



TPOne-S

Electronic Programmable Room Thermostat

Installation Instructions

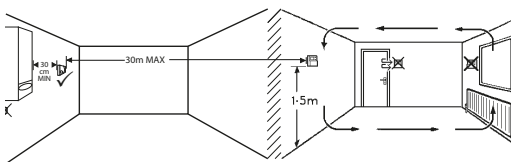
Specifications	TPOne-S	DBR
Operating Voltage	230V AC, 50 Hz	
Setting temperature range	5-35°C	-
Operating temperature range	0-45°C	
Switch rating	-	3A (1) at 230Vac
Switch type	-	SPST Type 1A
Transmission frequency	868.42 MHz	
WiFi Specification	802.11b/g (2.4GHz)	-
Transmission range (in normal buildings)	up to 30m	
Transmission power	Max 1 mW	
IP rating	IP20	IP40
On/off control	Yes	
Chrono-proportional control	Yes	
Operating mode	Heating	-
Construction	EN 60730-2-9	EN 60730-1
Control pollution situation	Degree 2	
Rated impulse voltage	2.5kV	
Ball pressure test	75°C	
Dimensions (mm)	H66 x W155 x D30	H84 x W84 x D30
Software Classification	A	

Important note RF products: Ensure that there are no large metal objects, such as boiler cases or other large appliances, in line of sight between the transmitter and receiver as these will prevent communication between thermostat and receiver.

Mounting

Please note: This product should only be installed by a qualified electrician or competent heating installer and should be in accordance with the local wiring regulations.

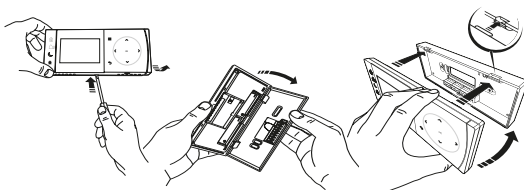
Thermostat positioning:



Note: These products use RF (Radio Frequency) technology to communicate with each other and it is important that care is taken during installation to ensure good wireless connection. Building structure and materials may influence performance and large metal objects such as boiler cases, appliances or mirrors in line of sight between the thermostat and the receiver will prevent communication.

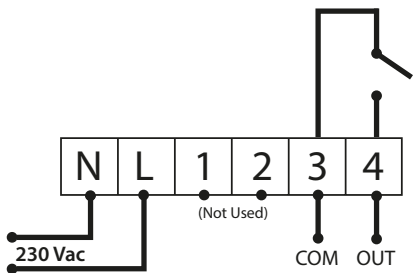
The receiver should be mounted near to the heat source leaving a minimum distance of 30cm away from any metal enclosures or appliance and positioned so that no large metal obstruction is between the receiver and thermostat. The thermostat can be mounted remotely up to 30m from the receiver while considering signal strength will be reduce as it passes through walls and ceilings. Walls and ceilings containing steel reinforcement or with metal foil lined insulation will also have a significant effect on communication distance and may block signal completely.

It is recommended that the RF connection should be checked before permanently mounting the thermostat and where necessary the location of the thermostat must be moved to ensure reliable communication. The thermostat should be mounted at a height of approximately 1.5m from the floor and away from draughts or heat sources such as radiators, open fires or direct sunlight.

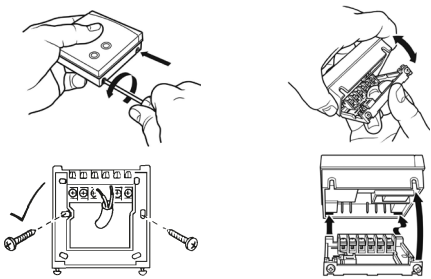


Wiring

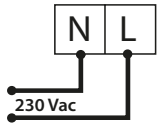
DBR Receiver



DBR Receiver

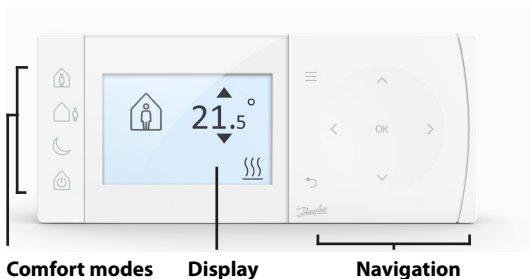


TPOne-S wiring



Note: When using the table stand **ONLY USE** the power supply and USB cable provided.

