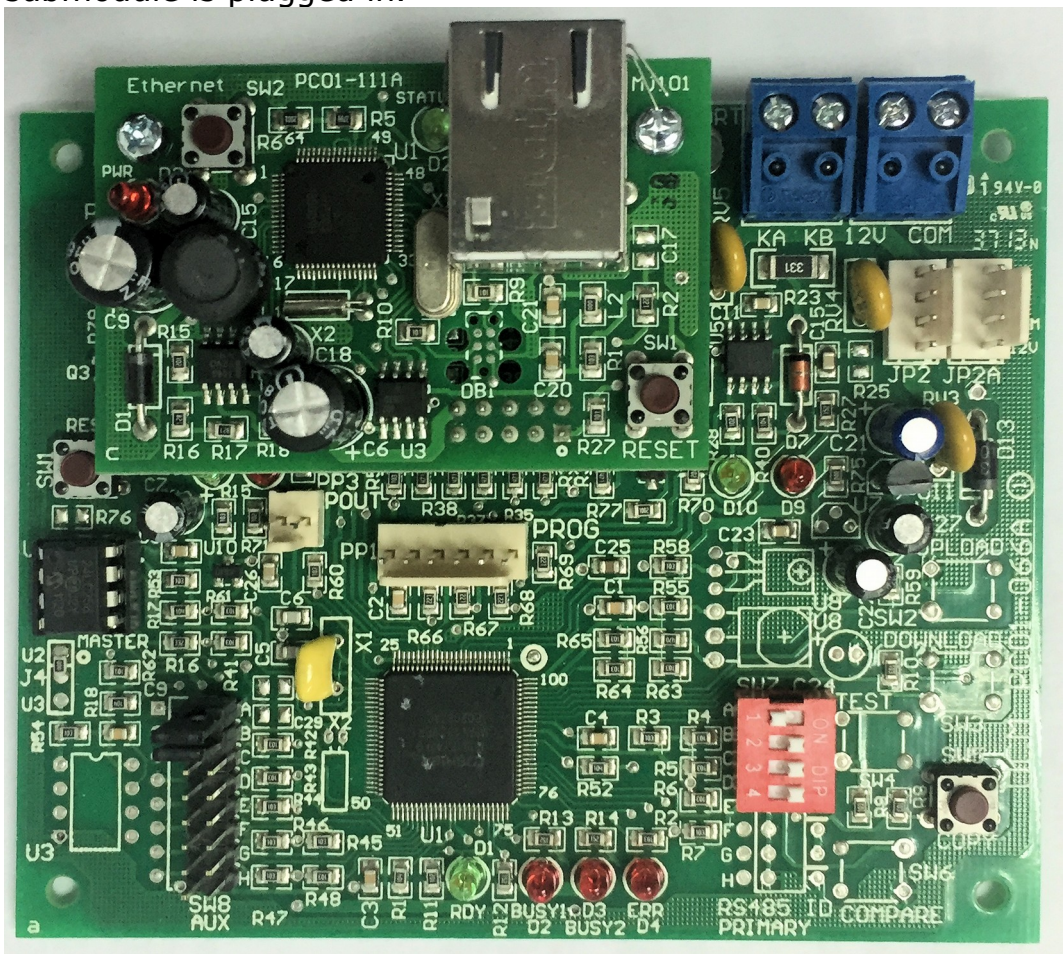
UCM/Logic Introduction

The UCM/Logic is an Automation Controller which can replace Comfort CM9000 in a network which can include any UCM (KNX, CBUS, Z-Wave, GSM etc), IRIO (Inteligent Remote I/O), HIO (Hotel I/O), KT03 touchscreens, or TSM (Temperature Sensing Module). UCM/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, 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. The UCM/Logic supports a plug in USB, RS232 or ETH03 ethernet submodule for programming and communications. With the ETH03 plug-in, the Comfort apps for mobile and tablet can be used to access and control the system. The UCM/Logic is a combination of a controller and a UCM when the ETH03 or USB submodule is plugged in.

