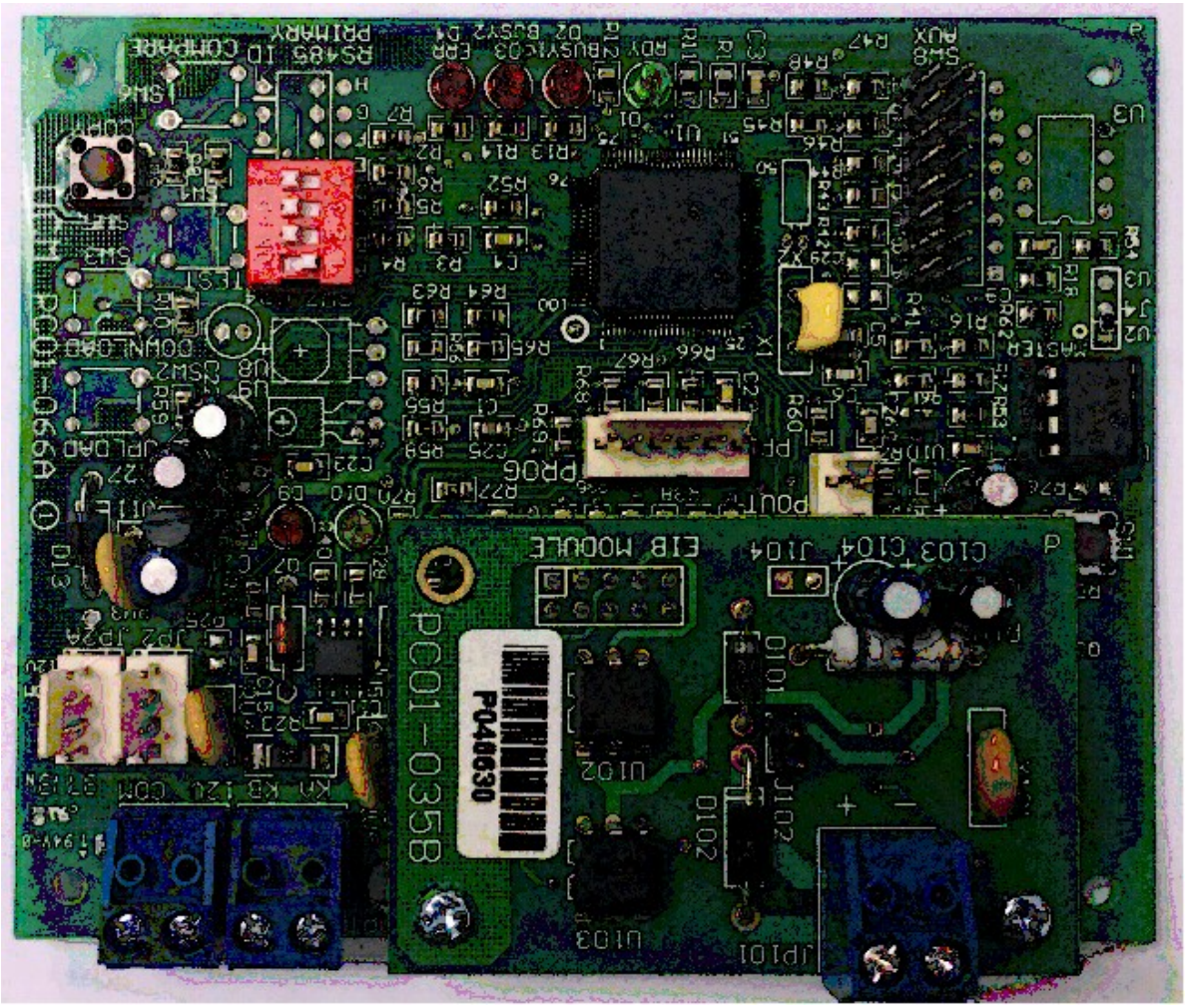
KNX/Logic Processor Introduction

The KNX Logic Processor is an Automation Controller with a KNX Interface which can work with other Cytech interfaces including CBUS, Z-Wave, GSM, Modbus, Velbus, IRIO. HIO Hotel I/O. KNX/Logic is applicable to an automation system which does not require the Comfort Intruder Alarm, but has the same capability of Comfort for Responses, Time Programs, Timers, Counters, Flags, and Sensors. It does not have the Voice recording/playback, voice menu, dial out, and telephone interface of Comfort and does not have any inputs and outputs.



KNX/Logic PCB

Key Features

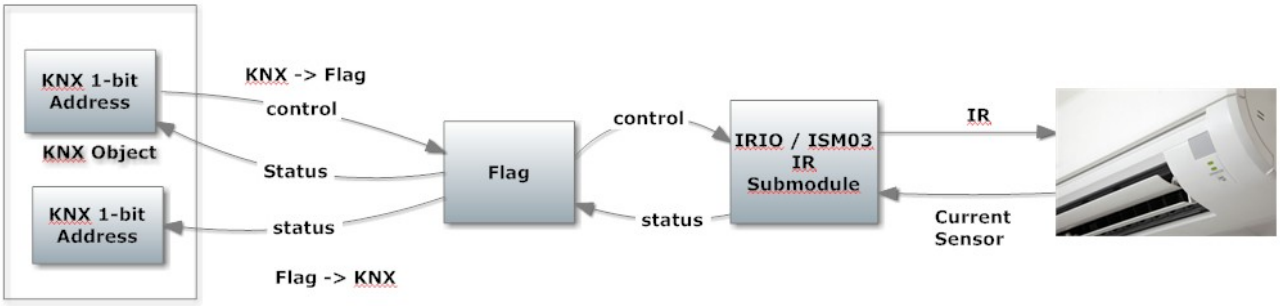
- 2 way KNX Interface able to send telegrams to KNX and receive from KNX
- Scheduling with 32 Time Programs.
- KNX buttons can be mapped to Comfort Counters, Flags and sensors, allowing control of non-KNX appliances like air-conditioners and other 3rd party automation systems
- Synchronise KNX/Logic real time clock to KNX devices. KNX/Logic has automatic

Daylight saving adjustments and Sunrise/Sunset times based on locations. The optional UCM/ETH03 module is synchronised to Internet Time Servers.

- Read Temperature and other sensors on the KNX bus or supply temperature readings or setpoints to KNX from Cytech modules like MSM01 Multisensor Module
- Functions as a Central Processor/Controller for an KNX network which is able to coordinate the functions of all the subsystems including security, lighting, HVAC, and others. KNX/Logic is able to take action based on conditional logic, for example, when the time is between 7 PM and 7 AM, on selected days of week etc
- Control KNX devices by Cytech mobile apps (iOS and Android)
- Interfaces to other systems eg C-bus, Modbus, etc by Cytechs UCM interface modules

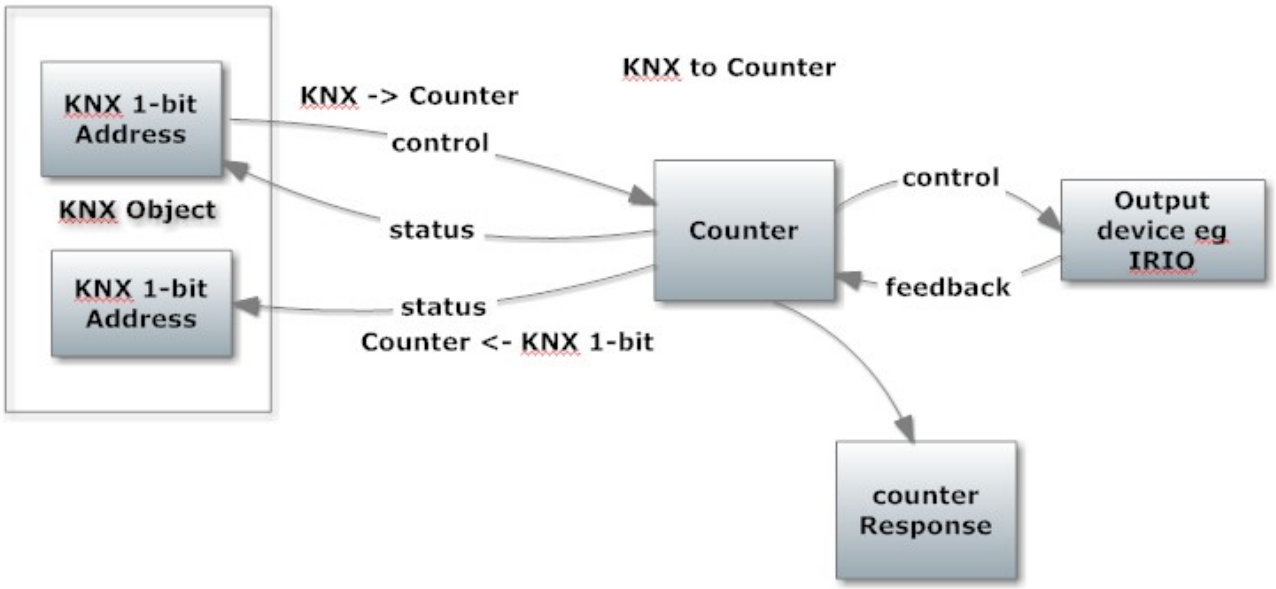
Applications

The KNX/Logic has a built-in KNX Interface.The KNX/Logic can be used to connect other Cytech modules in a system, eg UCMs, IRIO, HIO and link them by mapping to Flags, Counters and Sensors. For example, an IRIO with ISM03 Infrared submodule is used to control up to 4 airconditioners or AV systems using IR signals. Setting the flag turns on the appliance and clearing the flag turns it off. These appliances can be mapped to Flags or Counters in KNX/Logic. These appliances can be controlled by KNX and other systems by mapping the required group address to the same flags or Counters.

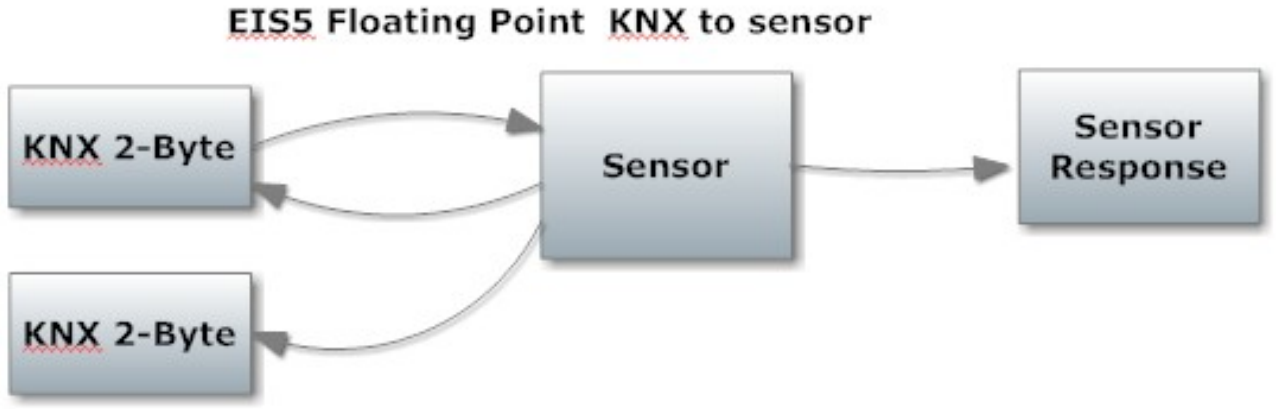


On/off states can be mapped to Flags. Setting the Flag controls the appliance according to the Flag state, ie 0 for Off, 1 for On. In IRIO, another flag can be assigned to the feedback status. This flag can be mapped to the KNX group address (or other system) to give feedback.

