IS-ZW-TSTAT-300 Advanced Thermostat Operation Guide

Content

Contact information

For contact information, see www.interlogix.com.

Description

The IS-ZW-TSTAT-300 programmable communicating thermostat operates via a high-quality, easy-to-use touch screen. To program or adjust your thermostat, simply touch your finger firmly to the screen. The screen will automatically light up and you will hear a "beep". The screen will respond differently to different types of touches, so you may want to experiment by touching it different ways, finger, fingernail, etc. Do not use a sharp or metallic device; it will scratch the screen.

**Figure 1: IS-ZW-TSTAT-300**
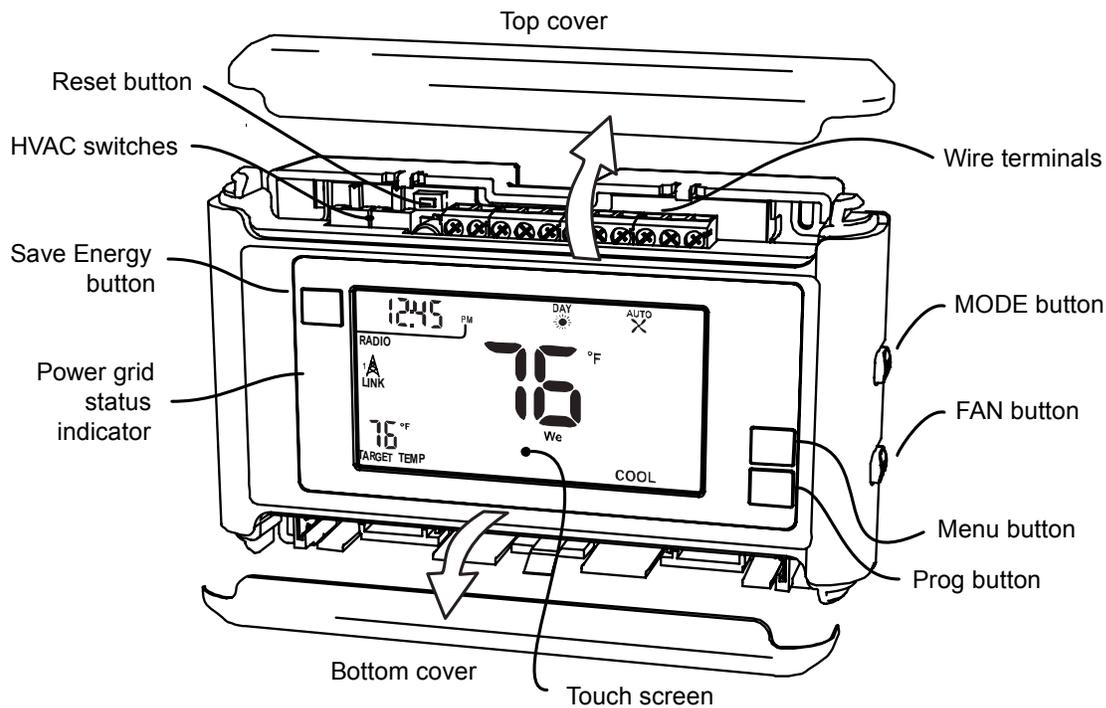
Control screens

Before you operate the thermostat, you should get familiar with these basic control screens. All the thermostat functions are accessed through these screens: Home, Menu, Program, and Manual. The touch screen technology allows you to select (by touching) an item and change it using the +/- arrows or the time arrows.