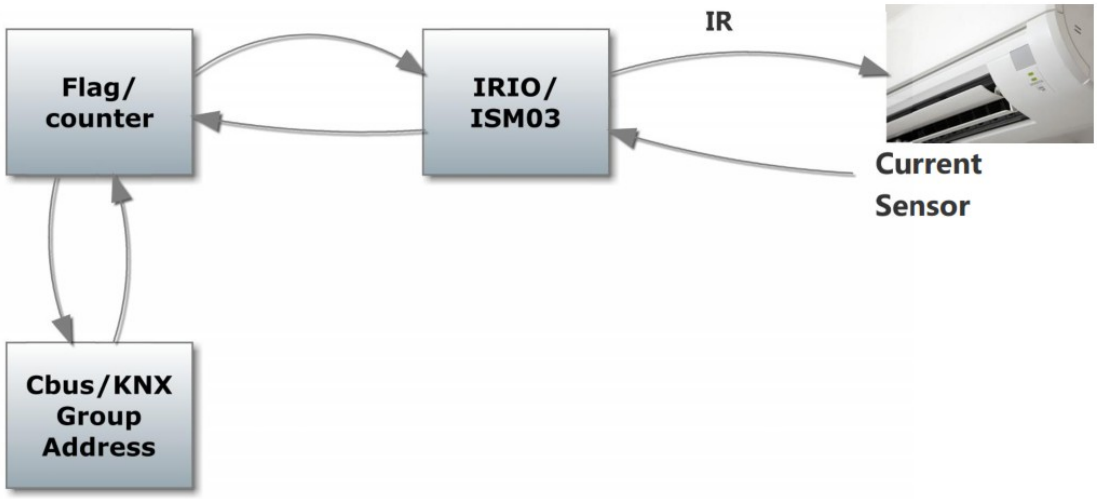


UCM/Logic with ETH03 submodule

Applications

The UCM/Logic is not meant to be used on its own, as it lacks any inputs and outputs. The UCM/Logic can be used to connect several Comfort modules in a system, eg IRIO, HIO, TSM, 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 UCM/Logic. These appliances can be controlled by KNX, Cbus 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 Cbus or KNX group address (or other system) to give feedback.

Counters are used when the state is not binary or On/off. Am 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.
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.
The Comfort apps can be used to control and monitor the UCM/Logic by programming the Control Menu.
The UCM/Logic can support the following modules on the Comfort Rs485 Bus;

- 8 UCMs (KNX, Cbus, GSM, Zwave, Universal etc)
- 15 IRIOs or RIOs (combined total)
- 8 Keypads (not for alarm) including KT03 touchscreen.
- 15 HIOs
- 15 TSMs

Note that UCM/Logic cannot be used together with the Comfort Controller in the same network as both work as controllers.

Submodules

Any of the UCM submodules can be plugged in to the 10 way socket; ETH03,

USB or RS232, but not KNX, Cbus, GSM and other external 3rd party interfaces. The UCM/Logic is not supplied with a submodule. It can operate without any submodule after the initial programming and write to EEPROM.

Specifications

- UCM size 108 x 88 mm
- Plug in submodule 2 x 5 way for ETH03, USB, RS232.
- Current Consumption 70 ma typical
- Power Supply 12V 1A wallmount universal adaptor 90V to 240VAC with UK, EU or US plug
- Control Menu – 8 Control Groups, each with 10 control keys, each control key has 10 Action keys.
- 1023 Responses for custom programmming
- 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 User Timers for programmed delays 1 to 65534 seconds.

Setup

The package includes

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

The UCM submodule is not included in the product. This needs to be purchased separately.

Buttons

- SW1 – RESET. This button resets the UCM/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) not used
- D3 “BUSY2” (Red) not used
- D4 “ERROR” (Red) Turns on if there is an error condition..
- D9 (Red) RS485 Transmit to Rs485 bus
- D10 (Green) RS485 Receive from RS485 Bus
- D11 (Green) RS232 Receive Data from submodule
- D12 (Red) RS232 Transmit Data to submodule

Switches/Headers

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

Connectors

- P3 – 2 x 5 way socket for Submodule.
- JP2, JP2A - 4 way headers for RS485 white cable
- JP3 – 12V/COM for Power Supply
- JP4 – KA/KB (alternate connection instead if Rs485wite cable)
- PP1 and PP3 - for Firmware Upgrading by another UCM- DO NOT CONNECT THE FIRMWARE PROGRAMMING CABLE IN NORMAL OPERATION