Counters are used when the state is not binary or On/off. An 8-bit counter has 256 states from 0 to 255 which can represent dimming levels for lights. Mapping to Counters allows dimming or analog levels to be passed from one system to another. A new value sent to a Counter will also trigger a Counter Response which can be used to apply Logic conditions which could set the values of other counters and flags.



KNX EIS5 (2-byte floating point) objects can be mapped to KNX/Logic Sensor Registers, which activate Sensor Responses based on the value of the 2-byte object.



Time Programs

Time Programs can be used to schedule commands or scenes for controlling devices. Logic If/Then conditions can be used in Responses for conditional programming

Cytech Apps

The Comfort Mobile apps can be used to control and monitor the KNX/Logic by programming the Control Menu.

Modules

The KNX/Logic can support the following modules on the Comfort Rs485 Bus;

- 8 UCM Interfaces (KNX, Cbus, GSM, Universal. Modbus etc)
- 15 IRIOs Intelligent Remote programmable I/O)
- 15 HIOs (Hotel I/O Room Logic controller)
- 15 MSM01 MultiSensor Modules (with temperature, Humidity, Water

leakage sensing)
- KT05 Tousccreen tablet

Note that KNX/Logic cannot be used together with the Comfort Alarm/Automation system or UCM/Logic Controller in the same network as they all work as controllers on the Cytech RS485 Bus.

Responses

Responses are programs consisting of Actions or commands which perform customised tasks; eg Control Outputs, send Infrared signals (Outputs require IRIO), control Flags and Counters, start and stop timers for delays do complex Conditional Logic which depends on Time, date, Sunset/Sunrise, Counters, Flags, timers, Inputs, and Outputs.

Specifications

- UCM size 108 x 88 mm
- Direct connection to KNX bus
- Power Supply 12V to 15V 1A wallmount universal adaptor 90V to 240VAC with UK, EU or US plug. The KNX Bus is isoolated from KNX/Logic voltages.
- Control Menu – 8 Control Groups, each with 10 control keys, each control key has 10 Action keys.
- 512 Responses for custom programming
- 255 Counters can be mapped to KNX, Cbus, Zwave, IRIO, HIO etc
- 255 Flags can be mapped to KNX, Cbus, Zwave, IRIO, HIO etc
- 32 Sensor Registers can be mapped to KNX, Cbus, Zwave, TSM etc
- 32 Time Programs or Schedules
- Sunrise/Sunset times with automatic daylight saving time adjustments
- 64 Timers for programmed delays 1 to 65534 seconds.
- Current Consumption 30 mA @12V
- Connected to KNX Bus via bus cable (2 wires).

KNX

- Physical addresses can be assigned to KNX/Logic, Area 0 to 15, Line 0 to 15, Physical Address 1 to 200
- KNX to Comfort allows 256 Group addresses to be mapped to Comfort.

Setup

The package includes
- KNX/Logic PCB with firmware 7.xxx
- RS485 white 4 way cable 1 meter.
- 12V – 15V Universal wallmount power supply 90-250 VAC with EU/UK/US/AU plug.

Buttons

- SW1 – RESET. This button resets the KNX/Logic. It does not change any parameters or

programming settings
- COPY – no function

LED Indicators

- D1 “RDY” (Green) should be on at all times.
- D2 “BUSY1” (Red) blinks if there is an incoming telegram from KNX
- D3 “Busy2” (Red) blinks when the UCM transmits a telegram to the KNX Bus which is acknowledged. If there is no acknowledgment from the target group address, D2 remains on.
- D4 “ERR” (Red) Turns on if the KNX Bus is not connected or power for the KNX bus is off. It also blinks when there is an error on the KNX bus. D4 turns off when the KNX bus is connected to the KNX/Logic JP101 terminal block. If the U2 EEPROM IC is missing, the ERR LED will flash continuously.
- D9 (Red) RS485 Transmit to Rs485 bus
- D10 (Green) RS485 Receive from RS485 Bus
- D11 (Green) Receive Data from KNX
- D12 (Red) Transmit Data to KNX

Switches/Headers

- SW7 ID DIP switch Not used
- SW8 2 x 8 Header Not used

Connectors

- P3 – 2 x 5 way socket for KNX Submodule.
- JP101 - 2 way terminal block for connection to KNX Bus (on KNX Submodule)
- JP2, JP2A - 4 way headers for RS485 white cable
- JP3 – 12V/COM for Power Supply
- JP4 – KA/KB (alternate connection instead of RS485 white cable)
- PP1 and PP3 - for Firmware Upgrading by another UCM- DO NOT CONNECT THE FIRMWARE PROGRAMMING CABLE IN NORMAL OPERATION

ICs

- U1 – Microcontroller IC. Label indicates the firmware version number “KNX/Logic 7.xxx”.
- U2 – EEPROM 256K bits for KNX/Logic programming settings (via Comfigurator “Write/Read to Comfort”)
- U3 – EEPROM 256K bits for KNX Configuration settings (via Comfigurator KNX Tab “Write/Read To EEPROM”)

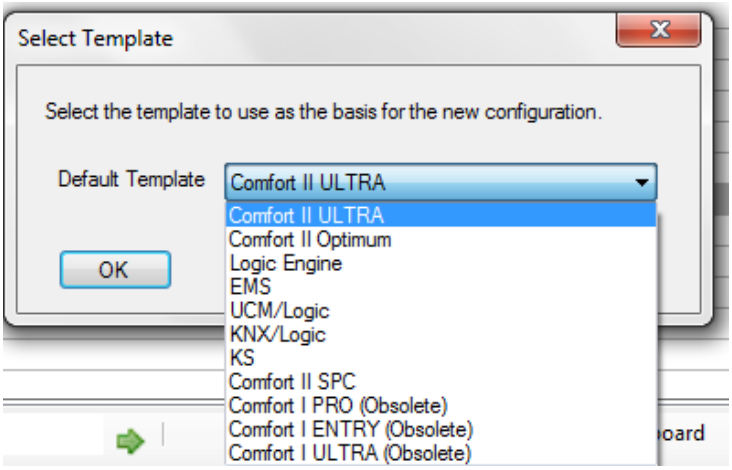
Connection Procedure

- Connect the KNX Bus to the JP101 2 way terminal block on KNX submodule.
- Connect the wallmounted 12V power supply to the 12V/COM terminal blocks according to the correct polarity (+ and -). The product will not be damaged by reversed connection.
- The KNX/Logic is connected to other modules by the supplied RS485 4-way white cable from 4-pin header JP2 or JP02 to the other module.
- Switch on the power to the KNX/Logic.
- The Green RDY led on the UCM (D1) should light up and remain on. D9 (red) flashes when the KNX/Logic polls other modules. D10 (Green) flashing shows that it is receiving messages from other modules in the bus. D9 should be constantly flashing. D10 should be flashing when there us at least 1 module connected to the RS485 bus. The BUSY1 LED turns on if the file system in the U2 EEPROM is not File System 40 (or the U2 IC is

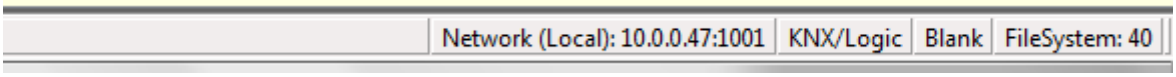
missing). Do a Write to Comfort with the correct file system to clear this error.

Using Comfigurator

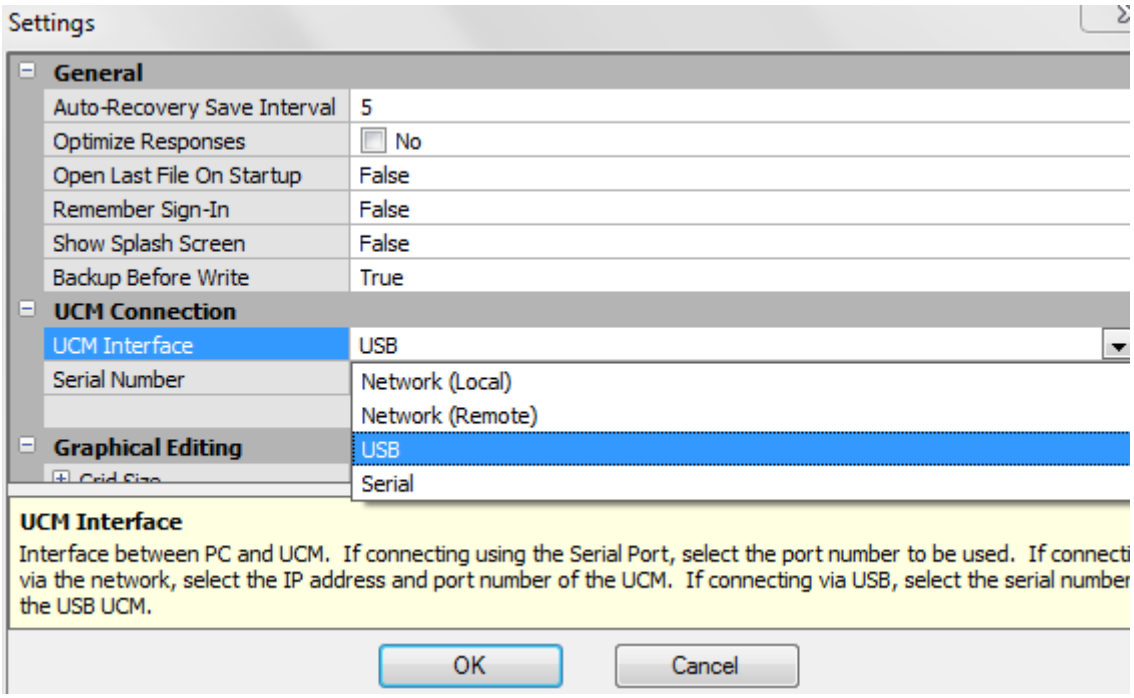
Use the Comfigurator software version 3.12.12 or above to configure KNX/Logic. The software can be downloaded from http://www.cytech.biz/comfigurator.html
Instructions for using Comfigurator can be downloaded from
http://www.cytech.biz/programming_with_comfigurator.html
A UCM/USB or UCM/ETH03 is required for programming with Comfigurator.
Run Comfigurator, go to File > New and select KNX/Logic in the screenshot below.



In the bottom right status bar, KNX/Logic is the product selected, File System 40 should be seen. t
The UCM interface via USB or IP address shows what interface is selected.



To select the communication interface, go to Options > Settings. In the UCM Connection section select Network (Local), Network (Internet), USB. Network (Local) and Network (Internet) are applicable for ETH03 submodule. USB is for USB module and Serial is for Rs232.
See the screenshot below.