Home screen

The Home screen is displayed when the unit is operating. This screen shows you the current settings and conditions.
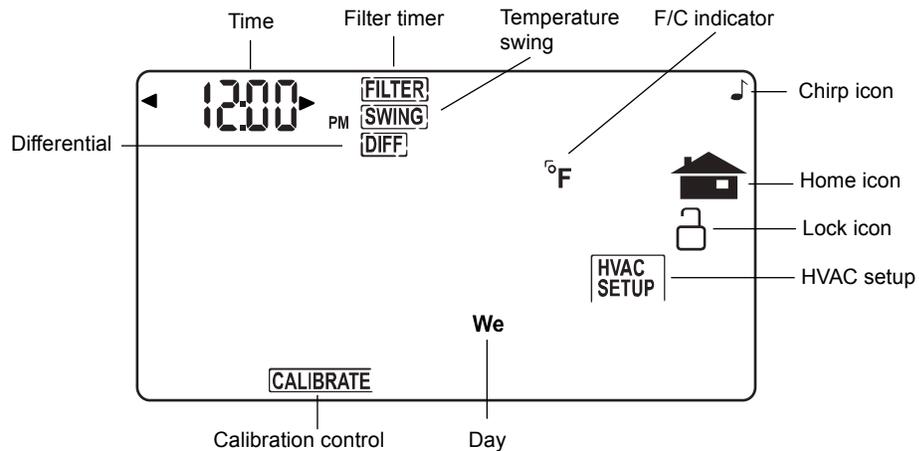
Figure 2: Home screen
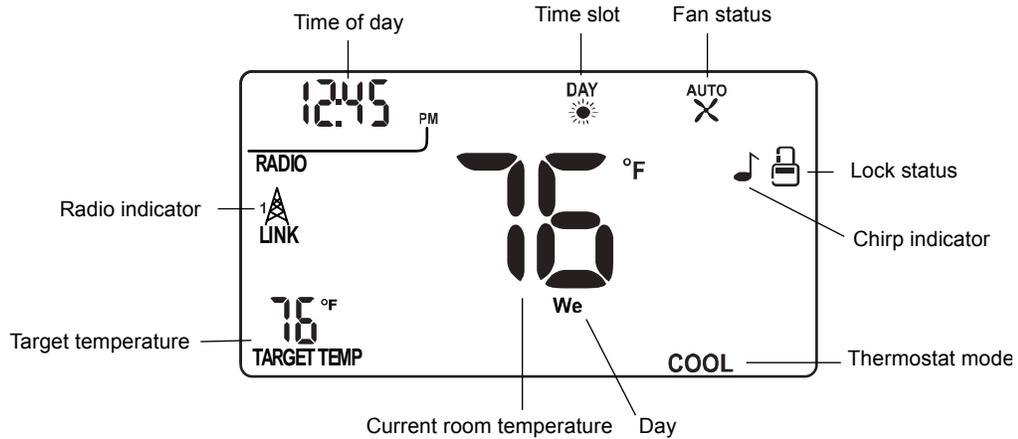
To set a mode, press the MODE button on the side of the thermostat. The thermostat will step through the HEAT, OFF, and COOL modes in order. The LCD display indicates the mode you are in.

Menu screen

To display the Menu screen, press the Menu button.

Figure 3: Menu screen

Use the Menu screen to access the following thermostat functions and settings:

Time of day	Touch the left (down) or right (up) arrows next to the time display to set the current time (1 minute per touch). Touch and hold the arrow for fast time set (15 minute jumps).
Day of week	Touch the Day area to select the present day.
FILTER	The thermostat can be programmed to remind you when the HVAC system's air filter needs changing. Touch FILTER. The display will show the usage to date. Touch FILTER for over 3 seconds and the display will change to LIMIT. Touch arrows to set the desired usage limit before the filter alert comes on the Home screen. When this limit is reached, FILTER will display on the Home screen. You can set the limit from 0 to 999 days (default is 90 days). To reset the usage back to 0, touch the usage number; touching it again restores the displayed usage.
SWING	This feature allows you to set the desired variance in temperature between the thermostat setting and the room temperature required before the heating or cooling system will turn on - from 0.5 to 2.0°F (0.25 to 1°C). For example, if SWING is set to 2.0°F and the thermostat is set to 70°F target temperature, the heat cycle will start when room temperature drops to 68°F. Similarly, the cooling system will start when the room temperature increases to 72°F. The HVAC then runs and will shut off at the target temperature. To set the feature, touch SWING. Touch the left/right arrows to set the SWING from 0.5 to 2.0°F. The HVAC will run more frequently at 0.5°F and less at 2.0°F. The default is 1.0°F. Touch the Home icon to return to the MENU screen.
DIFF (differential)	(This feature is used for two-stage normal or heat pump with aux only, the feature is not on screen for single stage.) The differential is the number of degrees between the room temperature and the target temperature at which the second stage will be used. The default is 2°F. Touch DIFF. Use the arrows to set the differential. We recommend 2°F for very cold climates and 4°F for warm climates.
CALIBRATE	Your thermostat was accurately calibrated at the factory to ± 1°F of actual ambient temperature. You do have the option, however, to change the display temperature to match that of a previous thermostat, or to match another thermostat already in your home. The rage of change is from -6F to + 6°F or -3 C to +3°C. To change your thermostat calibration, touch CALIBRATE. Use the +/- to adjust the displayed temperature up or down as desired. The Delta Factor that appears on the screen will also automatically increase or decrease for each 0.5°(F or C) adjustment so you can see your change. The large display will show the modified temperature reading that will be displayed on the Home screen and used as the new room temperature.
HVAC setup	Touch to configure the unit to work with your HVAC system.
Chirp icon	Touch to turn the audible chirp sound on or off.
°F/°C	Touch to toggle the temperature display scale between °F and °C.
Unlock/Lock icon	The thermostat has two lock modes. Touch the Unlock icon for 3 seconds; the unit will go into the Partial Lock mode (Lock icon with one bar). You can temporarily override the thermostat target temperature with the +/- buttons.

