The ST621TX 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. 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 programmable thermostat is a transmitter that combines the functions of both a room thermostat and heating controller into a single unit. The programmable thermostat is used to switch the heating system by means of time and temperature change. This unit is not like a standard programmer. It works by controlling the temperature according to a series of programmed settings that take effect at different times of the day. The ST621TX from SALUS Controls is a stylish and accurate 5/2 or 7 day programmable electronic thermostat with a large, easy to read Liquid Crystal Display (LCD). The thermostat provides the user interface and temperature sensing / control. The thermostat and RF 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 ST621TX 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
- Radio Controlled Clock (RCC)
- Manual Time / Date Setting Option
- Holiday Function
- Service Function
- Six Time / Temperature Settings / day
- Secure RF Transmission (one million unique RF address codes)
1. INSTALLATION

ST621TX Programmable Room Thermostat

Getting Started

Installing the ST621TX Batteries

To open the case of the ST620, undo the securing screw on the bottom.

Now pull the screw down until it stops, then carefully separate the two halves of the case by gently pulling out an upwards direction. You will now see the battery compartments on the rear of the front fascia as shown.

Ensure that the batteries are inserted correctly and check the polarity.
**Powering up the ST621TX for the first time**
As soon as the batteries have been inserted, the ST621TX will power up for the first time and behave in the following way:
All the segments on the display along with the display backlight will be turned on as shown.

After two seconds, the software version number will be briefly on the screen.

The ST621TX will now prompt you to choose a language. If you require ENGLISH press OK. If you require a different Language use the touch ring to scroll through the language options then press OK.

The ST621TX at this point will be in AUTO and at factory default settings. Changing default settings will be explained on page 15. You will also notice that the time at the top of the LCD is flashing. This will continue to flash until the unit picks up the RCC (Radio Controlled Clock) signal and displays the correct time. More information on the RCC can be found on page 24.

Now put the ST621TX front fascia in a safe place so you can mount the ST620 back plate. The back plate is easily fixed to the wall and uses industry standard mounting positions. We recommend that you continue with the back plate mounting before starting to program the ST621TX.
Note: If you do not wish to mount the ST621TX on the wall, use the stand provided and assemble the ST621TX front and back housing. Remember to tighten the screw at the bottom.

**Wall Mounting Guidelines**

The ST621TX 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.

The ST621TX should be mounted in a location where it will not come into contact with moisture or condensation as this can affect the Touch Ring operation.

To ensure trouble free reception for both the Radio Controlled Clock (RCC) and 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 ST621TX in enclosed areas such as cellars and basements is not recommended.

**NOTE: The ideal position to locate the ST621TX is about 1.5m above floor level.**

**RF Transmission**

The receiving range between ST621TX and the RF Boiler Control is around 100 metres in open air, however many factors can affect the RF transmission and shorten the operating distance, e.g. shielding by thick walls, foil back plasterboard, metal objects such as filing cabinets, general RF interference, and so on.

The operating range is generally around 30 metres, which is large enough for most household applications.

**Mounting the Back plate**

Use the screws and anchors supplied to mount the ST621TX back plate in your chosen position. Now attach the ST621TX front fascia to the back plate. Remember to tighten the securing screw.
<table>
<thead>
<tr>
<th>Indicator</th>
<th>Description</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>88:88** 1234567</td>
<td>Clock Display</td>
<td>Displays the day and time</td>
</tr>
<tr>
<td>88°c</td>
<td>Temperature indicator</td>
<td>Displays set or measured temperature</td>
</tr>
<tr>
<td></td>
<td>Alphanumeric Display</td>
<td>Displays menu and other status messages</td>
</tr>
<tr>
<td>123456</td>
<td>Programme Number indicator</td>
<td>Displays the number of the active (selected) programme</td>
</tr>
<tr>
<td></td>
<td>Output indicator</td>
<td>Indicates output is turned on.</td>
</tr>
<tr>
<td></td>
<td>Holiday indicator</td>
<td>Indicates Holiday operation mode is selected</td>
</tr>
<tr>
<td></td>
<td>Battery Status</td>
<td>Indicates battery is low</td>
</tr>
<tr>
<td></td>
<td>RF Signal indicator</td>
<td>Indicates the unit is transmitting a wireless signal</td>
</tr>
<tr>
<td></td>
<td>RCC indicator</td>
<td>Indicates the status of the Radio Controlled Clock</td>
</tr>
<tr>
<td></td>
<td>Service indicator</td>
<td>Indicates Service function is active</td>
</tr>
<tr>
<td></td>
<td>Frost Mode indicator</td>
<td>Indicates frost setting is turned on</td>
</tr>
<tr>
<td></td>
<td>Touch Lock indicator</td>
<td>Indicates touch lock is activated</td>
</tr>
</tbody>
</table>
There are few user controls for the ST621TX, making the programmable thermostat very easy to operate. The controls are a Touch Ring (which surrounds the user display), two touch sensitive buttons, a reset button and a slide operated switch mounted on the side of the thermostat.

