Self-Heated Timber Flooring

Installation Guide

LUXILA

FLOORS | SMART HOME | HEATING TECH | STAIRCASES

A Luxia Advancement Into Heated Flooring.

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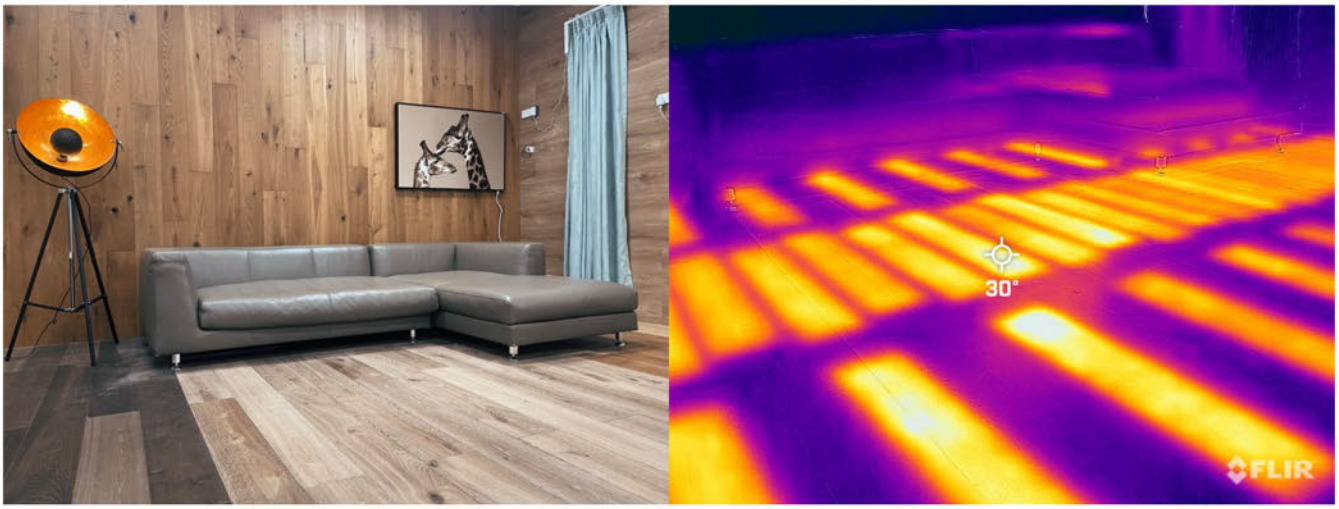
Introducing the

Self Heated Timber Floor.



Beginning development in 2015, Melbourne, Australia, Tony Xu has combined his background in timber flooring and experience in heated flooring subsystems. Ready for the market is the newest heated flooring phenomenon, Self-Heated Timber Flooring.

Our expertise at Luxia specialises in heated technology, timber flooring and smart home automation tech. Able to be controlled by your phone, Luxia 's Self-Heated Flooring has all these elements in one.

Designed with a heating element within each longboard, persons can experience heated homes from the bottoms of their feet, perfect for warming room temperature also.

Luxia 's Smart Home range is connected via ZigBee, a wireless mesh network. Control, check and switch on or off your devices anywhere at anytime.

Turn on your Self-Heated Floor 15 minutes before arriving home on a winter's day.

This is an improvement for heated floors. A smart innovation.

This is Luxia.

Installation Guide

Special Tools & Equipment

Ohmmeter (Test Leads attached to Male Connector)

Reads ohms (i.e., resistance), checking that Self-Heated Longboards are connected correctly. Any standard Digital Multimeter will have an Ohmmeter setting.

Wire Hook

Retrieve male and female connectors from ends of the self-heated longboard

Squeezer

Tighten all male and female connections

Cable

Electrical cable with female connectors. Plugs into male connectors of the self-heated longboards.

