

Configuration / Installation Process for the Net/X™ Wireless Thermostats

Installation Overview

- 1) Install the wireless back plate module (WBM-1) on the wall and connect the HVAC wires.
*(WBM-1 communications and power wires will already be in the correct screw terminals on the back plate. **Do not modify this!**)*
- 2) Install the Network Controller (NC) in an appropriate place to be able to connect to your LAN
- 3) Install the wireless coordinator module (WCM-2) in a location as most central location as possible to the multiple (WBM-1) Wireless Back plate Modules connect to the NC in the same manner as connecting a network thermostat. (See wiring instructions for details). The WCM-2 must be connected to the Network Controller via CAT5 cable and must be within 1,000 feet of the Network Controller.
- 4) Go through commissioning process to sync the WCM-2 and WBM-1 (BELOW)
- 5) Install the thermostat on the back plate and set the address from the front panel (see instructions with each Net/X™ thermostat
- 6) Connect to the NC with the Net/X™ Command Center software and verify connectivity to all thermostats

Wireless Commissioning

A) WCM-2 Power Up

Perform Steps 1 , 2 and 3 above and power both the WCM-2 and the WBM-1.

- 1) On 'Power Up' from the factory or any other power loss, the WCM-2 will turn on all LEDs on the display and then show two alphanumeric revision strings before moving to normal operation with 'On' in the display. This process will take about 4-5 seconds.

Example:



Configuration / Installation Process for the Net/X™ Wireless Thermostats

B) WCM-2 / WBM-1 Discovery Process

Once the WCM-2 is 'On' and in normal operation, a simple discovery process must be performed between the WCM-2 Wireless Coordinator Module and each WBM-1 Wireless Back plate Module.

NOTE: For simplicity, it is HIGHLY recommended that the Channel ID and Network ID both be left at the factory default of '1'. While there are 99 networks available on each of 15 channels, there is no need to change from the factory default unless you have more than one wireless coordinator (more than one WCM-2 on site). The examples below show how to change the network ID and Channel ID for larger systems. In most cases, simply press the 'setup' button to bypass both of these and move on to SETUP BUTTON PRESS #3.

- 1) **SETUP BUTTON PRESS #1** : CHANNEL SET UP: Press the Set Up button one time;

The display changes to light up the CHANNEL LEDs. Press the UP / DOWN buttons to select the channel ID. (in this example, the channel is set to #4)



Once the channel has been selected, move on to setup button press #2.

- 2) **SETUP BUTTON PRESS #2** : NETWORK ID SET UP: Press the Set Up button one time;

The display changes to light up the NETWORK ID LEDs. Press the UP / DOWN buttons to select the Network ID. (in this example, the network is set to #3)



Configuration / Installation Process for the Net/X™ Wireless Thermostats

3) **SETUP BUTTON PRESS #3** : DISCOVER SET UP: Press the Set Up button one time;

Now that the CHANNEL and NETWORK ID information is stored, it is time to find all of the end devices that need to be associated with this WCM-2. *(REMEMBER: There can be more than one WCM-2 on a building thermostat network because there can be more than one network controller (NT-SSAx), but only 32 thermostats per network controller.)*

a. WCM-2 (WIRELESS COORDINATOR) PROCESS

The display changes to light up the DISCOVER LEDs and alternates the ' - ' and ' - ' during the discovery process.



This process continues until:

- i. The SET UP button is pushed a fourth time, which will end the discover process, or
- ii. 15 minutes time elapses and the WCM-2 returns to normal operation.

While the WCM-2 (coordinator) is in DISCOVER mode, the other part of the 'link' is to walk to each WBM-1 (wireless thermostat back plate) and press the TSTAT button. If the WBM-1 can 'hear' the WCM-2, then the LED on the wireless back plate will start blinking, indicating its signal strength.

b. WBM-1 (WIRELESS BACKPLATE) INITIALIZATION PROCESS

Once the coordinator is in the DISCOVER mode, all WBM-1's needs to be found, and we need to KNOW that the WBM-1 is found and the signal is acceptable.

WBM-1 LED Indication:

- 1) NO LED – link to a coordinator, or Standard Operating Mode
- 2) SLOW BLINK LED (1 second on, 1 second off) – LINK established, but marginal signal
- 3) MEDIUM BLINK LED (½ second on, ½ second off) – LINK established, good signal
- 4) FAST BLINK LED (10x per second on and off) - LINK established, very good signal

Walk to EVERY WBM-1 module, press and release the TSTAT button, and verify the 'link' is established. If you cannot establish a link, the WCM-2 coordinator may need to be moved to a more central location or you'll need to install a Net/X Wireless Repeater WR-1. Contact technical support if you have questions.

Configuration / Installation Process for the Net/X™ Wireless Thermostats

c. WR-1 (WIRELESS BACKPLATE) INITIALIZATION PROCESS (OPTIONAL – AS NEEDED)

As stated above, if a reliable single can not be obtained for every WBM-1 module, you will need to add a WR-1 Wireless Repeater at a location that is central enough to allow the communications signals to hop from one thermostat to another. Find a suitable location where AC power is available close to where the 'hole' in the wireless mesh might be located.

While the coordinator is still in the DISCOVER mode, also press the LINK button on the WR-1, and the LED's will function as below.

WR-1 LED Indication:

GREEN LED: Power

RED LED:

1. NO LED – link to a coordinator, or Standard Operating Mode
2. SLOW BLINK LED (1 second on, 1 second off) – LINK established, but marginal signal
3. MEDIUM BLINK LED (½ second on, ½ second off) – LINK established, good signal
4. FAST BLINK LED (10x per second on and off) - LINK established, very good signal

When you have a good link, you can now go to the WBM-1 modules that could not get a link before, press and release the RFSet (or TSTAT) button, and verify the 'link' is established.

4) **SETUP BUTTON PRESS #4** : END DISCOVER SET UP: Press the Set Up button one time;

- a. Once all WBM-1 thermostat modules have been LINKed, the DISCOVER Mode is ended by pressing the Set Up button one more time, and the display returns to normal operation with 'On' on the display.



If there are any additional thermostats/WBM-1 modules that need to be added at a later time, simply return to Step #3 (DISCOVER) and then press the TSTAT button on the additional modules. It is not necessary to re-link any other existing thermostat. However, all WBM-1 thermostat backplates, WR-1 repeaters and the WCM-2 coordinator modules MUST be on the same channel and network IDs that are associated with the same NT-SSAx network controller.

Thermostat / Network Controller Installation

After completion of the wireless commissioning, follow the standard Net/X™ thermostat installation process for 'wired' Net/X™ thermostats. This will include setting the thermostat addresses, installing the network controller and installing the software. See each component manual for detailed instructions.

Remember, each thermostat connected to a single network controller must have a unique thermostat address. Therefore, you CAN NOT use the same thermostat address on wired and wireless portions of your network.