**USER CONTROL FUNCTION SUMMARY:**

<table>
<thead>
<tr>
<th>Key / Operation</th>
<th>Functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Touch Ring (move clockwise)</td>
<td>Increases the selected setting and scrolls down the menu selection</td>
</tr>
<tr>
<td>Touch Ring (move anti-clockwise)</td>
<td>Decreases the selected setting and scrolls up the menu selection</td>
</tr>
<tr>
<td>OK Key</td>
<td>Enters Menu or confirms a menu selection</td>
</tr>
<tr>
<td>Arrow (Back) Key</td>
<td>Single touch – sets the unit back one step. Hold for two seconds sets the unit back to NORMAL mode</td>
</tr>
<tr>
<td>Reset Button</td>
<td>Resets the programmable thermostat to default (original factory) settings except Service setting (when Service is on)</td>
</tr>
<tr>
<td>Slide Switch</td>
<td>Activates and deactivates the key lock function (prevents accidental changes)</td>
</tr>
</tbody>
</table>
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.
For full instructions on the receiver pairing refer to the RXVBC605 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 ST621TX is in NORMAL mode. To access the Menu screens, press the OK key twice. The first menu displayed is the PROGRAM menu:

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

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.

Pressing the Arrow key will return the ST621TX 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.
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 ST621TX 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. If the Red LED changed state after 10 minutes, repeat the whole pairing process.
Replacing the thermostat batteries will not affect the RF code setting. Pressing and holding the SYNC button on the receiver will not clear the RF address code saved into the internal memory, and switch the receiver into learning mode, as previously described.

**TESTING THE RF TRANSMISSION**

It is important to site both the receiver and thermostat in locations where the RF signal cannot be interrupted. The receiving range between thermostat and receiver is 100 metres in open air, however many factors can affect the RF transmission and shorten the operating distance, e.g. shielding by thick walls, foil back plasterboard, metal objects such as filing cabinets, general RF interference, and so on.

The operating range is generally around 30 metres, which is large enough for most household applications, but it is advisable to test the RF transmission from the intended thermostat location to the receiver location before fixing the thermostat to the wall.

The RF communication is one way, from the thermostat to the receiver – the receiver does not send any signal back to the thermostat. The RF signal indicator only flashes once when a signal is being transmitted.

The thermostat will transmit only when there is a need to control the heating system. Will transmit once every twelve minutes.
OPERATION

The ST621TX is configured and adjusted by the use of an innovative and stylish Touch Ring, and two touch sensitive buttons. The Touch Ring surrounds the programmable 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 programmable thermostat status.

ACCESSING THE MENUS

The Arrow key is not active when the ST621TX is in NORMAL mode. To access the Menu screens, press the OK key twice. The first menu displayed is the PROGRAM menu:
Use the Touch Ring to scroll through the Menus, and press the OK key to select the menu you want to use:

![Menu Options](image)

- PROGRAM
- HOLIDAY
- FROST
- SLEEP
- SERVICE
- TIME
- CONTROL
- PAIR
- LANG

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. Pressing the Arrow key will return the ST621TX to NORMAL mode. The programmable 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.
PROGRAMMING THE ST621TX

The ST621TX offers great versatility with its programming options, allowing the user to programme the ST621TX to operate on an individual, 5/2 or 7 day control cycle. The programmable thermostat has a default set of Programmes that have been designed to meet the needs of most users. If these default programmes are not suitable for your particular situation, reprogramming the ST621TX with your own settings is a very straightforward operation.

