Advanced Control Technologies, Inc.

Purpose:
To give an overview of how to use the ZTH100 version "TstatDemo2.0" to demonstrate the Z-Wave enabled thermostat. This is for use at A-1 for testing purposes.

Important: The Z-Wave module will function only on the original type of thermostats sent to ACT. The new Z-Wave modules WILL have the rx and tx line swapped, however, the module sent to A-1 is an older module. If you need to use the module sent to A-1 on a new thermostat, swap the rx and tx lines first on the thermostat.

Installation Instructions:

1. First, include the thermostat into the Z-Wave network. To do this scroll to the **SETUP** menu in the ZTH100.
    a. Press Menu button.
    b. Use left or right arrow to scroll until display reads **SETUP**.
    c. Press Ok button.
    d. Use left or right arrow to scroll until display reads **ADD UNIT TO NETWORK**.
    e. Press OK.
    f. At the prompt, "Are you Sure", press OK
    g. At the prompt "Press Button On Unit", hold the Timer and Mode buttons down on the thermostat until display on ZTH100 reads "Thermostat Included". (Buttons should not need to be held down for more than 3 seconds).
2. Now the thermostat can be controlled via the ZTH100.
    a. Press the Menu button.
    b. Use left of right arrow to scroll until display reads **THERMOSTAT**.
    c. Press Ok.
    d. The left and right arrows will scroll through the following:
        i. **Thermostat Mode**
        ii. **Thermostat Setpoint**
        iii. **Fan Mode**

Control Instructions:

1. **Thermostat Mode**
    a. Pressing OK when the display reads "**Thermostat Mode**" will allow you to set the Mode. You can scroll through the modes that the ZTH100 can set the thermostat to. Pressing OK when the desired mode is showing on the display will set the thermostat to that mode.
2. **Thermostat Setpoint**
    a. Pressing OK when the display reads "**Thermostat Setpoint**" will allow you to set the setpoint of the thermostat. The ZTH100 will prompt you to choose the setpoint. After choosing setpoint, press the OK button and the thermostat will be set to that setpoint.
3. **Fan Mode**
    a. Pressing OK when the display reads "**Fan Mode**" will allow you to set o the fan mode of the thermostat. You can scroll through the modes that the fan of the thermostat can be set to via the ZTH100. Pressing OK when the desired mode is showing will set the fan to that mode.

Reviewing Current Thermostat Information

With the Remote showing the Time of Day, you can press the OK button to scroll through the Current Temperature, Current Thermostat Mode, Current Setpoint, and Current Fan Mode. Every other OK press shows the Time of Day again.

Setting Timers

Due to memory constraints in the current version of the Z-Wave remote, the timers are set in such a way that the user has to have access to the thermostat so that it can cause its Node ID to be sent to the remote. This *may* be beneficial so that the Timers are not inadvertently set but regardless little can be done to change this operation. A front end controller or a new version of Z-Wave remote with more memory would allow for the Timers to be set without requiring the user to be at the thermostat.

To set timers, scroll to the **SETUP** menu in the ZTH100.

1. Press Menu button.
2. Use left or right arrow to scroll until display reads **SETUP**.
3. Press Ok button.
4. Use left or right arrow to scroll until display reads Config Unit.
5. Press Ok button.
6. At the prompt, "Parameter #", Press 1 if setting Timer On, Press 2 if setting Timer Off.
7. At the prompt "# of Bytes", Press 2.
8. At the prompt "ConfigValue1", use the arrows to scroll to the value desired. This value is the # of hours to set the timer to.
9. Press Ok button.
10. At the prompt "ConfigValue2", use the arrows to scroll to the value desired. This value is the # of minutes (x 10) to set the timer to.
11. Press Ok button.
12. At the prompt "Press Button On Unit", hold the Timer and Mode buttons down on the thermostat until display on ZTH100 reads "Config Successful". You should hear a beep from the Thermostat. (Buttons should not need to be held down for more than 3 seconds). It is possible that the ZTH100 returns "Config Failed", if so, try again.

To Do:

The ZTH100 supports Celsius for European and Canadian customers. The Z-Wave module on thermostat needs to have Celsius and Fahrenheit conversion added.

Due to IR being also available on thermostat, the serial port on the Z-Wave module needs to be disabled while the module is NOT communicating to the thermostat.

Various Z-Wave support commands also need to be added for Z-Wave Certification.

If Z-Wave module is busy communicating to thermostat while another Z-Wave "Thermostat" command is received, the Z-Wave module needs to buffer the new command or return "Unable to Process" back to sending unit.