ICs

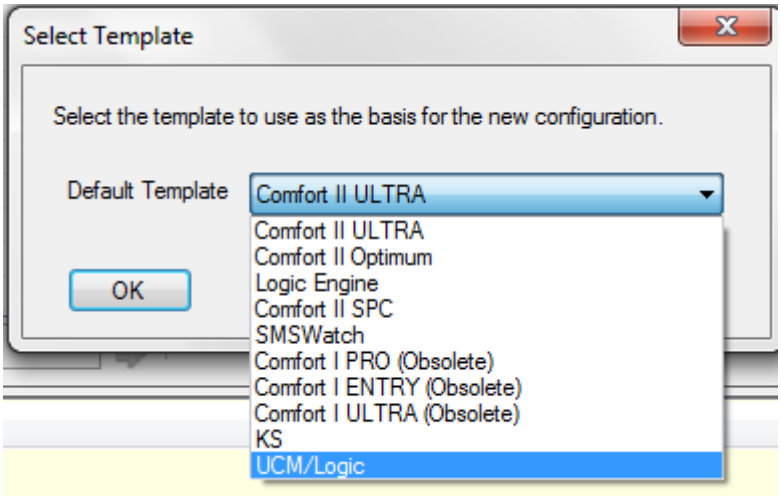
- U1 – Microcontroller IC. Label indicates the firmware version number "UCM/Logic 7.xxx".
- U2 – EEPROM 24C256 for programming settings (via Comfigurator)

Connection Procedure

- Plug in the ETH03 or USB to the 2 x 5 way P3 socket and use te supplied standoffs and screens to secure the submodule to the UCM/Logic baseboard.
- 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 UCMLogic 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 UCM/Logic.
- The Green RDY led on the UCM (D1) should light up and remain on. D9 (red) flashes when the UCM/Logic polls other modules. D10 (Green) flashing shows that it is receiving messages from other modules in the bus. D9 should be constantly flashin. D10 should be flashing when there us at least 1 module connected to the RS485 bus.

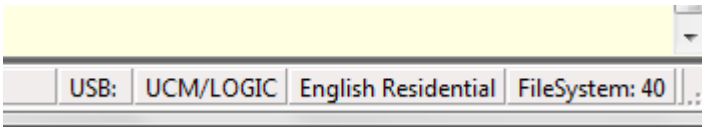
Using Comfigurator

Use the Comfigurator software version 3.11.2 or above to configure UCM/Logic. The software can be downloaded from http://www.cytech.biz/comfigurator.html
A USB or ETH03 submodule plugged in to P3 is required to program UCM/Logic by Comfigurator. A separate UCM/USB or ETH03 is not required, although one can be used for programming by Comfigurator.
Run Comfigurator, go to File > New and select UCM/Logic in the screenshot below.