User Interface



Comfort Modes

Heating made easy: TPOne Comfort Modes simplify the way you plan your heating day to day. You define your comfort modes in the user schedule and manually override when you need, allowing you to adapt your schedule to the way you live.

The Home, Away and Asleep comfort modes are linked to your defined comfort temperatures. The schedule follows the daily routine you have set or you just choose the comfort mode required and TPOne will recall the settings you have defined.

The TPOne Standby Mode allows you to switch your heating off when not required although the thermostat continues to monitor the room temperature and call for heating should there be a risk of frost damage.

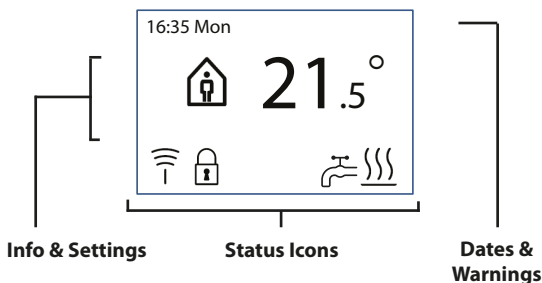
Comfort Modes

	Home Mode selects the home comfort temperature typically when the home is occupied during the day. The required temperatures for Home mode are selectable in the Temperature setting (see User Menu > Temperatures.) A separate Home AM and Home PM temperature can be chosen and these are automatically set according to the time of the day. <i>Note: When in Home mode if the home button is pressed again a 1, 2 or 3 hour heating boost is selected and the current home period is extended by the chosen time period. The chosen boost period is displayed under the Home icon on the display.</i>
	Away Mode selects the away comfort temperature typically when the home is unoccupied during the day. The required temperature for Away mode is selectable in the Temperature setting (see User Menu > Temperatures).
	Asleep Mode selects the nighttime comfort temperature which is set between the end of the last home period of the day and the beginning of the first home period of the following day. The required temperature for Asleep mode is selectable in the Temperature setting (see User Menu > Temperatures).
	The TPOne can be placed in Standby Mode. While in Standby the TPOne will not control the heating system other than to protect against frost damage (see User Menu > Installer Settings > Frost Protect for information on frost protect). Standby can be cancelled by pressing the Standby button again or by selecting another comfort mode. <i>Note: the standby option places the heating control in standby only, if Hot Water is set up this is not affected. To switch Hot Water control off see User Menu > Hot Water > Mode</i>

Navigation

	Menu	Press Menu to access the intuitive text menu. The common feature User Menu will be displayed first. Additional settings can found in the User Setting option and more advance settings can be found in the Installer Setting option.
	Select / Confirm	Press OK to select menu options or confirm settings. OK will be shown on the display when it can be used or is required.
	Menu Back	Press ↶ to exit a menu option. Pressing ↶ while in a setting will result in that setting change not be accepted. ↶ will also exit the menu system. ↶ will be shown on the display when it can be used
	Navigation	The Navigation buttons are used to navigate the TPOne menus and change setting values. The up & down buttons are also used to manually change the required temperature. Navigation arrows will be shown on the display when these buttons can be used.

Display



	Button Lock Indicates that Button Lock has been activated to avoid unintentional setting changes. To activate buttons while button lock is active press the OK button for 5 seconds. The Button Lock setting is found in the Installer Menu.
	Heat Calling When the current room temperature is below the required room set temperature the TPOne will call for heating from the connected heat source. This is indicated by the Heat Calling icon.
	Hot Water Calling Where the TPOne-S has been set up for control of domestic hot water the TPOne will call for hot water heating according to the user set schedule. This is indicated by the Hot Water Calling icon.
	The TPOne-S is connected by radio signal to a receiver. The Radio Frequency icon will be displayed to confirm that this connection is active and that the TPOne-S is controlling the heating. If connection is lost the icon will go off and a warning will be shown at the top of the display. <i>Important Note: Ensure that there are no large metal objects, such as boiler cases, other large appliances or mirrors in line of sight between the transmitter and receiver as these will prevent communication between the TPOne-S and receiver.</i>

NOTE:

TPOne monitors several conditions and will provide warning or information messages when necessary. Details on these can be found on pages 26-29.