To start programming the ST621TX, press the OK key when in NORMAL mode. This will by default select the PROGRAM menu - press the OK key once more to start the programming process.

Initially, the Weekdays will be selected and flashing – you can scroll through all the various options for day selection (Weekdays, Weekend, 7 days, or individual days) by using the Touch Ring. As usual, pressing the OK key will select the desired option.
After correct selection of the day option, the ST621TX display will change to the next programming screen. These screens allow you to set the required time and temperature settings to provide optimum control for your heating system.

The hour setting will be the first setting that needs to be adjusted, and this will easily be seen because the ‘hours’ section of the time will be flashing. Using the Touch Ring, scroll up or down to adjust the hour to the required setting and then press the OK key to confirm. After confirming this setting the ‘minutes’ section of the time will then start to flash. Change this setting using the Touch Ring in the same way that you changed the hour setting, confirming your setting with the OK key. Finally, set the desired temperature setting by scrolling with the Touch Ring and again confirm with the OK key.

Following this sequence you will have set up Programme 1 – the ST621TX display will then move on to Programme 2. Continue to add your desired settings for each of the programmes through to Programme 6 in the same way as Programme 1 (hour, minutes, and temperature).

If you decide to enter settings for individual days rather than Weekdays or Weekends, the ST621TX also offers a time saving COPY function that allows the user to copy settings from one day to another.
After entering the settings in Programmes 1 to 6 for Monday, the ST621TX display will change to display a COPY TO screen. On this screen, scroll to the day that you want to copy the settings to using the Touch Ring, and then confirm this by pressing the OK key. The ST621TX will then move to the next day and ask if you would like to copy again.

In the example here, Monday has been programmed, and the next day that has not been programmed is Tuesday. Once the settings for Tuesday have been programmed by copying, the settings can then be copied to Wednesday, and so on.

Pressing the Arrow key at any time will return the ST621TX to the previous screen. Once all the days have been programmed, the ST621TX will revert to NORMAL mode.

Please be aware that each of the programme time settings must be in sequence: for example, Programme 3 cannot be set with a time earlier than Programme 2. If this situation occurs, then the ST621TX may operate in an unpredictable way. The programmable thermostat will return to NORMAL mode after 10 seconds if no Key is pressed or if no movement is detected on the Touch Ring. In this case, the Programmes will not be updated.
HOLIDAY OVERRIDE MODE

Entering the HOLIDAY menu allows you to turn the holiday override mode of the ST620 on. The HOLIDAY mode allows the user to override all the current Programme settings with a specific temperature setting that is active between two dates entered by the user. When the holiday start date arrives, the HOLIDAY indicator turns on and the HOLIDAY mode is switched on. As long as the ST621TX is in HOLIDAY mode the FROST protection mode will be disabled. When the holiday end date is reached, the HOLIDAY mode will be turned off automatically and the ST621TX will operate in AUTO mode. The HOLIDAY mode indicator 🌟 will be displayed on all the HOLIDAY menu screens.

To start entering the Holiday Override settings, press the OK key once. ‘S_DAY’ will appear on the display. Use the Touch Ring to scroll to set the date and confirm the choice using the OK button.

The month setting (‘S_MONTH’) will then be selected – change this setting in the same way using the Touch Ring, and confirm the setting using the OK button. Finally, set the year (‘S_YEAR’) – this is done in exactly the same way as previously described for the date and month.

After confirming the year setting by pressing the OK key, the display will then change to display the first screen for entering the holiday end date (‘E_DAY’, ‘E_MONTH’ and ‘E_YEAR’).
Use the Touch Ring to enter the date in exactly the same way as for the holiday start date.

By default, the HOLIDAY mode start and end dates are set to the current date. **Make sure that the end date is after the start date** – if not, the HOLIDAY mode will be disabled.

The final setting to be entered is the protection temperature you want set while HOLIDAY mode is active.

Use the Touch Ring to set the preferred temperature and confirm the choice using the OK button. Once the temperature setting is confirmed, the HOLIDAY mode will be activated. While in this mode the HOLIDAY mode indicator will be shown on the display, but there will not be any MANUAL or AUTO indication.

