SECTION 1 PROGRAMMING KT03

This manual shows how to program or configure the KT03. Refer to the KT03 Installation Manual for information about installation, http://www.cytech.biz/product_details.php?item_id=265

The KT03 is configured using Comfigurator software version 3.6.x or above, which can be downloaded from http://www.cytech.biz/comfigurator.html

The functions of the software include:

1 Creating pages on the KT03.
2 Programming for appearance and behaviour of the elements on the pages.
3 Write and read project configuration to/from KT03. The data transferred consists of the bit maps of the screen and other information regarding elements on the screen.
4 Simulation Mode - simulate the touchscreen appearance and behaviour on screen.

KT03 USB Connection to PC

To program KT03, connect the supplied USB cable from the USB connector on KT03 to the USB port of the computer. The KT03 USB connector is accessed by removing the Front Bezel of the KT03. When the USB connection is made the D12 (green) and D13 (red) LEDs on KT03 will blink several times. Windows will detect the USB connection.

Connect the USB port to your PC. The USB driver needs to be installed if it has not been already installed previously. If a UCM/USB has been connected to the PC previously, then the USB driver should be alreadyinstalled.

Installing the USB Driver

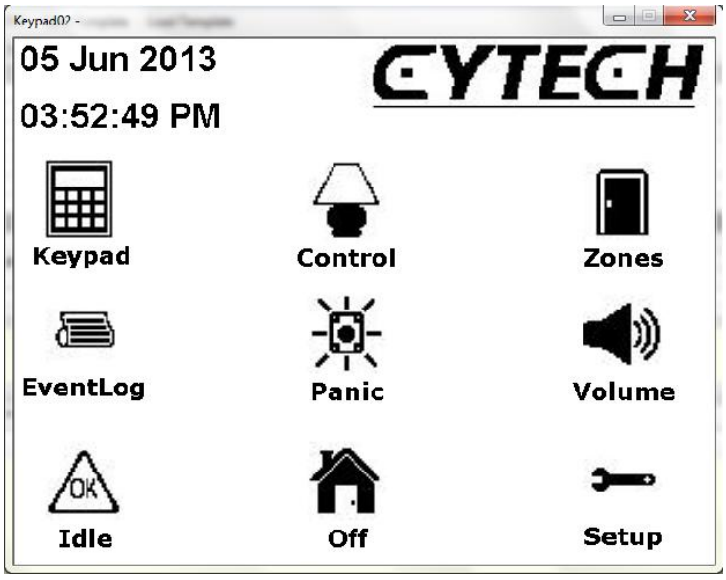
The USB drivers can be found in the folder "C:\Program Files\Cytech\Comfigurator\USB Drivers" depending on your Comfigurator installation folder. The current version of the driver can be downloaded from http://www.ftdichip.com/Drivers/D2XX.htm This driver should be version 2.06.00 or above.

- If a device of the same type has already been installed on your machine and the drivers that are about to be installed are different from those installed already, the original drivers need to be uninstalled before installing the new driver.
- Connect the device to a spare USB port on your PC. The Microsoft composite device driver is automatically loaded in the background and the Windows Found New Hardware Wizard will launch. If there is an available Internet connection, Windows XP will silently connect to the Windows Update website and install any suitable driver it finds for the device. If the automatic installation takes place there is no need to continue with the procedure outlined below.
- If there is no available Internet connection, the “Found New Hardware” screen appears. Click on that and select "No, not this time" from the options available and then click "Next" to proceed with the installation. Select "Install from a list or specific location (Advanced)" and then click "Next".

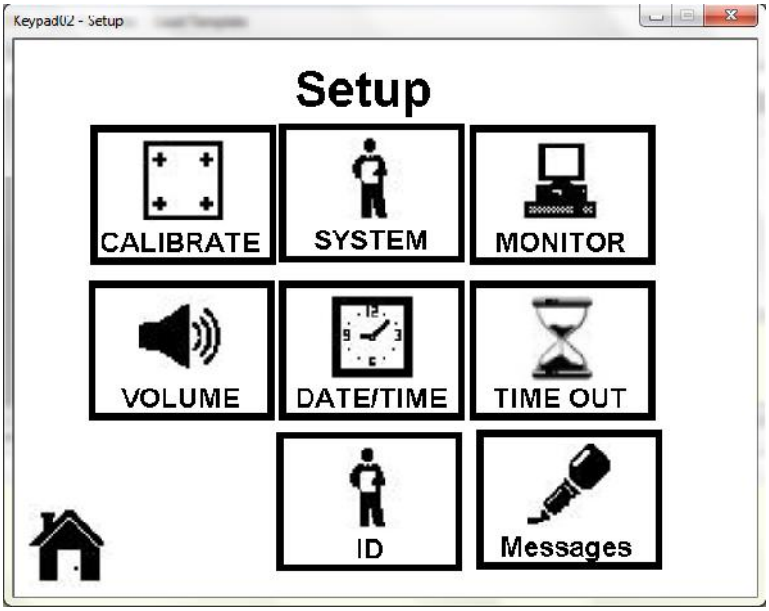
- Select "Search for the best driver in these locations" and enter the file path in the combo-box ("C:\Program Files\Cytech\Comfigurator\USB Drivers") or browse to it by clicking the browse button. Once the file path has been entered in the box, click next to proceed.
- If the message dialogue that “the software has not passed Windows Logo Testing” appears, click on "Continue Anyway" to continue with the installation.
- The Wizard will install the necessary driver files and show when the installation has been completed. Click Finish to complete the installation.

Setting KT03 ID

The KT03 ID must be unique, ie different from that of other Ids in the system, in the range 1 to 8. To check or change the KT03 ID, press the Setup button in the Home Screen.



A number keypad will be seen. Enter the user code (default 1234#) to access the Setup screen shown below.



Press the ID button. The next screen will show the ID of the KT03 from 1 to 8. Press the Up or Down buttons to change the ID and press Back to exit. The next section will explain other settings in the Setup screen

Other KT03 Settings

Calibrate

This calibrates the touchscreen. Use an pointed object to touch the points on the screen. Be careful not to damage the screen with too much force.

System

- Speaker - Enables or disables the speaker
- IR - Enables or disables the build-in IR receiver
- Backlight - Enables or disables the LCD backlight
- Tamper - Enables or disables the tamper switch which is activated by removing the PCB from the back housing
- Memory - shows the used memory and the percentage. This depends on the amount of Flash memory used for the pages

Monitor

This is similar to the Monitor I/O function on Comfigurator. It shows the commands and messages from Comfort to the built-in UCM

Volume

- Speaker - On/Off Enables or disables the speaker (same as System > Speaker)
- Internal/External Speaker - selects Internal (built-in) or External speaker (Audio jack at the back)
- Key Beep On/Off Enablels or disables the key beep
- Annoucement On/Off. Off means all anouncements eg “Security Off”, system armed modes, entry and exit announcements, doorbell chimes are disabled
- Volume slider - This sets the volume of the keypad voice menu. This is independent of the Announcement volume.

Date/Time

- Sets Date and Time on Comfort

TimeOut

- Screen TimeOut - sets LCD time out from 0 to 255 seconds
- User Code Required to turn on LCD - if ON it means after the screen times out, a user code must be entered to turn on the screen again.

Messages

This allows messages to be recorded, played back and deleted

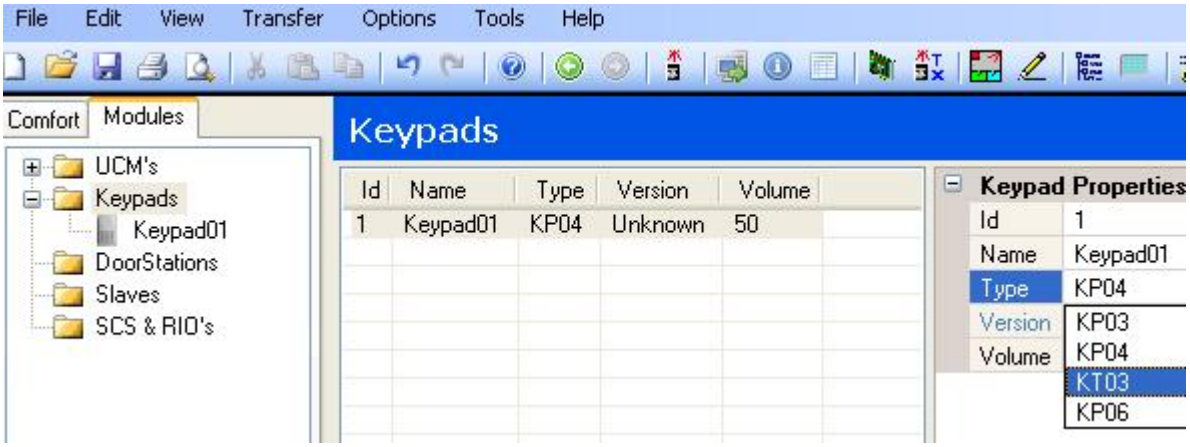
- Record Greetiing - Records Greeting message
- Play Greeting - Plays recorded Greeting message

- Erase Greeting - Erases recorded Greeting message
- Record Name - Records user name of user who signed in
- Play Name - Plays recorded User name of user who signed in
- Erase Name - Erase recorded User name of user who signed in
- Add User - go to voice menu to add user
- Delete User - go to voice menu to delete use
- Erase All - erase all users, names and messages
- Reminder 1, 3, 16 - menus
- Buttons 1,2,3, END - keypad buttons for the menus

Programming KT03 with Comfigurator 3

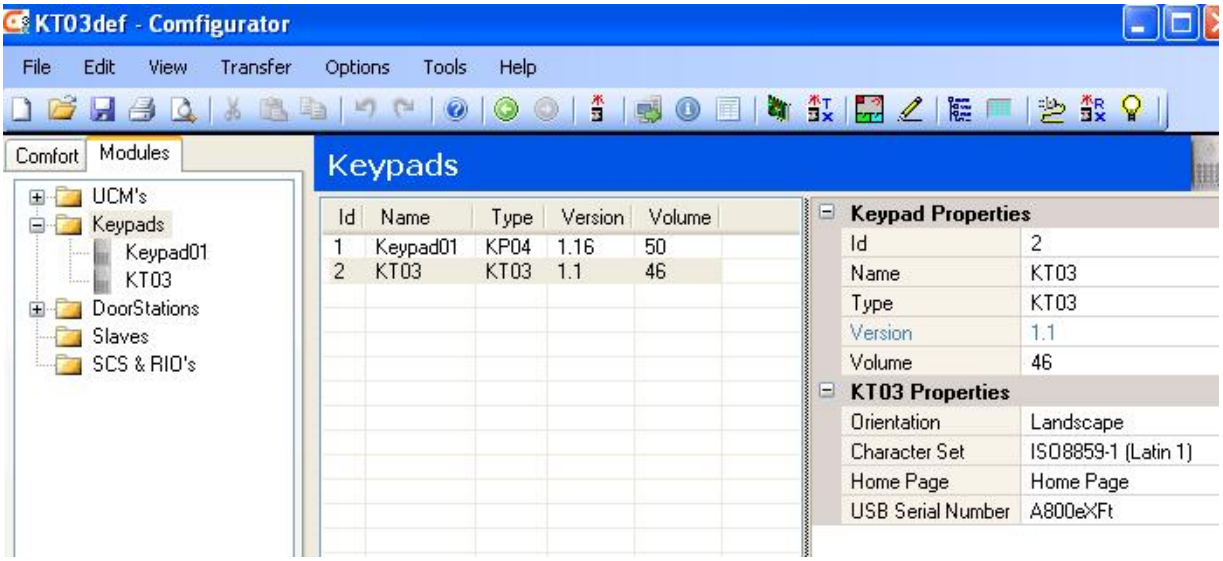
When the USB driver has been installed, run the Comfigurator software. Comfigurator minium version 3.6.8 should be used. Note that the KT03 USB connection can be used like a UCM to program Comfort, as well as the KT03.

In the Modules Tab, by default, 1 KP04 is configured as ID 1. If the Keypad at ID=1 is to be a KT03, change the Keypad Type to a KT03 using the pull-down menu as shown below.

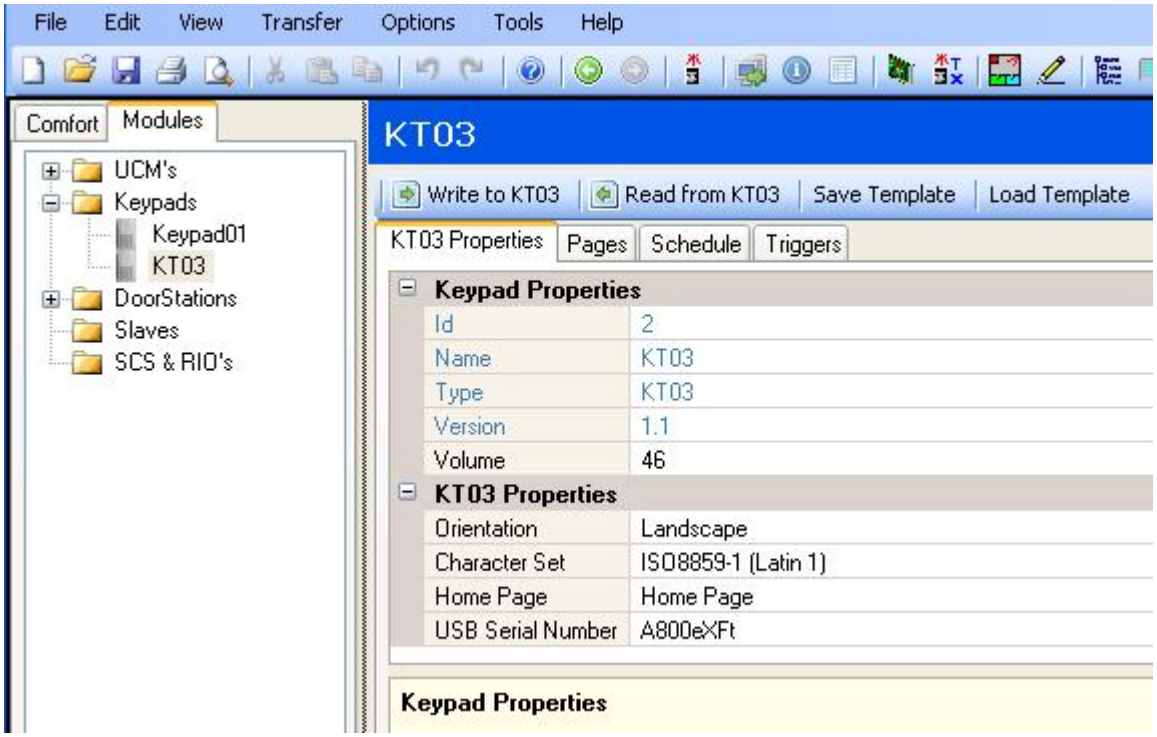


To add a KT03 as ID=2, i.e. to leave ID=1 as a KP04, right-click on Keypads and select Add Keypad

Select KT03 as the keypad Type in the Keypad Properties window as shown below;



Clicking on the Keypad icon on the left Panel corresponding to KT03 (Keypad02 in the above example) will show the KT03 configuration screen.