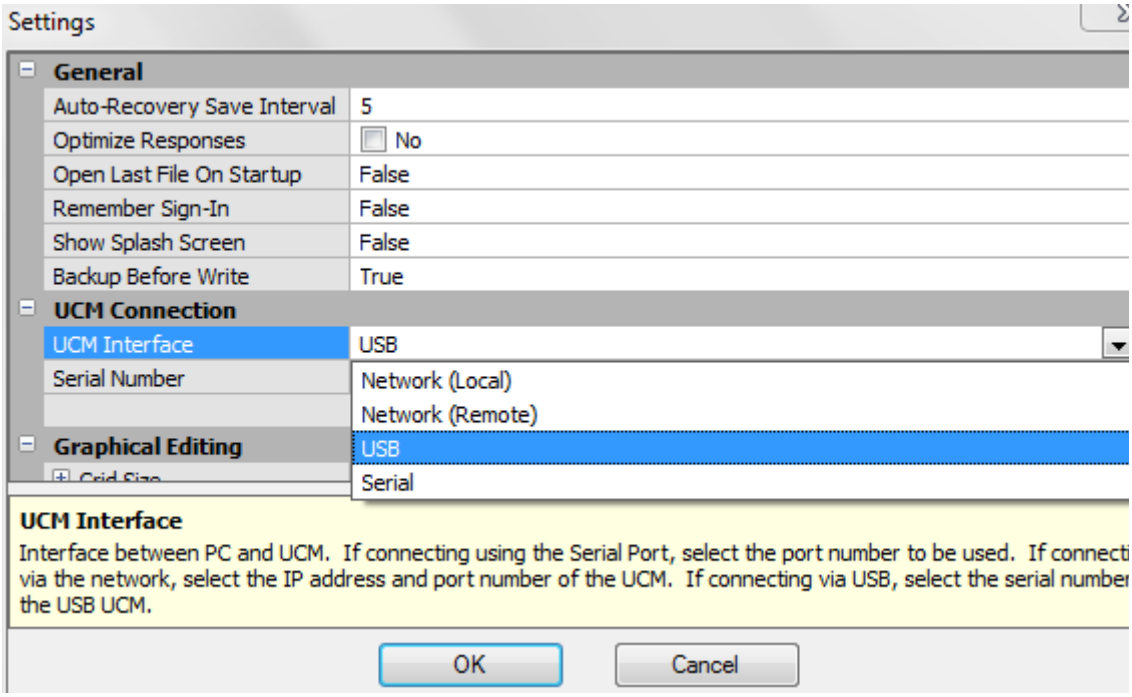


In the bottom right status bar, File System 40 should be seen. On the left the interface USB or IP

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 or Serial (RS232). Network (Local) and Network (Internet) are applicable for ETH03 submodule. USB is for USB module and Serial is for Rs232. See the screenshot below.

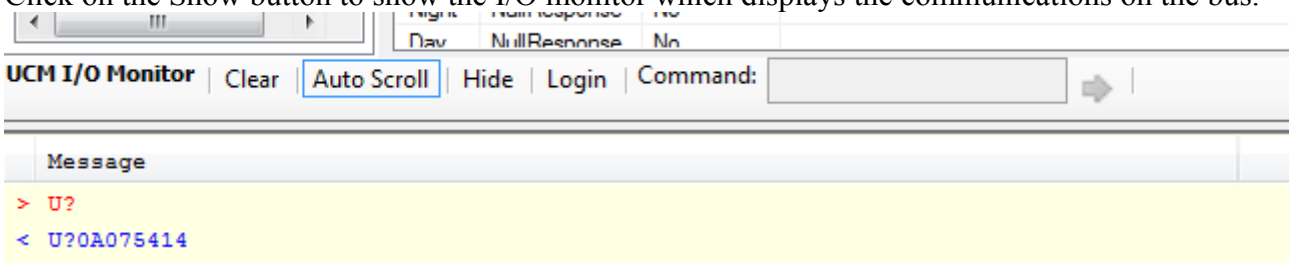


- For Serial, select the COM port 1 to 64
- For Network (Local) select the LAN IP Address and port
- For Network (Internet) select the LAN IP Address and port. This may be a dynamic IP name e.g. myname.dyndns.org or a fixed Internet IP address.
- For USB select the serial number which appears in the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

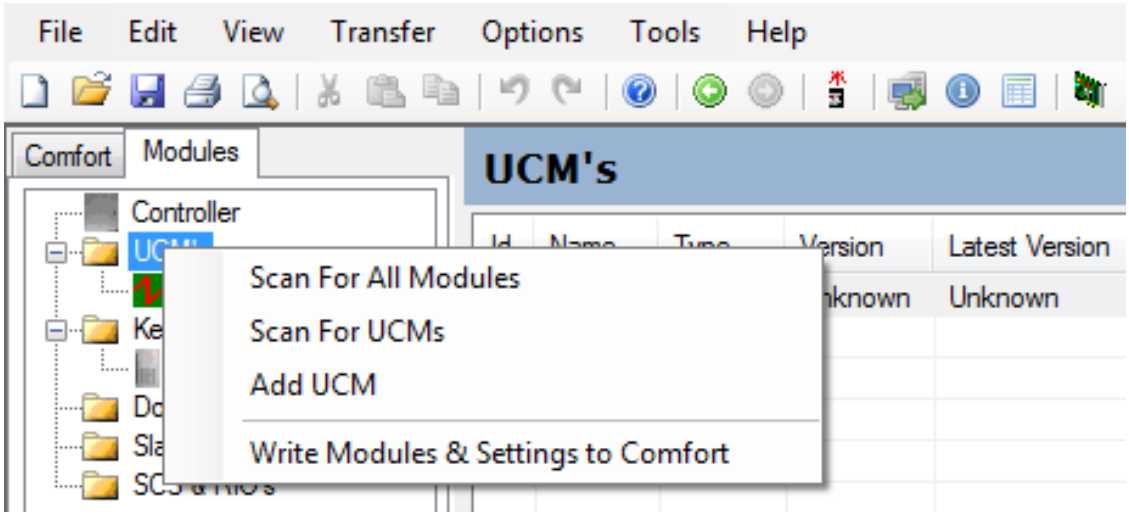
For instructions on setting the IP address and Port for the Network connections, go to the topic http://www.comfortforums.com/forum113/3402.html

