

## Welcome to your LUX/GEO™ quick-start guide

Your LUX/GEO™ internet connected thermostat puts the control of your comfort in your hands and you are only 10 easy steps away from installation.



IF AT ANY TIME DURING THE INSTALLATION AND SET-UP PROCESS YOU NEED ADDITIONAL SUPPORT, VISIT LUX-GEO.COM OR CALL 856.234.8803



### Step 1: Getting started

Locate and gather the following items for ease of installation

#### Included:



2 screws



2 wall anchors



2-AA Lithium batteries

#### Items needed:



Phillips & flat head screwdriver



wire stripper & cutter



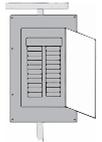
WiFi enabled mobile device



WiFi router

### Step 2: Switch power off

IMPORTANT: Turn off the power at circuit breaker to both your heating & cooling systems before performing any wiring.



### Step 3: Remove existing thermostat & install GEO™



TAKE PHOTO OF CURRENT WIRING



HOLD AND PULL TO OPEN GEO



REMOVE TERMINAL COVER

### Download App and Create Your Account

#### Download your LUX/GEO App

Depending on device type, search the App store for "LUX GEO" and create your LUX/GEO™ user account



IF YOU DO NOT HAVE AN iOS OR ANDROID DEVICE, PLEASE VISIT LUX-GEO.COM.

- Remove front of existing thermostat from base
- Photograph current wiring for reference**
- Release wires and mounting screws and remove base from wall
- Open GEO™ from base, pull up on plastic "cover" between terminal blocks to access and pull wires through.
- Secure GEO base to wall (mounting hardware & optional wall plate included)



WATCH OUR VIDEO DEMO LUX-GEO.COM

## Step 4: Powering & wiring LUX/GEO™

### GEO™ needs only 1 of 3 power source options:

- C-terminal (Recommended & for optimal performance. Reference photo from step 3 to confirm C-wire.)
  - Battery\* (2-AA Lithium included)
  - USB micro-port available on GEO™ (adapter & cord not included; recommend 1A adapter)
- Step 5 provides detail on battery & USB connection

## NOTE: System compatibility

### For Use On:

- Most 24-volt heating and cooling systems
- 1 or 2 stage heat / 1 or 2 stage cool: gas, oil, or electric furnace and a/c systems
- 1 or 2 stage heat / 1 stage cool: heat-pump style systems
- 2-wire hydronic (hot water) zone valves
- Gas Millivolt wall/floor heaters

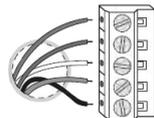
 AS AN ADDED RESOURCE, A GLOSSARY OF TERMS IS AVAILABLE ON LUX-GEO.COM

### \*Notice for battery installations:

- Batteries should be replaced at least once per year, but depending on your settings may need to be replaced sooner.
- Battery failure could leave property without controlled heating or cooling. Reliance on battery power is not recommended with prolonged absence from property.
- After installation you can choose to set the "energy profile" for your GEO™. This energy profile will determine the delay in GEO™ responding to changes from the App.
- GEO™ should only be used with lithium batteries.

### Not For Use On:

- 120/240 VAC line-voltage systems (without a transformer)
- Heat pumps that have (Y2) two compressor stages



WIRES INSERT INTO SIDE OF TERMINAL, UNDER SCREWS.

## 4.1 Wiring Terminal Reference: Conventional Furnace – gas/oil/electric & air-conditioning\*

\*for heat pump systems - see section 4.2

Referencing your wiring photo & terminal guide below, wire to GEO.

### GAS / OIL / ELECTRIC FURNACE and/or AIR CONDITIONING (typical)

RH (or R)	=	24(+) VAC Power, Heat
W1	=	1st Stage Heat
G	=	Blower Fan
C	=	24(-) VAC Common
Y1	=	1st Stage Cool

### [typical wire color used]

[RED]  
[WHITE]  
[GREEN]  
[BLUE]  
[YELLOW]

### (other)

RC	=	24(+) VAC Power, Cool
B	=	Heat Mode Damper
O	=	Cool Mode Damper
W2	=	2nd Stage Heat
Y2	=	2nd Stage Cool

**IMPORTANT:** If you have both an RC and RH wire present then remove the RED RC-RH shorting cap found on inside front of GEO™.

- Wiring is complete - you may return "cover" between terminal blocks.