The ID of the KT03 set using the KT03 Settings screen must correspond to the ID of the KT03 in Comfigurator.

KT03 Properties

Keypad Properties

- Id: KT03 ID (1 to 8)
- Name: KT03 name e.g. LivingRoomKT03 (def: Keypad#)
- Type : Keypad type i.e. KT03
- Version: KT03 firmware version
- Volume: Volume level for KT03 which can be adjusted by selecting here.

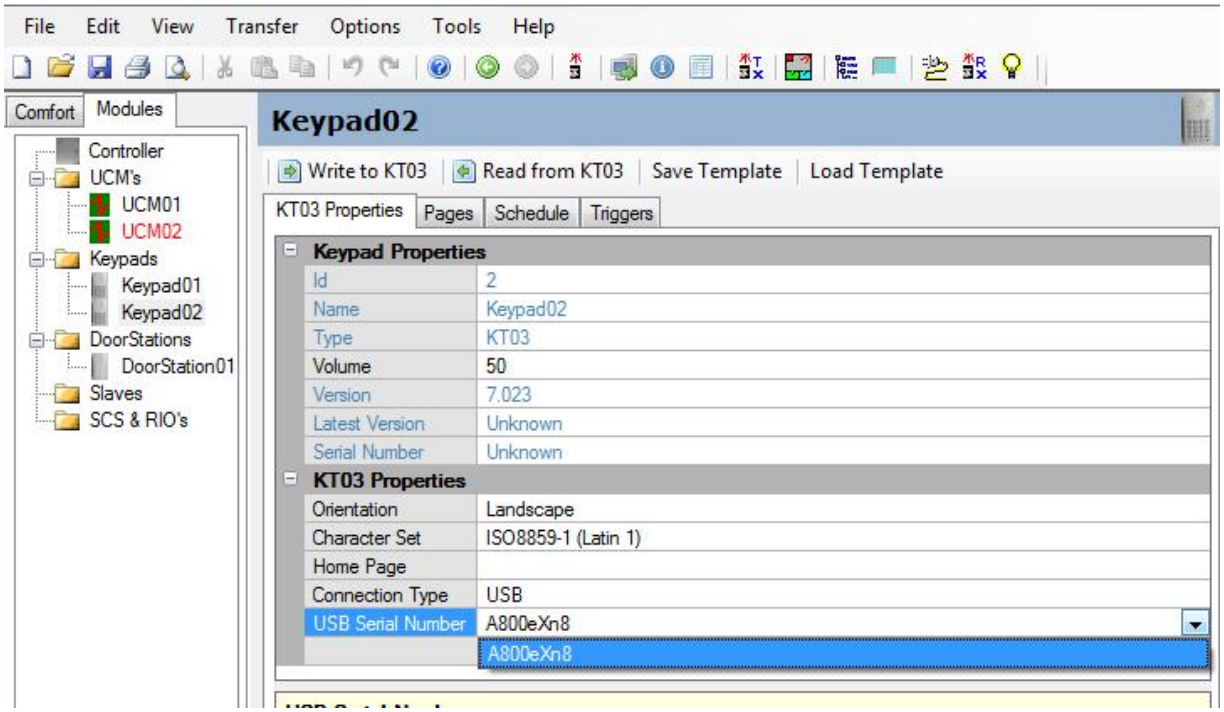
The ID determines the KT03 ID number 1 to 8. When writing to Comfort, this ID overrides the ID which was previously set in the KT03 Tools page.

KT03 Properties

- Orientation: Portrait, Landscape, or Landscape Inverted
- Character Set: To display text generated by KT03
- Home Page : An initial page displayed upon reset
- Connection Type: USB or UCM. Select USB if directly connected to KT03 USB. Select UCM if using a UCM to connect to the KT03 (ie without a USB connection to KT03)
- USB Serial Number: The unique serial number of the USB on KT03.

USB Serial Number

If the Connection Type is USB, Click on the handle on the right of the field “USB Serial Number”.



If the USB driver has been installed and the USB cable has been plugged into the KT03 as well as the computer, the unique serial number should be visible, eg “A800eXn8” in the screenshot above. If no USB serial number is seen, that means that the KT03 USB port has not been detected, or the driver has not been installed correctly. Disconnect the USB cable, close Comfigurator, then plug in the USB again and run Comfigurator again. If the USB port still cannot be detected, check if the driver has been installed by going to Windows Control Panel > System > Hardware Tab > Device Manager > Serial Connections. If there is a yellow question mark next to the USB driver, delete the driver and reinstall it by following the procedure described above.

If a UCM/USB is also connected to the computer via another USB port, then you should see two USB serial numbers. Select the one which corresponds with the KT03 USB port. If you are not sure which serial number should be selected, disconnect the UCM/USB so that only the KT03 USB serial number is visible.

The tabs on top of the KT03 configuration screen are explained as follows;

Write to KT03

Transfer KT03 configuration to KT03. Do this when the KT03 configuration has been completed.

Ensure the USB programming cable has been connected to the KT03 to be programmed (NOT to the UCM).

Read from KT03

Transfer configuration from KT03. Note that this does not transfer the image information from KT03.

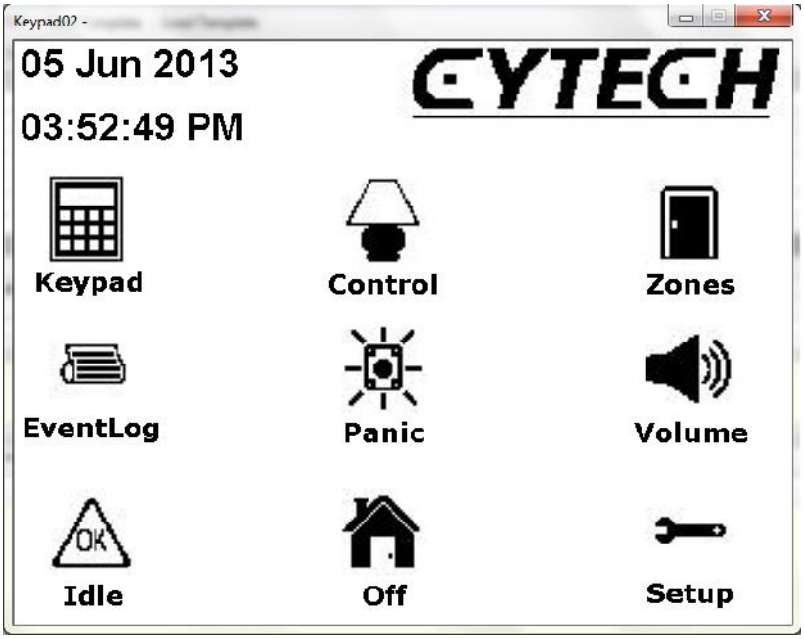
Load Template

This loads a previously created KT03 template with file name .kt3x. This allows a saved KT03 template to be added to a cclx file.

These default templates are found in the Comfigurator folder;

- Kt03def.kt3x for landscape (horizontal) orientation
- Kt03port.kt03x for portrait (vertical) orientation

These templates have a basic KT03 design with several pages, for example..



Save Template

This saves the KT03 configuration as a KT03 Template with extension .kt3x so that the template can be loaded into another Comfort configuration.

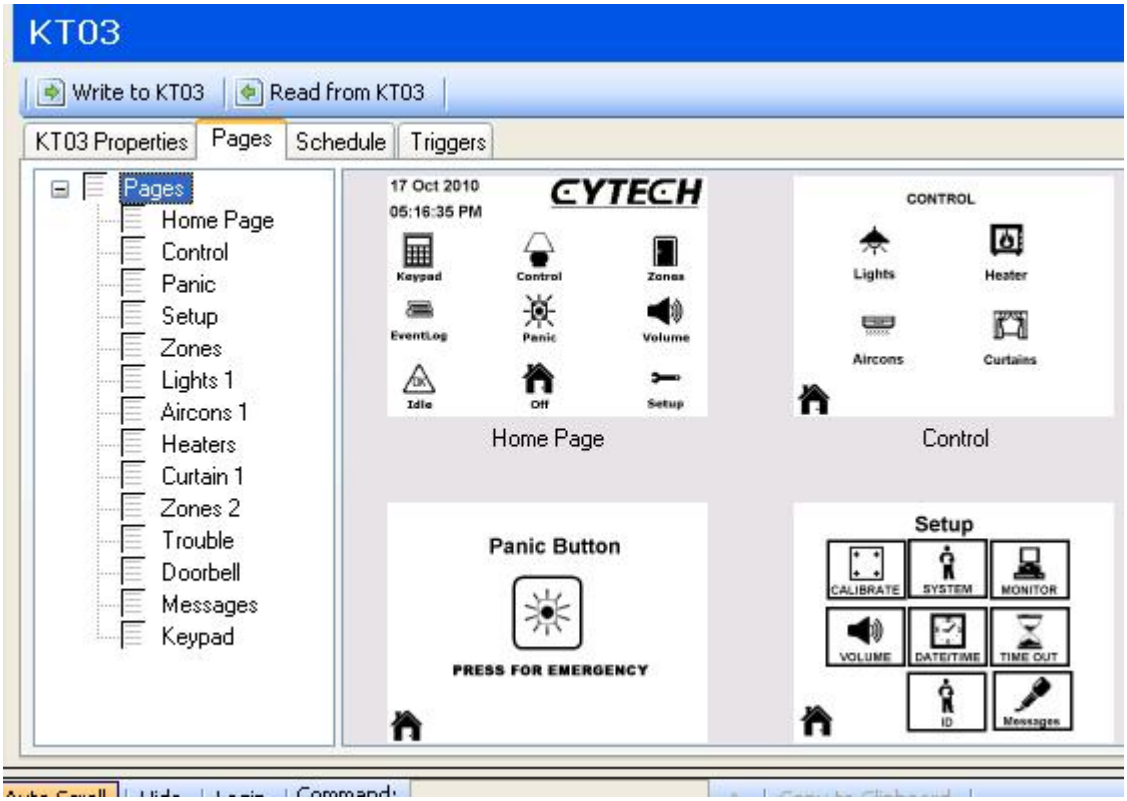
The other tabs; Pages, Schedule, Triggers are explained in separate sections

SECTION 2 PAGES AND ELEMENTS

Pages

The Pages tab shows the pages available on the current file.

For example, the supplied example file KT03def.cclx will have the pages shown below.

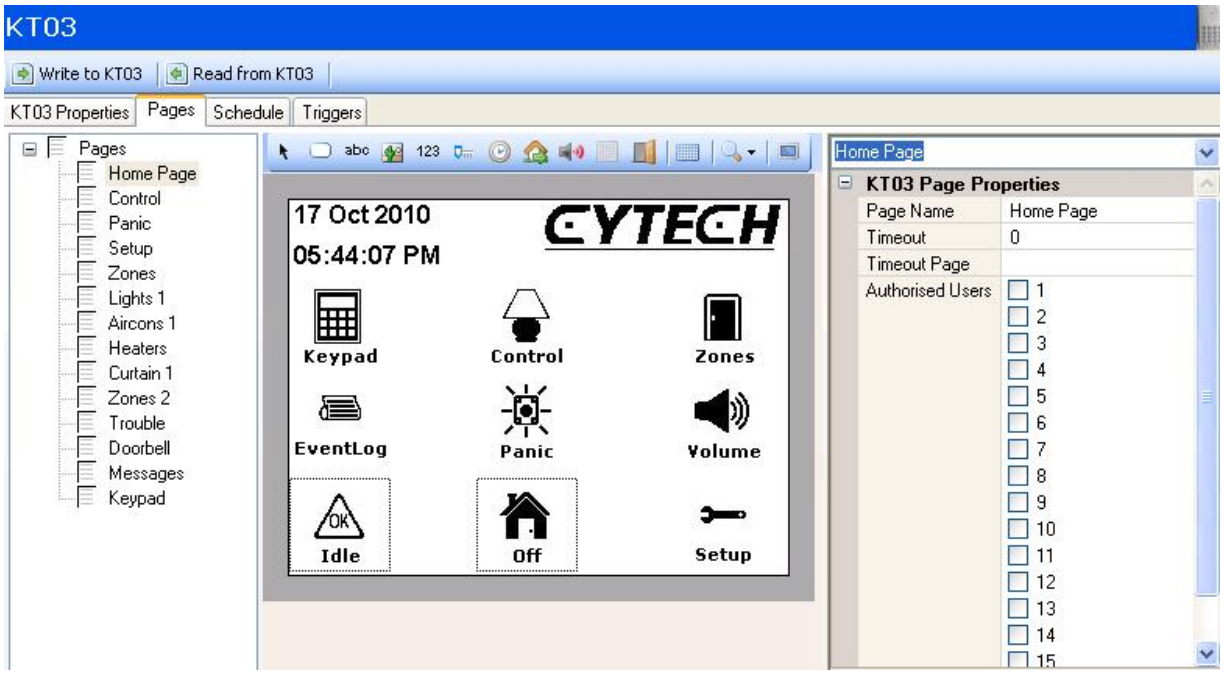


A thumbnail of the pages is shown on the right pane. Click on a page on the Pages List or the thumbnail to show that page for editing.

