

ESRTP4RF

# RF Programmable Room Thermostat

## User Instructions

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# Contents

## User Instructions

<b>1. What is a Programmable Room Thermostat?</b>	
1.1 The ES RTP4RF explained	6
1.2 Introduction to the ES RTP4RF	7
1.3 What is Chronoproportional Controls (TPI)?	7
1.4 What is Delayed Start?	8
1.5 What is Optimum Start?	9
1.6 What is Optimum Stop?	9
1.7 What is Landlord Service?	9
<b>2. Quick Operating Guide</b>	<b>10</b>
<b>3. Operation Modes</b>	
3.1 Factory Pre-Set Programme	12
3.2 Setting the Operation Mode (5/2 day, 7 day or 24hr)	13
3.3 Setting the Programme	13
3.4 All Day Setting	14
3.5 Permanent Manual Overrides	14
3.6 Temporary Manual Overrides	14
3.7 Holiday Mode	15
3.8 Frost Protection	16
<b>4. Programme Settings</b>	
4.1 Setting the Time and Date	17
4.2 Using the Copy Function	17
4.3 Battery Replacement	18
4.4 Resetting the Unit	18



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# User Instructions

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# 1. What is a Programmable Room Thermostat?

## 1.1 An explanation for householders

Put simply a Programmable Room Thermostat is a timer and thermostat combined in one unit. With a standard timer you choose your heating ON times and set your room thermostat (fitted usually away from the timer) to the desired comfort temperature required. With a Programmable Room Thermostat this is done within just one unit. i.e. for your heating ON times you assign a comfort temperature to those times.

The added bonus is that you can also attach a chosen temperature to the OFF time of your heating. This is called the set back temperature and is designed to prevent the temperature in the house falling below a pre-set temperature while the heating is programmed OFF. The advantage to this function is that by narrowing the gap between OFF house temperature and ON house temperature (usually 20°C) less energy will be required to bring the house temperature back up to 20°C when the heating is turned back ON. The recommended set back (OFF) temperature is 16°C, although it can be set higher or lower depending on personal choice (scale is 5°C - 35°C).

Having this function can be of assistance to elderly people as it prevents the house getting too cold when heating is programmed OFF.

**N.B.** *The unit is capable of operating in an air conditioning/cooling mode also. See instructions for further details.*

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A Wireless Programmable Room Thermostat operates using radio signals between the unwired battery operated thermostat and a wired receiver. Put simply the time and sensor part are separated from the hard wired part.

### **1.2 Introduction to the ES RTP4RF**

The ES RTP4RF is an easy to install and use Wireless 7 Day, 5/2 Day or 24 Hr Programmable Room Thermostat which offers four or six time and temperature changes each day, with different programmes available for weekdays and for weekends. It is designed to provide automatic time and temperature control of heating systems in domestic or light commercial premises. A large backlit LCD screen and easy-to-use function buttons ensures simplified programming and operation for all users.

Your ESi Controls Programmable Room Thermostat includes special features designed to save you energy. These features are factory set to be OFF to enable the homeowner to choose whichever features are preferred. Also, please note these features only apply to your home heating and not the hot water system.

### **1.3 What is 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 that the boiler 'ON' time is reduced to a minimum and matches the boiler heat 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 a simple ON/OFF control, like other domestic

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room thermostats, room thermostats with TPI increase boiler efficiency by firing the boiler at regular intervals, adjusting firing duration with demand, to maintain set room temperatures. This gives them a great advantage over other domestic room thermostats and achieves a constant ambient environment for the user e.g. if a property only has a simple mechanical thermostat installed, the energy saving benefits of a replacement high efficiency condensing boiler will not be realised as the boiler will rarely be running in condensing mode. Heating and hot water can account for over 80 % of total household energy usage. Chronoproportional (TPI) thermostats can provide great cost savings. It can be used on any boiler, with underfloor and radiator systems, zoned heating and electric heating systems. The use of an electronic thermostat with chronoproportional capability provides closer temperature control plus possible reductions of 10 % in both fuel cost and carbon emissions. This thermostat has the option of standard setting or TPI.

#### **1.4 What is Delayed Start?**

Thermostats with the Delayed Start function have been shown to reduce heating costs by as much as 10 %. This feature delays the start-up of the heating, depending on how warm the room temperature is at the time when the central heating is due to come on.

