The ST325TX can be used with any of these receivers:

- RXBC605
- RXST625
- RXRT505
- RXWBC605
- RXVBC605

ST325TX
Digital Room Thermostat

The ST325TX can be used with any of these receivers.
PRODUCT COMPLIANCE

This product complies with the essential requirements of the following EC Directives:

- Electro-Magnetic Compatibility directive 2004/108/EC
- Low Voltage Directive 2006/95/EEC
- EC Marking directive 93/68/EEC

SAFETY INFORMATION

These instructions are applicable to the SALUS Controls model stated on the front cover of this manual only, and must not be used with any other make or model. These instructions are intended to apply in the United Kingdom only, and should be followed along with any other statutory obligations. This accessory must be fitted by a Competent person. When fitting batteries don’t mix old and new batteries together. Do not use rechargeable batteries. Please leave these instructions with the end user where they should be kept in a safe place for future reference.
INTRODUCTION

A thermostat is a transmitter that is used to switch the heating system in your home on and off as needed. It works by sensing the air temperature and switching on the heating when the air temperature falls below the thermostat setting, and switching it off once the set temperature has been reached. The ST325TX from SALUS Controls is a stylish and accurate electronic thermostat with a large, easy to read LCD display. The thermostat provides the user interface and temperature sensing / control. The thermostat and receiver are linked together by a Radio Frequency (RF) signal. The use of the revolutionary Touch Ring technology makes for simple usage, and is coupled with a unique, smart design. The LCD display will show the current room temperature and the ‘one touch’ operation makes the ST325TX easy to operate.

FEATURES

- Touch Ring Technology
- Large LCD with white backlight
- Stylish Casing
- Intelligent Communication Technology
- Battery Powered with Replacement Indicator
- Frost Protection
- Burner on symbol
- Secure RF Transmission (one million unique RF address codes)
INSTALLATION
Please read the important safety information at the start of this manual before you start to install the device.

The ideal position to locate the thermostat is about 1.5m above floor level. It should be mounted in a location where the thermostat is accessible, reasonably lit and free from extremes of temperature and draughts. Do not mount the thermostat on an outside wall, above a radiator or in a location where it may be subjected to direct sunlight.

To ensure trouble free operation of the Radio Frequency (RF) signal, always ensure that the programmable thermostat is mounted away from any possible sources of interference (such as radios, TV sets, computers, etc.), and is not mounted on or in close proximity to large metal objects. Installing the ST325TX in enclosed areas such as cellars and basements is not recommended.

INSTALLING AND REPLACING BATTERIES
Installing or replacing the ST325TX thermostat batteries is a straightforward operation, but does require you to open the case of the thermostat.

To open the ST325TX case, undo the securing screw on the bottom of the case (just to the right of the hole for the Reset Button):

After undoing the screw pull it forward until the screw stops moving, then carefully separate the two halves of the case by gently pulling in an upwards direction. Once the case has been separated, the batteries should be visible:

Ensure that the batteries are inserted correctly, paying careful attention to the polarity markings on the battery and next to the battery holders. After inserting the batteries, refit the ST325TX case and retighten the securing screw.
PAIRING THE THERMOSTAT AND THE RECEIVER

It is important to correctly pair both the receiver and thermostat to ensure that the RF address codes are matched and that reliable communication is established between the units. Please follow the instructions below to ensure that the units are configured correctly.

**On the receiver:**
Press and hold the sync button on the receiver to put the receiver into pairing mode*.

**LOCATION OF SYNC BUTTONS ON THE RECEIVERS**

- **RXRT505**
- **RXBC605**
- **RXVBC605**
- **RXST625**
- **RXWBC605**

*Please note this receiver does not have a sync button. Switching it on automatically puts it into pairing mode.

For full instructions on the receiver pairing refer to the RXRT505 manual. See page 7.

For full instructions on the receiver pairing refer to the RXBC605 manual. See page 16.

For full instructions on the receiver pairing refer to the RXST625 manual. See page 9.