To add a page on the touchscreen; right-click on the Page list on the left and select “Add New Page”.

Page Properties

The Page Properties are shown on the right pane when a page is selected. For example the screenshot shows the Home Page being selected.



Page Name

Name of the page

Timeout

The time out for the page in seconds (0 = no time out)

Timeout Page

The page to jump to when the page timeout expires. The Home Page will be assumed when no page is specified.

Authorised Users

When at least one user is selected, the KT03 will ask for user code to be verified by Comfort. If no users are selected, no authorisation is required to access the page.

Elements

Elements are objects on the page with their properties which are configured to be displayed. For example in the above screenshot of the Home Page, all the objects on the page are elements.

Elements can display text, images, values, shapes, date/time, etc. There are two types of elements: static and dynamic elements. Static elements are for appearance or labels only and can not show status or perform any function. Dynamic elements can perform a function when pressed and/or change their appearance based on status.

Elements can be selected and placed on any page. Right-clicking on an element on the page shows the options: Select All, Delete, Move To Front, and Move To Back actions. Left-clicking on an element displays its properties on the right pane thus allows the editing of the properties of the element. The size of the image can be changed by dragging its edge or corners.

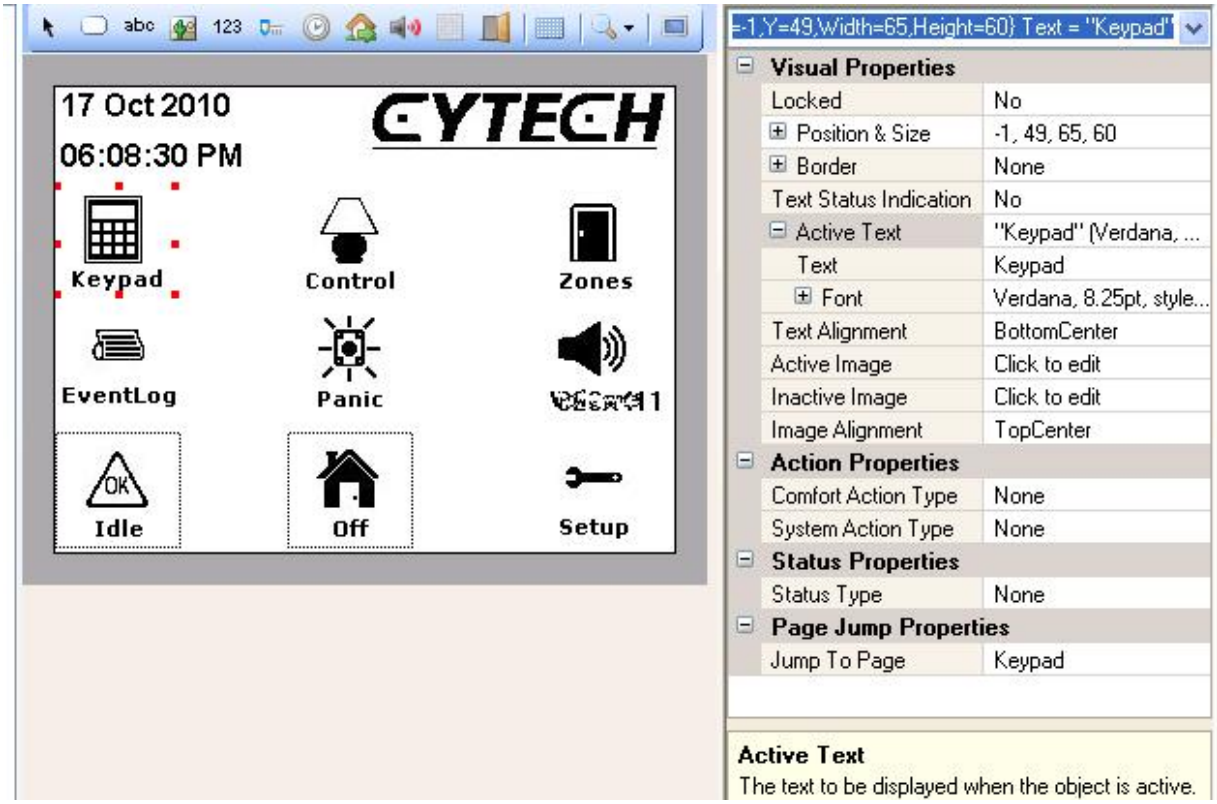
The Elements consist of;

- Button - select circle, rectangle styles with border and images. Each button has on and off image. The button is active i.e. it can send commands to Comfort and have status updated by Comfort.
- Text - static text to be displayed (to be used as a label).
- Image - select static image files from Image library (to be used as a label).
- Value - display numeric value 0 to maximum, with a scaling factor. Select text eg units F or C, Voltage, Humidity etc as a label. Comfort Status will change the number displayed.
- Slider - with minimum and maximum values 0 to 255. Status from Comfort will change position of the slider. The slider is an active element i.e. it can send commands to Comfort and have status updated by Comfort.
- Date/Time - selectable date format MMDDYYYY or DDMMYYYY. The date and time display is synchronised with Comfort.
- Security Mode - 5 states (Security Off, Away, Night, Day, Vacation). There are 5 images associated with the modes which are displayed when the security mode changes.
- Alarm State - 4 states (Idle, Trouble, Alert, Alarm). There are 4 images associated with the states which are displayed when the state changes.
- Zone State - 4 states (Off, On, Trouble, Bypass). This shows the state of a zone. There are 4 images associated with the states which are displayed when the state changes.

Before describing each Element in detail, the contents of an Element will be explained.

Element Properties

The screenshot below shows the element properties of the selected Element, which is a Button element representing the Keypad.



Element Properties consist of Visual Properties, Action Properties, Status Properties, and Page Jump Properties. These will be described in detail below.

Element - Visual Properties

- Locked - If locked the element cannot be moved or resized.
- Position and Size - left, top, width, height of the element. The element can also be dragged around the page, and can be resized by selecting the handles of the image and dragging it.
- Border - Rectangle, Rounded Rectangle, Ellipse with border width and radius parameters. Border Style (Solid, dotted, Dashed, Double).
- Border Status Indication means that the Border Style can be selected in active and inactive state, eg when the status is true, the Border can be solid, and if false the border can be dotted or None. If Border Status indication is disabled (false) only the active border style is displayed.
- Text Status Indication - Allows different text and styles to be displayed depending on the status of the element, for example text for “OFF” and “ON” with different text attributes can be displayed.
- Active and Inactive Text - enter the text to be displayed, the font and text attributes for active and inactive text. If Text Status indication is disabled (false) only the Active Text can be specified. For elements that have more than 2 states eg Alarm States, Security Mode, Trouble States etc, there will be as many text fields to select as the number of states, so that the text corresponding to each state can be displayed.
- Text Alignment - specify where the text will be displayed; Top Left, Top Center, Top Right, Middle Left, Middle Center, Middle Right, Bottom Left, Bottom Center, Bottom Right. If an Element contains both image and text, the alignment of text and images must be arranged so that they do not overlap and block each other.
- Active/Inactive Image - Select the images from the library to be displayed depending on the status of the element. This allows different images to be displayed for ON and OFF conditions. For elements that have more than 2 states eg Alarm states, Security Mode, Trouble States etc, there will be as many images to select as the number of states, so that the image corresponding to each state can be displayed. For Elements that use only one image, the Active Image is displayed. The Image Library is in the folder Images in the Comfigurator folder. You can add your own image files in this folder. Refer to the Images section in this manual.
- Image Alignment - specify where the image will be displayed; Top Left, Top Center, Top Right, Middle Left, Middle Center, Middle Right, Bottom Left, Bottom Center, Bottom Right. If an Element contains both image and text, the alignment of text and images must be arranged so that they do not overlap and block each other.

Element - Action Properties

The following actions are available depending on the element; Response, Keypad Key, Counter/Sensor Register. This defines what Comfort shall do when the button is pressed.

Response

This specifies which Comfort Response is activated when the button is pressed. Comfort Responses are selected from the cclx file associated with the project. A window will open showing the available Responses for selection, and a new Response can also be added.

Keypad Key

These buttons allow keys to the pressed on the simulated keypad

Keypad keys are defined as follows;

0 to 9 = Keys 0 to 9
0AH = F key
0BH = * key
0CH = # key
0DH = “AWAY” soft key,
0EH = “NIGHT” soft key,
0FH = “DAY” soft key.
10H = Panic Key
11H = Fire key
12H = “AWAY” HARD key
13H = “NIGHT” HARD key
14H = “DAY” HARD key
15H= “Vacation” HARD key
1AH = Enter Key, like # key but will not go into menu, disarm only
1BH = END key to exit keypad menu
1CH to 1FH unused
20H = Function 0 (these are shortcuts to Function keys)
21H = Function 1
22H = Function 2
23H = Function 3
24H = Function 4
25H = Function 5
26H = Function 6
27H = Function 7
28H = Function 8
29H = Function 9
2AH = Function F
2BH = Function *
2CH = Function #
30H = Record Greeting
31H = Erase Greeting
32H = Hear Greeting
33H = Record user name
34H = Erase user name
35H = Hear user name
36H = Record alarm message
37H = Erase alarm message
38H = Hear alarm message
39H = Add User
3AH = Delete User
3Bh = Delete all Users
3Ch = Talk to Door station by menu
3Dh = Reserved
3Eh = Reserved
3FH = Reserved
40H = Reminder Msg 1
41H = Reminder Msg 2
42H = Reminder Msg 3
43H = Reminder Msg 4
44H = Reminder Msg 5
45H = Reminder Msg 6
46H = Reminder Msg 7
47H = Reminder Msg 8
48H = Reminder Msg 9
49H = Reminder Msg 10
4AH = Reminder Msg 11
4BH = Reminder Msg 12
4CH = Reminder Msg 13
4DH = Reminder Msg 14
4EH = Reminder Msg 15

4FH = Reminder Msg 16

The new keypad keys are shortcuts to menus and functions

Set Counter

The value of the element is saved in Comfort's Counter register that is selected, and will trigger a Counter Response in Comfort. This is used when a slider position is changed.

Set Sensor Register

The value of the element is saved in Comfort's Sensor Register that is selected, and will trigger a Sensor Response in Comfort. This is used when a slider position is changed.

Element - System Action Type

This specifies the action to be performed by KT03 (not comfort)

The values in brackets are the numeric values which represent the corresponding actions.

Backlight Off

Switch off Backlight

Backlight On

Switch on Backlight

Infrared Receiver Off

Disable IR Receiver

Infrared Receiver On

Enable IR Receiver

Speaker Off

Disable Speaker

Speaker On

Enable Speaker

Screen Off

Turn off screen

Screen On

Turn on screen

Alarm History

Show visual Alarm History (on zones screen). This action causes the KT03 to show the sequence of zone activations starting with the arming of the security system. The KT03 will start recording the zone activation and deactivation and the date/time of the event when the system is armed. For alarm history the screen shows each event of zone on and off and arm/disarm of security system in sequence with the date and time of each event. The alarm history is erased when the system is armed and a new history is recorded. Maximum number of

events recorded = 64. If more events, ignore, as earlier events are more important

None

No System Action

Element - Status Properties

This selects what is monitored and which alternate image or text is displayed by the element

The Status Types are:

- InputZone (Input/Zone #, state= on/off). On and Off states will select the selected image.
- Output (Output #, state= on/off). On and Off states will select the selected image.
- Counter (counter # 0 -255, value= 0-255).
- Sensor Register (sensor #, value= 0-255).
- Trouble Conditions (On/Off)- AC Failure, Low Battery, Zone Trouble, RS485 Trouble, Tamper, Phone Trouble, GSM Trouble.
- Flag (flag #, state= on/off).

The state of the monitored elements will change the image or text displayed in real time when the page containing the element is active. The visual property must correspond with the monitored value, eg On/Off will change the image displayed, Counter values will show % or scaled value.

Element - Page Jump Properties

Jump to another Page. There is a Drop down list to select pages defined in the file or to Special Pages defined below.

CTRL Left - clicking on an element with a Jump To Page action will cause a jump to the selected page for editing in Comfigurator.

Special Pages

The following Special pages can also be selected in the JUMP to Page. These are functions for the KT03 unit and not the software.

- *Calibrate Touchscreen
- *Back - Jump to previous page
- *System (Backlight On/Off, IR Receive On/OFF, Speaker on/off, Screen Off. MEMORY)
- *Monitor
- *User ID
- *Event Log
- *Timeout
- *Date/Time
- *Volume

These are fixed pages in KT03 which are not configured in the software.