The heating start can be delayed for up to 45 minutes if the room is already relatively warm, when the weather is milder for example. This often reduces how long the heating is on per day, with no comfort loss, saving you energy and money! The Delayed Start feature can be fully automated and needs no extra programming.



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### 1.5 What is Optimum Start?

The Optimum Start adjusts the starting time for home heating according to the temperature measured within the building. Instead of setting an arbitrary time for the heating to come on, the homeowner programmes the time that the home should be at the desired temperature. Up to 10% of domestic energy costs can be saved, as the warm up time is automatically reduced according to the ambient temperature. Many homeowners set their heating to start a couple of hours before getting up to avoid waking up to a cold house. With the Optimum Start function you don't need to do this. The actual start time is automatically delayed or advanced to ensure your home reaches the set temperature by the programmed time.

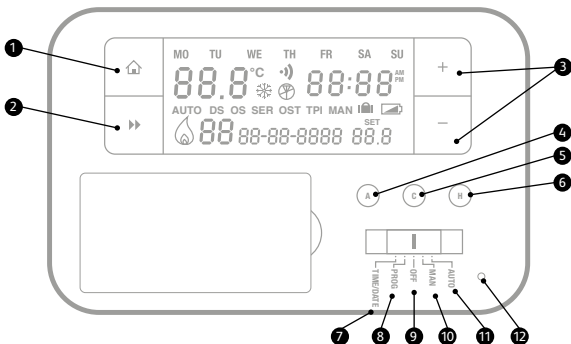
### 1.6 What is Optimum Stop?

Optimum Stop saves energy by switching the boiler off a little earlier than the programmed OFF time. If the house is up to temperature, you should not notice the effect on the temperature but you should see a difference in your energy bill.

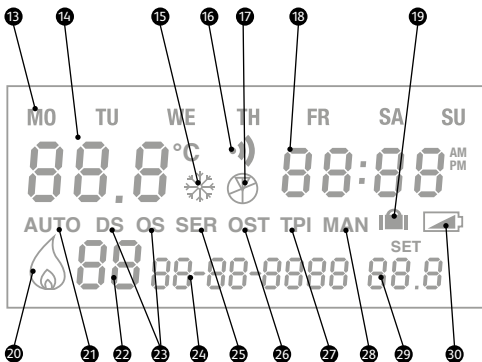
### 1.7 What is Landlord Service ?

The optional Landlord Service safety feature offers protection for tenants and landlords against illegal boiler negligence (in compliance with Gas Safety Regulation 36). 30 days before the boiler is due to be serviced, the LCD will display **SER**. If the annual maintenance is not carried out before the 30 days, the system will only run for a pre-determined number of minutes per hour before turning off.

## 2. Quick operating guide



- 1 **Home** (takes you back to home screen)
- 2 **Next** (moves you to next option within a function)
- 3 Temporary Override/Settings Adjustment
- 4 Accepts/Confirms selection in functions/All Day Mode
- 5 Copy (**COPY**)
- 6 Holiday Mode
- 7 Sets Time and Date
- 8 Selects and adjusts Programme (**PROG**)
- 9 Places Thermostat into Frost Protection Mode (**OFF**)
- 10 Places Thermostat into Manual Mode (**MAN**)
- 11 Runs Programme (**AUTO**)
- 12 Reset





- 13 Day Display
- 14 Room Temperature
- 15 Frost Protection Mode
- 16 Thermostat is receiving signal
- 17 Thermostat is not receiving signal
- 18 Time Display (**12 hour AM/PM or 24 hour**)
- 19 Holiday Mode symbol
- 20 Flame symbol when system calling for heat
- 21 Operation Mode symbol & Auto Mode symbol
- 22 Programme Events Display/All Day
- 23 Delayed Start (**DS**) / Optimum Start (**OS**) is active
- 24 Date (DD-MM-YYYY)
- 25 Annual Service is due (**SERV**)
- 26 Optimum Stop (**OST**) is active
- 27 TPI is active
- 28 Manual Mode symbol
- 29 User Set Temperature
- 30 Low Battery Warning

## 3. Operation modes

### 3.1 Factory Pre-Set Programme

This Programmable Room Thermostat has been designed to be a simple to use thermostat, requiring minimal user intervention with a pre-programmed heating profile. The pre-set heating times and temperatures will suit most people (see table below). To accept the factory pre-set programme, move the slider to AUTO which will revert the thermostat to Run Mode (the colon (:)) in the LCD display will begin to flash).