FOR A DETAILED WIRING GUIDE VISIT LUX-GEO.COM.



RETURN  
TERMINAL  
COVER

## 4.2 Wiring Terminal Reference: Heat Pump Systems

Referencing your wiring photo, attach your thermostat wires to the LUX/GEO™ using your original wiring letters and the following terminal reference as a guide based upon your system type.

### HEAT-PUMP (COMPRESSOR) STYLE HEAT/COOL SYSTEM

R (or RC/RH)	=	24(+) VAC Power, Cool
O	=	Reversing Valve
Y1	=	Heat Pump Outdoor Unit
G	=	Blower Fan
W2	=	Auxiliary/Emergency Heat
C	=	24(-) VAC Common
B**	=	Reversing Valve (only if no "O" wire- ie: Rheem/Ruud/Bard systems)

### [typical wire color used]

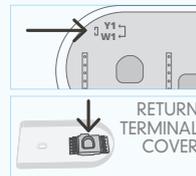
[RED]
[ORANGE]
[YELLOW]
[GREEN]
[WHITE]
[BLUE]
[can vary per each installation]

Note: There should NOT be a wire used on the W1 wire connection at terminal.

**\*\* IMPORTANT: If you have both an O wire and B wire (ie: Trane system), please install B to the "C" terminal**

**Heat Pump systems (Y1/W1) - YELLOW cap MUST BE MOVED to sit on both pins.**

- Wiring is complete – you may return "cover" between terminal blocks.

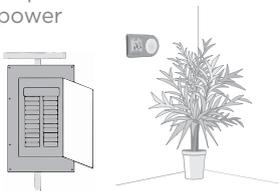


## Step 5: Power on

- For C-terminal: secure GEO™ front onto base
- For battery power: insert 2-AA lithium batteries & secure GEO™ front onto base
- For USB power: place a flathead screwdriver against port cover from inside GEO™ along bottom side - twist & push out. Plug in Micro USB and insert into base.
- Once GEO™ front has been secured to base (line up and firmly push), return power to system.



WITH GEO SECURE & POWER ON – THE DISPLAY SHOULD ILLUMINATE, IF NOT, CHECK POWER IS BACK ON.



## Step 6: Configure system settings

GEO™ will guide you through setup

Rotate the control wheel to navigate through options and values. To make a selection, press ▲; to go back, press ✕. GEO™ will prompt you to select:



- Whether heating and/or cooling are connected.
- System type (only applies if you have heat). Note if you wired per section 4.1 you have a furnace. If you wired per section 4.2 you have a heat pump.  
*If furnace fan is not operating properly after installation, change from furnace:gas to furnace:electric in the settings menu.*
- The number of stages for heat/cool you have. Most common is 1 heat/1 cool. Not sure? refer to our online glossary to learn more.
- If you have set more than 1 stage of heat or cool, the OFFSET setting adjusts the stage-2 cut in.

**Step 7: If you have not yet downloaded your LUX/GEO™ App-do so now**

## Step 8: Connecting LUX/GEO™

The recommended set-up of GEO™ requires an iOS or Android device...using another?... Visit LUX-GEO.com. Set-up follows a series of screen prompts - have your GEO™ and mobile device ready.

### 8a. Getting ready to connect

You've downloaded the LUX/GEO App, created a user account and now, from your GEO, select "yes" for WiFi setup

GEO will begin scanning - but you can move on to 8b.



### 8b. Connecting GEO™ to your mobile device

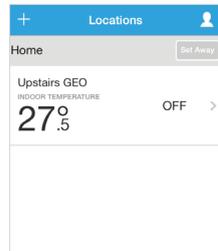
Your GEO will show: "DISCONNECTED".

Open App and click + icon to add device. When prompted, leave App & go to your mobile device's WiFi settings menu.