☎ Press Ctrl+C together to copy an element and Ctrl+V to paste it in a page

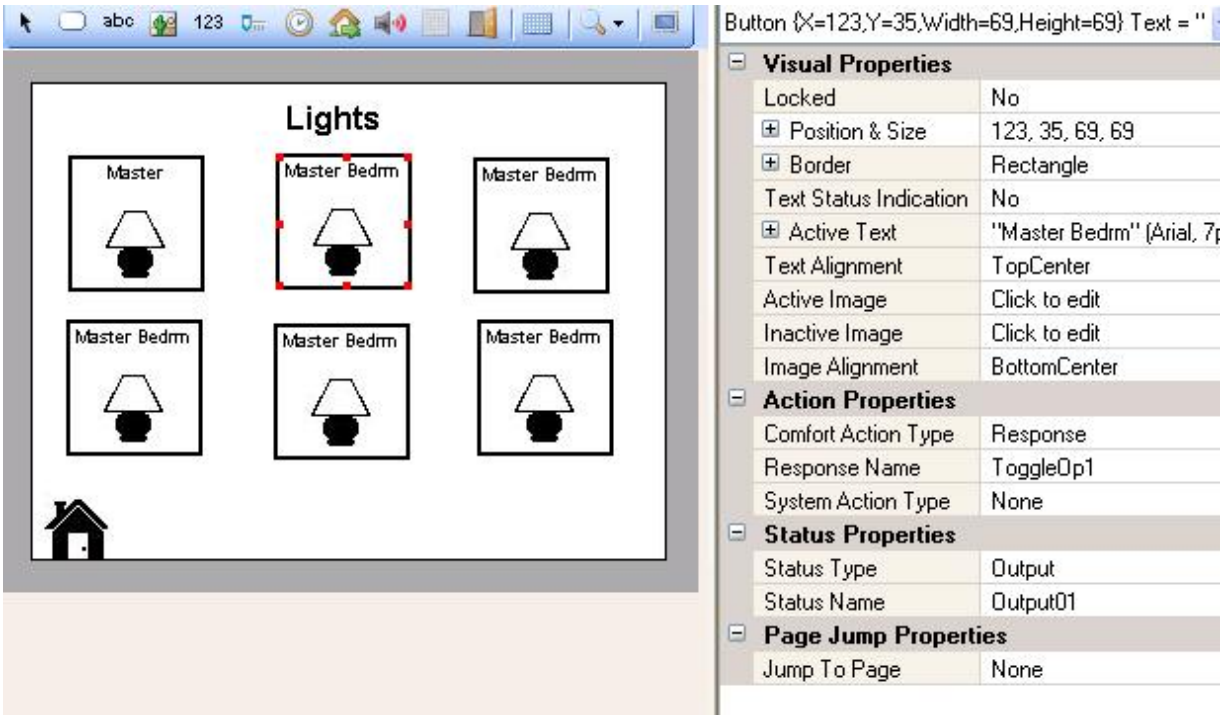
SECTION 3 ELEMENTS IN DETAIL

This section describes each of the predefined Elements in detail. Select the Element by clicking on the toolbar in the middle pane of a page.

The elements in the above figure from left to right, after the pointer icon are Button, Text, Image, Value, Slider, Date/Time, Security Mode, Alarm State, Zone State. The type of image can be seen by hovering over the icon in the toolbar.

Button

A Button is an active element which has 2 states and can send commands to Comfort and have its status updated by Comfort. A Button element can have 2 states to show the state of something controlled by Comfort eg Output, C-Bus, KNX, Appliance with Current Sensor.



Visual Properties

- Locked, Position and Size are described in Pages & elements section
- Text Status Indication - Yes to enter Text to be shown in the On (Active Text) and Off states (Inactive Text)
- Text Alignment - select alignment of Text in the element
- Active/Inactive Image - select an image to be displayed in the ON (Active) and Off (Inactive) state
- Image alignment - select alignment of image in the element

Comfort Action

- Response - select a Response to be activated when the button is pressed
- Key - select a keypad key to be sent to Comfort for keypad emulation when the button is pressed.

System Action

See the list of System Actions described in Pages & elements section

Jump to Page

Select a page to jump to when the button is pressed

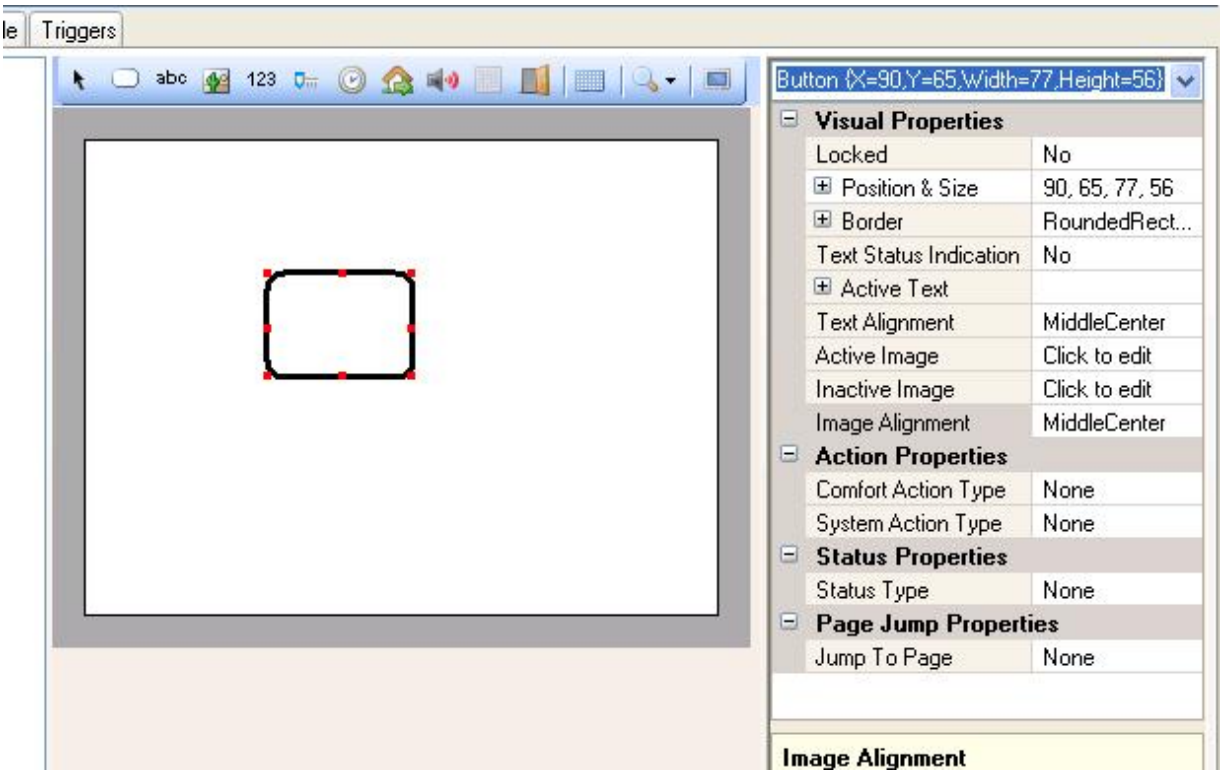
Status Type

A Button has the following Status Types: InputZone, Output, Counter, Flag, Sensor Register, Trouble Condition. See description of Status Type in Pages & elements section.

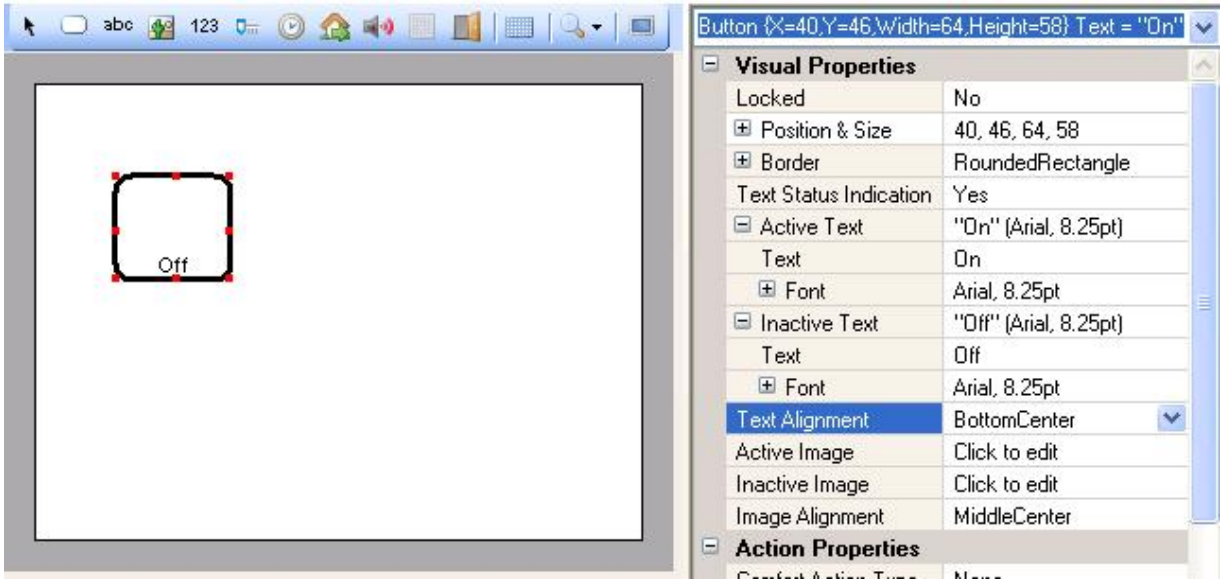
Adding a Button - Step by step

In this example, we will design a button which switches an Output Off and On with Text and Image status indication

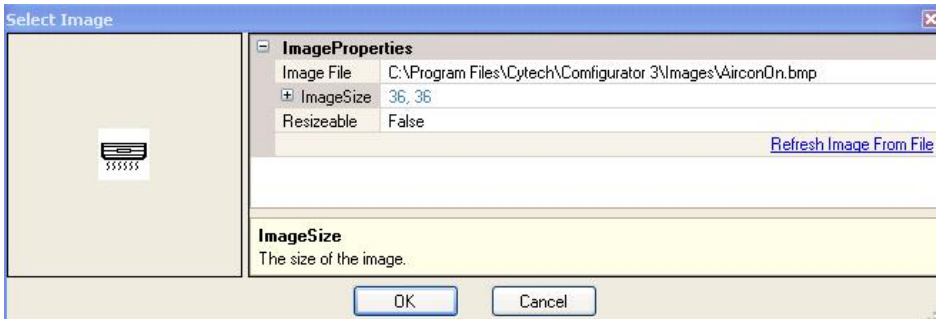
Click on the button icon in the toolbar, then position the cursor on a desired spot on the page and drag to the left and down to determine the size. A button with Rounded Rectangle is produced by default. Modify the size and position as required or drag and drop to change the position and size.



If the button is to have an On and Off text, then set “Text Status Indication” to On, and enter text “On” in the Active Text and “Off” in the Inactive Text field and set the font and attributes of the text. You can use different font and attributes for active and inactive text, for example Bold for the On text and normal for the Off text. In Text Alignment, select Bottom Centre so the text will be positioned below the image. Change the font and attributes for Active and Inactive text accordingly.

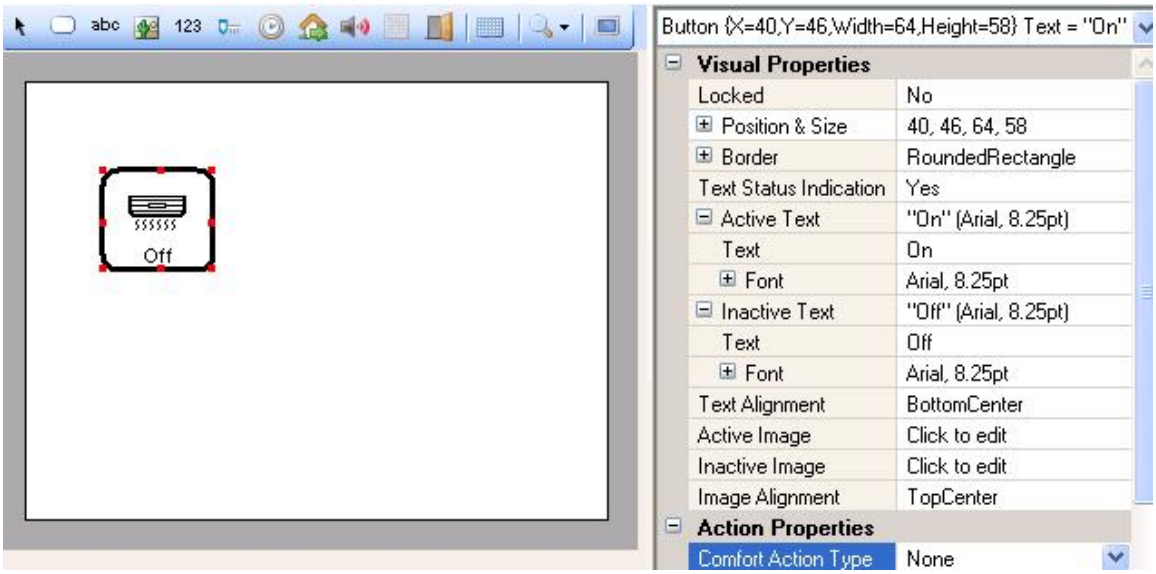


In the Active Image field, press “click to edit” to select an image from the Image library, say AirconOn.bmp. The image size is shown. “Resizable”, if True allows you to change the size of the image by applying a percentage. It is best not to resize the image on KT03 as the images have been designed for best resolution (See section on Images). This image will be shown when the state of the item selected in Status Properties is ON.



In the Inactive Image field, select another image from the Image Library say AirconOff.bmp. This image will be shown when the state of the item selected in Status Properties is OFF.