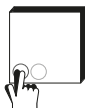
Setup Wizard/ Unit

The setup wizard will run when power is first applied to the TPOne. Once set the further changes can be made in the user and installer setting menus.

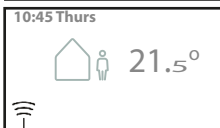
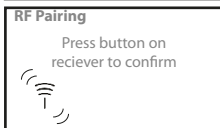
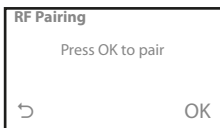
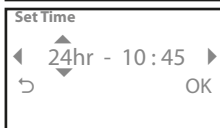
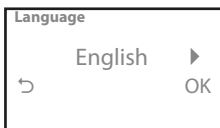


OK

DBR Receiver



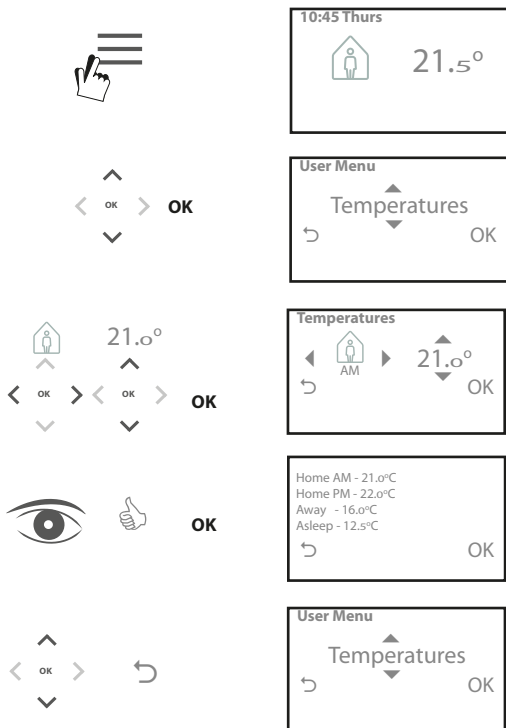
READY



Set Temperatures/ Unit

Follow this routine to set required Comfort Mode temperatures. Changes can be made for each mode, once all changes have been made press OK and a confirmation screen will display the new settings.

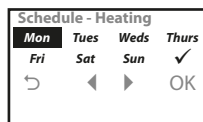
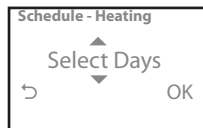
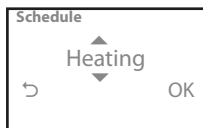
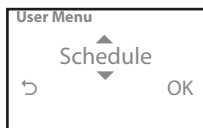
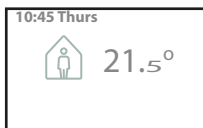
See page 25 for default temperatures



Setup Schedule/ Unit

Follow this routine to set Heating Schedule. Days can be set individually or grouped and options for weekdays and weekend settings can be selected. All day combinations can then have one, two or three Home Periods selected. TPOne will automatically fill in the gaps with Away and Asleep Periods depending on the time of the day.

Where TPOne-S is set up to control domestic hot water as well as heating there is a dedicated Hot Water schedule which can be set
See page 24 for default schedule times



Setup Schedule (Continued)

OK OK

Schedule - Heating

Mon	Tues	Weds	Thurs
Fri	Sat	Sun	✓
↶	◀	▶	OK

^
 < OK >
 v

OK

Select Home Periods

◀ (3) ▶
 ↶ OK

^
 < OK > OK < OK >
 v

Home Period - 1

From	To
◀06.00▶	08.30
↶	OK

^
 < OK > OK < OK >
 v

Home Period - 2

From	To
◀12.30▶	13.30
↶	OK

^
 < OK > OK < OK > OK
 v

Home Period - 3

From	To
◀17.30▶	22.30
↶	OK



Schedule - Heating

Your heating schedule has been saved

^
 < OK > ↶
 v

User Menu

↶ Schedule ↵ OK

TPOne Programme via App

TPOne can be programmed via a smartphone App.

Download the App from App Store or Google Play by following the QR code or by searching for TPOne.

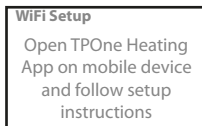
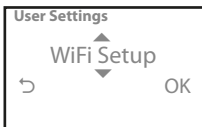
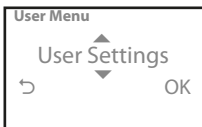
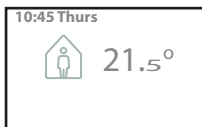


Pairing TPOne-S

Follow the prompts from the TPOne-S App to pair your TPOne-S.