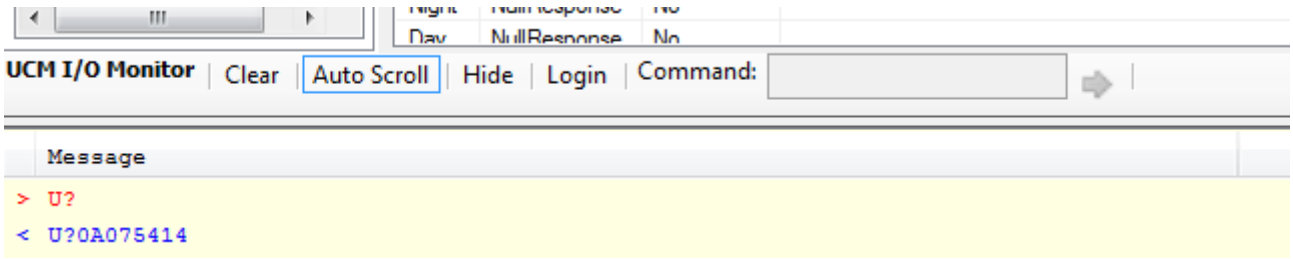


- For Network (Local) select the LAN IP Address and port
- For Network (Internet) select the LAN IP Address and port. This may be a dynamic IP name e.g. myname.dyndns.org or a fixed Internet IP address.
- For USB select the serial number which appears in the serial number window
- For Serial, select the COM port 1 to 64

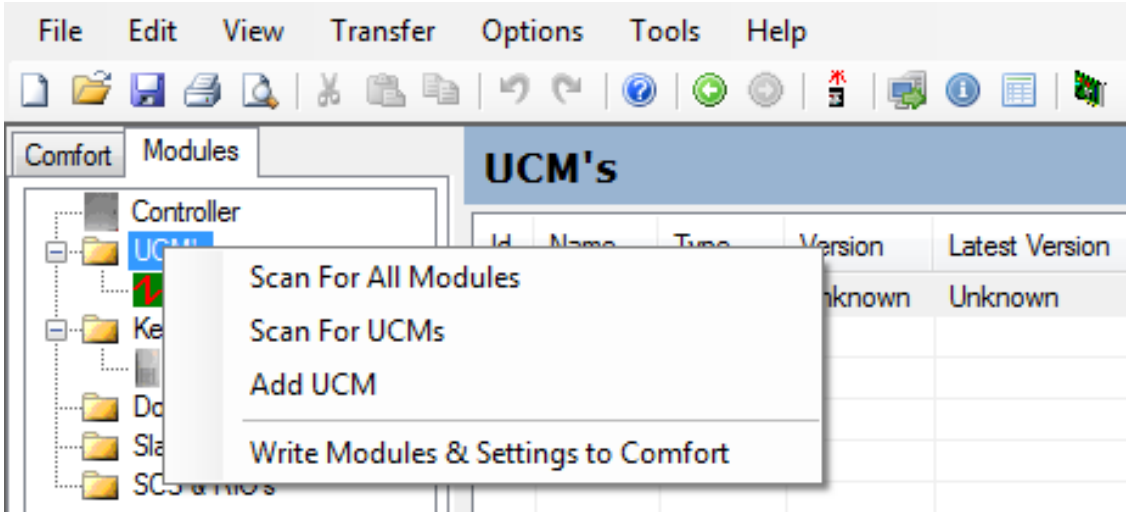
For instructions on setting the IP address and Port for the Network connections, go to the topic http://www.comfortforums.com/forum113/3402.html

For instructions for using USB interface go to http://www.comfortforums.com/forum4/3404.html

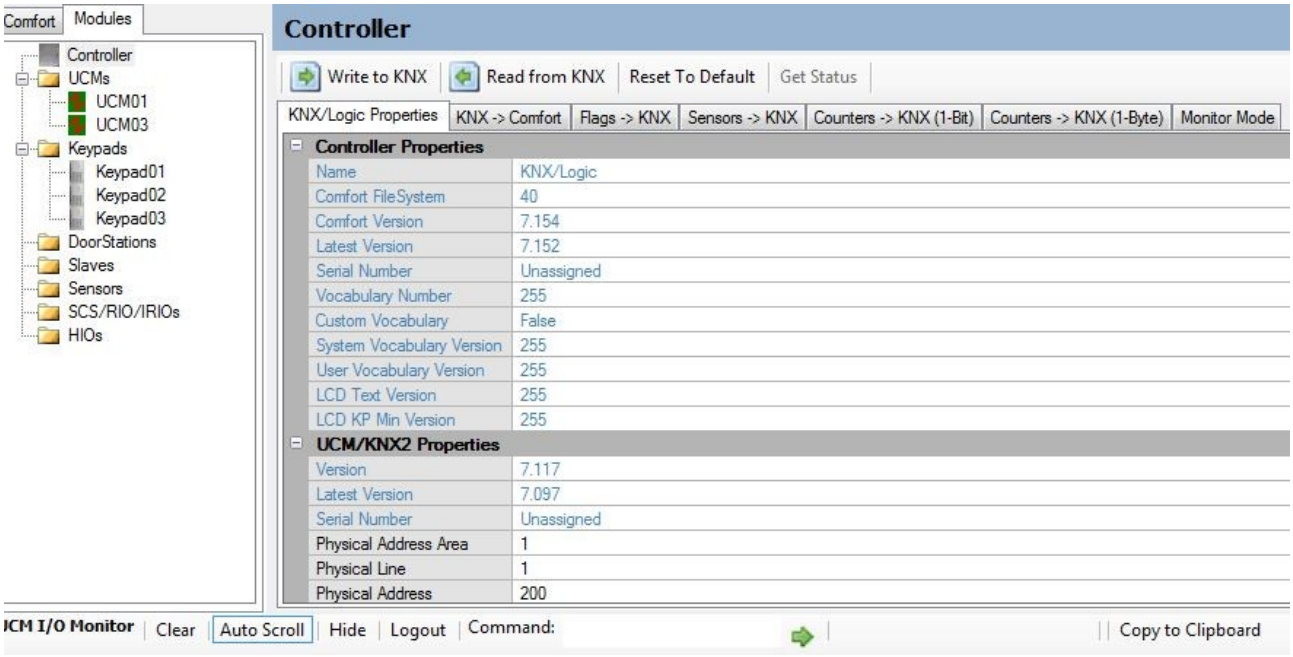
When the UCM connection has been entered, click on Login button on the UCM I/O Monitor window at the bottom
Click on the Show button to show the I/O monitor which displays the communications on the bus.



Go to the Modules Tab and right-click on Controller folder symbol as shown below.



"Scan for All Modules" will automatically detect the KNX/Logic and all UCM and other modules connected on the bus with the correct ID. An example after scanning is shown below.



The tabs in the right pane are; KNX/Logic Properties, KNX to Comfort, Flags > KNX, Sensors > KNX. Counters > KNX 1-bit, Counters > KNX 1-byte, and Monitor Mode. Each of the tabs are explained below

"WRITE to EEPROM" button in the screenshot above must be pressed after configuring the KNX settings in order to save the configuration in KNX/Logic. "Write to Comfort" in the Transfer Menu does NOT do a Write to EEPROM.

Controller Properties

- Name: KNX/Logic
- Filesystem: 40
- Version: Firmware version of KNX/Logic

- Latest Version: latest KNX/Logic firmware . Seen after Scan for modules.
- Serial Number. This is the serial number if any.

KNX/Logic Properties

- Physical Address Area: This is the area of the KNX/Logic on the KNX Bus (0 to 15).
- Physical Line: This is the Line number of the KNX/Logic on the KNX Bus (0 to 15).
- Physical Address: This is the physical address of the KNX/Logic on the KNX Bus (1 to 200)**.** Comfigurator will be limited to 200 to allow compatibility with older firmware.

  The Physical address is usually expressed as Area.Line. Address e.g. 1.1.200 means Area 1, Line 1, Address 200 This address should be unique on the KNX Bus to avoid conflicts.

Write To EEPROM/ Read from EEPPROM

The KNX2 programmed configuration is saved in the U2 EEPROM on the KNX/Logic. To write the configuration into the KNX/Logic select the button "Write To EEPROM". You will be asked for the Comfort login code (default 1234).
To read the configuration from the KNX/Logic, press "Read From EEPROM" This loads the configuration from the KNX/Logic.
The read and write process should take a few seconds or longer, depending on the number of group addresses in the KNX to Comfort table.

The KNX/Logic configuration is saved with the Comfigurator cclx file. However when you Write to Comfort, this operation does NOT write the KNX/Logic Configuration to its EEPROM . Also when you Read a configuration from Comfort this does not Read from the KNX/Logic EEPROM. Write to EEPROM and READ from EEPROM must be done independently of Write and Read to Comfort.

Monitor Mode

In this mode, any telegram received by the KNX/Logic is displayed on the screen for diagnostic purposes. The meaning of the telegram is beyond the scope of this document. Please consult your KNX documentation for a description of the KNX telegrams.

In Monitor Mode, KNX telegrams will not activate mapped Comfort counters, sensors and virtual inputs etc. Remember to click away from the Monitor Tab to end Monitor mode when finished with monitoring. Otherwise if you close comfigurator or log out without leaving Monitor mode, the KNX telegrams will be ignored and will not trigger anything on Comfort.

KNX To Comfort

This is to map KNX Group addresses to Comfort's registers for sending commands and Status to Comfort

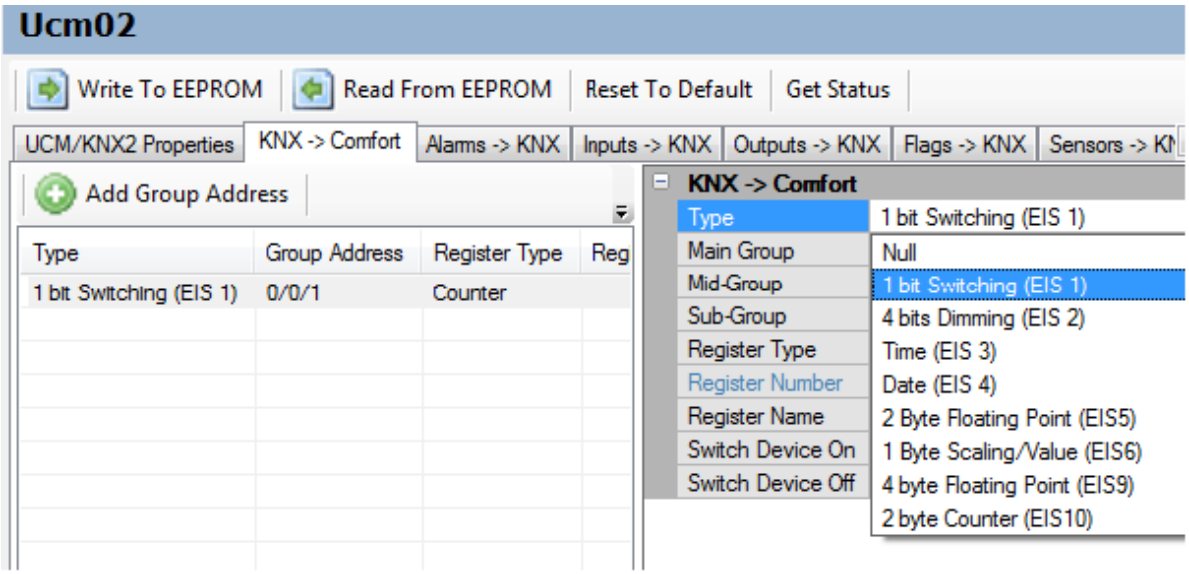


Figure 3.5 - KNX to Comfort Initial Screen

KNX Group addresses can be added to the list on this screen by selecting "Add Group Address" or "Learn"

When the "Add Group Address" button is pressed, the KNX to Comfort Right Pane properties appear as shown above. Click on Type to show the Drop-down list to select the KNX Types; Null, 1-bit Switching (EIS1), 4-bit switching (EIS2), Time (EIS3), Date (EIS4), 2 byte floating Point (EIS5), 1 byte Scaling (EIS6), 2 byte counter (EIS10)

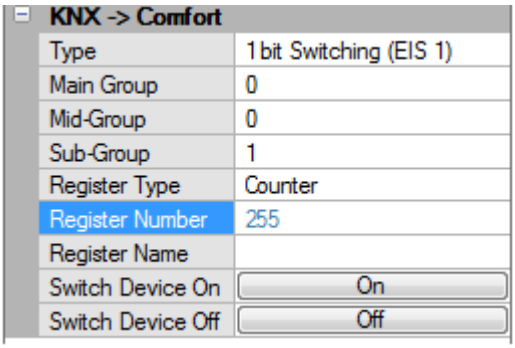


Figure 3.6 - KNX to Comfort - KNX Type properties

The right pane shows the properties of the new KNX group address.