For full instructions on the receiver pairing refer to the RXWBC605 manual. See page 23.
ON THE THERMOSTAT:

The Arrow key is not active when the ST325TX is in NORMAL mode. To access the Menu screens, press the OK key once. The first menu displayed is the FROST menu:

Use the Touch Ring to scroll through the Menus, and press the OK key to select the PAIR menu:

You can scroll through the menus in either direction (forwards or backwards) depending on the direction you move your finger around the Touch Ring. The menus are displayed in the order shown in the picture above.
After selecting the PAIR Menu, PAIR and the RF icon are displayed.

Press the OK key to start sending the RF address code to the receiver. The ST325TX thermostat display will change to show a rundown timer:

The unit counts down for a period of 10 minutes, with the RF Signal indicator flashing while the signal is being transmitted. The RF address code will be generated randomly and the thermostat will transmit the signal every second for the full 10 minutes until:

- The Arrow key is pressed to return to the previous display
- The OK key is pressed to return to NORMAL mode
- The 10 minute timer runs out

Note that the receiver must be already in learning mode BEFORE attempting to access the PAIR menu on the thermostat. If the Red SYNC LED has not turned off after 10 minutes, repeat the whole pairing process.
Pressing the reset button on the thermostat and the receiver (RXST625 only) will clear the RF address code and generate a new default code which will be saved into the internal memory of the unit; there is no need to re-pair the receiver and thermostat. This is a quick and easy way to directly link the units in many applications.

Replacing the thermostat batteries will not affect the RF code setting.Pressing and holding the SYNC button on the receiver will however clear the RF address code saved into the internal memory, and switch the receiver into learning mode, as previously described.

**AFTER INSTALLATION**

After completing installation and powering up the ST325TX for the first time the programmable thermostat will behave in the following way:

All the indicators on the display and the backlight will be turned on. After two seconds, the display will change to show the currently installed firmware version.

The ST325TX will then operate in NORMAL mode and display the current room temperature.

All programmable thermostat settings will have been returned to default values.

If the Reset Button is pressed, the ST325TX will behave in the same way as described above, except that any previously saved user settings stored in the internal memory will be deleted and overwritten with the default settings.
USER INTERFACE AND CONTROLS

The status and operation of the ST325TX is clearly shown on the large backlit Liquid Crystal Display (LCD).

The display consists of a combination of symbols and alphanumeric displays. The top row is a set of status symbols, the centre row is used to indicate temperature (in Celsius), and the bottom row is an alphanumeric display for menu and status messages.

The status symbol functions are:

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Description</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF Signal indicator (Not used with ST325TX)</td>
<td>Indicates the unit is transmitting a wireless signal</td>
<td></td>
</tr>
<tr>
<td>Touch Lock indicator</td>
<td>Indicates touch lock is activated</td>
<td></td>
</tr>
<tr>
<td>Heat Mode Output indicator</td>
<td>Indicates output is turned on.</td>
<td></td>
</tr>
<tr>
<td>Frost Mode indicator</td>
<td>Indicates frost setting is turned on</td>
<td></td>
</tr>
<tr>
<td>Battery Status</td>
<td>Indicates battery is low</td>
<td></td>
</tr>
</tbody>
</table>

OPERATION

The ST325TX is configured and adjusted by the use of an innovative and stylish Touch Ring, and two touch sensitive buttons. The Touch Ring surrounds the thermostat display, and is operated very easily by moving your finger around the ring. The backlit Liquid Crystal Display (LCD) gives a highly visible, easily readable indication of the thermostat status.

REVIEWING THE SET TEMPERATURE

If you press the Touch Ring anywhere except the OK and Arrow keys when the ST325TX is in NORMAL mode (NORMAL mode is when the thermostat is displaying the room temperature), you can check the set temperature setting. This will display the current set temperature. The set temperature will be displayed for two seconds before the LCD changes to display the room temperature again.