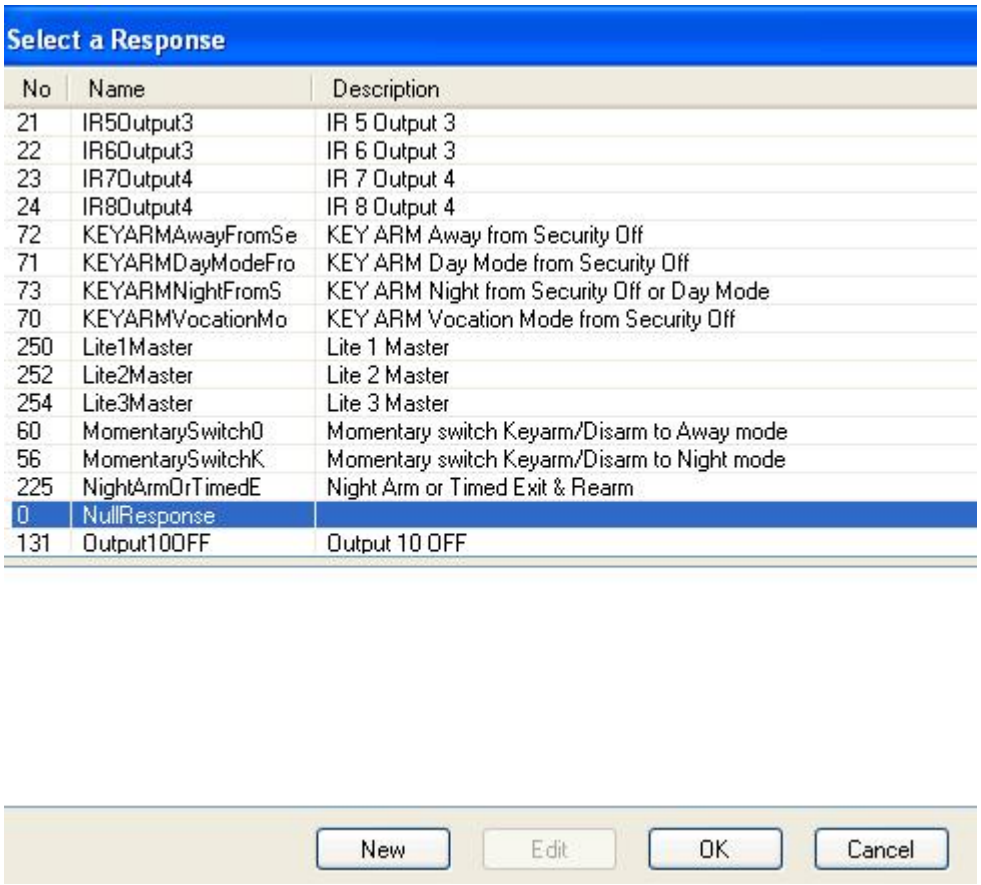
In Image Alignment, select Top Centre so the image will appear above the text



For counters and sensors Status Types, the state is considered to be OFF when the value of the counter or register is 0, and ON when the value is greater than 0, i.e. 1 to 255.

Next we shall program the button to alternately switch on and off Output 1 on Comfort.

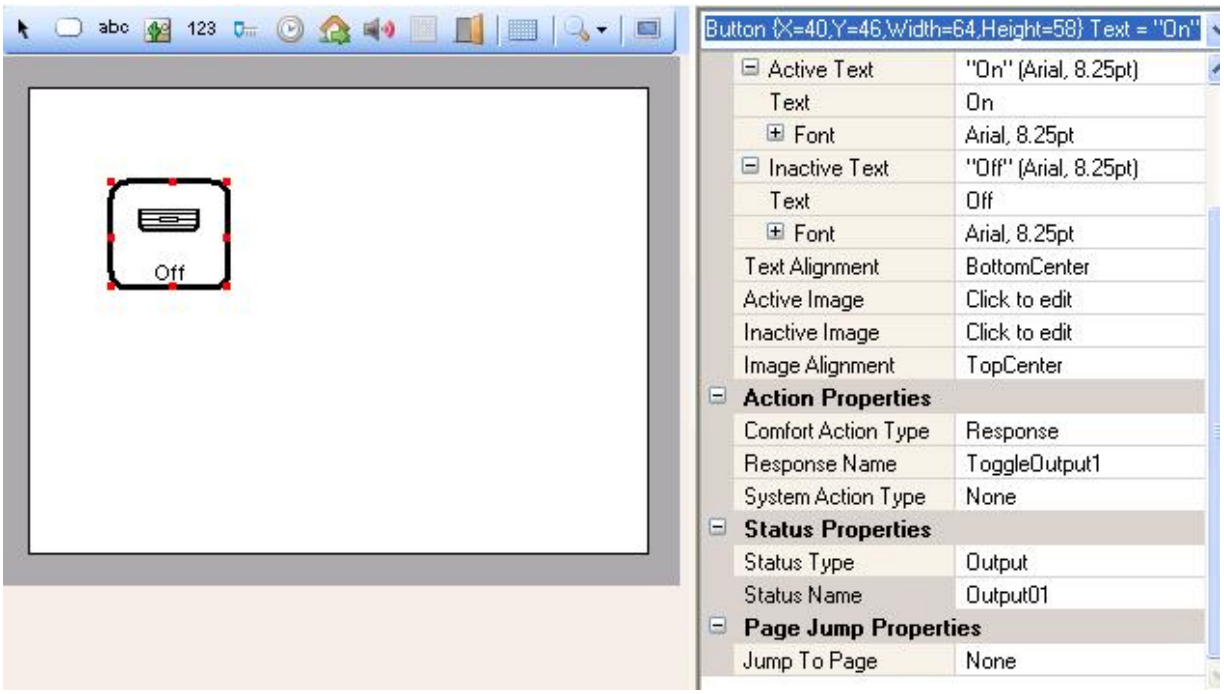
In Action Properties, select Comfort Action Type as Response. The ResponseName field appears below, showing NullResponse. Click on the right of the Response, to open Select a Response window;



We can now select an existing Response, like Output1On. This would turn on the output 1 when the button is pressed. We would like to toggle Output 1

alternately with this button so we will create a new Response. Press NEW on the bottom left to add a Response. Add an action Toggle Output 1 (it is assumed you already know how to program Comfort). Press OK after you have created and selected the Response.

The button should show the state of the output. In Status Properties, select Status Type as Output, and the Status Name as Output01 (which selects which output will provide the status).

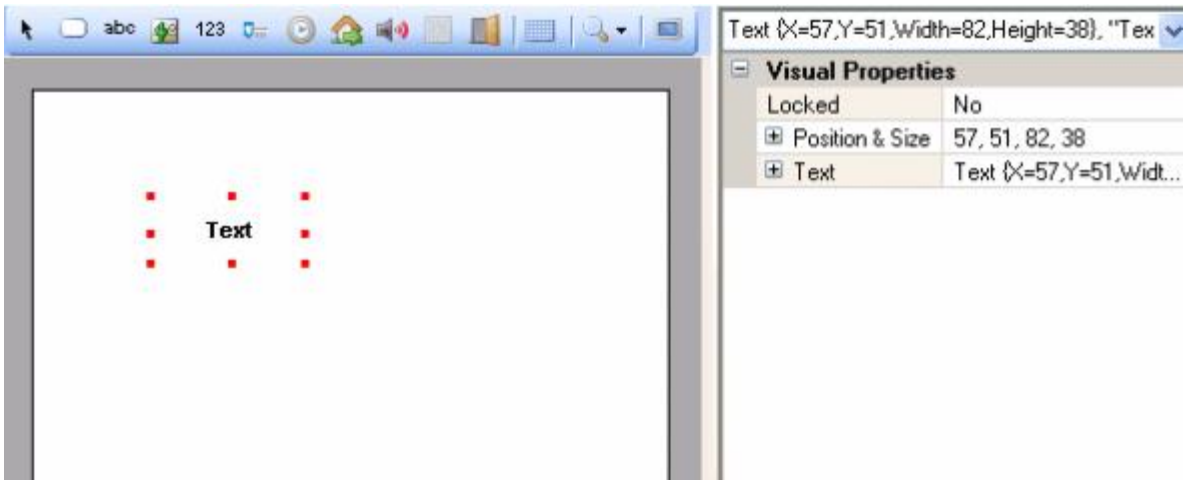


Now the button can be used to switch Output 1 on and off as well as show the real status of Output 1 even when the output was changed by things other than this KT03.

Jump to Page can be used to Jump to another page when the button is pressed.

Text

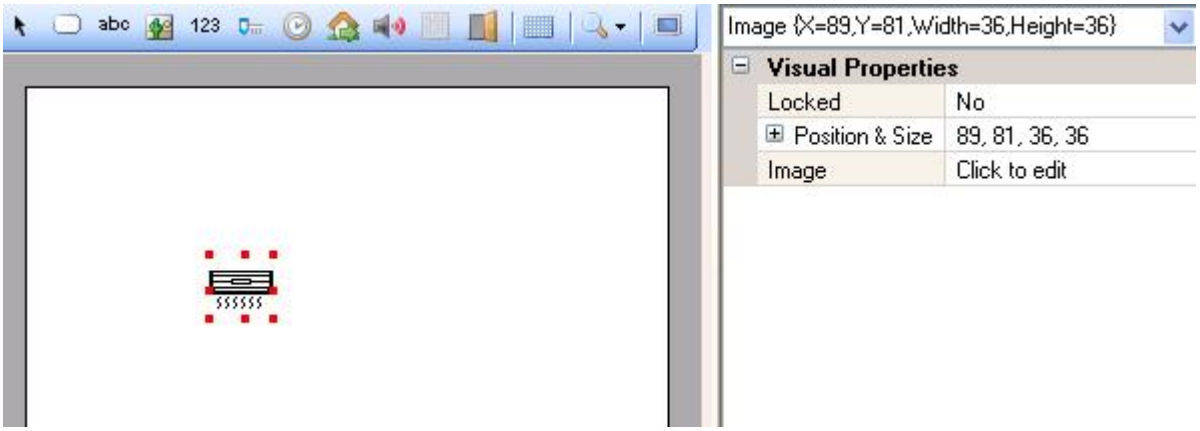
The Text Element is for static text to be used as a label.



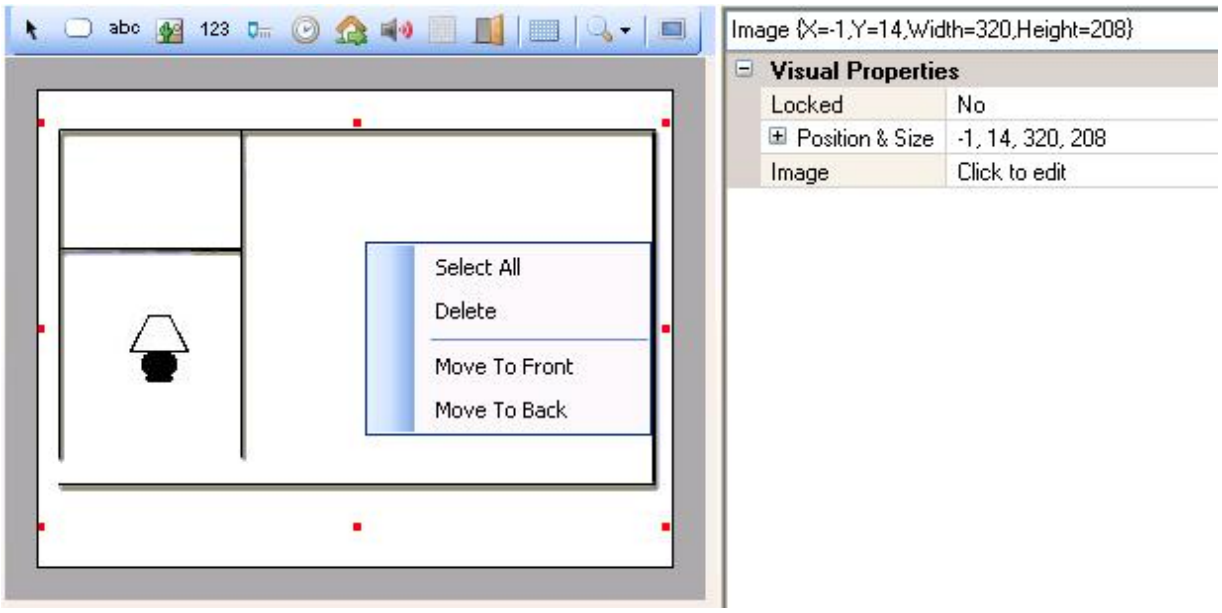
The Text element only has visual properties.

Image

The Image element is a static image used as a label.



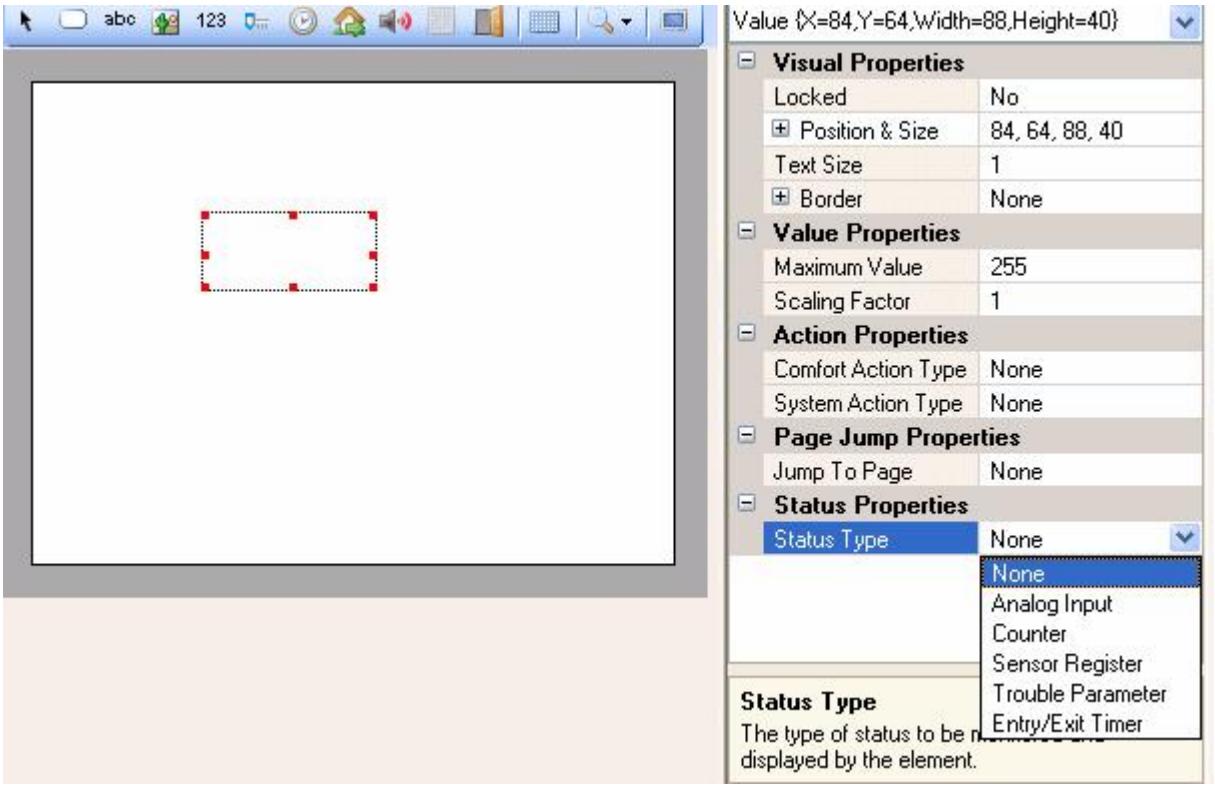
An Image can be used as a static background, eg a plan or layout of the room or house as in the example below.



