

ESRTP4RFW

# RF Programmable Room Thermostat

## User Instructions



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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 warranty

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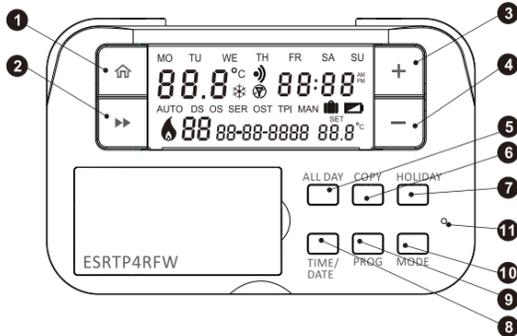
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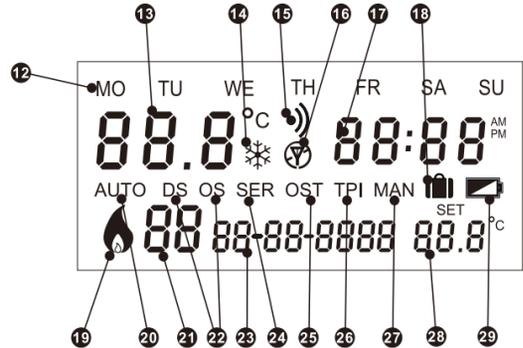
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## Quick Operating Guide



- 1 **HOME** – Takes you back to your HOME screen
- 2 **NEXT** – Moves you to the next option within a function
- 3 **PLUS** – Temporary override/adjust settings
- 4 **MINUS** -Temporary override/adjust settings
- 5 **ALL DAY** – Set All Day Mode
- 6 **COPY** – Copy programs from 1 day to another (only in 7Day schedule)
- 7 **HOLIDAY** – Set Holiday Mode
- 8 **TIME & DATE** - Set the current time & date
- 9 **PROG** – Set programs
- 10 **MODE** – Choose between Auto Mode, Manual Mode or Off
- 11 **RESET**



- 12 **Day Display**
- 13 **Room Temperature**
- 14 **Frost Protection** (Thermostat is OFF)
- 15 **Wi-Fi Connection State** (When paired with ESWIFIHUB)
- 16 **RF Connection State**
- 17 **Time Display**
- 18 **Holiday Mode**
- 19 **Flame Icon** (When calling for heat)
- 20 **Auto Mode is selected**
- 21 **Current running program number**
- 22 **Optimum/Delayed Start is active**
- 23 **Date Display**
- 24 **Annual Service is due**
- 25 **Optimum Stop is active**
- 26 **TPI is active**
- 27 **Manual Mode is selected**
- 28 **SET temperature**
- 29 **Low battery warning**

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## What is a Programmable Room Thermostat?

A Programmable Room Thermostat is a thermostat and a timer (programmer) combined into 1 unit.

With a standard timer, you choose your heating ON times and set your room thermostat to your desired comfort level. As a Programmable Room Thermostat will do both time and temperature control, you must program this unit for **ON** programs and also for **OFF** programs (also known as a SETBACK temperature). The SETBACK temperature is designed to prevent the temperature in the household falling below a pre-set temperature while your heating is off. This can narrow the gap between your OFF temperature and your ON temperature, meaning less energy will be required to bring the house temperature back up when the heating is ON. The recommended SETBACK temperature (OFF) is 15c, although it can be set higher or lower.

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## Introduction to the ES RTP4R FW

The ES RTP4R FW gives you the option of choosing 24Hour, 7Day or 5-2Day programming and either 4 or 6 daily temperature changes (events). 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 simple programming and operation.

Your ES RTP4R FW includes special features designed to save you energy. These features are factory set to be OFF to enable the end user to choose which features are preferred. These features only apply to your home heating and not your hot water system.

## Chronoproportional Control (TPI)

Chronoproportional or TPI room thermostats make boilers operate more efficiently and provide close accurate control. Chronoproportional control is a load

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compensator as it ensures 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 a simple ON/OFF control, like other domestic 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 end user. TPI room thermostats 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

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up to 10% in both fuel cost and carbon emissions.

### **Delayed Start**

Thermostats with Delayed Start software 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 heating is due on.

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

### **Optimum Start**

Optimum Start adjusts the start time for your heating according to the temperature measured within the building. Instead of

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setting an arbitrary time for heating to come on, the end user programs the time that the home should be at the desired temperature. Most homeowners set their heating to start a couple of hours before getting up to avoid waking up to a cold house. With Optimum Start, you don't need to do this as the actual start time is automatically delayed or advanced to ensure your home reaches the SET temperature by the programmed time.

### **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.

### **RF Pairing**

If the RF receiver and thermostat have been supplied as a kit, the units have already been

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paired in the factory and no pairing is needed. However, if you ever need to re-pair your room thermostat with your RF receiver, follow these instructions.

1. Power up the RF receiver and hold the **HEATING** button for approximately 10 seconds, until the **MANUAL OVERRIDE** (green) light begins to flash.
2. Press the **MODE** button until the thermostat is set to OFF (\*).
3. Press and hold the **ALL DAY, HOLIDAY** and **+** buttons until the display shows **SAVING** and the green light on the RF receiver stops flashing.