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

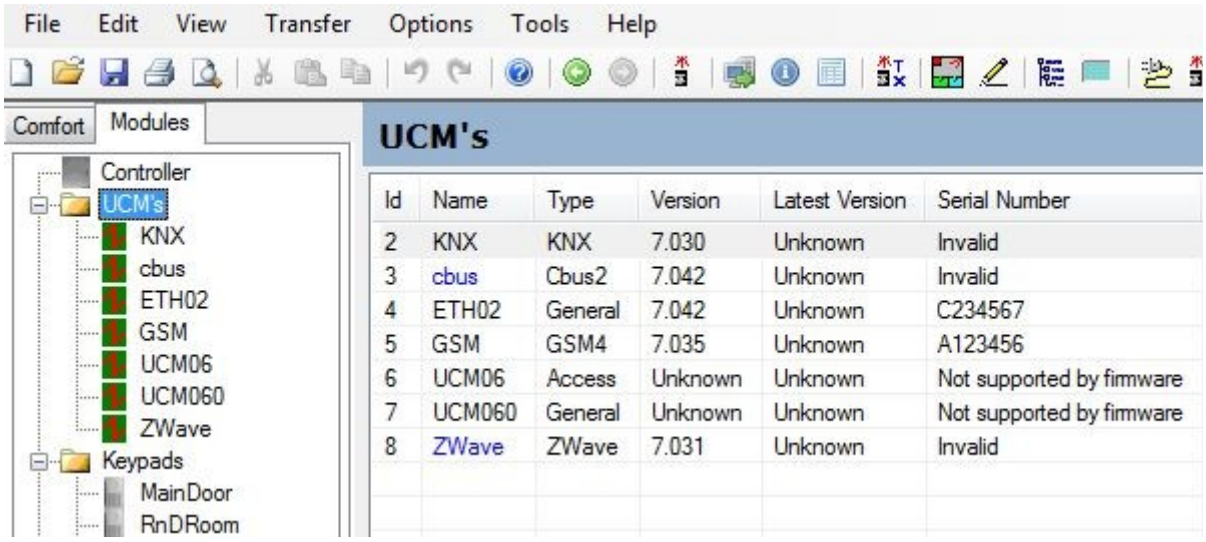
When the UCM connection has been entered, click on Login button on the UCM I/O Monitor window at the bottom
Click on the Show button to show the I/O monitor which displays the communications on the bus.



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

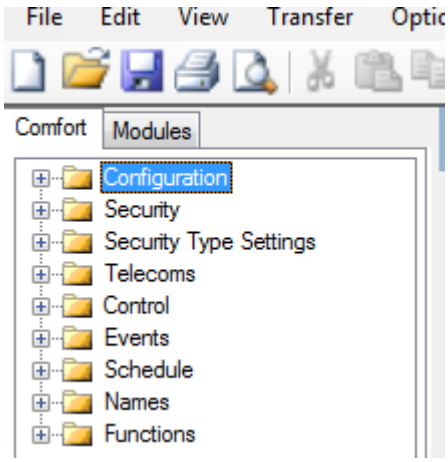


"Scan for All Modules" will automatically detect the UCM/Logic and all modules connected on the bus with the correct ID. An example after scanning is shown below.