#### Pre-Set Temperatures: 5/2 Day

Key	Event	Time	Temp	Event	Time	Temp		
  	Week Days	1	06:00	20°C	Weekdays	1	07:30	20°C
		2	08:00	15°C		2	09:30	20°C
		3	12:00	15°C		3	11:30	20°C
		4	14:00	15°C		4	13:30	20°C
		5	17:00	21°C		5	16:30	21°C
		6	22:00	15°C		6	22:30	15°C

**N.B.** If 4 events is chosen the events 3 & 4 are skipped

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## Pre-Set Temperatures: 7 Day

In 7 day setting, the pre-set settings are the same as the 5/2 Day programme.

## Pre-Set Temperatures: 24 Hours

In 24hr setting, the pre-set settings are the same as Mon-Fri of the 5/2 Day programme.

### 3.2 Setting the Operation Mode (5/2 day, 7 day, 24hr)

1. Switch the slider to **PROG**.
2. **Press +/-** buttons to move between 7 day, 5/2 day or 24hr operation.

**5/2 Day operation** is shown by MO, TU, WE, TH, FR flashing (5 Day) and then SA, SU flashing (2 Day)


**7 Day operation** is shown by just one day flashing at a time

**24 hr operation** is shown by MO, TU, WE, TH, FR, SA, SU flashing at the same time.


3. Wait 15 seconds to automatically confirm and return to Run mode or press **Next ►►** to move to 'Setting the Programme'.

### 3.3 Setting the Program

1. Choose between 5/2 day, 7 day or 24 hr operation (see *above steps 1-2*).
2. Press the **Next ►►** button. The time will flash and P1 will be displayed (the 1st temperature event).
3. Press **+/-** to set the time (10 minutes increments). Press the **Next ►►** button and the temperature will flash.
4. Press **+/-** to set the temperature (increments of 0.5°C). Press the **Next ►►** button to go to the next time temperature event (e.g. P2).

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5. Repeat steps 3 - 4 for all temperature events.
  6. Press A to accept/confirm temperature events and move to the next day/block of days.
  7. Repeat steps 3 - 6 until all days have been set. Then wait 15 seconds to automatically confirm and return to run mode or press the  **Home** button.

### 3.4 All Day Setting


1. Switch the slider to **AUTO**.
2. Press the **A** button under the fascia. The display will now show **AL (All Day)**.
3. Press the **+/-** button to set the temperature (increments of 0.5°C).
4. The mode will quit by 00.00 that day. Press the  **Home** button to cancel and return to Auto Mode.

### 3.5 Permanent Manual Overrides

1. Switch the slider to **MAN**. **MAN** will appear in the display.
2. Press **+/-** to adjust the temperature to the desired setting. This will set a constant temperature 24hrs a day.
3. Switch the slider to **AUTO** to revert back to Auto mode.

### 3.6 Temporary Manual Overrides


1. To temporarily override the Programmable Room Thermostat status or temperature press the **+/-** buttons. The Programme Events Display (e.g. P1) will no longer be shown.
2. Press the **+** button to increase the set temperature in increments of 0.5°C and/or press the **-** button to decrease the set temperature in increments of 0.5°C.


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3. Once the desired temperature is reached (and after approx. 6 seconds) the time display will be replaced by a display indicating the time left to the next programme (the length of time the temporary override will run, if left unhindered) and the display then alternates between the time left and the current time. When the next ON/comfort programme is arrived at, the temporary override will end and Auto mode is reactivated.
  4. Press the  **Home** button to cancel this function and reactivate Run mode.

### 3.7 Holiday Mode

Holiday Mode saves energy by letting you reduce the temperature for 1 to 99 days while you are away from home, resuming normal operation on your return.