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	For full lock, touch the Lock icon again for 5 seconds to go to Full Lock mode (Lock icon with two bars). No changes can be made. Once locked, the thermostat will respond just to mode and menu. To unlock, press the Menu button. Touch and hold the Lock icon for 5 seconds for two bars (if not there already). Then touch and hold the Lock icon for another 5 seconds. Each 5-second touch and hold must be separate.
Home icon	Return to the Home screen.

Program screen

Press the Prog button to display the Program screen. Use the Program screen to program thermostat control for your home HVAC system.

Figure 4: Program screen
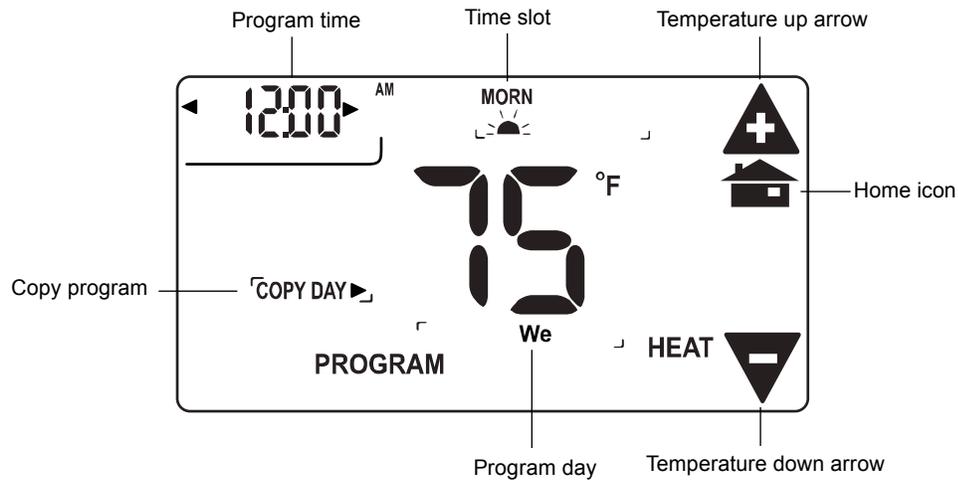
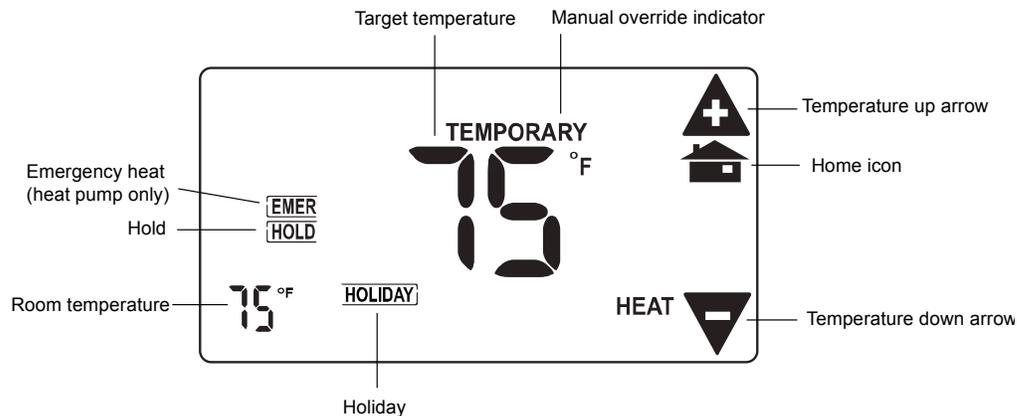| **Day**	Touch to set the day of the week for which you want to program target temperatures.
Time slot	Touch to set the time slot (MORN, DAY, EVEN, or NITE) you want to program.
Program time	Touch to set the time of day you want the time period to start. Left arrow goes back, right arrow goes forward (touch and hold for fast set).
Temperature up/down arrows	Touch these to raise or lower the target temperature for the time slot (touch and hold for fast set).
COPY DAY	Touch to copy the current day's program to the next day.
Home icon	When programming is complete, touch the Home icon to run your program and return to the Home screen.