- Type: This is the Type of telegram to be mapped to Comfort (described below). The Type can be selected from a drop-down list.
- MainGroup/MidGroup/SubGroup: These are the parts of the group address. **Note that the Group address selected must be unique in the KNX to Comfort and Comfort to KNX Tables, ie a Group Address can only appear once in any table.**
- Switch Device On and OFF: these buttons test the KNX device if it is a 1 bit object by switching the device on or off.

The "Learn Group Address" button can be used when Comfort is connected at this time. You will be asked for a sign in code if you have not logged into Comfort yet. A pop-uo window appears as shown below.

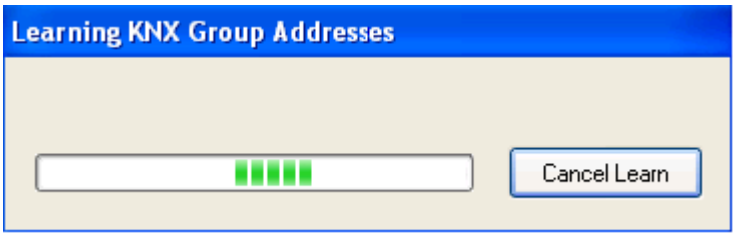


Figure 3.7 - Learning Group Address

Press a KNX button to be learned into the KNX to Comfort list. The group address of the telegram received will be displayed in the right pane as in Figure 3.6. Be careful that other KNX buttons which are not to be learned are not pressed at this time.
When the Group addresses have been learned, press "Cancel Learn".
The following section shows how to select the KNX Types
When the group address has been learned, click on Type. A drop-down list will appear which will show the available types as shown below

KNX Types

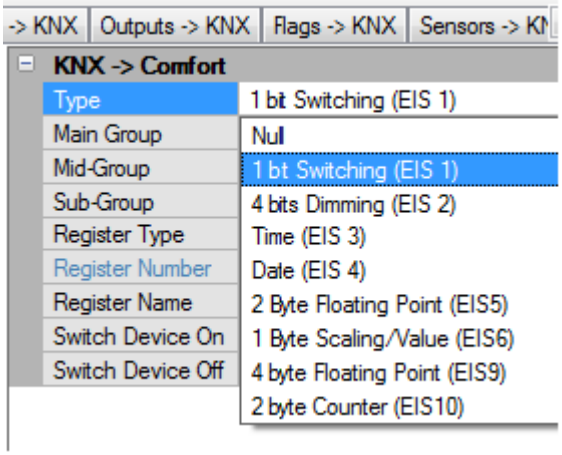


Figure 3.8 - KNX Types

First, a KNX Type is selected, followed by the Comfort Register available for that type which is to be mapped to the KNX Group address.

1 Bit Switching (EIS1)

This refers to a EIS1 1-bit object associated with an on/off switch or Actuator.

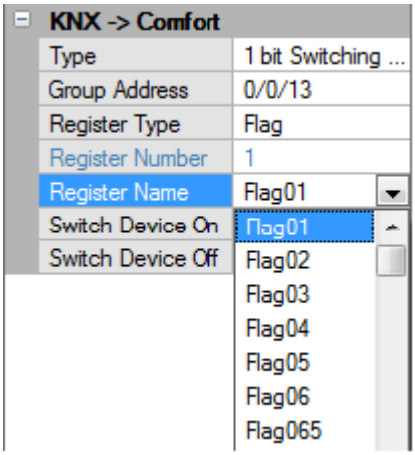


Figure 3.9 - 1 bit Switching (EIS 1)

"Switch Device On" and "Switch Device Off" will switch on and off the Group address selected, for testing purposes. This shows that the communications with the KNX device is working correctly.
The 1-bit EIS 1 type can be mapped to a Counter, Virtual Input, Flag, Output, Output Toggle, Output Pulse, Arm Security, Panic, Bypass zone in Comfort. After selecting the Comfort Register type select the register number eg Counter number, flag number etc from a dropdown list.

1-Bit Switching (EIS1) > Counter

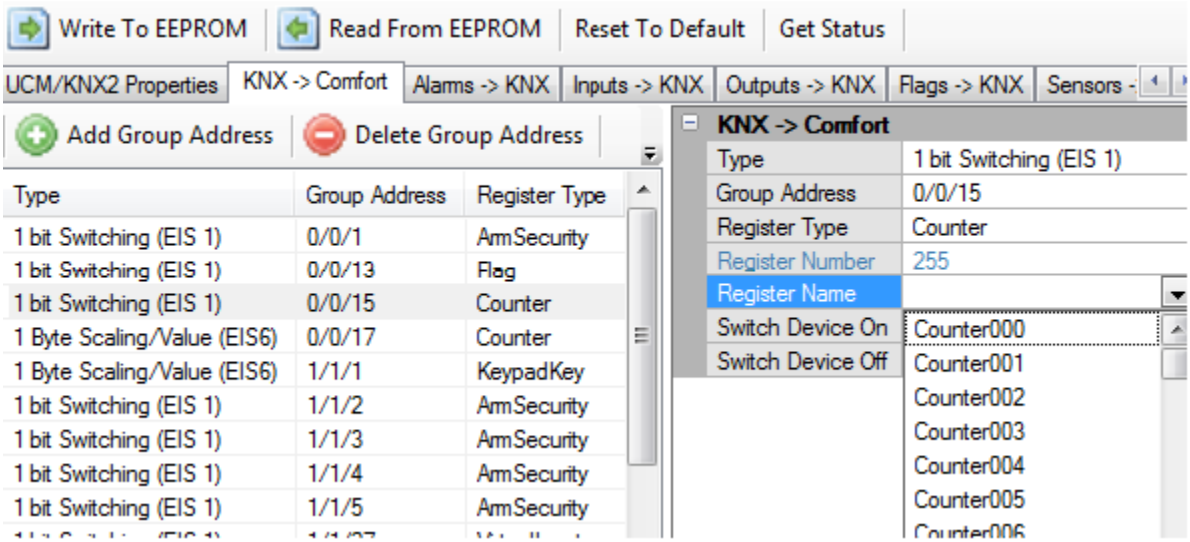


Figure 3.10 - KNX 1-bit to Counter

For mapping to Counters, when a telegram with this group address is received by the KNX/Logic, the value of the object is saved in the Counter (0 for off, 255 for ON and 1 to 254 for level). This also activates a Counter Response corresponding to the counter number.

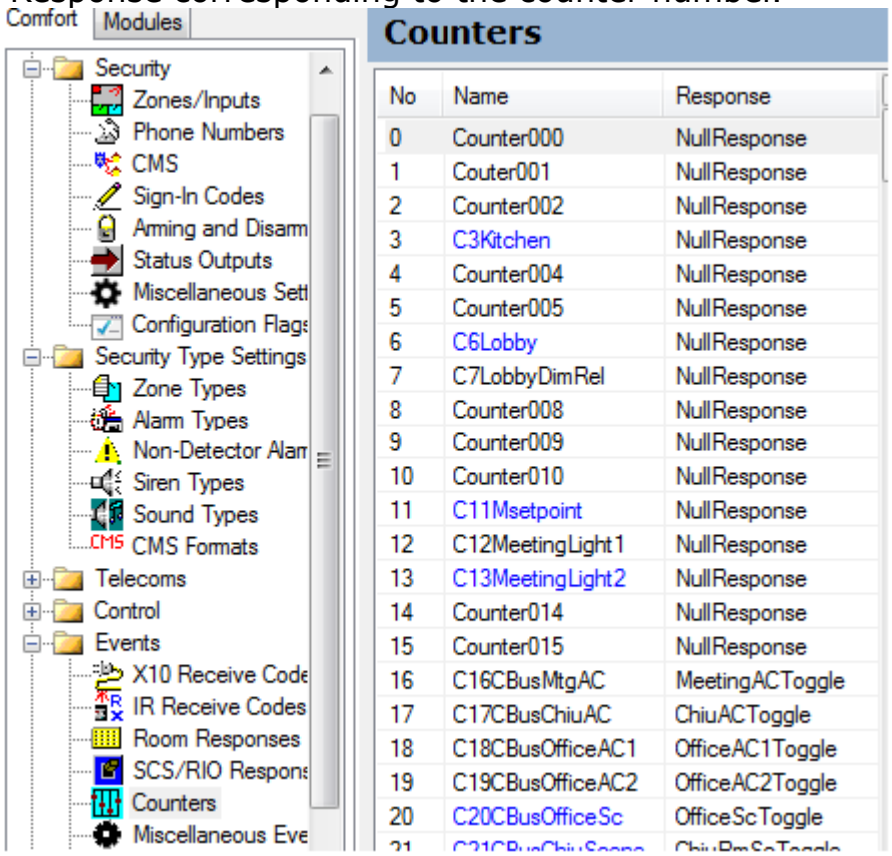


Figure 3.12 - Counter Responses

A Counter Response can be selected or created by selecting the Counter and selecting Response Name.
A typical Counter Response is shown below.

If LastUcmCounter = 0 Then
Do Response001

Else
Do Response002
End If

"LastUcmCounter" means the value in the counter which activated the Counter Response.
A 1-bit EIS 1 telegram will cause the mapped Comfort counter to be loaded with a value of 0 for OFF, or 255 for ON.
The example Response above means if the 1-bit telegram received has a value of 0 (Off), then the "Response001" Response is activated. Otherwise if the telegram has a value greater than 0, (On) then the response "Response002" is activated.
This allows KNX 1 bit group address to map to a Comfort counter. Changing the counter value in Comfort will also send a telegram to the same KNX group address. Hence the KNX Group address sends to and receives from a mapped counter. (This is the same behaviour as in UCM/KNX).
Additionally, in Counters (1-bit) to KNX and Counters (1-byte) to KNX, the same Comfort counter can be mapped to a different KNX group address if desired. This allows a Counter to provide status to a KNX object. The diagram below shows the scheme.