Pressing the Touch Ring will change the display to show the current temperature setting, but this setting cannot be adjusted while in this mode.
CANCELING HOLIDAY OVERRIDE MODE

When in HOLIDAY mode, pressing the OK key will make the display change between CANCEL and HOLIDAY every 0.5 seconds as shown below:

Pressing the OK key will cancel HOLIDAY mode and return the ST621TX to AUTO mode. Pressing the Arrow key leaves the programmable thermostat in HOLIDAY mode.

REVIEWING THE SET TEMPERATURE

NORMAL mode is when the thermostat is displaying the room temperature; if you press the Touch Ring anywhere except the OK and Arrow keys when the ST621TX is in NORMAL mode 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.

The ST621TX will go back to NORMAL mode without changing the set temperature after 10 seconds of inactivity, or after pressing the Arrow key.
**FROST MENU**

Entering the FROST menu allows you to turn the frost protection mode of the ST621TX 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 on 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.

If the ST621TX is operating in FROST mode the LCD will not indicate MANUAL or AUTO, but 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. Press the OK key to confirm the setting.
SLEEP MENU

The SLEEP mode allows the ST621TX 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:

Pressing the OK Key at any time within the 5 seconds will cause the ST621TX to immediately go into SLEEP mode, as will allowing the countdown to complete. Pressing the Arrow key will return the ST621TX 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 ST621TX from SLEEP mode and restore the programmable thermostat to AUTO mode.

N.B: The unit will not control the heating while in SLEEP mode.
MANUAL OVERRIDE SETTING

When the ST621TX is in NORMAL mode, press the Touch Ring anywhere except the OK and Arrow keys to enter the Manual Override 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 ST621TX will go back to NORMAL mode without changing the set temperature after 10 seconds of inactivity, or after pressing the Arrow key.

When the ST621TX is operating in Manual Override mode, the LCD will display MANUAL instead of AUTO. The manual setting will remain in effect until the next programme time is reached, programme or clock settings are changed, an operating mode change is detected or the Manual Override mode is cancelled.

Manual Override mode can be cancelled at any time by pressing and holding the Arrow key for 2 seconds – this will return the ST621TX to AUTO mode.

If the ST621TX is in Frost, or Holiday or Service mode, the set temperature can’t be adjusted, only can be reviewed.
MANUAL SETTING OF TIME AND DATE

If the time and date setting need to be set manually, this can be done by accessing the TIME menu. The first option within the menu is a choice of 12 or 24 hour clock setting. On entering the menu, use the Touch Ring to scroll to the preferred option (12 or 24 hour clock), and confirm the choice using the OK button. Use the Arrow key to return to the previous screen display. After setting the time display format, the next screen display allows you to set the time.

Use the Touch Ring to scroll to set the hour and confirm the choice using the OK button. The minute setting will then be selected – change this setting in the same way using the Touch Ring, and confirm the setting using the OK button. After setting the time, the next screen display allows you to set the date – this is set in exactly the same way as previously described for the time.

After setting the date, the next screen display allows you to set the daylight saving time (DST) option. Use the Touch Ring to scroll to set the DST option ON or OFF, and confirm the setting using the OK button – the default setting is ON. Press the Arrow key to return to the previous screen display, or do nothing for 10 seconds and the ST621TX will return to NORMAL mode.

The DST setting allows the ST621TX to automatically adjust the time when local time changes from Greenwich Mean Time (GMT) to British Summer Time (BST) on the last Sunday in March, and then back to GMT on the last
If the ST621TX is able to receive an RCC signal, the time will be correctly updated regardless of the DST setting, but if no RCC signal is being received and DST is ON, then the current stored time will be automatically adjusted.

**SERVICE MENU**
The Service Menu should only be selected or changed by the Engineer carrying out the installation, or other qualified person. It is strongly recommended that you familiarise yourself with the instructions contained in the Operation section of this manual before attempting to change any of the settings in the SERVICE menu. During commissioning the installation engineer has the option to enter either his Mobile or Office telephone number as both a reminder when the system is due to be serviced, and as a way for the home owner to make contact when the service is due.