Fig 1.1

Self-Heated Timber Flooring installation. Looks very similar to any longboard, fully glue down installation. However, our cable is running along the edge of the room, connected to the longboards for self-heated flooring. When ready, the installer will cut off the excess cable. We only need the cable for one edge of the room, in this case, against the back wall. All the cable against the wall on the left-hand side is excess.

The Multimeter is connected to the cable where it is out of the way of the installer. It will read a level of resistance that decreases as each longboard is connected. This is how we are sure that any particular self-heated longboard is fit for working manner.

This installation guide will focus on outlining specific details for installing self-heated timber floors. Included is unique information about installing this product, not necessarily standard flooring installation info.

The appropriate installation method for Self-Heated Timber Flooring is ***fully glue down*** *only.*

1 Site Preparation

Fig 2.1

Fig 2.2

When allocated a space to install self-heated flooring on, we must complete an inspection with our flooring installer, and qualified electrician. Our floor installer will understand the job at hand, find installation or practicality issues that need addressing. The electrician will learn what must be done to complete electrical connectivity. Thus, giving the okay our self-heated flooring is safe for commercial and home use.

Upon inspection, we see the floor is rectangular shaped. Hence, less board cutting involved (compared to curved or triangular-like edges). Where boards need cutting to fit, that piece cannot be powered for self-heating. In which case, Non-Heated Longboards are provided. For floors with similar shaped-areas, there is more heated-flooring opportunity. Can complete self-heated flooring for any areas, but upon inspection, the client must be briefed about areas where it is unfeasible.

Our client informs there will be cabinets along the left and right-hand side of the room. Hence, heated-flooring will be provided in the middle chunk of the room. Along the back end of the room (Fig 2.1) is where floor installer and electrician will run the cable . Longboards will run vertically as you walk in.

Fig 2.3

2 Lay out Cable


Fig 3.1

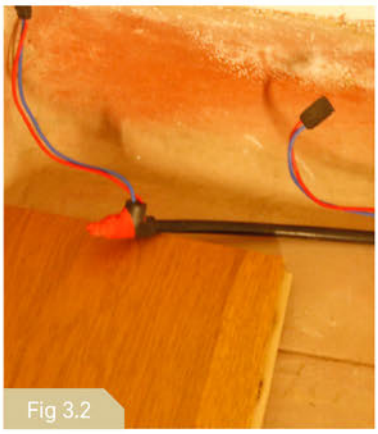


Fig 3.2

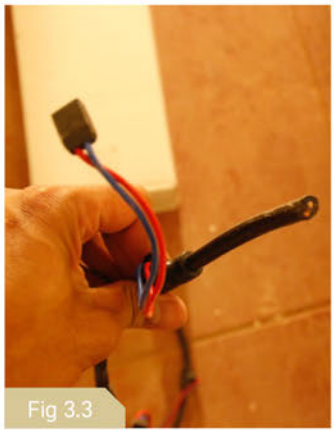


Fig 3.3

Layout the cable along the edge of the room, leaving excess aside (Fig 3.1). Installation will start on from the left. Excess cable is put to the right out of the way.

Avoiding the cabinets, our cable is positioned to begin 60cm away from the side-wall. Note; if whole floor is to be heated, run cable along whole edge.

Excess cable is important for connecting the Multimeter. This will read resistance levels as heated-longboards are connected to the circuit. Do not cut the excess end yet.

Apply duct tape around the beginning of the cable (Fig 3.2). The electrician will NOT connect this side to power. Leave the other end of the cable as is (Fig 3.3).


Fig 3.4

Explaining the Ohmmeter

Digital Multimeter

Electronic measurement instrument, primarily observing voltage, the electric current and resistance. For self-heated flooring installation, we need to measure resistance **only**.

Test Leads

Also known as probes. These are attached from the Multimeter and when pressed against a subject, can inform a measurement.

Male Connector

Connectors are what transmits the electric current from our cable to each subsequent heated board. Each self-heated board has a Male and Female Connector on either side.

Female Connector

The Cable has Female Connectors only. Only a Male connector can plug into a Female Connector.