If unsuccessful, repeat steps 2-3 above. If you are still unable to pair, isolate the power to your RF receiver for 10 minutes, and then repeat the steps above.

### **Reset**

If you need to reset your thermostat, insert a pin-like object into the reset hole.

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## Set The Time & Date

1. Tap on the **TIME/DATE** button. The hour digits will flash.
2. Use the **+/-** buttons to adjust the digits to the correct hour.
3. Tap the **▶▶** button, the minute digits will flash. Use the **+/-** buttons to adjust the digits to the correct minutes.
4. Tap the **▶▶** button, the date digits will flash. Use the **+/-** buttons to adjust the digits to the correct date.
5. Tap the **▶▶** button, the month digits will flash. Use the **+/-** buttons to adjust the digits to the correct month.
6. Tap the **▶▶** button, the year digits will flash. Use the **+/-** buttons to adjust the digits to the correct year.
7. Tap the **▶▶** button & use the **+/-** buttons to select between 12 Hour Clock or 24 Hour Clock.

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## Modes

Your ES RTP4R FW has 3 Modes, which can be selected by tapping the **MODE** button:

**AUTO** – AUTO will appear on the screen and your programs will run. When in AUTO, you can still adjust the current SET temperature temporarily by using the **+/-** buttons. The time shown on the display will alternate between showing the current time and a countdown. The countdown is telling you how much time is remaining until the next program is due to start. When the countdown reaches **0h:00**, your override will be cancelled & the next program will begin as normal. You can cancel the override at any time by pressing the **HOME** button.

**MANUAL** – MAN will show on the display. Use the **+/-** buttons to adjust the SET temperature to a comfortable level. Your thermostat will

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maintain your heating at this level until you change the SET temperature or until you switch to a different Mode. No programs will run when in MANUAL Mode

**OFF \* (Frost Protection)** - If you don't want your heating ON, you can set it to OFF by tapping the **MODE** button until a snowflake icon appears on the display. The snowflake icon is indicating Frost Protection is in operation. Frost Protection will not allow your room temperature to drop below 5°C. If the temperature gets as low as 5°C, your ES RTP4R FW will bring your heating on until it reaches 7°C.

## Buttons & Screen Icons

### Home Button

Pressing the Home button will return you to your Home screen, exiting any menus or other functions (All Day function, Holiday Mode).

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### Next Button ►►

Use this button to advance to the next option when in menus, programming, setting the time & date, All Day & Holiday settings.

### +/- Buttons

The + & - buttons are used to adjust temperatures and other settings.

### All Day Button

Your ES RTP4R FW has an All Day function which allows you to set an adjustable room temperature until midnight, instead of using programs:

1. Tap the **MODE** button until your thermostat is in **AUTO** mode.
2. Tap the **ALL DAY** button.
3. Use the +/- buttons to select a SET temperature and adjust it throughout the day when necessary.

At midnight, All Day mode will be cancelled and

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your programs will run.

You can cancel **ALL DAY** mode at any time by pressing the **HOME** button.

### **COPY Button**

The COPY button allows the end user to copy an entire day's programs onto another day when using 7Day Program Schedule. This will save time and cuts out the need to program every day individually. See page 14 for details on using the COPY button.

### **HOLIDAY Button**

Holiday Mode can be set only when your ES RTP4R FW is set to AUTO or MANUAL.

To set Holiday Mode;

1. Tap the **HOLIDAY** button, you will see **1d** appear on the display.
2. Use the **+/-** buttons to enter the number of days you will be away (maximum 99 days).

3. Tap the **▶▶** button and use the **+/-** buttons to set a base temperature for while you are away.

When Holiday Mode is active, a suitcase icon will appear on the display and the time displayed will alternate with a countdown showing the number of holiday days remaining. When the countdown reaches **0d**, Holiday Mode will be cancelled and AUTO or MANUAL setting will resume. You can cancel Holiday Mode at any time by pressing the **HOME** button.

### **Frost Protection Icon**

The Frost Protection icon will show if you choose OFF mode. When in OFF mode, if the room temperature gets as low as 5°C, your ES RTP4R FW will bring your heating on until it senses the room temperature has reached 7°C.

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### **Flame Icon**

The flame icon will show on the lower left corner of the display when your heating is on. You should also see a red light on your RF receiver.

### **Wi-Fi Icon**

The Wi-Fi icon will flash when not connected to an ESWIFIHUB. It will go solid when connected to an ESWIFIHUB (see page 11)

### **RF Icon**

The RF icon will show as a solid antenna when your thermostat and RF receiver are paired. If the RF icon has a circle around it and a line crossed through it, your thermostat is letting you know that it has sent an RF pulse to your RF receiver but has not received a reply. This should be rectified at the next RF handshake (your thermostat and RF receiver will talk to

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each other every 50 seconds – we call this an RF Handshake).

If the antenna does not appear without a circle around it after 2 minutes, re-pair the two units by following the instructions on page 13.