OK



User Menu

Hot Water	User override settings for Domestic Hot Water: Boost - choose to extend the current hot water heating period for 1, 2 or 3 hours. Once boost time is finished hot water heating will return to user set schedule. Mode - choose between scheduled on or off. Scheduled mode will follow the user set hot water heating schedule. Off mode will switch hot water heating off and will remain off until set back to scheduled. Default settings: Boost - Off Mode - Scheduled <i>Note: The Domestic Hot Water feature will be set at installation and will require a separate hot water cylinder thermostat and suitable wiring to the boiler. If the TPOne has been installed for heating only this menu option will not be given. The hot water heating feature can be deactivated after installation, see User Menu > Installer Settings > Hot Water Setup</i>
Click & Save 	Click & Save is an easy access saving function. Switching Click & Save ON will reduce the user set comfort temperatures by 1°C. Switching Click & Save OFF will return TPOne to the user set comfort temperatures. Default setting: Off <i>Note: Independent tests have proven that a reduction in home heating temperatures by 1°C can save on average 10% energy.</i>
Heating Mode	Heating Mode will change the TPOne from a thermostat with full user set heating schedule to a manually set temperature only thermostat. In schedule mode the thermostat will follow the user set heating schedule. In manual mode the user set schedule will be ignored, the required comfort mode is then chosen manually Default setting: Scheduled

User Menu (Continued)

Schedule 	User set heating schedule option: Heating - settings for the daily heating schedule. Choose weekday, weekend or independent daily options and 1,2 or 3 periods per day. Option to reset daily heating schedule to factory defaults. Hot Water - settings for the daily domestic hot water schedule. Choose weekdays, weekend or independent daily options and 1,2 or 3 periods per day. (Option only available if TPOne has been configured for domestic hot water control) Option available to reset daily domestic hot water schedule to factory defaults. Summary - graphical overview of the set daily heating or hot water schedule Default settings: see default heating times later in this guide
Temperatures	User set comfort temperatures (heating), individual comfort temperatures for Home AM, Home PM, Away and Asleep. Home AM and Home PM temperatures will be set during the home periods chosen in the user set heating schedule, see User Menu > Schedule. Away temperature will be set during the day between the home periods. Asleep temperature will be set during the night between the home periods. Default settings: Home AM - 20°C Home PM - 20°C Away - 15°C Asleep - 15°C
Holiday 	Holiday feature allows you to set in advance your holiday dates. TPOne will reduce the heating to your chosen Holiday temperature on the first day set to save energy and will return to your set schedule and mode temperatures on the return date to ensure the home is comfortable for your return. Enter start and end date of your holiday and the required energy saving home temperature.

User Settings

WiFi Setup	Option to connect the TPOne-S to the internet to allow remote smart phone control. Ensure the TPOne-S App is downloaded before selecting WiFi Setup, see page 15 for details. <i>Note: TPOne-S will operate and control your heating without connection to the internet. Only setup WiFi if there is a home WiFi network and internet connection available.</i>
Set Date	Option to set the current date.
Set Time	Option to set the current time and 12 or 24hr clock setting.
Button Click	Button Click is an audible feedback feature to confirm button press. Button Click can be switched On or Off Default setting: On
Backlight 	When buttons are pressed on the TPOne the display backlight will come on to aid viewing. Where backlight is not required this feature can be switched off. Default setting: On
Language	Choose menu language Default: English <i>Note: if required a reset menu language feature is available, press and hold OK for 5 secs and the option to change language will be given.</i>
User Reset	User Reset will return user settings only to the TPOne-WiFi factory default. <i>Note: User Reset will not reset settings in the first level user menu or the date and time.</i>
Information	Information on product type, software level and boiler service interval date if set.
Connectivity	Information on TPOne-S connectivity status