Programming

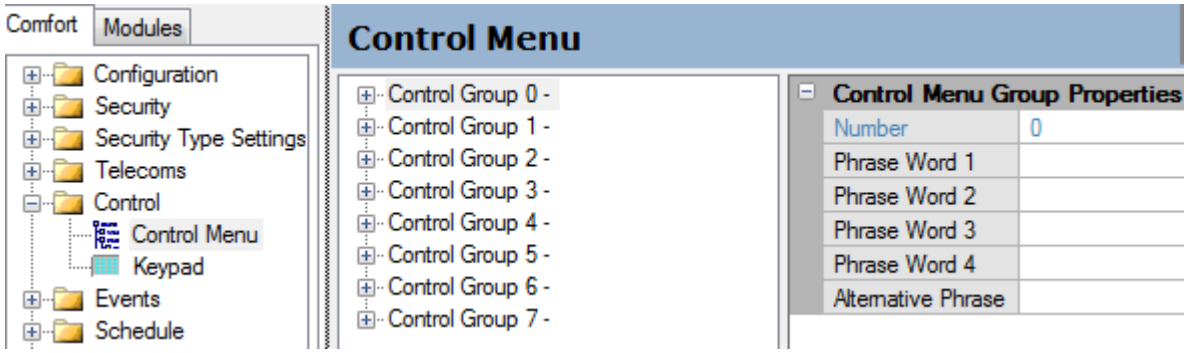
Programming of UCM/Logic is similar to Comfort except that it does not have any inputs or outputs, telephone connection, voice, or dialer. However it is able to accept UCM Modules, IRIO (intelligent Remote I/O), TSM (Temperature Sensor module) and HIO (Hotel I/O) connected by the Comfort RS485 bus. Comfigurator 3.11.x onwards is used to program UCM/Logic.
This is a quick guide to programmming of each of the items. The left pane of Comfigurator is shown with the categories.



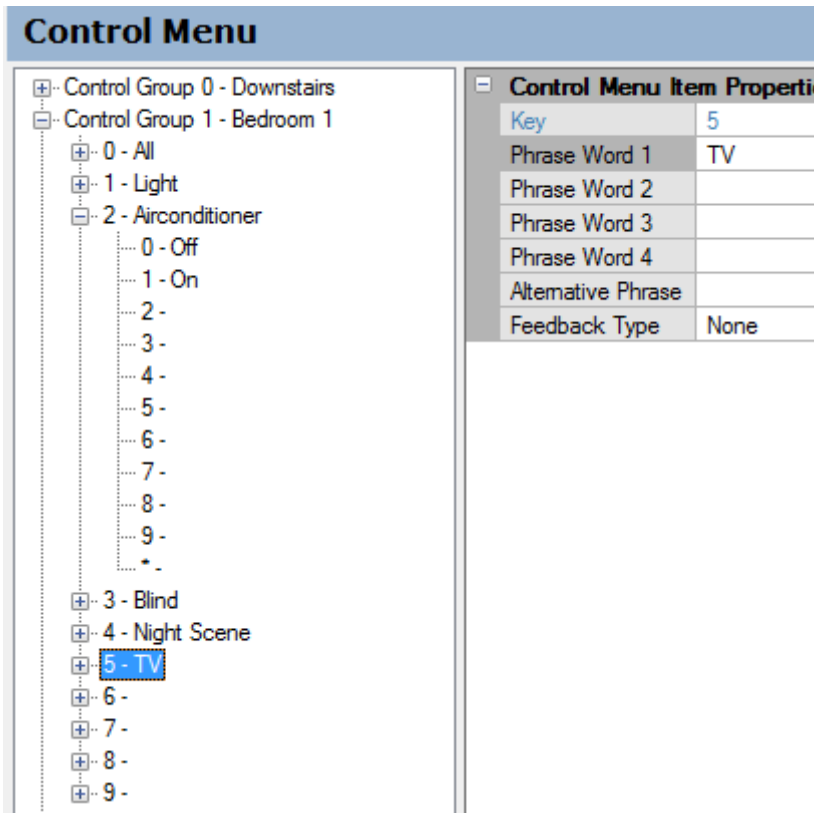
The Configuration, Security, Security Type, Telecoms categories can be ignored as these are not relevant for UCM/Logic as they involve alarm, Input/output, dial-out and voice settings.

Control

The Control Menu is applicable for UCM/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

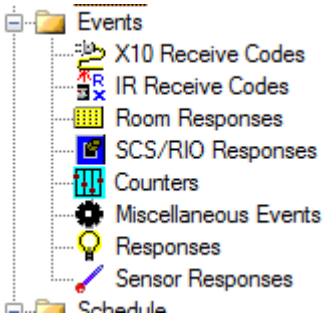


Instructions for programming the Control menu can be seen at
http://www.comfortforums.com/forum126/4071.html

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

Events

The Events category is applicable for some items.