### **Low Battery Icon**

The low battery icon will appear on the screen when the 2 x AA batteries are low on power. Replace the AA batteries as soon as possible with high quality alkaline cells.

The time, date and program settings will be retained as long as the back-up battery has not also expired.

When the Low Battery Icon appears, the thermostat backlight will also stop working until the batteries are replaced – this is to avoid the batteries running out completely.

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## Programming

### Program Schedules

Your ES RTP4R FW 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 & temperatures will suit most people, (see table below). To accept the factory pre-set profile, tap the MODE button until you see AUTO on the display. This will run the pre-set programs.

	Event	Time	Temp		Event	Time	Temp
Week Days	1	06:00	20°C	Weekends	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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### Set Program Schedule (5-2Day, 7Day, 24Hour)

1. Tap the **PROG** button.
2. Use the **+/-** buttons to choose from the following:
  - **5-2Day**: One set of programs can be set for weekdays, with a different set of programs for weekends.
  - **24Hour**: Every day will run the same programs.
  - **7Day**: Every day can run a different program. Each day **MUST** be programmed separately.
3. Use the **▶▶** button to move on to programming.

### Choose 4 Or 6 Daily Programs

Your thermostat will be defaulted to use 4 daily programs, this would usually be used as 2 ON programs & 2 reduced temperature (SETBACK)

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programs. If preferred, the end user can set each program to their own comfort temperature, with only 1 SETBACK temperature for overnight.

If you would like to add a further 2 daily programs, follow these steps:

1. Tap the **MODE** button until your thermostat is OFF (\*).
2. Press and hold the **ALL DAY & HOLIDAY** buttons together. Then, tap the ►► button to enter the technical settings menu. Release all buttons.
3. Tap ►► until you see **Code**. You won't need a code for this function, so tap ►► once more.
4. The screen will show **Err** and will then be replaced with **Pro9ran5** and the number of programs that are currently being used. Use the + button to select either 4 or 6 programs.
5. Press the **HOME** button to exit the technical settings menu.

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## Setting Programs

1. Choose a Program Schedule as shown above.
  2. Press the ►► button to move onto Program 1 (P1). The time will be flashing on the display.
  3. Use the +/- buttons to set your start time, then press the ►► button to move on to the temperature for P1.
  4. Use the +/- buttons to set your P1 temperature and press the ►► button to move on to P2.
  5. Use the +/- buttons to set your P2 start time (this is when you want your heating to go OFF), then press the ►► button to move on to the temperature for P2.
  6. Use the +/- buttons to set your P2 temperature, remember this is an OFF program so you may want to set it
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quite low e.g. 15c. Press the ►► button to move on to P3.

7. Use the +/- buttons to set your P3 start time (this is when you want your heating to be ON again, then press the ►► button to move on to the temperature for P3.
8. Use the +/- buttons to set your P3 temperature, then press the ►► button to move on to P4.
9. Use the +/- buttons to set your P4 start time (this will be when you want your heating to go OFF for overnight), then press the ►► button to move on to the temperature for P4.
10. Use the +/- buttons to set your P4 temperature, remember this is an OFF program so you may want to set it quite low e.g 15c. Press the ►► button.
11. If you are using 7Day or 5-2Day Schedule, press the **ALL DAY** button to

move on to the next day or weekend and follow the steps above.

### Using the COPY function

When using 7Day mode, you can copy an entire day's programs onto another day by following these steps.

1. Use the **MODE** button to select AUTO.
  2. Tap the **COPY** button. You will see a solid **MO** (Monday) and a flashing **TU** (Tuesday) at the top of the screen. The solid day is the day you are copying *from*, and the flashing day is the day you are copying *to*.
  3. Choose the day to copy *from* by tapping the **ALL DAY** button & choose the day to copy *to* by using the **+** button.
  4. Press **COPY** to confirm and you will see **SET** on the display to acknowledge the change in programming.
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5. Repeat until all your programming is completed.

## Optional Wi-Fi Hub (ESWIFIHUB)

To upgrade the ES RTP4RFW to smart control, the thermostat can be RF paired with the ESWIFIHUB and can then be used with our ESi Centro app.

### Pairing ES RTP4RFW With ESWIFIHUB

1. On your ESWIFIHUB, hold the right (red) button until the left button flashes green.
2. Release the button.
3. On your ES RTP4RFW, tap the **MODE** button until your thermostat is OFF (\*).
4. Hold the **ALL DAY** button, the **HOLIDAY** button and the + button until the green light on your ESWIFIHUB stops flashing. Your thermostat will now be paired with your ESWIFIHUB.

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## Pairing ESWIFIHUB With Centro

1. Download the ESi Centro app from the Apple App Store or Google Play store.
  2. Create a Centro account using an email address and memorable password.
  3. Log into Centro.
  4. Tap on **ADD A NEW DEVICE** at the bottom of your phone screen and follow the on-screen instructions to pair your Wi-Fi Hub to your home network.
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We are continuously developing our products to bring you the very latest in energy-saving technology and simplicity.

Version 1.0.

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