Installer Settings

Hot Water Setup	The TPOne-S can be used as a single channel programmable thermostat to control the temperature regulation of the heating system only or as a two channel programmable thermostat to control the heating and the time schedule of a domestic hot water circuit. The domestic hot water selection will have been chosen in the startup wizard on initial installation. Choose this setting after installation to switch the domestic hot water option on/off. Default: Set at startup <i>Note: Settings in the menu which are required for domestic hot water are only accessible if the Hot Water Setup is switched on. TPOne-S controls only the time schedule for domestic hot water and should always be used with a suitable hot water cylinder thermostat.</i>
RF Pairing	The TPOne-S must be paired to a compatible receiver/boiler relay. The initial pairing is made in the startup wizard. If pairing was not made at startup or if pairing is required to a new receiver/boiler relay select this setting to start new pairing.
Control Type 	This allows the thermostat to be set to run in On/Off mode or in chrono-proportional 3, 6 or 12 cycle rate. Default: Chrono 6 <i>Note: for condensing boiler control tests have shown that boiler efficiency is significantly improved when controlled by a chrono-proportional type controller</i>

Installer Settings (Continued)

Start-up Method 	This feature allows the thermostat to start up the heating system in three different ways. Normal - Heating is turned up or down at the programmed times. Delayed start (or Economy Setting) - Set the period start times in the normal way taking into account the time that the building takes to heat on an average day. The thermostat monitors switch on time, actual temperature and wanted temperature and delays the start of the heating if the actual temperature is close to the programmed temperature. Delayed Start in TPOne is dynamic and will adjust automatically to the home heating characteristics while maximising energy savings. Optimised Start (or Comfort Setting) - This allows you to programme the time at which you would like to be up to the required temperature. The thermostat then calculates how soon before the required time the heating is turned up. Optimised Start in TPOne is dynamic and will adjust automatically to the home heating characteristics to reach required temperature at the required time. Default: Normal
Temperature Limits	This allows the upper and lower temperature of the thermostat setting range to be limited. Defaults: Minimum 5°C, Maximum 35°C
Frost Protect	To help protect against damage to the heating system caused by extreme low temperatures the TPOne includes a Frost Protect level. This is the minimum temperature level and is also used when the TPOne is placed in standby mode. Default: 5°C
Temperature Override	This establishes the degree of manual temperature override available to the user, No Limit, Limited +/- 2°C or No Override Default: No Limit

Installer Settings (Continued)

Daylight Saving	Choose to set automatic daylight saving changes on or off. Default: On
Button Lock 	Button lock can be set to avoid unintentional setting changes. To activate buttons while button lock is active the user must press the OK button for 5 seconds. Default: Off
Display Idle Mode	When the TPOne is in idle mode the display can be set to go off. The display will come on when any button is pressed. Default: On
Service Interval 	TPOne incorporates a service interval timer where a service due date for the boiler can be set. The service interval timer is passcode protected and must only be set by a qualified heating installation engineer. The installer can set the service due date and select from one of four service due restriction modes: 1 - Warning Only - visual and audible warnings only, no reduction of heat. 2 - Heat 45min/hr - visual and audible warnings with reduction of heat to 45 minutes per hour. 3 - Heat 30min/hr - visual and audible warnings with reduction of heat to 30 minutes per hour. 4 - Heat 15min/hr - visual and audible warnings with reduction of heat to 15 minutes per hour. 5 - No Heating - visual and audible warnings with no heating. Once set, the service interval timer can only be reset or deactivated by an installer having the correct access code. Additional information on Service Interval can be found later in this guide <i>Note: If the TPOne is fitted to a combination boiler, the function only works in conjunction with a heating demand, hot water production is unaffected.</i>

Installer Settings (Continued)

Service Demo	Choose this feature to provide a demonstration of the audible and visual warning which will be given when service is due.
Installer Lock	TPOne allows the installer to lock all installer settings by means of a passcode. The 3 digit passcode can be chosen and set by the installer and once set will be required to make any installer setting changes.
Installer Reset	Select option to reset all installer settings to factory defaults. <i>Note: Service interval will not be reset and can only be reset or deactivated by entering the service interval setup.</i>



TPOne is an intelligent programmable heating control made easy. TPOne includes features which are designed to save energy. Look out for the leaf symbol throughout this guide for settings which can directly influence the energy saved.

Default tables (Continued)

TEMPERTURE DEFAULTS

 AM	20°C
 PM	20°C
	15°C
	15°C

Information

TPOne will show information related to current operation, these messages will be shown at the top of the display.