Buttons or other elements can be overlayed on top of the image. The status image should be moved behind the other visible elements by Right-clicking on the image and selecting Move to Front or Move To Back.

Value

The Value Element is a numeric field that can be updated by status of the parameter from Comfort. It can be used to show temperature, brightness and other parameters.



The Status types available are Analog Input, Counter, Sensor Register, Trouble Parameter and Entry/Exit Timer.

Value Properties

Maximum Value is the maximum number that can be displayed.

Scaling Factor will be used to scale the value before display. E.g. if the Status is set to Counter 10, and the value of Counter 10 is 200 and the scaling factor is 0.5, then the value displayed by KT03 will be 100. The scaling factor is in the range 0.25 to 2.0

Action Properties

Comfort Action Type

Set Counter - The value is sent to the selected Counter

Set Sensor Register - The value is sent to the selected Sensor

System Action Type

See System Actions Type in previous section

Status Types

Analog Input

The value of the analog input on Comfort will be displayed from 0 to 255. The full scale input voltage on a Comfort Input is 3.0 Volts which corresponds to 256 so the reading will range from 0 to 2.988 Volts. Note that only Comfort and Slave Inputs can be used as analog inputs but not LEM Inputs. Zone Types for analog Inputs can be set to 0 (Null).

Counter

If Counter is selected, the next field is the Counter number 0 to 255. If a Counter number is selected for Status, the value of that counter (from 0 to 255) will be displayed in the Value field.

Sensor

If Sensor is selected, the next field is the Sensor number 0 to 31. If a Sensor number is selected for Status, the value of that sensor (from 0 to 255) will be displayed in the Value field.

Trouble Parameter

- Zone Trouble Number - show zone trouble number 1 to 64 as value.
- RS485 Trouble ID - show ID as value (eg 17 to 24 for UCM, 33 to 35 for SEM, 49 to 51 for DP, 65 to 72 for KP, 81 to 95 for SCS/RIO).
- User Number - show user number 1 to 16 who last armed, disarmed.
- Alarm Type - show alarm type 1 to 31.
- Zone Not Ready - show zone not Ready 1 to 64 when arming.
- RS485 Alarm ID - ID that caused alarm eg tamper for Keypad and Slave, or Low battery for Slave.

Entry/Exit Timer

Shows the Entry or Exit Timer. This number will count down showing the remaining timer of the exit or entry timer

Slider

The Slider element is a control which has a knob that can be moved to allow a range of values to be sent to Comfort for dimming or temperature control. Status from Comfort can also change the knob position on the slider.

Visual Properties

- Position, size and Border are as described previously.
- Orientation can be horizontal or vertical.
- Style can be Bar or Slider.
- Minimum and maximum values define the range from 0 to 255.

Visual Properties - Track

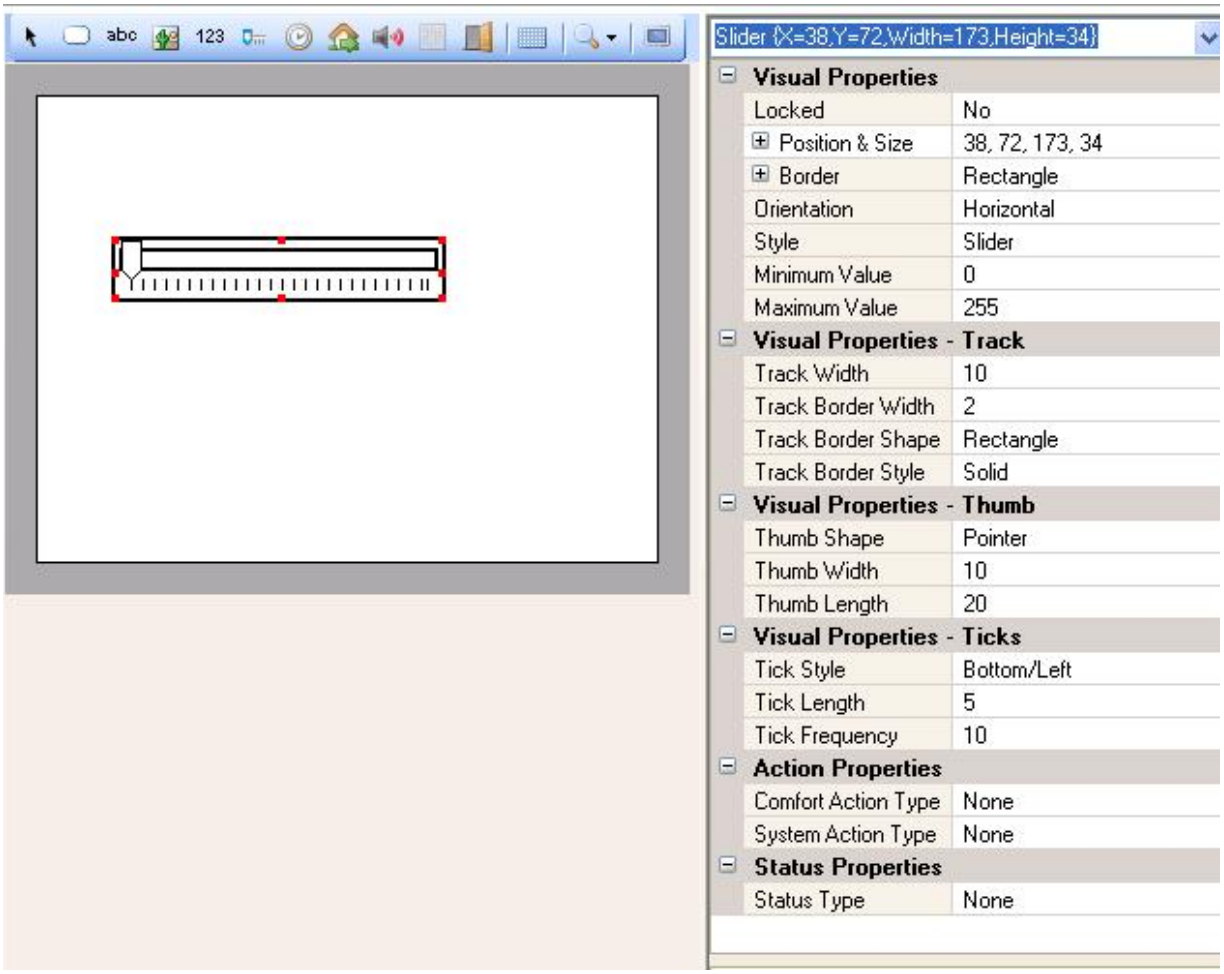
Track Width, Border Width, Border Shape and Border Style define the shape of the Track.

Visual Properties - Thumb

Thumb Shape, Thumb Width and Thumb Length define the particulars of the Thumb.

Visual Properties - Ticks

Tick Style, Tick Length and Tick Frequency define the characteristics of the ticks.



Action Properties

Comfort Action

- Set Counter - set the specified Counter number to the selected value of the slider
- Set Sensor Register - set the specified Sensor 0 to 31 to the selected value of the slider

System Action Type

See System Actions described previously

Status Types

Analog Input

The value of the analog input on Comfort will be displayed from 0 to 255. The full scale input voltage on a Comfort Input is 3.0 Volts which corresponds to 256 so the reading will range from 0 to 2.988 Volts. Note that only Comfort and Slave Inputs can be used as analog inputs but not the LEM Inputs. Zone Types for analog Inputs can be set to 0 (Null).

Counter

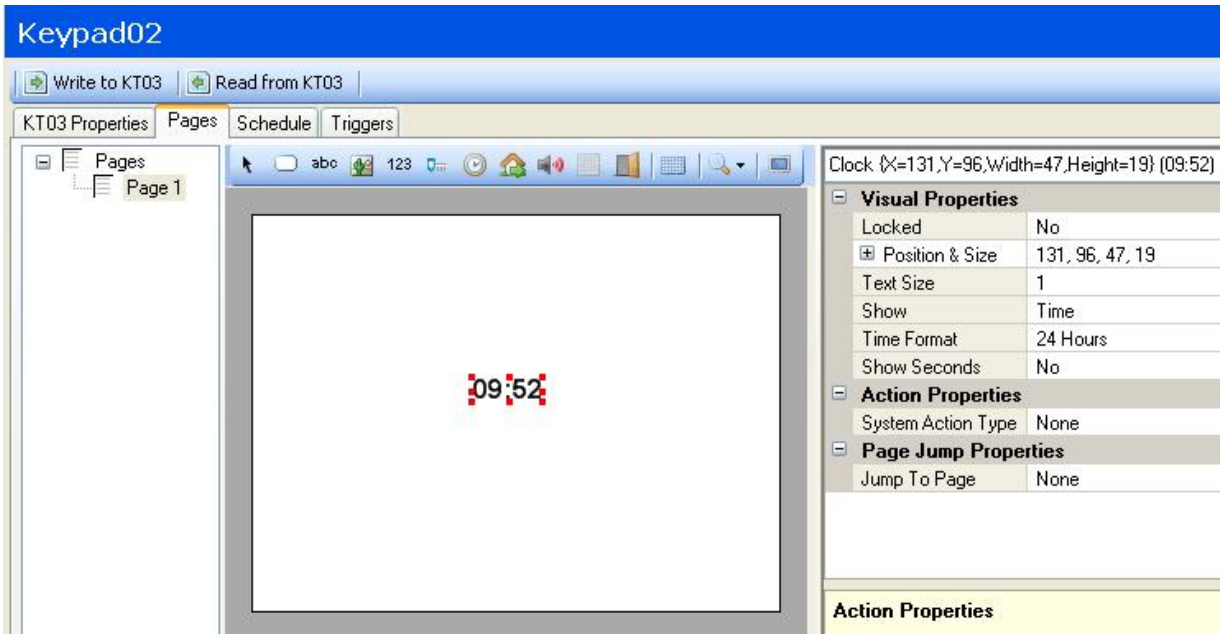
If Counter is selected, the next field is the Counter number 0 to 254. If a Counter number is selected for Status, the value of that counter (from 0 to 255) will be displayed in the Value field.

Sensor Register

If Sensor is selected, the next field is the Sensor number 0 to 31. If a Sensor number is selected for Status, the value of that sensor (from 0 to 255) will be displayed in the Value field.

Date/Time

Shows Date and time from Comfort.



Visual Properties

- Text Size: 1 to 4 in ascending order of text size.
- Show: Date, Time, or Date and Time.
- Date Format: DDMMYY, MMDDYY, YYMMDD.
- Show Month Name: Yes, or No. If No, show the month 01 to 12.
- Date Separator: Space, "-", ".", or "/".
- Year Format: 2 digits or 4 digits.
- Show Day of Week: Yes or No.
- Time Format: AM/PM or 24 Hours.
- Show Seconds: Yes or No.

System Action Type

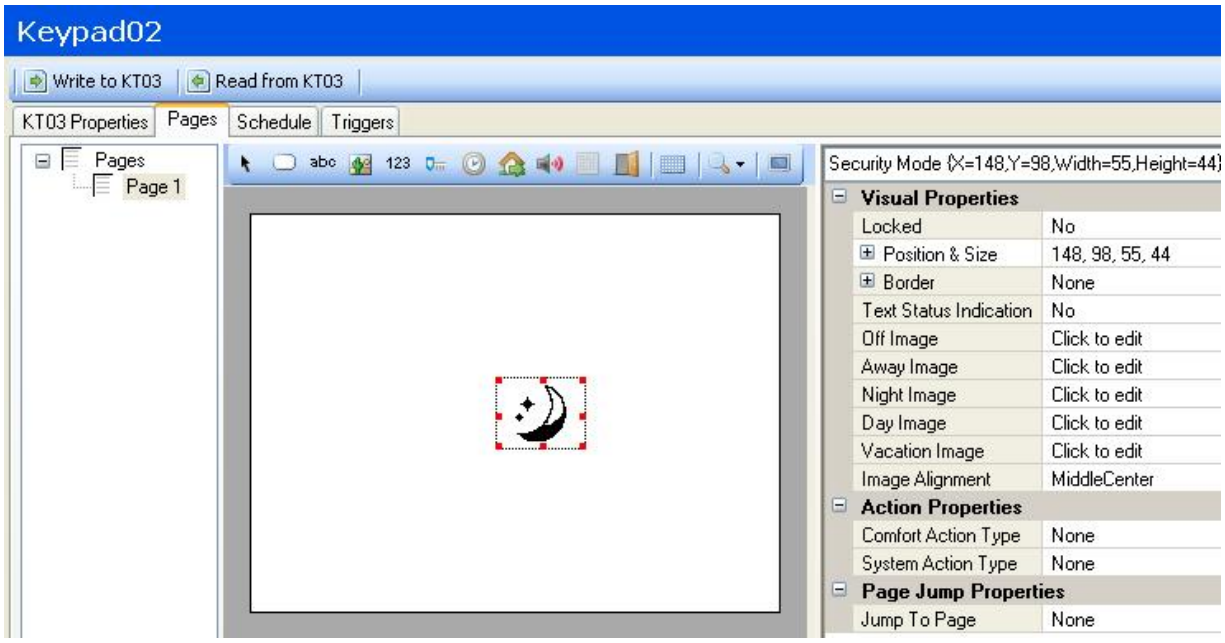
As described in Pages & elements section

Jump to Page

As described in Pages & elements section

Security Mode

The Security Mode element shows images or text for the 5 different modes of security i.e. security off, away, night, day and vacation.