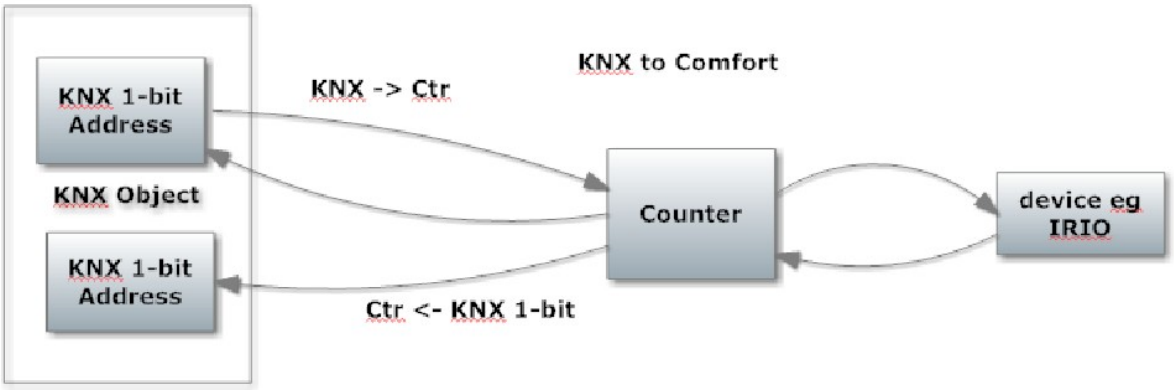


Figure 3.13 - KNX to Counter Flowchart

1-Bit Switching (EIS1) > Flag

A 1-bit switching (EIS1) group address can be mapped to a Comfort Flag, when a telegram with this group address is received by the KNX/Logic, the state of the object is saved in the Flag (0 for off, 1 for ON)

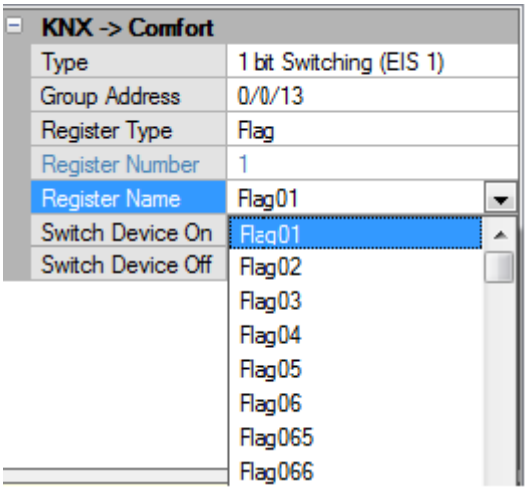


Figure 3.14 - KNX 1-bit to Flag

If a KNX object is mapped to a Flag, this can be used to send commands to other Comfort objects mapped to the same Flag. For example the flag may be mapped to a CBUS group address, a Zwave device, or an Infrared function on IRIO. Changing the Flag causes all the objects mapped to the flag to be controlled simultaneously. If there is a CBUS Group address (via UCM/Cbus2) mapped to the same flag as a KNX group address, then the 2 systems could communicate with each other via the flag.
Changing the Flag state in Comfort will also send a 1-bit telegram back to the KNX group address. Hence the KNX Group address sends to and receives from a mapped Flag. (This is the same behaviour as in UCM/KNX).
Additionaly, in Flags to KNX, the same Comfort Flag can be mapped to a different KNX group address if desired. This allows the Flag to provide status to a KNX object. The diagram below shows the scheme.

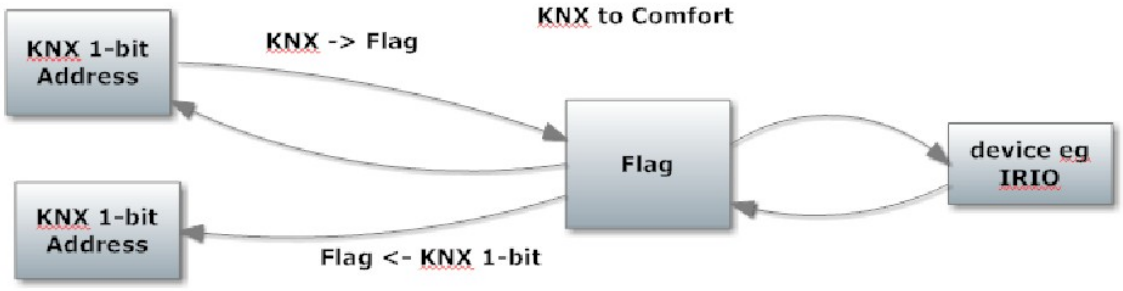
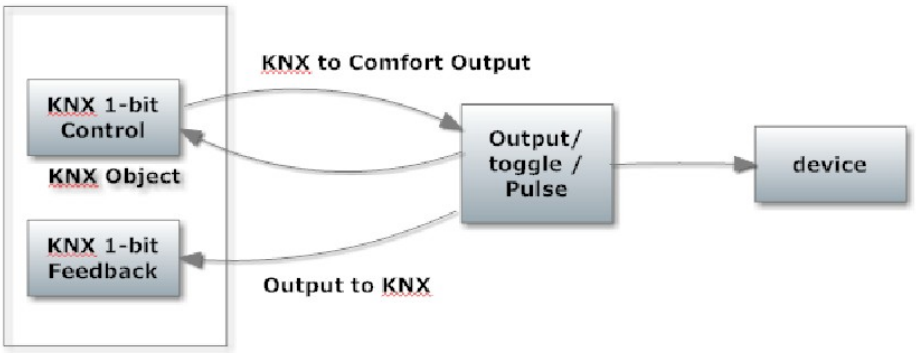


Figure 3.15 - KNX 1-bit to Flag flowchart

The difference between mapping to Flags and Counters is that a Counter has Counter responses and Counters have 256 levels which can be used for dimming levels.



4 Bits Dimming (EIS2)

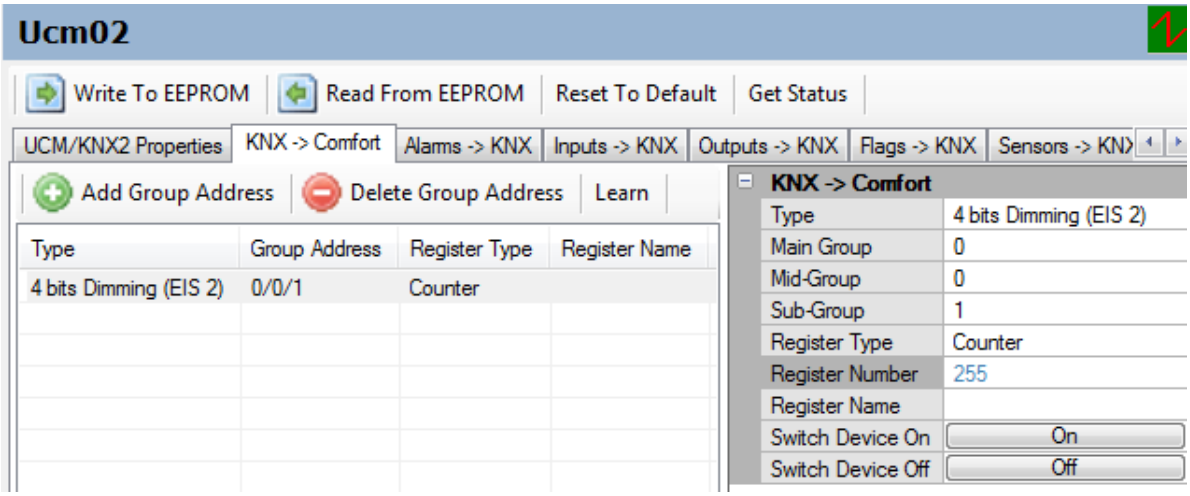


Figure 3.25 - 4 bit Dimming

The 4-bit dimming group address is used for a KNX button which is used for dimming. This can be mapped to a Counter. The KNX device is able to send a relative dimming value according to the percentage to dim or brighten. This will scale the value of the Counter according to the relative dimming value. The Counter response can trigger a counter response which can be used by Comfort to set different levels in other devices according to the counter value.

A KNX button is usually associated with a 1-bit dimming group address as well as a 4-bit relative group address. In this case the counter associated with the 1 bit and 4 bit group addresses for the same dimming actuator should be the same, so that the mapped counter can track the absolute value of the dimming level from 0 to 255.

The "Switch Device On" and "Switch Device Off" buttons have no function

Time (EIS3)/ Date (EIS4)

This is used to map a KNX group address to Comfort's Time or Date respectively. This allows KNX time or date to be sent to Comfort. The "Switch Device On" and "Switch Device Off" buttons have no function. KNX to Comfort for Time (EIS3) is shown below. Select the KNX group address that has the Time. KNX Type Date (EIS4) is similar where a KNX group address that supplies that date is selected. The Time and Date

Group addresses do not allow Comfort time and date to be sent to KNX.

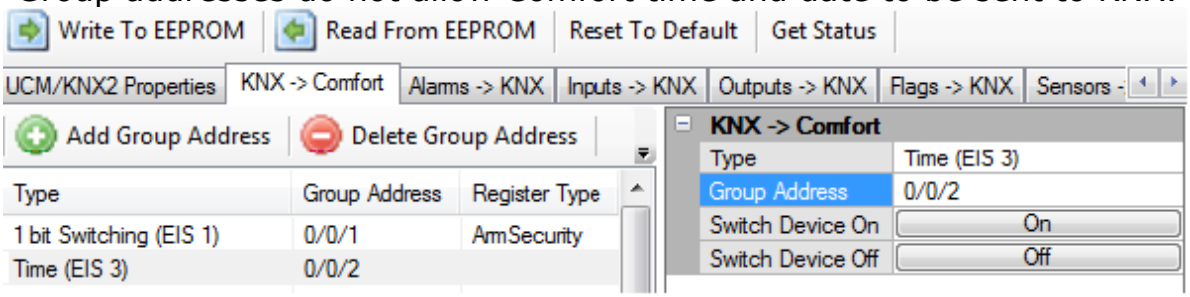


Figure 3.26 - Time /Date

To allow Comfort to send its date and time to KNX, use the Alarms to KNX tab and select different group addresses for Date and Time to KNX.

Floating Point Value (EIS5)

This refers to a EIS5 2-byte floating point object which can be associated with temperature or other value.