Manual screen

Touch the large current temperature display on the middle of the Home screen to access the Manual screen.

You can use the Manual screen to make temporary changes to your thermostat's operation.

Note: The mode must be in HEAT or COOL to access the Manual screen.

Figure 5: Manual screen

Temperature up/down arrows	Touch to raise and lower the manual override target temperature.
Manual override indicator	Touch the +/- arrows to select your desired temporary target temperature. Touch the Home icon to return to operation. The TEMPORY icon will display indicating you have modified the target temperature for the current time slot only. It goes back to the program target at the next period. Also, when in TEMPORARY, if the target is set the same as the programmed target for that period, the word TEMPORARY will not display.
HOLD	Touch to operate the thermostat as a manual thermostat. This will hold the target temperature you set indefinitely, until you turn HOLD off. Use care when using the HOLD function as the program is now bypassed. To set a hold target temperature, touch HOLD and use the +/- icons to select your hold temperature. The HOLD icon will display on the Home screen indicating you have changed the target temperature. The system will hold this temperature until you return to the Manual screen and deselect HOLD by touching it. HOLD is also canceled when you set the mode to OFF
HOLIDAY	Touch to invoke a single program that repeats day after day until you turn it off. It supersedes the weekly program. To use it, touch HOLIDAY. The default holiday program is shown (HEAT 70°F all day and 62°F at night; COOL 78°F all day and 82°F at night). To modify this program, touch the PROG button and then touch the Day area until HOLIDAY appears (after SAT).

EMER (heat pump only)	If you set your thermostat for HEAT PUMP with auxiliary heat, the EMER function is available on the Manual screen. If you touch EMER, it displays EMER|ON. You heat pump is disabled and auxiliary heat is your sole source of heat. This manual override stays active until you toggle EMER off. Auxiliary heat is more expensive than the heat pump, so use EMER only if the heat pump cannot keep up or is defective.
Home icon	Touch to return to the Home screen.

Initial settings

From the Home screen, press the Menu button to display the Menu screen.

On the Menu screen:

- **To set the day of the week**, touch the day area to cycle through the days of the week and select the current day.

- **To set the current time**, touch the time of day arrows to move the time selection forward or backward until it displays the correct time. (You can touch and hold for faster setting.)

- **To select °F or °C for the display**, touch the °F to toggle to °C, or touch the °C to toggle to °F.

- **To set the audible chirp**, touch the musical note icon to toggle between chirp or no chirp.

- **To return to the Home screen**, touch the Home icon.

Auto-run program

The thermostat comes preprogrammed with an EPA approved program. This program is recommended by the EPA for energy efficiency. We strongly recommend that you Auto-Run this program for one week and see if it works for you. If it does not fit your needs you can always input a custom program.

To run the EPA program:

1. Set the MODE button to HEAT or COOL.
2. Press the Menu button and use the arrows by the time display to set the time.
3. Touch the DAY area and advance it to select the present day.
4. Touch the Home icon.

The unit is now running the program.

Table 1: EPA program

	MORN	DAY	EVEN	NITE
HEAT	6:00am	8:00am	6:00pm	10:00pm
All Days	70 F	62 F	70 F	62 F

	MORN	DAY	EVEN	NITE
COOL	6:00am	8:00am	6:00pm	10:00pm
All Days	78 F	85 F	78 F	82 F

To change the program

Make sure the thermostat mode is set to either HEAT or COOL, then press the Prog button to display the Program screen. The programmed start time is displayed on the upper left. The Time Slot icon indicates the active time slot in the default program (MORN, DAY, EVEN, NITE). The programmed target temperature is shown on the main display.

The heat and cool programs are separate.

On the Program screen:

- To select the **day** you want to program, touch the Day area to cycle through the days of the week to the desired day.

- To select the **time slot** (period) you want to program (MORN, DAY, EVEN, or NITE), touch the time slot area to cycle through to the desired period.

- To select the desired **start time** of that time slot, touch the time arrows to display the desired starting time. (Hold the arrow down for fast time scrolling.)

- To select the desired **target temperature** for that time slot, touch the +/- arrows to display the desired temperature.

- To **copy** one day's programming to the next day, touch COPY DAY once. The information for the current day will be copied to the next day which will appear on the screen. Holding down COPY for over 3 seconds will copy to all seven days.

- Touch the **Home** icon to return to the Home screen.

