

## **What is a room thermostat?**

A room thermostat simply switches the heating system on and off as necessary. It works by sensing the air temperature, switching on the heating when the air temperature falls below the thermostat setting, and switching it off once this set temperature has been reached.

Turning a room thermostat to a higher setting will not make the room heat up any faster. How quickly the room heats up depends on the design of the heating system, for example, the size of boiler and radiators.

Neither does the setting affect how quickly the room cools down. Turning a room thermostat to a lower setting will result in the room being controlled at a lower temperature, and saves energy.

The heating system will not work if a time switch or programmer has switched it off.

The way to set and use your room thermostat is to find the lowest temperature setting that you are comfortable with, and then leave it alone to do its job. The best way to do this is to set the room thermostat to a low temperature – say 18°C – and then turn it up by one degree each day until you are comfortable with the temperature. You won't have to adjust the thermostat further. Any adjustment above this setting will waste energy and cost you more money.

If your heating system is a boiler with radiators, there will usually be only one room thermostat to control the whole house. But you can have different temperatures in individual rooms by installing thermostatic radiator valves (TRVs) on individual radiators. If you don't have TRVs, you should choose a temperature that is reasonable for the whole house. If you do have TRVs, you can choose a slightly higher setting to make sure that even the coldest room is comfortable, then prevent any overheating in other rooms by adjusting the TRVs. Room thermostats need a free flow of air to sense the temperature, so they must not be covered by curtains or blocked by furniture. Nearby electric fires, televisions, wall or table lamps may prevent the thermostat from working properly.

## **USER GUIDE TLX 7506 DIGITAL ROOM THERMOSTAT**

### **Installation**

Please read all installation instructions before starting.

The TLX 7506 Digital room thermostat is battery powered and operated by radio control. It does not require any electrical connections. If it is replacing an existing hard wired thermostat, isolate and make safe the wiring to the old thermostat, as it is no longer required.

All electrical wiring changes must be carried out by a competent person in accordance with the latest appropriate wiring regulations. Be sure to switch off the Mains supply before removing any existing thermostat.

### **Position**

The ideal position to locate the TLX 7506 Digital room thermostat, is about 1.5M above floor level, accessible, reasonably lit and free from extremes of temperature and draughts. Do not mount on an outside wall, above a radiator or where it will be subject to direct sunlight.

The wireless nature of the installation means that the thermostat can now be positioned in any room to provide optimum thermal response, rather than to minimise or simplify the installation wiring.

It is recommended that the commissioning procedure be carried out before fixing the mounting plate to ensure the chosen locations are suitable for transmitting and receiving radio signals.

## Fixing

1. The metal mounting plate supplied, should be positioned with a minimum of 70mm clearance all around to allow adequate air flow.
2. Fix the mounting plate directly to a flat wall using the wall plugs and screws provided.
3. Remove the battery insulating strip protruding from the rear of the unit. Check the unit is functioning and fit to the metal mounting plate on the wall

## Configuring

The unit is supplied with a 5°C minimum temperature set point and configured as a heating thermostat as factory defaults. Two internal links can be used to re-configure these defaults.

1. Isolate the thermostat from the mains supply before proceeding
2. Open the unit by slackening the retaining screw on the lower side and hinge unit upward along the top edge to separate it from the plastic base. Remove batteries.
3. Locate and identify the two option links 1 and 2. Use a pair of small wire cutters to carefully cut the appropriate links to give the required configuration.
4. Cutting link 1 will give a minimum temperature set point of 16°C (factory default is 5°C). Cut link 2 to display cooling symbol instead of heating symbol.
5. Carefully replace batteries being sure to observe the correct polarities. Re-fit to plastic base and tighten retaining screw. Check unit is functioning as required.
6. Re-connect to mains supply.

## Battery replacement

This is the only maintenance required for this product and should be carried out by a competent person.