Visual Properties

- Text Status Indication: If enabled (Yes), allows text to be entered for each Security Mode - Off, Away, Night, Day, Vacation.
- Off Image, Away Image, Night Image, Day Image, Vacation Image - Select an image to be displayed for each Security Mode.

Comfort Action Type

Key - sends a keypad key to Comfort if element is touched.

System Action Type

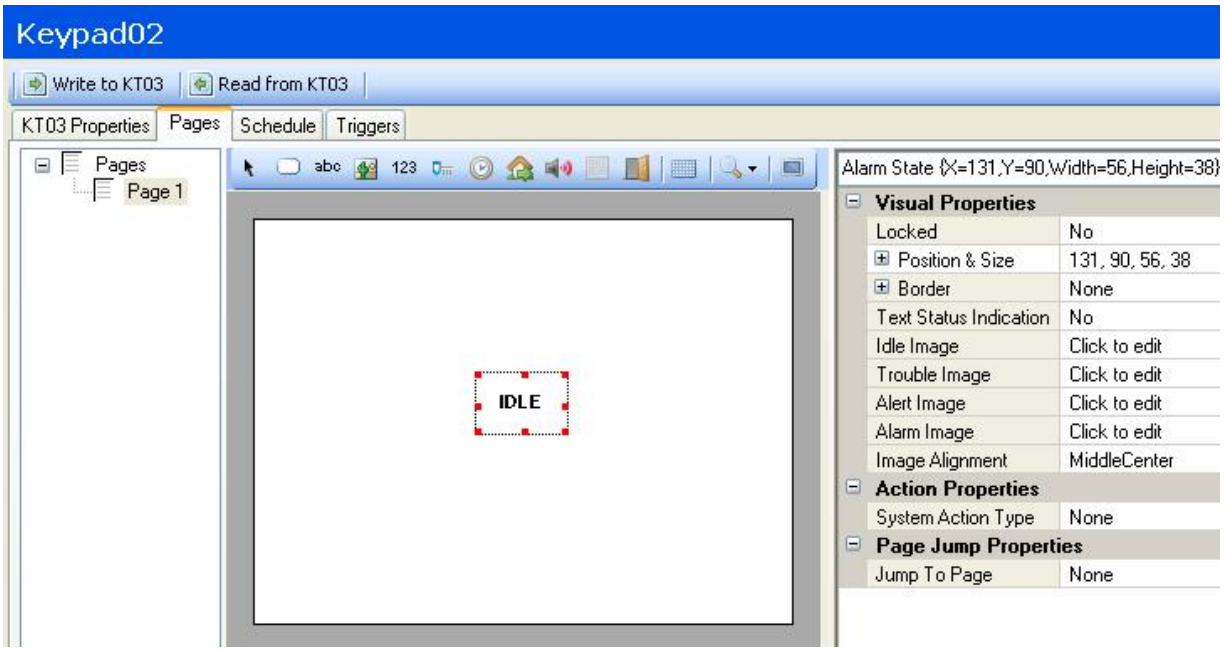
As described in Pages & elements section

Jump to Page

As described in Pages & elements section

Alarm State

The Alarm State element shows images or text for each of the 4 different states of alarm i.e. idle, trouble, alert, and alarm.



Visual Properties

- Text Status Indication: If enabled (Yes), allows text to be entered for each Alarm State - Idle, Trouble, Alert, Alarm.
- Idle Image, Trouble Image, Alert Image, Alarm Image - Select an image to be displayed for each Alarm State.

System Action Type

As described in Pages & elements section

Jump to Page

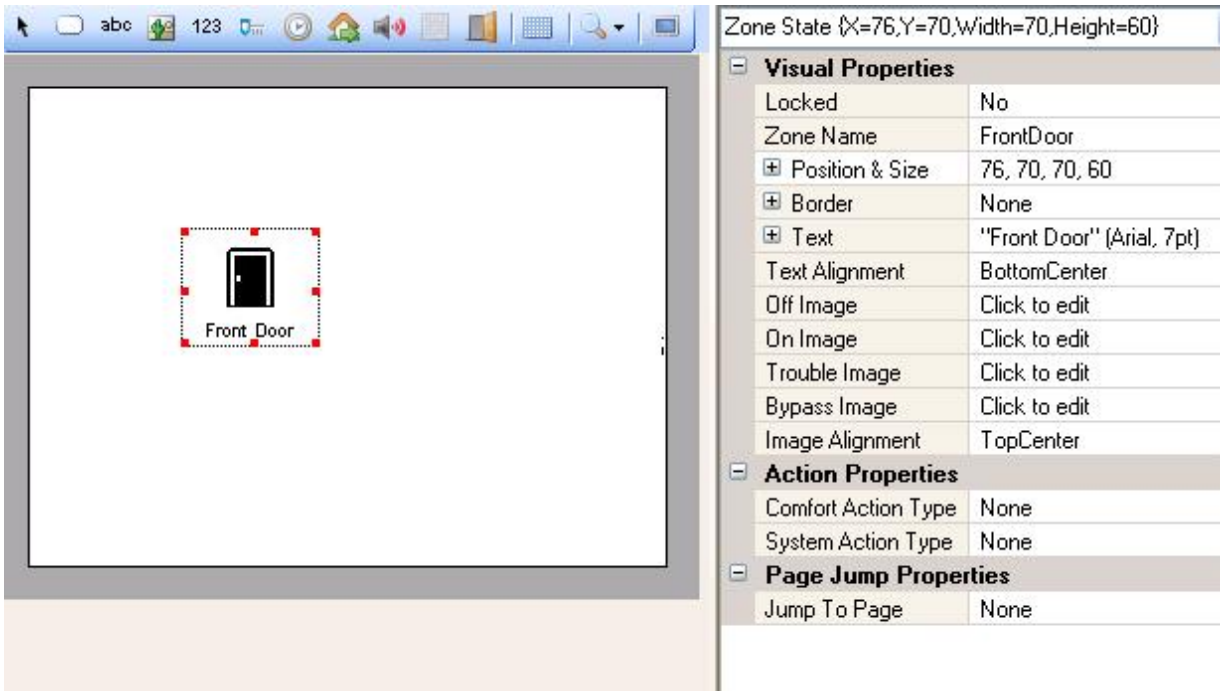
As described in Pages & elements section

Messages

for future use

Zone State

The Zone State Element shows the state of a zone/input being monitored, either OFF, ON, Trouble, or Bypassed.



Visual Properties

- Zone Name: the zone name defined in Comfigurator for this zone/input. This text will be displayed on the element.
- Off Image, On Image, Trouble Image, Bypass Image - Select an image to be displayed for each zone state.

Comfort Action Type

Bypass Zone - Bypasses the zone if the element is touched.

System Action Type

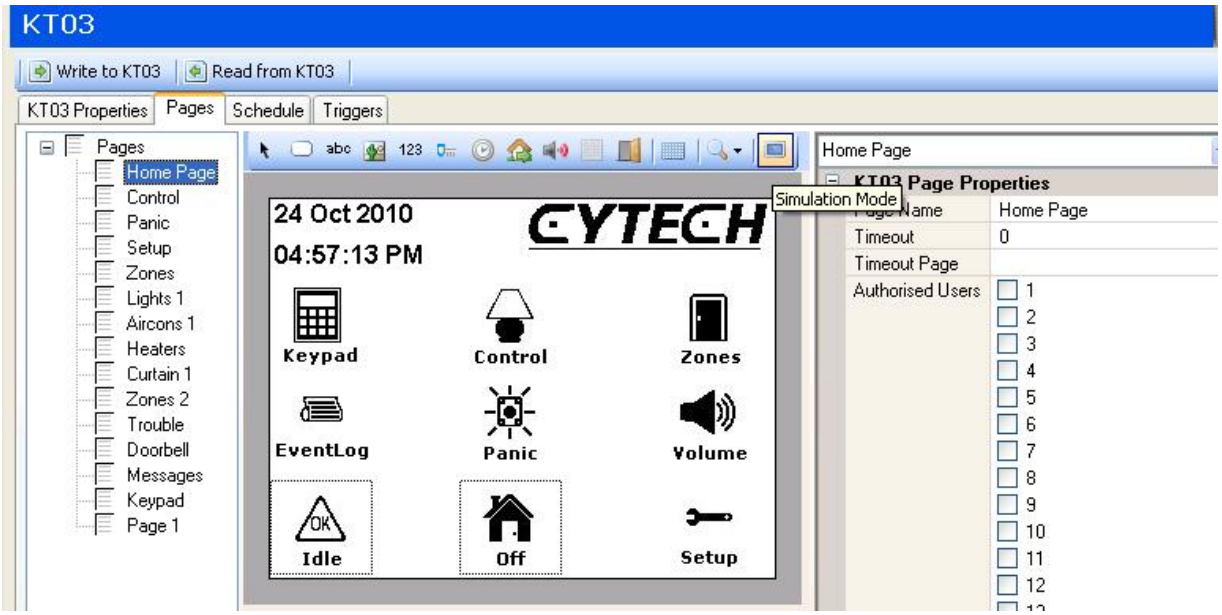
As described in Pages & elements section

Jump to Page

As described in Pages & elements section

Simulation Mode

This simulates the KT03 Screens and allows navigation through the pages by touching the elements. To enter Simulation Mode, click on the Simulation Mode icon to the right of the KT03 toolbar as shown below.



Simulation Mode works only when connected to Comfort via a UCM. You will be asked to login before going into Simulation Mode.

This is a useful way to test the screens design and images before writing to KT03.

Creating Images

The KT03 is a monochrome or black and white LCD with resolution 320 x 240 dots.

The Image library is where the supplied images for KT03 are found. This is in the Images folder in the Comfigurator program Folder.

Images can be created using any Image editing software like Windows Paint or Photoshop. Any file format like .gif, .bmp, or .jpg can be used. It is recommended that the images be converted to 2 colour .bmp files for the most accurate representation of what will be shown on the LCD. JPG and other formats may appear a little different on the LCD compared to what is seen on the computer.

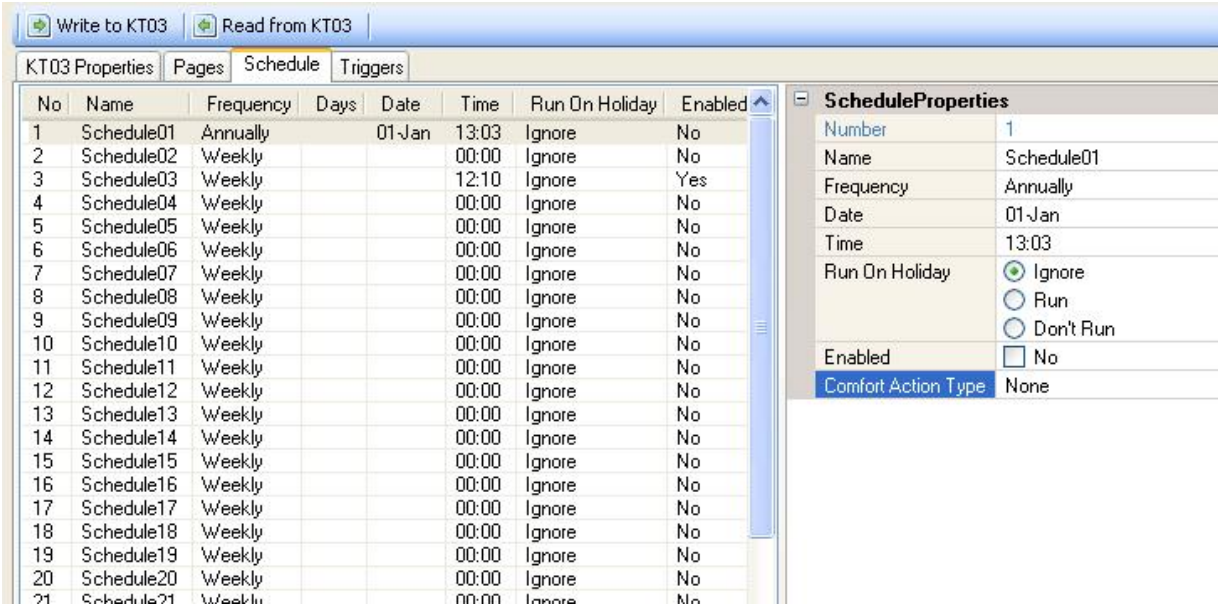
In the sample image files on the Images folder, most of the images are of size 36 x 36 pixels, with resolution of 72 pixels per inch, so an element will appear as 0.5 inch or 12.7 mm on the LCD. A larger size of image can be used at the expense of the number of images that can fit on the screen

SECTION 4 SCHEDULE

Schedule

Each KT03 can be configured for 64 Schedules. The schedules can be programmed for any combination of days of week or by date and for any time of the day. KT03 schedules are independent of Comfort's Time Programs.

To go to the Schedule page, press the Schedule tab on the KT03 configuration page.



Schedule Properties

- Number - The number of the schedule.
- Name - The name of the schedule.
- Frequency - Specifies how often the schedule is executed, weekly or annually.
- Days - Specifies the days on which the schedule is run.
- Time - Specifies the time at which the schedule is run.
- Run On Holiday - Specifies whether the schedule is run on a holiday.
- Enabled - Specifies whether the schedule is enabled.
- Comfort Action Type - The type of action to be performed by Comfort, either a Response or Keypad key.