Using the Ohmmeter is vital for Self-Heated Flooring Installation. Because it is electrically powered, when installing the floor, we must observe the electrical resistance between the cable and every subsequent heated-longboard connected thereafter. To measure resistance, our subject must have NO live electrical circuitry. We are not observing the voltage or current in our circuit (i.e., zero current flowing), but the resistance (measured in ohms (Ω)).

How we can be 100% sure that any longboard is connected correctly, or fault-proof, is that the resistance level will have decreased on the ohmmeter. This changes the width of the electrical circuit to an increase. When connected to power, more electrons will flow at once throughout the circuit (i.e., greater electric current and higher amps). This is good for heated-longboards placed furthest from the cable, as longboards will be powered and heat up evenly.

Modifying the Ohmmeter

Male Connecter Attached to Test Leads

To connect the Ohmmeter to the cable, it must be modified first.

Attached to the Test Leads is a Male Connector. The Red Wire of the connector will be duct taped to the positive lead (red), and the Blue Wire will be duct taped to the negative lead (black).

Now, it can conveniently be plugged into any Female Connector of the cable, ready to measure the circuits resistance.

Luxia will provide a prepared Ohmmeter to all distributors of Self-Heated Timber Flooring.

3 Connect the Ohmmeter

Fig 4.1

Fig 4.2

Fig 4.3

Along the excess cable, connect the Multimeter to any female connector (Fig 4.1). Switch it to the Ohmmeter setting (Fig 4.2). Ohmmeter will read OL (Open Line) (Fig 4.3) meaning there is no complete circuit (i.e., no resistance to read).

4 Measure the Circuit

Fig 5.1

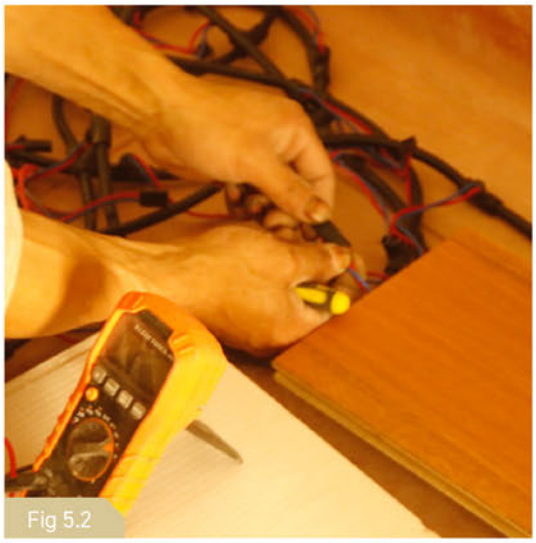


Fig 5.2

To begin measuring resistance, we must have two heated-longboards attached to (any part of) the cable. This will complete a circuit.

By measuring the resistance of these two longboards, we observe that they are fit for use.

Choose two longboards that will be used to begin the floor installation.

Carefully fetch the connectors with the Wire Hook (Fig 5.1).

Connect both boards along the excess cable (Fig 5.2) by joining the Male Connector of the board to any Female Connector on the Cable.

The ohmmeter reads a measurement, informing these boards will function correctly when powered.

The initial level of Ohms measured (Fig 5.3) may differ from every job (i.e., depends on length of Cable, size of heated-longboard). What is important is that the resistance will decrease from here, after every longboard is attached.

Fig 5.3

5 Connect Board to Cable


Fig 6.1


Fig 6.2

Unplug the two longboards from the excess cable.

As you would any direct stick installation, apply flooring adhesive to areas ready to work with (Fig 6.1).

Connect one self-heated longboard to the Cable (i.e., Male Connector to Female Connector) (Fig 6.2). Then, lay it atop the adhesive (Fig 6.3).

For this job, the installer has placed non-heating flooring towards the left-hand side of the room (i.e., for the cabinets). This was done specifically for this job at hand.