#### To set the Holiday Mode:

1. Make sure the Programmable Room Thermostat is in Auto mode. Press the **H** button, underneath the fascia and the suitcase symbol will appear on the display and the number of days will flash.
2. Press **+/-** to set the number of days you will be away.
3. Press the **Next ►►** button and the temperature will flash. Press **+/-** to set the desired temperature.
4. Press the **Next ►►** or  **Home** button, or wait 15 seconds to automatically confirm.
5. The number of days chosen will alternate with time symbol on display and the number of days will count down.
6. Once the countdown has finished the thermostat will return to normal operation. It may be advisable to set the Holiday Mode 1 day less so the house is back up to temperature for your return.

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7. To cancel the Holiday Mode setting or to exit the function at any time, press the  **Home** button to revert back to Run mode.

### **3.8 Frost Protection**

This function is provided as an option if it is desirable to turn the heating off permanently. It is usually used in summer.

#### **To set the Frost Protection Mode:**

1. Switch the slider to OFF to enter the Frost Protection Mode. The display will show the frost protection snowflake symbol and the set temperature will be 5°C.
2. Switch the slider to **AUTO** to exit Frost Protection Mode and revert to **AUTO** mode.



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## 4. Program settings

### 4.1 Setting the Time and Date

The time and date are factory set so it will not normally be necessary to do this on site. Changes between summer and winter time are handled automatically by the unit.

1. Switch the slider to Time/Date. The hour symbols will flash, use **+** or **-** to adjust.
2. Press the **Next ▶▶** button and the minute symbols will flash, use **+** or **-** to adjust.
3. Press the **Next ▶▶** button and the day date will flash, use **+** or **-** to adjust the day.
4. Press the **Next ▶▶** button and the month date will flash, use **+** or **-** to adjust the month.
5. Press the **Next ▶▶** button and the year date will flash, use **+** or **-** to adjust the year.
6. Press the **Next ▶▶** button and choose between 12hour or 24hour clock by using the **+** or **-** buttons.
7. Press the **Next ▶▶** or **🏠 Home** button, or wait for 15 seconds to automatically confirm and return to Run mode.


### 4.2 Using the Copy Function

The unit is provided with a copy function which allows an adjusted programme to be copied to another day or set of days. This avoids the necessity of re-entering a desired programme for another day or sets of days.

**N.B.** This function **only** works in 7 Day setting.

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## To operate the copy function

1. Switch the slider to **PROG** and press the  **Home** Button.
2. Press the **C** button to enter the **COPY** mode.
3. The **A** button chooses the day you want to copy from and the **+/-** buttons choose the day you want to copy to.
4. Press the **C** button to confirm. The screen will show **SEr** (to show the Copy function is set).

## 4.3 Battery Replacement

When the low battery symbol flashes in the LCD display, the batteries need to be replaced as soon as possible. The battery compartment is located on the front of the thermostat, under the fascia cover. Remove the old batteries and insert new ones. All settings including time are maintained.

**N.B.** *If the display ever goes blank during normal operation, the batteries need to be replaced with high quality alkaline cells. The date, time and factory pre-set heating times will be retained (assuming the back up battery has not failed).*

## 4.4 Resetting the Unit

To reset the programmer, hold **reset** for approx. 3 seconds. The system and programme will restore to the factory default settings. Hold the **Next ►►** button and press the **reset** button to restore to factory default settings.

## Manual Operation

It is possible to operate the receiver manually. This may be necessary where, for example, the batteries in the Thermostat (Transmitter) are depleted and therefore the heating cannot turn ON or OFF.

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1. To engage the manual override, press the **MANUAL** button on the receiver, which will then light up with a green background. This shows that the manual override is active.
  2. Use the **M/A** button to manually override the status of the receiver. If ON, the heating will turn OFF (M/A red light goes off). If OFF, the heating will turn ON (M/A red light comes on).

**N.B.** *It is important to remember that the automatic control of the receiver is now off and the receiver will only respond to manual operations.*

3. To return to Auto mode, press the **MANUAL** button on the receiver and the green light will turn off. The receiver should now be back in Auto mode, receiving commands from the thermostat.

**N.B.** *If the receiver cannot receive a signal for 30 minutes, both the red and green light will flash and the unit will need to be reconfigured.*

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

In the interests of continuous product improvement we reserve the right to alter designs, specifications and materials without prior notice and cannot accept liability for errors.

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



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