Other functions

Save Energy button

The Save Energy feature on the thermostat provides a simple, easy-to-use way to help you manage your energy use. This feature automatically adjusts your target temperature up in COOL or down in HEAT by 4 F. To use the Save Energy

feature, press the Save Energy button in the upper left corner of the unit. The screen will now read "Save Energy". To return to normal operation, press the Save Energy button again. This is useful to save energy if your are going to be gone for a short time.

MODE button

The MODE button sets the thermostat to HEAT, COOL, or OFF modes. Press it once to step to the next mode. If the thermostat is in OFF mode and you want to return to the mode you were previously in, touch the OFF indicator on the screen.

FAN button

The fan control is normally in AUTO mode, meaning that the fan operates automatically with the HVAC system and the thermostat. When you press the FAN button, the fan goes on. The fan will run continuously in this manual override until switched back to AUTO by pressing the FAN button again.

Note: The fan ON function is available in the OFF mode to allow simple ventilating.

RESET button

The RESET button reboots the thermostat processor. It does not effect the user programs that have been stored in permanent memory.

Simple screen

This display mode limits the amount of information on screen and limits the functions to just the +/- arrows and the Save Energy button. Hold down the Prog button for 10 seconds to access the limited display screen. Hold down the Prog button for 10 seconds to leave the limited display screen.

Compressor protection

The thermostat has a minimum cycle time of 4 minutes to protect your compressor in cool and in heat pump (if you have one). The Home screen will show a small clock and A/C during this time and the compressor will not come on until the 4-minute delay is over.

Communicating thermostat

The thermostat has two RTM-1 radio ports. These allow your thermostat to communicate with other systems. Depending on your area power company, programs may be available to connect your thermostat to power grid status information. This can make it easy for you to moderate your energy use at peak hours and use power when it is less expensive.

Figure 6: USNAP radio and port

USNAP radio
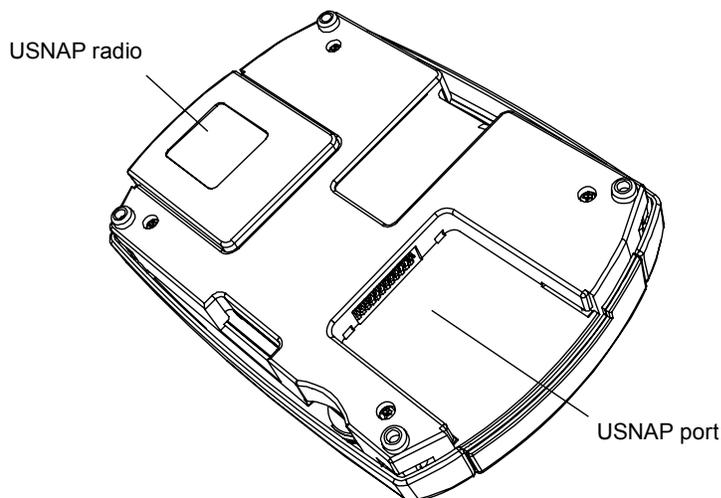
USNAP port

The USNAP ports allow you to connect your Thermostat to your home Z-Wave network. This can give you access to your home's HVAC system even when you are away (with additional web service). It can also give you access to web based efficient energy management sites that can help you save money and protect the environment. You can connect your thermostat to an AMI network for in home display of electric grid status or connect to a home automation network for HA functionality with remote access to your HVAC system and home conditions.

To insert a USNAP radio module, power off the thermostat, insert the radio module in either slot on the back of the thermostat, and then power up the thermostat.

To connect to a network, follow the instructions that come with the USNAP module.

Caution: Do not insert or remove USNAP radio modules if power is on. This can damage the thermostat or radio modules.

Specifications

Voltage	24 VAC (supplied via the C wire)
Batteries	Three AA alkaline batteries (Duracell, Energizer). Do not use rechargeable batteries.
Dimensions (W x H x D)	5.5 x 3.5 x 1.5 in. (140 x 89 x 38 mm)

Operating environment
    Temperature
    Relative humidity
	Indoor use only
	32 to 104°F (0 to 40°C)
	10 to 90% noncondensing

Statement of use:

100% compatible with all popular residential HVAC systems; 24 VAC single, two-stage conventional heating systems (gas/oil/electric), heat pumps, single stage or auxiliary heat (electric or fossil), zoned forced air and zoned hot water (two or three wire), millivolt systems (with a 12-24 AC or DC source), one or two stage cooling, and hybrid systems.

FCC regulatory information

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 and 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.

FCC ID: QO8-ZWave-0210

IC regulatory information

This Class B digital apparatus meets all requirements of the Canadian Interference Causing Equipment Regulations. 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 of the device.

IC: 4714A-ZWave-0210

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