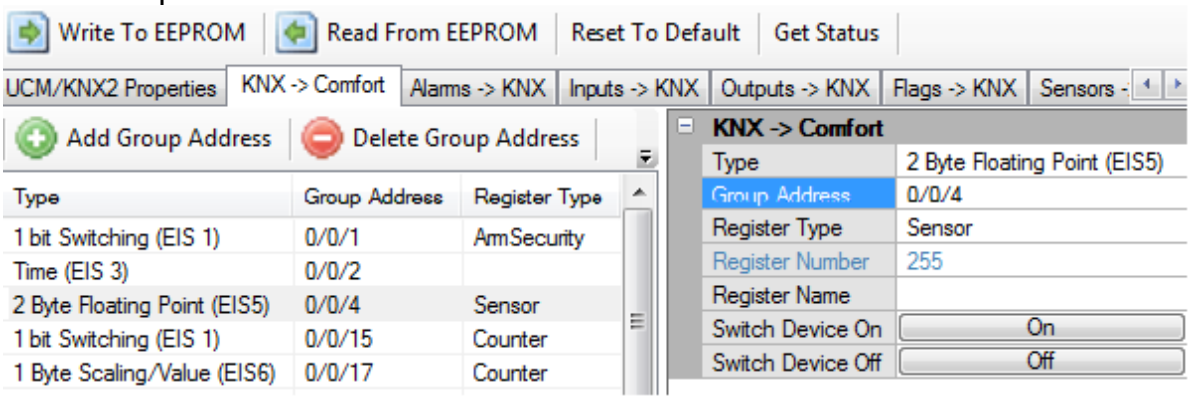


Figure 3.27 - Floating Point Value

The “Switch Device On” and “Switch Device Off” buttons have no function at present for this KNX group address Type.
Select a Comfort Sensor to be mapped to this group address. Comfort has 32 sensor registers which can store 16 bit signed values which can be used to keep sensor values. The sensor can be used to monitor the state of the KNX device as a value from -32768 to +32767. In the Control Menu, any control key can have feedback so that the user on the telephone can hear the sensor value. Select Feedback Type as Sensor and select the Feedback Name as the sensor which has been mapped to the group address. In the screen below, sensor 8 is the feedback for the control key called “Sensor 8” (which may be renamed “Bedroom temperature” for example.

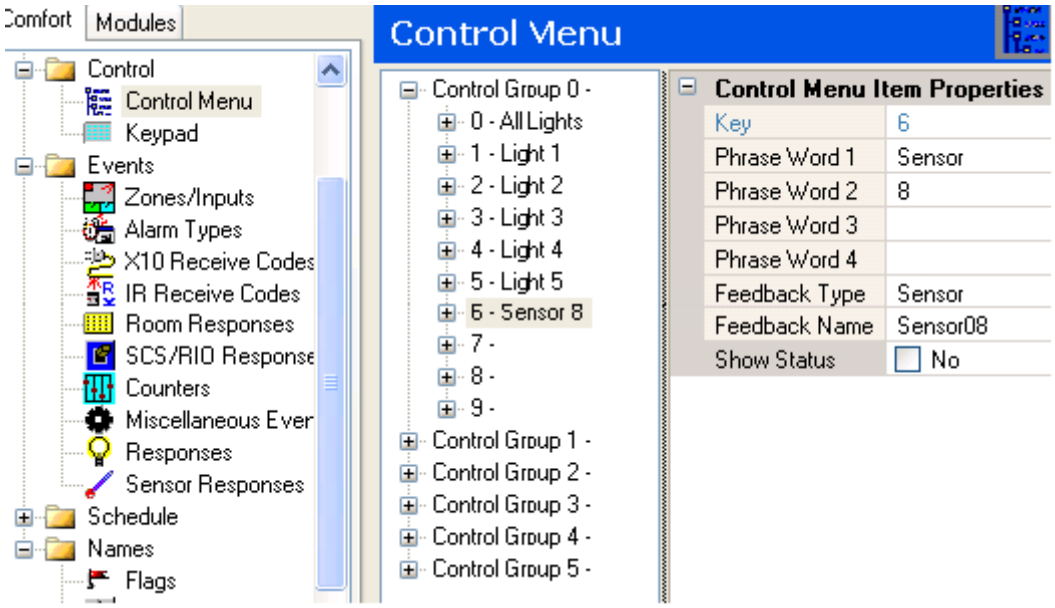


Figure 3.28 - Sensor Feedback

The value saved in the sensor register is a signed value from -32768 to +32767.

When a sensor register is changed by a KNX group address, a Sensor Response is activated as shown below in Events > Sensor Responses.

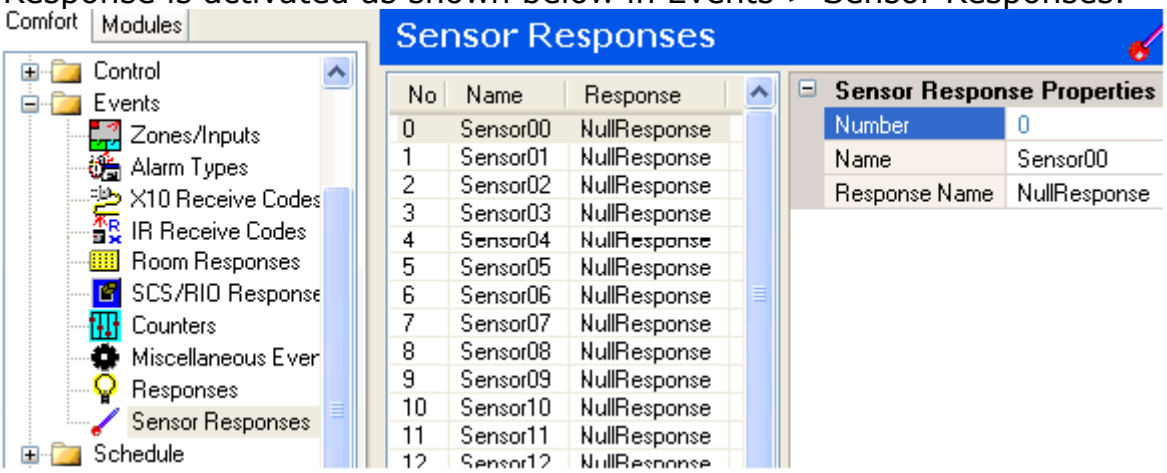


Figure 3.30 - Sensor Response

Click the Response Name on the right pane to select or create a Response for the sensor.

When a Floating Point EIS 5 group address is mapped to a Comfort Sensor, any change in the sensor value in Comfort results in sending an EIS 5 telegram to the same KNX group address to update the KNX value. Additionally, the same Sensor may be optionally mapped to a different Group address to provide feedback to the object

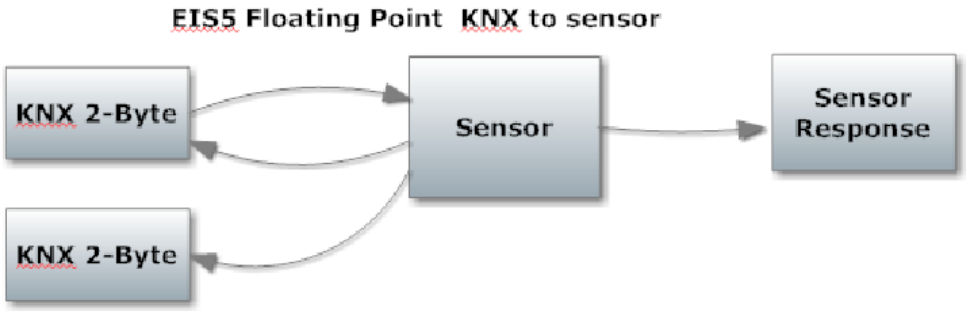


Figure 3.29 - Sensor Flowchart

Scaling (EIS6) - Map to Counter

Scaling (EIS 6) is 1-byte absolute value object which can be mapped to a Counter or Keypad Key in Comfort. In the Register Type field, select either Counter or Keypad Key.

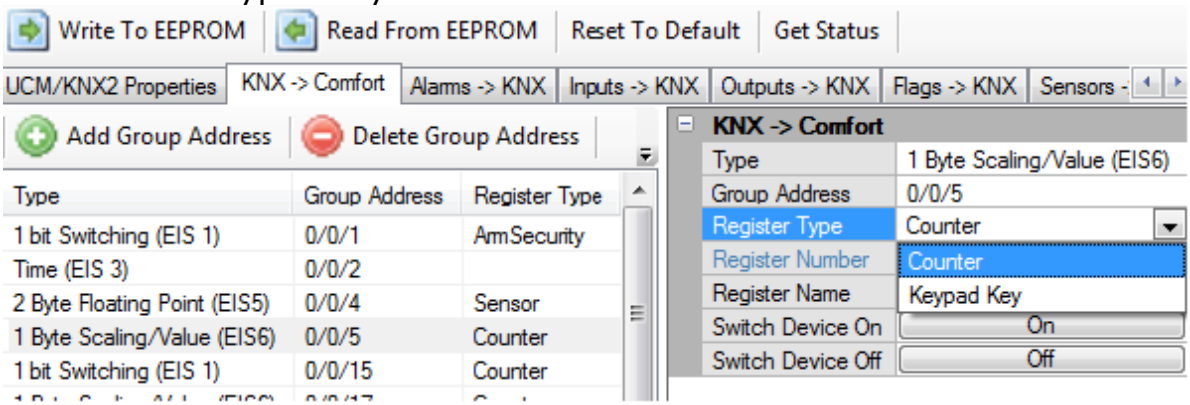


Figure 3.31 - Scaling (EIS6)

If Counter is selected, a Counter selection field appears. (note that Map to Keypad is not supported in KNX/Logic) Click on "Counter Name" to reveal a drop-down list to select the Counter to be mapped to this group address.

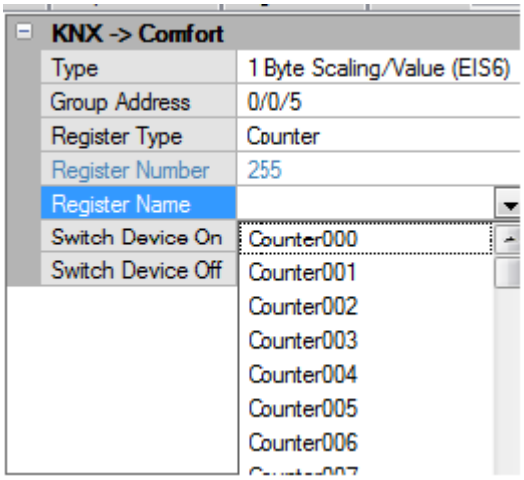


Figure 3.32 - Scaling (EIS6) to Counter

A EIS 6 telegram has a 1 byte value from 0 to 255 which is saved in the mapped counter.
The counter can be used to monitor the state of the KNX device as a value from 0 to 255. The received telegram mapped to a Counter can also trigger a **Counter Response** based on the counter value

Eg

```
If LastUcmCounter = 0 Then
   Clear Flag Flag001
End If
 If LastUcmCounter =1
   Set Flag Flag001
End If
```

The "Switch Device On" and "Switch Device Off" buttons have no function at present for this KNX group address Type

In Counters to KNX (1 byte) and Counters to KNX (1 bit) , the same counter can optionally be mapped to the same KNX object at a different group address as shown below.