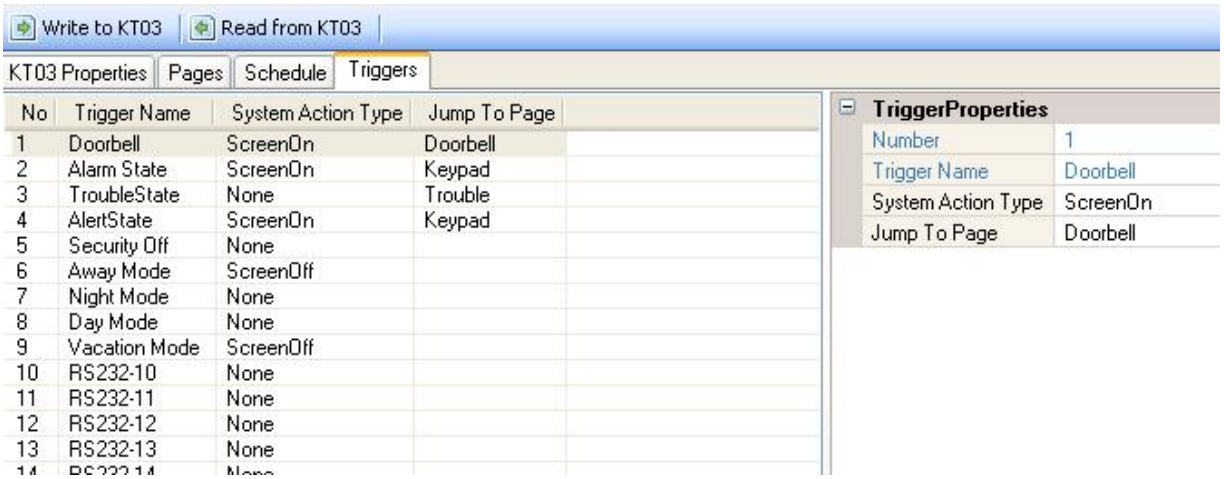
SECTION 5 TRIGGERS

Triggers

This allows events not related to touching the screen to trigger actions. The purpose is to change touchscreen behaviour when these events occur, e.g. Doorbell can be programmed to jump to the Doorbell page.

To go to the Triggers page, press the Triggers tab on the KT03 Configuration screen.

Trigger Properties



The events are

- Doorbell - caused by the Door Station button being pressed.
- Alarm State - caused the system going to Alarm State (instead of Idle, Trouble, or Alert states).
- Trouble State - caused the system going to Trouble State (instead of Idle, Alert or Alarm states).
- Alert State - caused the system going to Alert State (instead of Idle, Trouble or Alarm states).
- Security Off - caused by system being disarmed .
- Away Mode - caused by system armed to Away Mode.
- Night Mode - caused by system armed to Night Mode.
- Day Mode - caused by system armed to Day Mode.
- Vacation Mode - caused by system armed to Vacation Mode.

Each event can be configured to respond as follows:

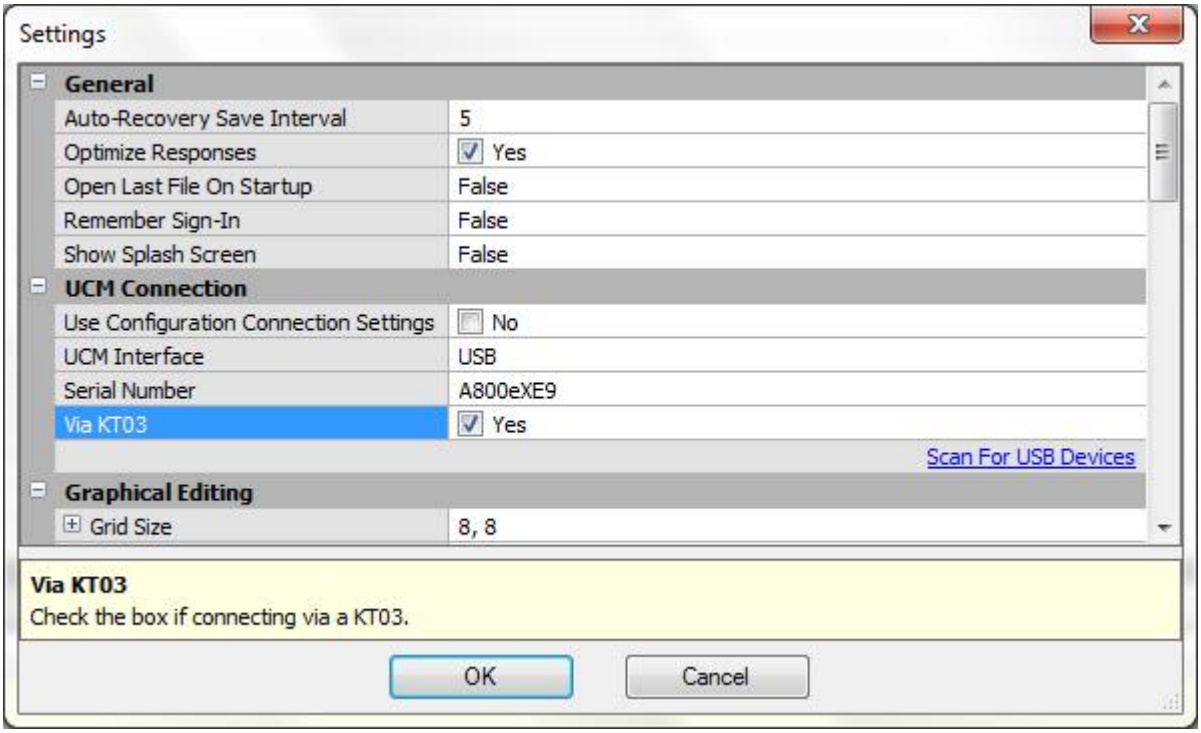
- Jump To Page - select any page to jump to when the event occurs.
- System Action Type - select Backlight On/Off, IR Receiver On/Off, Speaker On/Off, Screen On/Off, and Alarm History.

SECTION 6 KT03 AS UCM

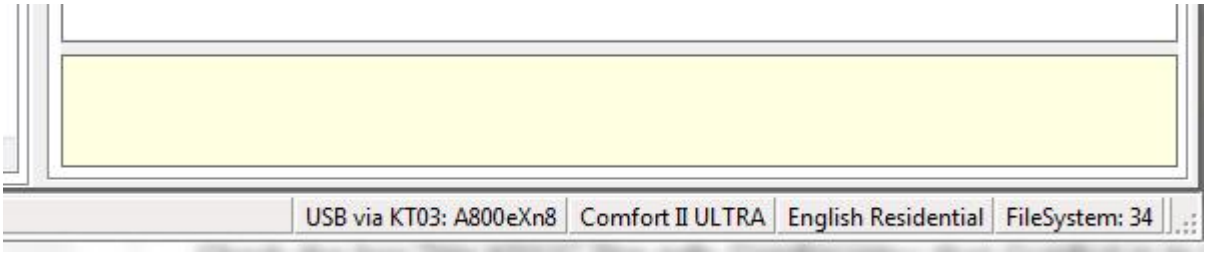
Programming Comfort via the KT03 USB Port

The KT03 USB port is used to write the KT03 Configuration into its EEPROM. Another very useful feature of the KT03 USB port is that it works like a UCM/USB, ie it is able to write the Comfort configuration to Comfort and read the configuration from Comfort, upgrade firmware, scan for modules etc.

Go to the menu Options > Settings/ UCM Connections and select UCM Interface as USB. Click on "Scan for USB devices". Click on the handle to the right of the Serial Number field and select the USB serial number corresponding to the KT03 USB Port. If another UCM/USB is connected to the same PC, then 2 serial numbers would be seen. Disconnect the UCM/USB cable to ensure that you are selecting the KT03 USB port. If the serial number is not found, click on "Scan for USB devices" and try again. If the serial number still is not, seen, unplug and re-plug the KT03 USB cable to the computer.

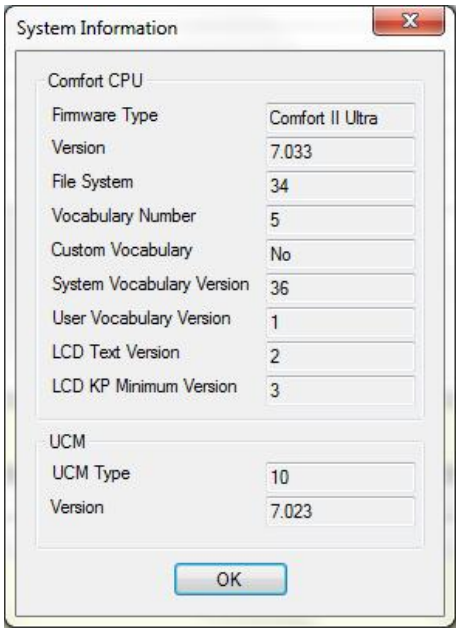


Check the box "Via KT03" This tells Comfigurator that Comfort is to be programmed via the KT03 USB port. Press OK.



The Status bar at the bottom of the Comfigrator screen will show the UCM Connection method as "USB Via KT03" followed by the USB serial number as in the screenshot above.

Test the connection by going to Menu Transfer > System Information. This will cause the system information box to appear (see example only below)



The KT03 USB port can now be used as a UCM/USB.

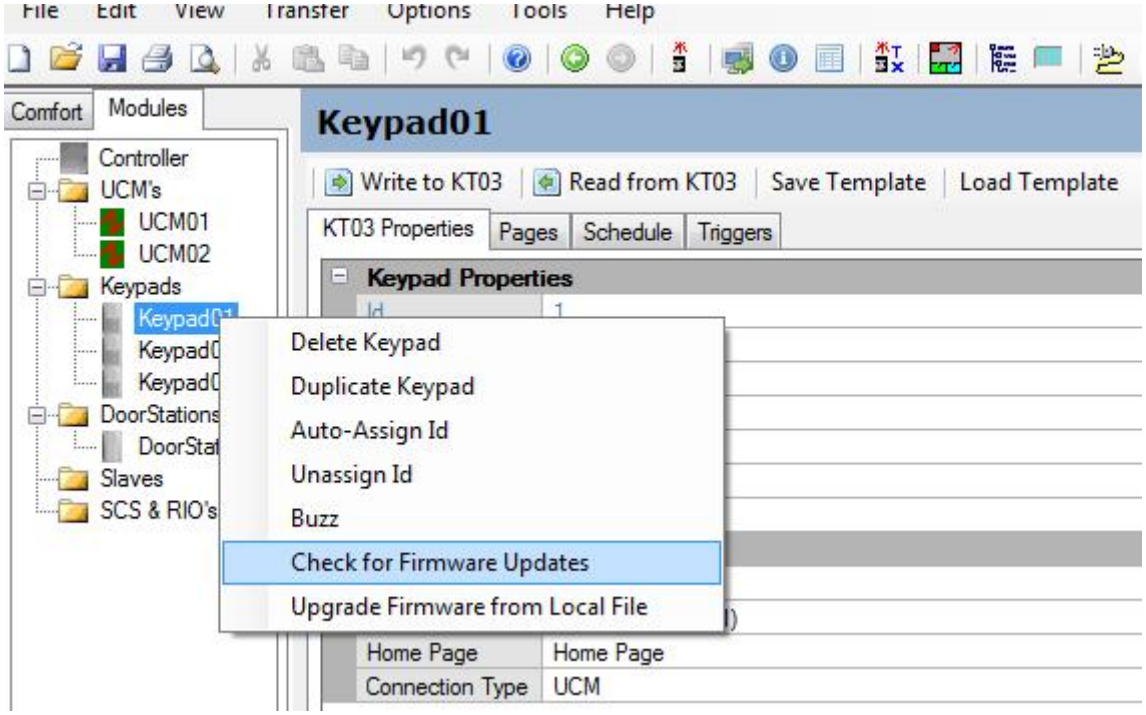
Upgrading KT03 Firmware

Applicable from KT03 firmware version 2.001 and Comfigurator 3.6 onwards, the KT03 firmware can be upgraded by the USB direct connection from the KT03 to the PC.

If the KT03 firmware is version 1.xxx, the firmware must first be upgraded to the latest using a UCM with a programming cable as explained in the UCM Manual or in the forum http://www.comfortforums.com/forum4/1782.html

If the KT03 firmware has been upgraded to 2.xxx or above, its firmware can be upgraded using only the KT03 USB cable without needing a UCM. This is done by connecting to the KT03 USB port as described above.

Go to the Modules Tab which shows Controller, UCMs, Keypads etc. Select the KT03 in the list.



If there is a more recent firmware version available, the message “KT03 firmware willl be upgraded to x.xxx. Please press F0 on the keypad to continue”.

Press F0 on the KT03 keypad in the Keypad page, or press F0 on another keypad. This is a security feature to prevent unauthorised upgrade.

Comfigurator will start the upgrade process and will show the upgrading progress bar on the screen.

The other option “Upgrade firmware from Local File” is used when the firmware file has been downloaded from the server

IMPORTANT: DO NOT disconnect or reset the KT03 or Comfort or interrupt the communication in any way during this upgrade process. If the upgrade fails for any reason, DO NOT reset or unplug power from the KT03 as this will corrupt the KT03 firmware; just repeat the upgrade firmware procedure again.

The progress bar for the process will be displayed and the second progress bar which lasts only a few seconds will appear through the end of the process.

After the upgrade completes, the firmware will have been loaded and the KT03 can be used immediately.

Document Revision History

- Versuon 1.04 - 4 June 2013 Revised for Comfigurator 3.6.x, rearranged content, added Setup page description
- Version 1.0.3 - 8 August 2011: Added description on new firmware upgrade method (self-upgrade)
- Version 1.0.0: Initial release

Important Note

The printed manual may not always be the most current version. Please check and download the latest version from http://www.cytech.biz/manuals.html

This manual is in A4 format. To print this manual as an A5 Booklet, on HP PCL printers select Page Scaling = Fit to Printable Area. Select Properties> Finishing Tab, Document Options = Print on Both Sides, Booklet Layout = Left Side Binding. Other printers may have different settings to achieve the same result

Document Title:	KT03 Manual
Filename:	KT03prog.lwp
Version:	1.0.4
Date Last Modified:	6 June 2013

web site: *http://www.cytech.biz*
Email: *support@cytech.biz*
User Group/Tech Support: *http://www.comfortforums.com*