If the ST325TXRF is operating in Frost Mode the LCD will display both the Room temperature and also the Frost Mode indicator. To turn off FROST mode, select the FROST menu and then by using the Touch Ring scroll to the OFF setting. OFF will then be displayed on the LCD. After pressing the Touch Ring, the LCD will display the preset Frost Mode temperature of 5 ºC (this temperature is factory set and cannot be adjusted). Pressing the OK or Arrow keys will return the ST325TXRF to NORMAL mode.
CHANGING THE SET TEMPERATURE

When the ST325TX is in NORMAL mode, press the Touch Ring anywhere except the OK and Arrow keys (as described in the previous section), to enter the Review Set Temperature mode. The currently set temperature will be displayed on the LCD and will flash.

When the set temperature is flashing, press the Touch Ring and move your finger clockwise to increase the set temperature, or anti-clockwise to decrease the set temperature. Press OK at any time to confirm the selection.

Note that the set temperature display will not flash while being adjusted – this is normal and the display will start to flash again approximately 0.5 seconds after the Touch Ring is released.

The ST325TX will go back to NORMAL mode without changing the set temperature after 10 seconds of inactivity, or after pressing the Arrow key.

If the ST325TX is in FROST mode, the set temperature cannot be adjusted. Turn off FROST mode as described below to allow the set temperature to be changed.
ACCESSING THE MENUS

The Arrow key is not active when the ST325TX is in NORMAL mode. To access the Menu screens, press the OK key once. The first menu displayed is the FROST menu:

Use the Touch Ring to scroll through the Menus, and press the OK key to select the menu you want to enter:

Pressing the Arrow key will return the ST325TX to NORMAL mode. The thermostat will also return to NORMAL mode after 10 seconds if no Key is pressed or if no movement is detected on the Touch Ring.
FROST MENU

Entering the FROST menu allows you to turn the frost protection mode of the ST325TX on or off. The FROST mode temperature is preset at 5 ºC; this temperature is factory set and cannot be adjusted. The FROST mode indicator will be displayed in all the FROST menu screens.

On entering the menu, use the Touch Ring to scroll to the preferred option (OFF or ON), and confirm the choice using the OK button. Use the Arrow key to return to the Menu Option display.
SLEEP MENU

The SLEEP mode allows the ST325TX to conserve power by turning off the LCD display. Entering the SLEEP menu allows you to activate this power saving feature from a 5 second run down timer.

N.B unit will not control the heating while in SLEEP mode.

Pressing the OK Key at any time within the 5 seconds will cause the ST325TX to immediately go into SLEEP mode, as will allowing the countdown to complete. Pressing the Arrow key will return the ST325TX to the Menu display mode.

Pressing the Touch Ring for 1 second will turn on the LCD backlight, and pressing the Touch Ring for 3 seconds will wake the ST325TX from SLEEP mode and restore the thermostat to NORMAL mode.

CONTROL MENU

By selecting the Control menu, the user can change the control method used by the thermostat - either ON/OFF or Pulse Width Modulation (PWM).

On entering the menu, scroll to select the preferred option (ON/OFF or PWM control), and confirm the choice using the OK button. Use the Arrow key to return to the Menu Option display. **PWM mode should only be selected by the Engineer carrying out the installation or other qualified person.**
PAIR MENU

The PAIR mode allows the ST325TX thermostat and receiver to communicate with each other.

On entering the menu, scroll to select the preferred option (Pairing ON or OFF), and confirm the choice using the OK button.

Please consult the Installation section of this manual for full instructions on how to Pair the ST325TX units.

OFF MODE

The Low Battery indicator will be displayed if battery voltage is detected as “low”, in this case the thermostat functions normally during battery low except the backlight is turned off. The ST325TX will enter into OFF mode if the battery voltage falls drastically low, and all outputs will turn off.

As all functions except sampling the battery voltage are disabled in OFF mode, it is recommended that you replace the ST325TX batteries as soon as possible to restore normal operation.

If the voltage of the replaced batteries is not high enough (if older batteries have been used) the unit will remain in OFF mode and will not reset.
SLIDE SWITCH

The thermostat has two slide switches. The Slide Switch has two positions: UNLOCKED and LOCKED.