Information messages will be displayed while the operation is active and will automatically reset when operation is completed

Optimised Start	If the TPOne start up method is set to Optimised Start this message will display while this feature is active. <i>see page 18</i>
Delayed Start	If the TPOne start up method is set to Delayed Start this message will display while this feature is active. <i>see page 18</i>

Warnings

TPOne monitors several conditions and will provide warnings when necessary, these messages will be shown at the top of the display. If the condition that has created the warning has been corrected then the message can be cancelled by selecting Clear Warnings in the TPOne menu. Where more than one warning has occurred the most recent will be shown on the display. All warnings can be viewed and cleared in the Clear Warnings menu.

RF Lost	If the RF connection between the TPOne-S and Receiver has been lost this warning will be shown. If this warning is shown and the RF Icon is still displayed on the TPOne-S the loss of connection may have only been temporary and re-connection was made automatically. The warning can then be cleared in the menu. If the RF Icon is not displayed then connection may not be possible or may be inconsistent. Important Note: Ensure that there are no large metal objects, such as boiler cases, other large appliances or mirrors in line of sight between the transmitter and receiver as these will prevent communication between the TPOne-S and receiver.
----------------	---

Pairing Failed	When first installed the startup Wizard will include the pairing of the TPOne-S and the Receiver. If this function was not completed correctly or failed due to unreliable connection then this warning will be shown. Manual pairing can be made by selecting this option in the installer menu. Important Note: Ensure that there are no large metal objects, such as boiler cases, other large appliances or mirrors in line of sight between the transmitter and receiver as these will prevent communication between the TPOne-S and receiver.
Frost Risk	This will be displayed if the TPOne monitors a temperature of below 5°C. TPOne will call for heat if this occurs but if the heat source is faulty then risk of frost damage may still occur. The heating system should be checked to confirm it is operating correctly
Low Heat	If set mode temperature is not reached within 2 hours then TPOne will warn of Low Heat. The heating system should be checked to confirm it is operating correctly
Service Due	Where the TPOne Service Interval timer has been set this warning will be shown when the timer has expired. Contact the property owner or landlord to arrange the boiler safety mainantance. see page 21
Heat Reduced	Where the TPOne Service Interval timer has been set this warning will show after the timer has expired and will indicate that heating has been reduced for your safety until a boiler service has been completed. Contact the property owner or landlord to arrange the boiler safety mainantance. see page 21
Sensor Fail	If the TPOne in-built temperature sensor is measuring outside it's operational parameters then it may have failed. If this warning cannot be reset then contact your service provider for advice.

Warnings (continued)

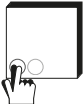
No Network Connection	If the TPOne fails to find the home router, then this warning will be shown. The WiFi signal may be obstructed or the TPOne-S may be out of range of the DBR. Where possible move the router or TPOne-S and re-try WiFi Setup. If WiFi has previously been set and working and this warning is shown, where possible move the router or TPOne-S and the TPOne-S will re-connect to the router when in range and obstruction free. <i>Important Note: Ensure that there are no large metal objects, such as boiler cases, other large appliances or mirrors in line of site between the TPOne-S and home router as these may prevent connection</i>
No IP Address	If the TPOne-S is connected to the home router but it is unable to obtain a valid IP address this warning will be shown.
No Internet Found	If the TPOne-S has a good connection the home router but the home router has no internet connection, then this warning will show
Set-up Timed Out	During WiFi setup the TPOne will wait 2 minutes for a valid mobile device connection. If this time is exceeded without valid connection, then this warning will show and WiFi setup will need repeating.
Software Update Failed	Automatic software updates will be performed when the TPOne-S is connected to the Internet. If an update fails to load correctly, then this warning will be shown and control of the heating may be stopped. To reset, power to the TPOne-S must be removed for minimum 30secs and then re-applied.

Hot Water Paring

Follow this routine to pair optional hot water channel. An additional DBR receiver will need to be installed for domestic hot water control.


 **OK**
 **OK**
 **OK**
OK

DBR Receiver


READY

10:45 Thurs
 21.5°

User Menu
Installer Settings
↶ ↷ OK

Installer Settings
RF Pairing
↶ ↷ OK

RF Pairing
Hot Water
↶ ↷ OK

Hot Water
Press OK to pair
↶ OK

RF Pairing
Press button on receiver to confirm


10:45 Thurs
  21.5°
