

**ESRTERFW**

# **Wireless Digital Room Thermostat User Instructions**

---





# Thank you for choosing ESi Controls

All our products are tested in the UK so we are confident this product will reach you in perfect condition and give you many years of service. However, for additional peace of mind, we recommend you register your product online at **[www.esicontrols.co.uk/warranty](http://www.esicontrols.co.uk/warranty)** for your extended 3-year warranty within 30 days of purchase. Products registered after 30 days of purchase will qualify for 1 year warranty.

We are continuously developing our products to bring you the very latest in energy saving technology and simplicity. However, should you have any questions regarding your controls please email us at [sales@esicontrols.co.uk](mailto:sales@esicontrols.co.uk).

## Contents

What Is an Electronic Room Thermostat.....	3
Chronoproportional Control.....	4
Setting the Temperature.....	5
RF Receiver Functions.....	5
RF Pairing (Configuring/Commissioning).....	6
DIP Switches.....	6

# What Is An Electronic Room Thermostat?

A room thermostat simply switches a heating system on and off based on room temperature. 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 the boiler & 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 house insulation quality is a key factor in heating control.

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, e.g. 18°C and then turn it up until you are comfortable with the temperature, (20°C is the usual preferred set point).

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 often be only one room thermostat to control the whole house, but building regulations Part L require houses above a certain size to have more than 1 heating zone, meaning more than 1 room thermostat.

Room thermostats rely on a free flow of air to sense the temperature, so they must not be covered by curtains or blocked by furniture or be installed behind a door.

Nearby sources of heat, e.g. fires, televisions, PCs & monitors, wall or table lamps may prevent the thermostat from working correctly. Also, keep out of direct sunlight.

A Wireless Room Thermostat operates using radio signals between the unwired, battery-operated thermostat and a wired RF receiver. Put simply, the temperature sensor part is separated from the hard-wired part. Wireless Room Thermostats are ideal for use in situations where it is not possible to hardwire a programmable room thermostat back to a boiler, e.g. retrofit where walls are already decorated or not suitable for chasing a cable through.

## **Chronoproportional Control (TPI)**

A chronoproportional (or TPI) room thermostat makes boilers operate more efficiently and provide close, accurate control. Chronoproportional control is a load compensator as it ensures the boiler 'ON' time is reduced to a minimum & matches the boiler output with the heat loss. This reduces the net temperature of the return water to the boiler. This is due to the TPI (Time Proportional and Integral) advanced energy saving feature.

Rather than just simple ON/OFF control, like other domestic room thermostats, a TPI room thermostat increases the boiler efficiency by firing the boiler more often, but for much shorter amounts of time, adjusting firing duration with demand to maintain SET room temperatures and giving them a great advantage over other domestic room thermostats and achieving a constant ambient environment for the user.

Heating & hot water can account for over 80% of total household energy usage. TPI thermostats can provide great cost savings. They can be used on any boiler, with underfloor and radiator systems, zoned heating & electric heating systems.

The use of an electronic thermostat with TPI capability provides closer temperature control plus possible reductions of 10% in both fuel cost and carbon emissions.

## Setting the Temperature

To set the temperature, turn the dial until the desired temperature is shown in the LCD display. The LCD display will flash the desired temperature for approximately 5 seconds before returning to display the current room temperature.

## RF Receiver Functions

It is possible to operate the RF receiver manually (Manual Override). This may be necessary where, for example, the batteries in the thermostat are depleted and therefore the heating cannot turn on or off.

To engage manual override, press the **MANUAL** button on the RF receiver, which will then light up green. The solid green light is letting you know your RF receiver is now in Manual Override.

After 2-3 seconds, press the **M/A** button. This button will light up red to show a manual demand for heat.

When you no longer require the heating to be on, press the **M/A** button again to switch the heating off. The red light will disappear to signify there is no demand for heat.

When the green light is on (RF receiver is in manual override), your RF receiver will not listen to any commands given by your thermostat.

To return control back your thermostat, tap the **MANUAL** button to turn off the green light.

# RF Pairing (Commissioning/Configuring)

The thermostat & RF receiver will have already been paired in the factory, so no pairing should be necessary. However, if RF comms are lost, follow the steps below.

1. Press & hold the **M/A** button for approximately 10 seconds, until the **MANUAL** button flashes green.
2. Ensure the thermostat has good quality batteries.
3. Move the thermostat dial to number **1** and remove the dial by firmly pulling it away from the thermostat.
4. You will see a small black button in the space where the dial was. Hold this button until the receiver light stops flashing.
5. Return the dial to the thermostat with number **1** at the top. Turn the dial to a level above the room temperature and check the **M/A** button is illuminated red.
6. If unsuccessful, isolate the power to your RF receiver for 5 minutes, then switch the power back on and repeat the steps above.

## DIP Switches

COOL	HEAT
TPI ON	TPI OFF
6 Cycles	3 Cycles
°F	°C

Typical setup for a property with gas heating.

Use 3 cycles for oil heating.

**WARNING:** Interference with sealed parts renders the guarantee void.

UK  
CA

CE



Energy Saving Innovative Controls Limited

Version 4.2

ESI Controls Limited

[sales@esicontrols.co.uk](mailto:sales@esicontrols.co.uk)

<http://www.esicontrols.co.uk>