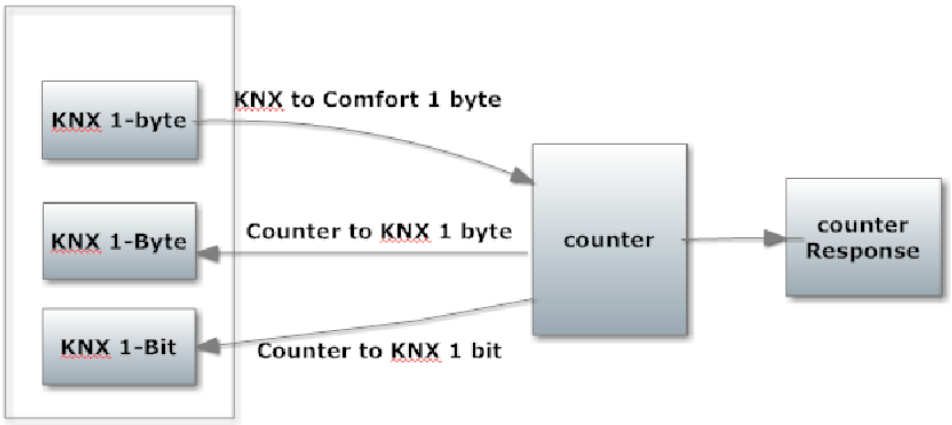


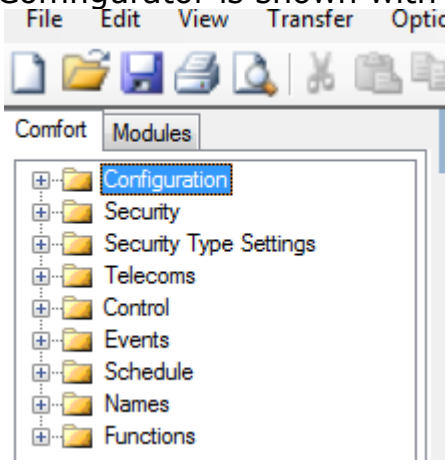
Figure 3.33 - Counters Flowchart

Programming

Programming of KNX/Logic is similar to Comfort except that it does not have any inputs or outputs, telephone connection, voice, or dialer. However it is able to work with all UCM Modules (eg Cbus, KNX, Modbus, Velbus, Universal), IRIO (intelligent Remote I/O), HIO01 (Hotel I/O) connected by the Comfort RS485 bus.

Comfigurator 3.12.12 onwards with UCM/USB or UCM/ETH03 is used to program KNX/Logic.

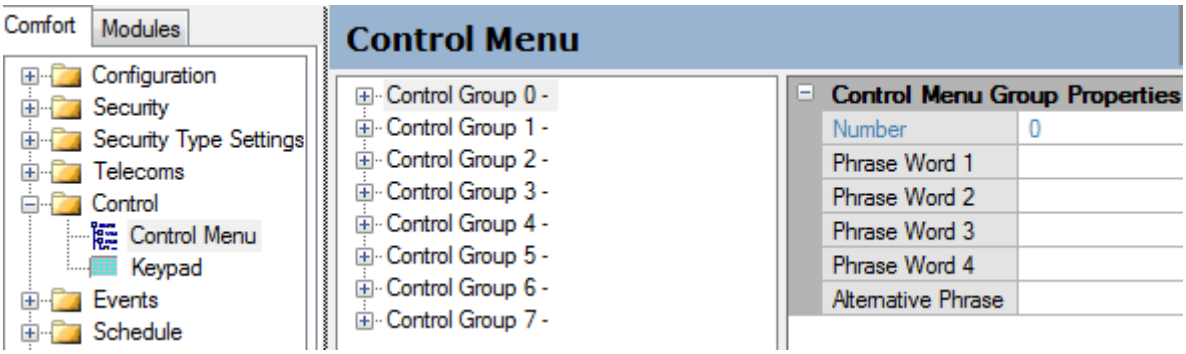
This is a quick guide to programmming of each of the items. The left pane of Comfigurator is shown with the categories.



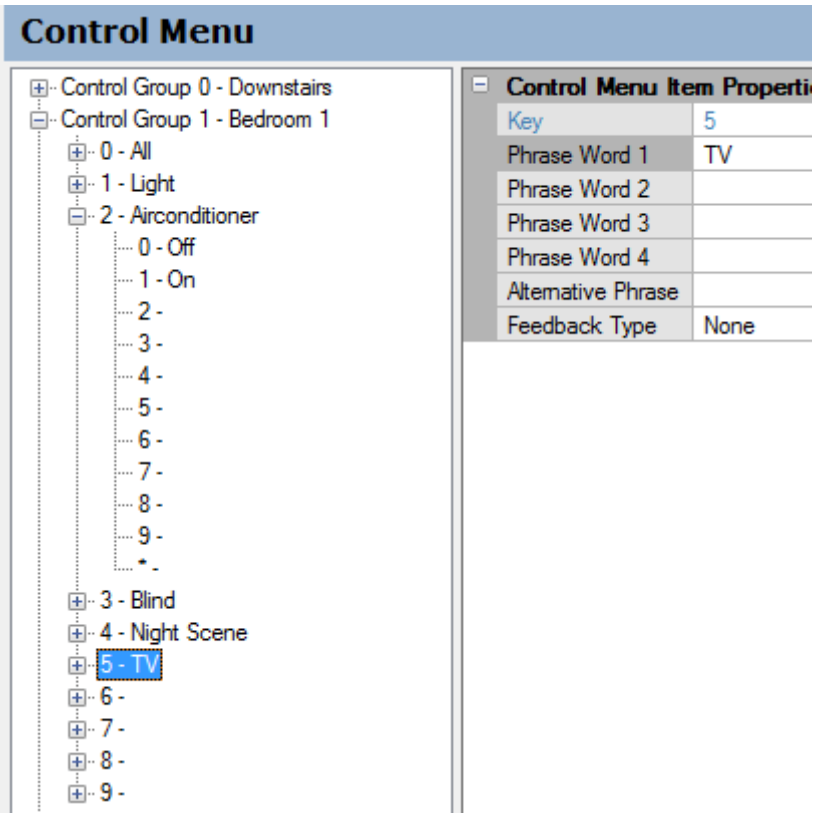
The Configuration, Security, Security Type, Telecoms categories can be ignored as these are not relevant for KNX/Logic as they involve alarm, Input/output, dial-out and voice settings.

Control

The Control Menu is applicable for KNX/Logic



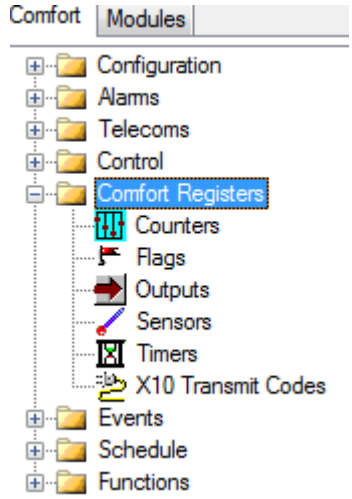
The Control Menu is used for the Comfort apps to control automation devices in iOS and Android tablets and Phones when the ETH03 submodule is installed. There are 8 groups each with 10 control keys. Each control key can have up to 10 Action Keys eg 0 for Off, 1 for on, 2 for dim etc



Instructions for programming the Control menu can be seen at
http://www.comfortforums.com/forum126/4071.html

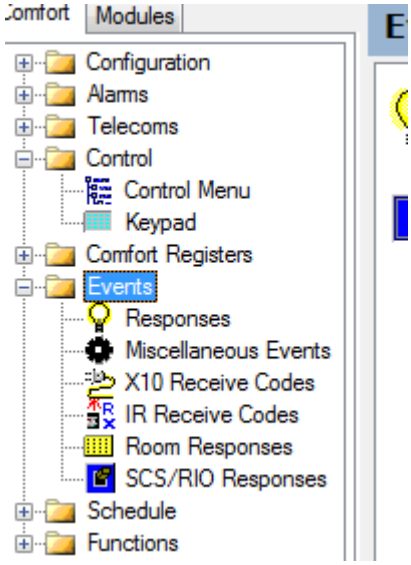
Control > Keypad can be ignored as Comfort keypads are not normally used.

Comfort Registers



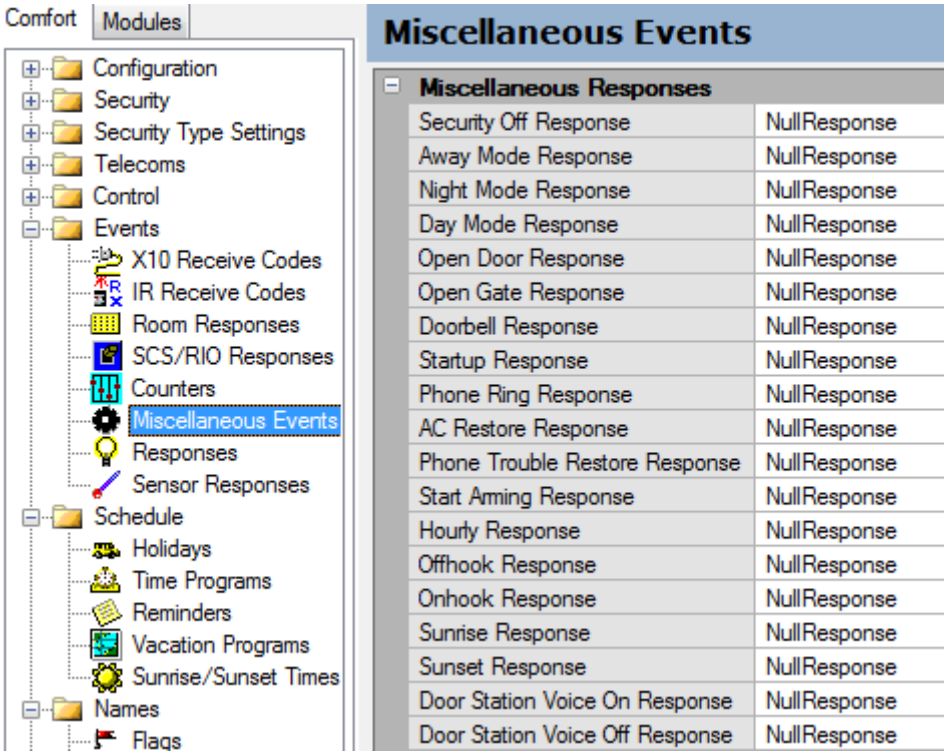
Events

The Events category is applicable for some items.