The Arrow key is not active when the ST621TX is in NORMAL mode. To access the Menu screens, press the OK key once. The first menu displayed is the PROGRAMME menu:

Your ST621TX can be configured for HEAT or COOL applications. This allows the product to control the Heating or Cooling systems. The factory default setting is HEAT, details on how to change the default setting for a cooling application can be found below.

**NOTE:** Changing the HEAT or COOL function should only be changed by your engineer or a competent person, changing this setting will have a serious effect on your system operation.

Use the Touch Ring to scroll through the menu screens, once SERVICE appears in the display press the OK button to enter the SERVICE menu. The SERVICE indicator will be displayed on all SERVICE menu screens.

Firstly you need to enter a unique PIN code, when the first digit flashes scroll to set the first digit and press OK to confirm the repeat for the other two digits Once all digits have been entered, press OK to confirm or the arrow key to return to previous digit or previous display. The service code is total 3 digits, from 000 to 999.
If you forget the code you will have to contact SALUS technical team. Once the code has been entered, the next menu screen allows you to set the next service date for the system. Set the date in the order day, month and year:

Now you have entered your own PIN code you will be asked to select SERVICE ON or OFF. Default is OFF, if you do not require the service function activated press OK and proceed to HEAT or COOL menu. If you require SERVICE mode activated, use the touch ring to scroll from OFF to ON and press OK.

**HEAT or COOL**
The unit is default HEAT. If you wish to configure the ST621TX for a cooling application. Select COOL and press OK.

**NOTE:** To allow saving of your selection in HEAT and COOL it will still require you to continue through the menus.

Confirm the setting using the OK key, or Press the Arrow key to return to the previous screen display. The next menu screen allows you to set a temperature setting. This temperature is the maximum temperature that the heating system will operate at once the previously set service date is reached.

The temperature is set by scrolling the Touch Ring to the desired setting, then confirming with the OK key. After enabling SERVICE mode, there is a screen that will allow you to enter an 11 digit number — this feature is intended for you to enter your telephone number so that the end user can contact you when the next service is due. The number is entered in the same way as the code — scroll with the Touch Ring until you reach the required number, then confirm by pressing the OK key.
Repeat this action until you have entered the entire telephone number. After entering and confirming the last digit with the OK key, store the telephone number by pressing the Arrow key.

Once set as described, the SERVICE indicator will appear on the display 30 days before the set date. At seven days before the set date, the SERVICE indicator will flash and the bottom section of the display will alternate between displaying the current mode (AUTO or MANUAL), and the telephone number previously entered.

Once the SERVICE date has been reached, the system will only operate at the temperature that was previously set in SERVICE mode. The display will no longer display the operating mode, only the telephone number that has been entered and the SERVICE indicator (which will continue to flash).

To enter the SERVICE menu, press the OK or Arrow keys, and enter the code you originally set to access SERVICE mode. Once back in SERVICE mode, you can edit the telephone number, set a new servicing date, or turn SERVICE mode ON or OFF in exactly the same way as described earlier.
CONTROL MENU

By selecting the Control menu, the installer can change the control method used by the programmable thermostat - either ON/OFF or Pulse Width Modulation (PWM). The default setting is ON / OFF.

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.**

RADIO CONTROLLED CLOCK

The ST621TX time and day of the week settings are updated automatically every day (at 12:00 AM or 2:00 AM) by the use of a very accurate internal Radio Controlled Clock.

The RCC status indicator will be displayed for 10 minutes during clock updates. The indicator will flash during the time update process, after which the indicator will be displayed for 5 minutes before turning off.

The time and date will also be automatically updated when the ST621TX is powered up, or after the Reset Button is pressed.

If for any reason the ST621TX fails to automatically update the time setting, then the data stored in the internal memory will be used. The clock settings can also be changed manually if required – manual settings will be overwritten at the next successful automatic update.
PAIR MENU

The PAIR mode allows the ST621TX 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 ST621TX units.

BATTERY STATUS

The ST621TX checks the battery voltage frequently during normal operation. If the battery voltage is sensed as being low, the low battery indicator will be displayed on the screen. Although the programmable thermostat will continue to operate normally at this stage, you should replace the batteries as soon as possible to prevent the ST621TX entering OFF mode.