In the LOCKED position, the Touch Lock indicator will be visible on the LCD, and it will not be possible to change the ST325TX settings. If you are unable to change any thermostat settings, check that the Slide Switch is in the UNLOCKED position.

RESET BUTTON

The Reset Button is provided as a way to restore the thermostat to its default factory settings. Pressing this button will delete any previously entered settings.

a. The set temperature is 18°C.
b. Frost: Off
c. Sleep: Off
d. Control method: On/Off.
e. RF address code: 00000000000000000000 (20bits).
ENERGY TIP

One way to set and use your room thermostat is to find the lowest temperature setting that you are comfortable with, and then leave it set at this temperature. You can do this by setting the room thermostat to a low temperature, (for example 17 °C) and then increasing the setting by one degree each day until you are comfortable with the room temperature - you won’t have to adjust the thermostat further, as adjustment above this setting will waste energy - a 1 °C increase in temperature is equal to 3% of your heating costs.

MAINTENANCE

The ST325TX thermostat requires no special maintenance. Periodically, the outer casing can be wiped clean using a dry cloth (please DO NOT use solvents, polishes, detergents or abrasive cleaners, as these can damage the thermostat).

There are no user serviceable parts within the unit; any servicing or repairs should only be carried out by SALUS Controls or their appointed agents.

Should the ST325TX thermostat fail to function correctly, check:

- Thermostat batteries are the correct type, fitted correctly and are not exhausted - fit new batteries if in doubt.
- If fitted, the heating system time switch or programmer is switched on.
- If the ST325TX is still not functioning correctly, press the Reset Button.
# PRODUCT SPECIFICATION

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model:</td>
<td>ST325TX</td>
</tr>
<tr>
<td>Type:</td>
<td>Electronic programmable thermostat with RF module,</td>
</tr>
<tr>
<td>Temperature Scale:</td>
<td>Celsius</td>
</tr>
<tr>
<td>Tolerance:</td>
<td>Less than ± 0.5 °C at 25 °C</td>
</tr>
<tr>
<td>Sampling Rate:</td>
<td>Every 15 seconds</td>
</tr>
<tr>
<td>Display Range:</td>
<td>0.0 °C to + 45.0 °C</td>
</tr>
<tr>
<td>Display Resolution:</td>
<td>0.5 °C</td>
</tr>
<tr>
<td>Set Temperature Range:</td>
<td>5.0 °C to + 35 °C</td>
</tr>
<tr>
<td>Control Method:</td>
<td>1. On – Off control  2. PWM control</td>
</tr>
<tr>
<td>Memory Backup Type:</td>
<td>Electrically Erasable Programmable Read Only Memory (EEPROM)</td>
</tr>
</tbody>
</table>

## Power Supply – thermostat

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Source:</td>
<td>2 x AA alkaline batteries (don’t use rechargeable batteries)</td>
</tr>
<tr>
<td>Battery Life:</td>
<td>Approximately 1 year</td>
</tr>
<tr>
<td>Operating Frequency:</td>
<td>868 MHz</td>
</tr>
<tr>
<td>Max. Operating Range:</td>
<td>100 metres (free air) 30 metres (indoors)</td>
</tr>
<tr>
<td>Protection rating:</td>
<td>IP30</td>
</tr>
</tbody>
</table>

## Environment

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Temperature:</td>
<td>0 °C to + 50 °C</td>
</tr>
<tr>
<td>Storage Temperature:</td>
<td>-20 °C to + 60 °C</td>
</tr>
</tbody>
</table>
**ST325TX Warranty**

SALUS Controls warrants that this product will be free from any defect in materials or workmanship, and shall perform in accordance with its specification, for a period of two years from the date of purchase. SALUS Controls sole liability for breach of this warranty will be (at its option) to repair or replace the defective product.

| Customer Name: | ................................................................. |
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| Tel No: | ................................................................ |
| Email: | ................................................................ |
| Engineers Company: | ................................................................ |
| Tel No: | ................................................................ |
| Email: | ................................................................ |
| Instalation Date: | ................................................................ |
| Engineers Name: | ................................................................ |
| Engineers Signature: | ................................................................ |