Select the WiFi network that looks like LUXGEO-xx-xx

After connecting to LUXGEO return back to App

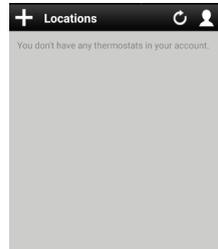
#### iOS



#### iOS



#### Android



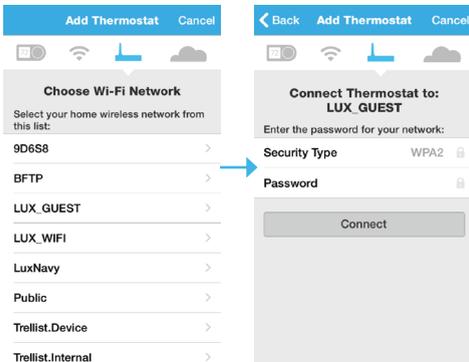
#### Android



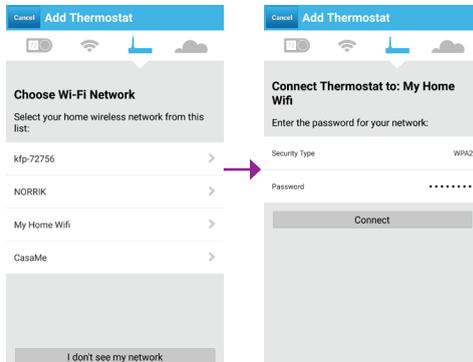
## Step 8: Connecting LUX/GEO™

### 8c. Select your home WiFi network & enter password

#### iOS



#### Android



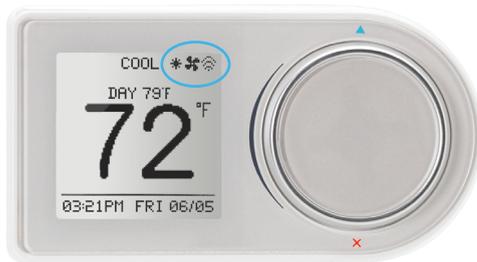
### 8d. When room temp appears on GEO™ display, continue by following prompts on App

Once you see ✓ on app and  on GEO - your system is now successfully connected.

#### Troubleshoot:

You may need to manually reconnect your phone to your wifi network.

If this is unsuccessful - restart GEO by going to menu/settings/network and pick up App from step 8b.



## Step 9: Custom settings & Radius™ set-up

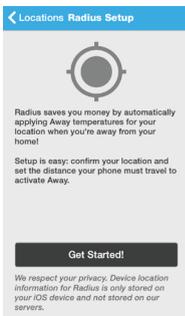
Radius™ is a geofence that allows you to set a geographic “fenced” zone via your mobile device. Using GPS, Radius™ (geofencing software) will recognize your approach into or out of the “fenced” area and trigger your thermostat to adjust to either your “at home” comfort settings or “Away” settings which provide more efficient energy use. With Radius™, geofencing can be set on multiple devices/users and to your custom needs and can work with or without a thermostat schedule to still save energy when away from home.

*Please note and be assured that your GPS location is NEVER reported or known by LUX Products.*

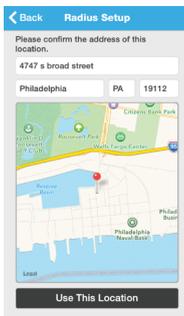
### Setting your “fence”



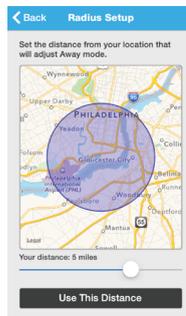
The Radius™ icon can be found in upper right of screen



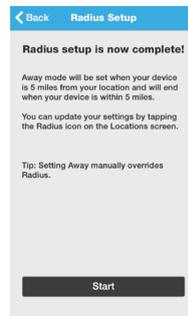
Ready to set your fence



Confirm starting location



Customize your distance



Complete



**TIP: IF YOU SET YOUR FENCE FURTHER FROM YOUR HOME THEN YOUR SYSTEM WILL HAVE MORE TIME TO MAKE YOUR HOME COMFORTABLE BEFORE YOU GET HOME. IF YOU SET THE FENCE CLOSER TO HOME THEN YOU WILL SAVE MORE ENERGY BUT SOMETIMES YOUR SYSTEM WILL NOT HAVE TIME TO RECOVER BEFORE YOU GET HOME.**

**IF YOU ARE USING BATTERY POWER, WE RECOMMEND SETTING A LARGER DISTANCE.**

**Step 10:** Enjoy the comfort, peace of mind and flexibility of your LUX/GEO™ thermostat. VISIT OUR ONLINE COMMUNITY FOR INTERESTING ARTICLES AND TIPS FOR SAVING ENERGY AT LUXPRODUCTS.COM. THANK YOU.