Fig 6.3

6 Connect Board to Board


Fig 7.1


Fig 7.2

Lay the other self-heated longboard on top of our already-glued down boards, to focus on attaching our Connectors (Fig 7.1).

Connect the Male and Female Connectors (Fig 7.2).

Before laying the board on the adhesive, check the ohmmeter that it reads a resistance level (Fig 7.3).

It does, so, lay the board atop the adhesive and glue it down as such (Fig 7.3).

If not, check all connectors are plugged in correctly, or use a different longboard.

Fig 7.3


Fig 7.4


Fig 7.5

Cutting Boards

For any longboards that need cutting to complete flooring installation, it cannot be powered for self-heating. Thus, cut the non-heated longboards that are included included to finish your floor installation.

Make sure connectors on any glued down floor boards are tucked into their socket, and glue down your cut-floorboards as you would on any typical occasion.

7 Carry on Floor Installation

Repeat the same steps to carry on with the floor installation.

Apply your floor adhesive (Fig 8.1). Use the Wire Hook to retrieve the Connectors from the longboards (Fig 8.2). Connect your board to the cable before gluing it (Fig 8.3). Check the ohmmeter has decreased (Fig 8.4). Lay it on the glue and connect the tongue and groove system (Fig 8.5). Connect longboards to ones glued down (Fig 8.6). Check the ohmmeter has decreased again (Fig 8.7). Lay these boards down (Fig 8.8). Cut any needed non-heated boards and glue them down also (Fig 8.9).

Repeat.


Fig 8.1


Fig 8.2


Fig 8.3


Fig 8.4

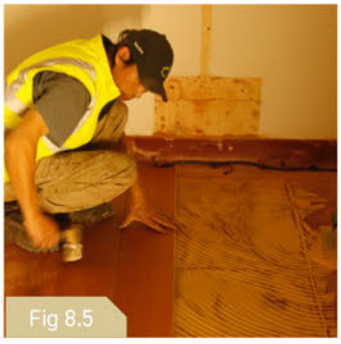


Fig 8.5

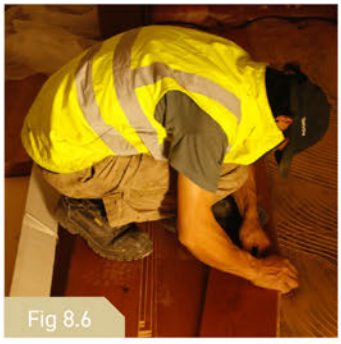


Fig 8.6


Fig 8.7

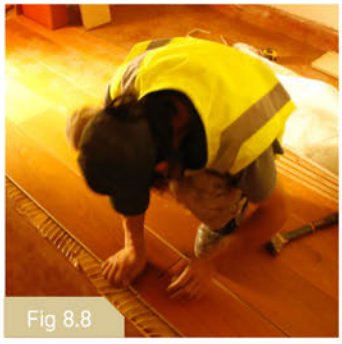


Fig 8.8

Fig 8.9

8 Cut the Excess Cable

Once all the floor has been fully laid out, it is time to cut the excess cable.

In a typical scenario, your floor will be complete, however for this job (Fig 9.2), the remaining area is non-heated (more cabinets). We will finish of the rest of this job with non-heated boards.

Our use with the cable is now finished. It is ready to be cut.

With a sharp scissors or knife, cut the cable on the outside of the last occupied female connector. Complete the cut halfway between the last occupied female connector and the next unused one. Leave this end as is, no duct tape.

The excess cable can be used again for more jobs in the future.

Fig 9.1

Fig 9.2

Fig 9.3

Our completed job is as such (Fig 9.2).

Seeing the length and positioning of the cable, we know that a wide middle section of the room can be self heated.

The cable will be positioned behind the room's skirting, or left in a position where skirting will be placed Infront, later.

The electrician will connect all relevant wiring, and also install the thermostat into the wall.

This is Luxia's phenomenon. Self-heated timber flooring.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