A flashing 'low batt' symbol will appear at the bottom left of the display when the batteries start to approach the end of their life. This indicates that they should be replaced within the next month. Normal operation will be maintained during this period. Ultimately the complete display will start flashing, at which time the thermostat will switch off the heating and shut down until the batteries are replaced.

To replace the batteries the following procedure should be carried out. The thermostat should be isolated from the mains before proceeding.

1. Remove the unit from the wall plate by sliding upwards and gently pulling away from the wall. Slacken the retaining screw on the unit and open by hinging upwards along the top of the unit.
2. Carefully remove batteries from the battery compartment and fit two new 'AA' alkaline cells taking care to observe the correct battery polarities. Check unit is functioning and re-fit to the plastic base by hinging downwards from the top edge. Ensure unit is properly closed and re-tighten screw. Check unit is functioning correctly.

Re-mount onto the metal wall-plate and check the TLX 7506 is still in radio communication with the RF receiver. This is easily done by adjusting the SET POINT to switch the heating system on and off several times and checking the green indicator on the RF receiver goes on and off accordingly

To clear any problems when fitting batteries, I.E. a blank or partial display, reset the unit by REMOVING the batteries and pressing any key for 10 secs. To fully discharge any residual voltage.

## Commissioning

This is the process of establishing communication between the Sunvic TLX 7506 (RF transmitter) and the TLX 1206 (RF receiver).

The following assumes that the TLX 7506 room thermostat and the TLX 1206 RF receiver have been installed in accordance with the appropriate instructions.

The commissioning procedure is simple and straightforward, however, should difficulties be experienced, see the 'Hints & Tips' section below. It is important to read through these instructions once before carrying out the procedure.

The procedure consists of putting the TLX 7506 thermostat in a mode where it repeatedly sends a unique security install code. During this time, the RF receiver is put into install mode when it receives and holds this unique security code. The receiver will then respond to signals from that particular TLX 7506 thermostat.

## RF Receiver LED's (indicators)

### Red LED

Flashing -indicates receiving an RF signal

### Red LED

Steady on -Indicates a fault condition e.g. RF signal not being received

#### Red LED

Slowly pulsing -Indicates a valid install code has been received

#### Green LED

Steady on -Indicates a demand for heat

#### Green LED

Off - i.e. Heating satisfied

### Checking the hard wired circuit

1. Apply power to the TLX 1206 receiver. Ensure any Separate programmer in the heating circuit is calling for heat. The Red LED should be OFF
2. Press the TEST button. The Green LED should come on. Check that the boiler and/or motorised valve have operated. Remember to allow adequate time for the valve to open. Press TEST button again. The Green LED should go out, closing any valve and switching off the boiler.

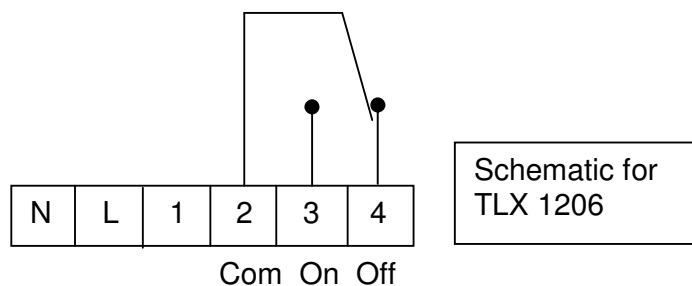
Note: TEST mode will automatically switch off after 15 minutes.