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 ST621TX 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 ST621TX 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.
BACKLIGHT

The backlight of the ST621TX is switched on automatically whenever the Touch Ring is activated, or any of the keys are pressed. The backlight will remain illuminated for approximately 6 seconds after the last key press, except if you are changing settings within the Clock, Programme or Temporary Override modes – in this case, the backlight will remain illuminated for 10 seconds after the last key press.

The backlight will not illuminate if the ST621TX battery is low, or if the Slide Switch is in the LOCKED position.

SLIDE SWITCH

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 ST621TX settings. If you are unable to change any thermostat settings, check that the Slide Switch is in the UNLOCKED position.
SLIDE SWITCH

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 ST621TX 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.

After pressing the Reset Button, the ST621TX will revert to the following (default) settings:

- Mode: Auto
- Programme: 6
- Date: Jan.1.2011
- Time: 12hr, 12:00am
- DST: On
- Control method: On/Off
- Holiday: Off
- Frost: Off
- Sleep: Off
- RF address code: 00000000000000000000 (20 bit)
MAINTENANCE

The ST621TX programmable 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 ST621TX programmable thermostat fail to function correctly, check:

• The batteries are the correct type, fitted correctly and are not exhausted - fit new batteries if in doubt.
• Heating system time switch or programmer is switched on.
• If the ST621TX is still not functioning correctly, press the Reset Button.
PRODUCT SPECIFICATION

Model: ST621TX
Type: Electronic programmable thermostat with RF module, designed for heating or cooling applications.

Clock
Type: Radio Controlled Clock (RCC) DCF77.
Reception Frequency: 77.5KHz +/- 300Hz
Display Modes: 12 or 24 hour clock display.

Programming
Programming Modes: User selectable for 5/2 or 7 day option
Number of Programmes: Six (6) user programmes plus factory default programme.
Override Facility: User selectable programme override facility.
Holiday Facility: User selectable option to temporarily override selected programme.

DEFAULT PROGRAMMES

<table>
<thead>
<tr>
<th>Programme</th>
<th>Output</th>
<th>Weekday</th>
<th>Weekend</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ON TEMP 6:00 AM 21 ºC</td>
<td>6:00 AM 21 ºC</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>ON TEMP 8:00 AM 14 ºC</td>
<td>8:00 AM 14 ºC</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>ON TEMP 11:00 AM 21 ºC</td>
<td>11:00 AM 21 ºC</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>ON TEMP 1:00 PM 14 ºC</td>
<td>1:00 PM 14 ºC</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>ON TEMP 4:00 PM 21 ºC</td>
<td>4:00 PM 21 ºC</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>ON TEMP 9:00 PM 14 ºC</td>
<td>9:00 PM 14 ºC</td>
<td></td>
</tr>
</tbody>
</table>
**Temperature**
Scale: Celsius
Tolerance: Less than ± 0.5 °C at 25 °C
Sampling Rate: Every 15 seconds
Display Range: 0.0 °C to + 45.0 °C
Display Resolution: 0.5 °C
Set Temperature Range: 5.0 °C to + 35 °C
Resolution: 0.5 °C

**Power Supply – Thermostat**
Power Source: 2 x AA alkaline batteries
(Don’t use rechargeable batteries)
Battery Life: Approximately 1 year

**Control**
Control Method: 1. On – Off control  2. PWM control

**Memory Backup**
Type: Electrically Erasable Programmable Read Only Memory (EEPROM)

**Radio Frequency (RF) Settings**
Operating Frequency: 868 MHz
Max. Operating Range: 100 metres (free air) 30 metres (indoors)
Protection rating: IP30

**Environment**
Operating Temperature: 0 °C to +50 °C
Storage Temperature: -20 °C to +60 °C
ST621TX 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: ........................................................................................................
Customer Address: ....................................................................................................
................................................................................................................................. Post Code: ...........................................
Tel No: .................................. Email: .................................................................
Engineers Company: ...................................................................................................
Tel No: .................................. Email: .................................................................
Instalation Date: ........................................................................................................
Engineers Name: ........................................................................................................
Engineers Signature: .................................................................................................
www.salus-controls.com

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