- Responses – up to 512 Responses can be programmed which are triggered by Events in KNX/Logic.
- Miscellaneous Events can be programmed to trigger Responses.
- X10 Receive codes is not applicable as KNX/Logic does not support X10.
- IR Receive Codes can be used if any keypads is connected.
- SCS/RIO Responses are triggered by IRIO module inputs

Miscellaneous Events



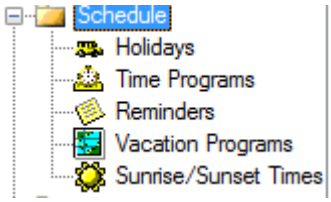
Miscellaneous Events

Miscellaneous Responses	
Security Off Response	NullResponse
Away Mode Response	NullResponse
Night Mode Response	NullResponse
Day Mode Response	NullResponse
Open Door Response	NullResponse
Open Gate Response	NullResponse
Doorbell Response	NullResponse
Startup Response	NullResponse
Phone Ring Response	NullResponse
AC Restore Response	NullResponse
Phone Trouble Restore Response	NullResponse
Start Arming Response	NullResponse
Hourly Response	NullResponse
Offhook Response	NullResponse
Onhook Response	NullResponse
Sunrise Response	NullResponse
Sunset Response	NullResponse
Door Station Voice On Response	NullResponse
Door Station Voice Off Response	NullResponse

The applicable Events for KNX/Logic are;

- Startup Response – Run at system reset
- Hourly Response – Run every hour
- Sunrise Response – Run at Sunrise time
- Sunset Response – Run at SunsetTime

Schedule



Holidays – up to 24 holidays are programmed for use by Tine Programs
Time Programs – 32 Time programs can be programmed for any day of week and time of day to run a Responses
Reminders – Not applicable for KNX/Logic
Vacation Programs – Not applicable for KNX/Logic
Sunrise/Sunset Times - see http://www.comfortforums.com/forum92/1004.html for how to set sunrise and sunset times and daylight saving

Sending Telegrams to KNX using Responses

KNX/Logic sends telegrams to KNX based on the flags, counters and sensors mapped to KNX addresses. This is the preferred and easier way to communicate with KNX addresses, both for sending and receving values. KNX/Logic can also be programmed to send telegrams to any KNX group address to do control in the Control Menu (accessed by telephone or keypad), or Time Programs or as a Response to any event or condition. This works without mapping or assigning the KNX address to Comfort flags or counters.
Comfigurator has a Response Wizard which helps to program the Actions which make up a Response. Select Events -> Responses, Right click anywhere on the Responses and select Add Response to create a new Response as shown below, or you can edit an existing Response by selecting Response Wizard.

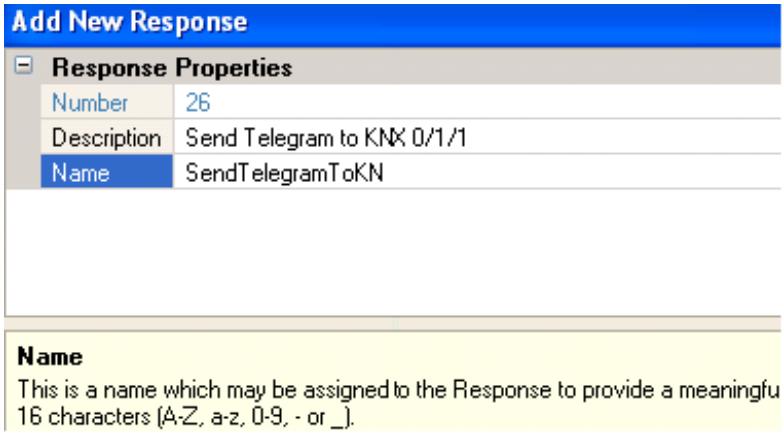


Figure 3.22 - Add New Response

Enter a Description of the Response. Press Enter when complete. This automatically generates a Name for the Response, which is used to reference this Response. Press OK. The Response Wizard opens.
Select "Append New Action" This opens a drop-down list as shown below

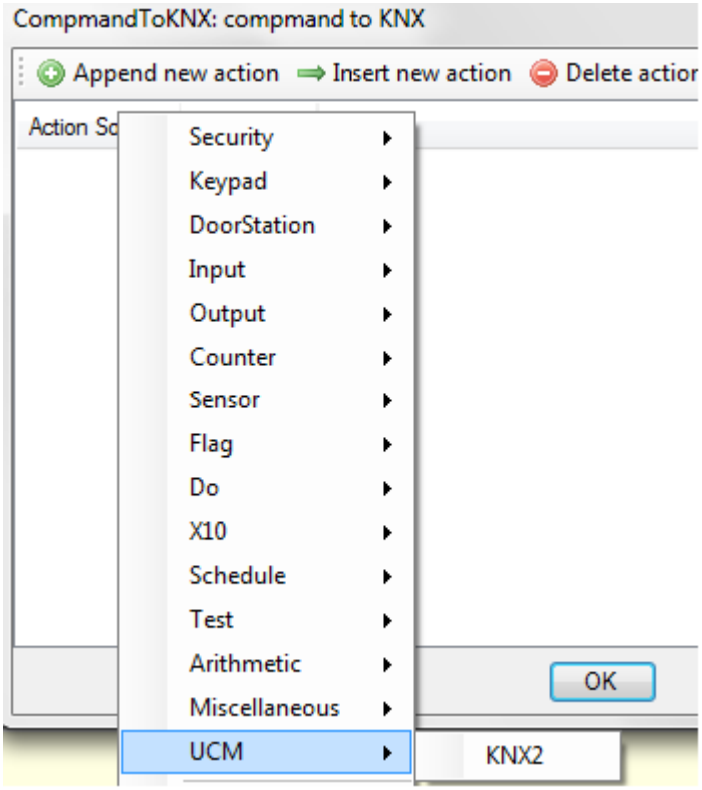


Figure 3.23 - "Send Telegram to KNX" Action

The Response Wizard has a list of categories of Actions to select the actions to be used in the Response. Note that the KNX tab is available when a UCM of type KNX is in the system. Select KNX2. The Dialog to select the properties of the telegram to send to KNX appears, as shown below;

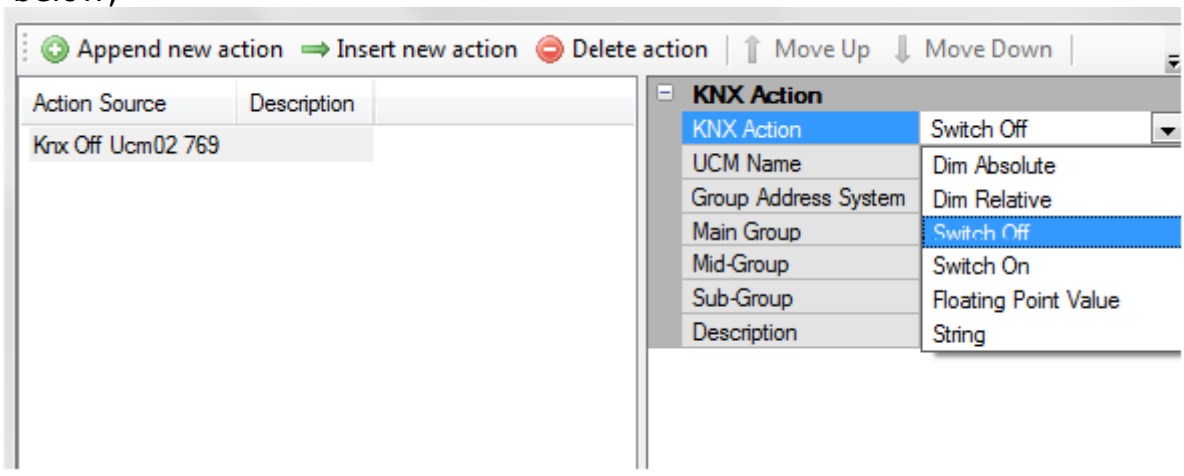


Figure 3.22 - KNX Actions

The list of KNX commands which can be sent in a telegram are listed. Select the appropriate command.
The UCM Name is the name of the UCM/KNX2 in the system. If there is more than 1 UCM/KNX2, be careful to select the correct one.
Group Address system selects the display of 2-level or 3-level group addresses.
Main Group/Mid Group and Subgroup selects the group address for the telegram

Description is an optional comment for this action.
Press OK to accept this action
You can continue to add more KNX telegrams to the Response. A Response can have an unlimited number of actions combined together, but this will reduce the total number of Responses available (maximum 1023)
When a command is sent to a KNX group address which is in the KNX to Comfort Table, the Counter or Sensor which is mapped to that group address is also updated with the new state or value so as to maintain synchronisation between the two systems.

Control Menu

The Control Menu is used by the keypad and phone voice menu to control automation. It also determines what is controlled by the Comfort iOS and Android apps. In the Control Menu, any control key can have feedback so that Keypad or phone menu can hear the value or the Comfort app can display the feedback value. Select Feedback Type (Counter, Input, Output, Flags, Sensor) and select the Feedback Name as the register number.

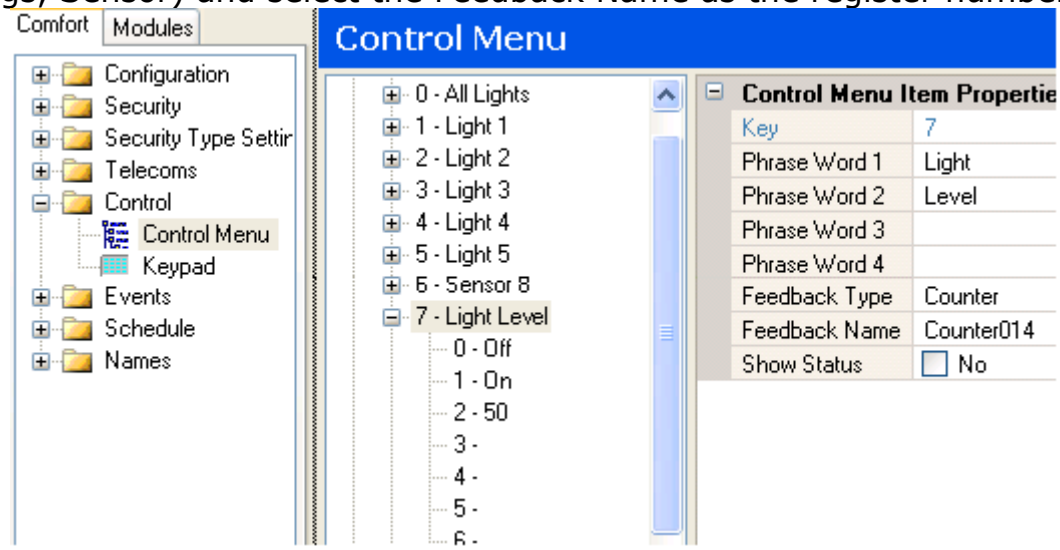
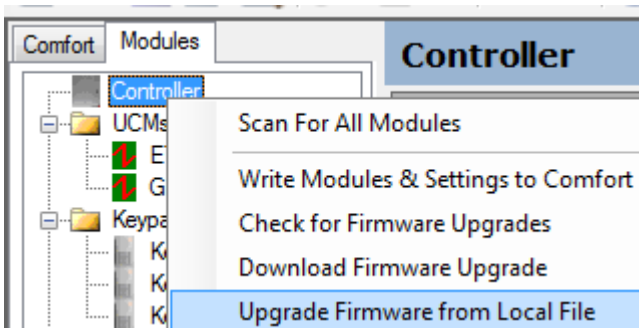


Figure 3.24 - Counter Feedback for Scaling 1 byte value

Firmware Upgrading

The firmware of KNX/Logic can be upgraded by right clicking on Modules Tab > Controller and selecting "Check for Firmware upgrades" when connected to the Internet. Alternately iselect "Download Firmware Upgrade" and save the cbf file when connected to the Internet and do "Upgrade Firmware from Local File" and select the saved .cbf file. This method is useful when the system is on a site where Internet access is not available.



Upgrading Firmware

Document History

20 January 2019 – Initial Draft