Auto,Fan On)
2. Schedule mode(7 days, 5+1+1 days, 0 day)
3. Temperature scale(°C °F)
4. Maximum Setpoint limit(41-90)
5. Minimum Setpoint (41-90)
6. Temperature correction(-3°- +3°)
7. Backlight switch(on,off)
8. Time mode (12h,24h)
9. Heat Swing (0.2 - 2)
10. Cool Swing(0.2 - 2)

FCC Warning

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Instruction Manual