### Checking the RF circuit

#### ENSURE THE RED AND GREEN LIGHTS ON THE RECEIVER ARE OFF PRIOR TO INSTALLING CODE

1. Press and hold the + and – buttons on the TLX 7506 for at least 3 seconds. The TLX 7506 will then transmit its unique digital security code every 10 secs. for the next 5 mins. The display will show flashing ' ] ] ' while this is happening.
2. Within the 5 minute period, go to the TLX 1206 rf receiver. Press and hold the INSTALL button and then press the TEST button while the install button is held. This will clear out any previously installed codes. The RED LED will pulse slowly for 3 seconds to indicate this has been done.
3. Next, place the receiver in INSTALL mode by pressing and holding the INSTALL button (for at least 10 secs) The RED LED will come on and stay on until a valid INSTALL code has been received. When this happens, the RED LED will start pulsing slowly and the INSTALL button can be released. The RED LED will pulse for a further 3 seconds and then go off. The INSTALL code has been successfully received.
4. Go to the thermostat transmitter and press any key to stop the transmission. The display will stop transmitting ' ] ] ' and return to normal.
5. The TLX 1206 RF receiver will now only respond to radio signals with the installed code. I.E. from the TLX 7506 thermostat just installed. Even if the power is removed from the receiver it will not forget the installed code.
6. Check that the TLX 7506 and the TLX 1206 are communicating with each other by adjusting the TLX 7506 Set Point below and then above the actual temperature, thus generating a radio signal requesting the heat to come on or go off and check that the boiler responds as expected. The RED LED on the receiver will flash for 3 seconds each time a radio signal is received. This will happen every time the TLX 7506 thermostat calls for the heating to be switched on or off.
7. The TLX 7506 thermostat also sends a radio signal Every 5 minutes to make sure that the TLX 1206 receiver knows what state it should be in. Therefore every 5 minutes the RED LED will flash for 3 seconds. If the TLX 1206 does not receive regular RF signals, the RED LED will come on indicating that a fault condition has occurred and the heating system will be switched OFF.

**NOTE. If more than one Radio Controlled Digital Room thermostat system is fitted within the same property, it is important that the above procedure is used to install each Room Thermostat in turn so that they are correctly matched to the relevant Receivers.**



## Hints and Tips

### 1. Receiver RED LED 'steady on'

This could be an indication of dead batteries, or some temporary interference with the radio signal.

### 2. Commissioning

If nothing has happened after 20 seconds of holding the INSTALL button pressed, check the TLX 7506 thermostat is still transmitting (i.e. it may have been more than 5 minutes since it was started)

### 3. Minimum set point

If while adjusting the Set Point it is found that it cannot be set below 16°C, check with the installer that the unit has not been configured to restrict the minimum Set Point. (This is often required for installations in sheltered accommodation). See 'CONFIGURING' above for details of how to re-configure the unit.

### 4. Failure to operate

If the heating fails to come on when the thermostat is calling for heat, check the 'Battery Low' indicator on the thermostat display. If the display has faded, replace the batteries as you may have previously overlooked the battery low indications. If the batteries are removed for more than 5 – 10 minutes, the unit may need to be re-commissioned. (See above).

## OPERATION

The TLX 7506 Digital room thermostat is simple to use. The large 12MM Liquid crystal display continuously shows actual room temperature.

To display the temperature requested,(the SET POINT) press and hold the button marked SET. On releasing this button the display will revert back to actual temperature.

To change the SET POINT,(I,e, the temperature requested),press and hold the SET button, and at the same time, press + or - to increase or decrease the temperature setting. The display will continue to show the SET POINT until the SET button is released. The display will then show actual temperature.

When the TLX 7506 instructs your heating system to switch on, A small flame symbol appears at the bottom right of the display. This symbol will be displayed only when the thermostat is calling for the heating to be on.

## TLX 7506 Technical data

Temperature range	5°C to 35°C In 1°C steps 16°C to 35°C selectable.
Differential	<1 °C at 4 K per Hour.
Ambient Temperature Operating	0°C to 45°C
Power supply	2 type AA 1.5V alkaline Cells
Switch	230V ac 2(1)A
Battery life	2 years typical
Wiring	For fixed wiring only
Maintenance	Minimal user maintenance
Radio signal range	30 metres typical
Year 2000 compliant in accordance with BSI/DISC 2000-1	

This product complies with the essential requirements of the Following EC Directives  
Electro-Magnetic Compatibility Directive EMC 89/336/EC  
(as amended by 91/263/EEC and 92/31/EEC)  
Low Voltage Directive:  
LVD 73/23/EEC;96/68/EEC



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