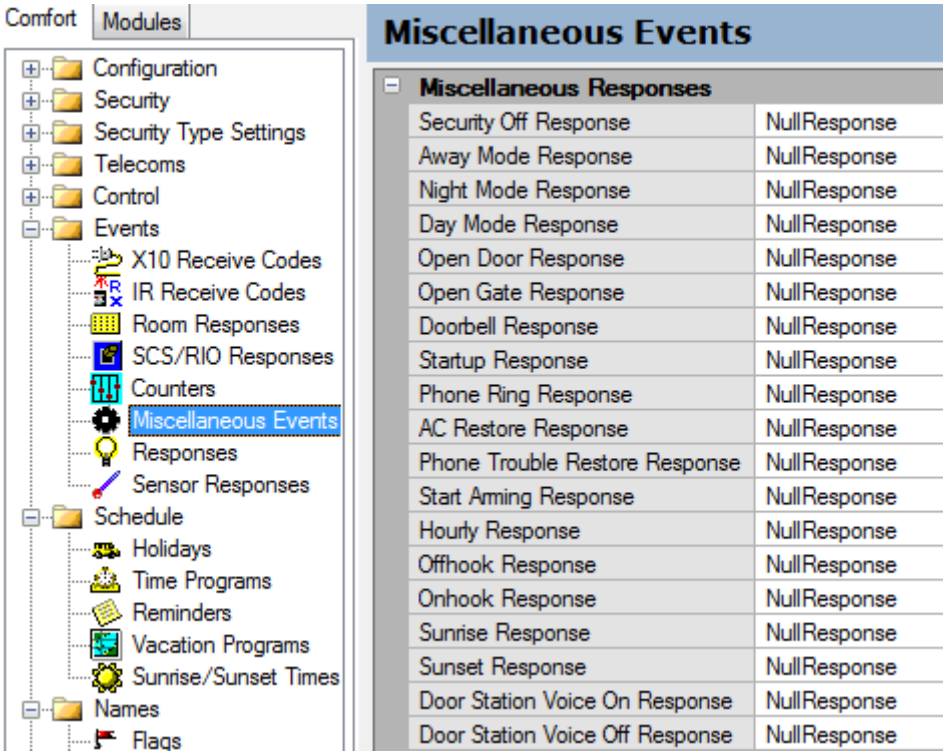


- X10 Receive codes is not applicable as UCM/Logic does not support X10.
- IR Receive Codes can be used if any keypads RIO, KP04, KP05, KT03, KP06 with IR receiver is connected.
- Room Responses are used with RC01 remote control which requires RIO.
- SCS/RIO Responses are triggered by IRIO module inputs and IR Receive codes.
- Counters can be mapped to KNX, Cbus, Zwave addresses, and will trigger Counter Responses.
- Miscellaneous Events can be programmed to trigger Responses. See below.
- Responses – up to 1023 Responses can be programmed which are

triggered by Events in UCM/Logic.

- Sensors can be mapped to KNX, Cbus, Zwave etc and can trigger Sensor Responses

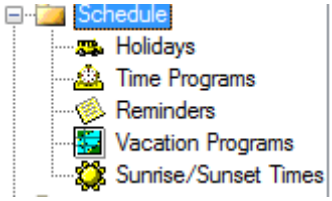
Miscellaneous Events



The applicable Events for UCM/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

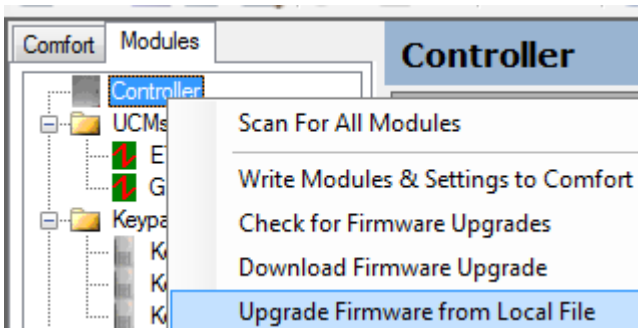


Holidays – up to 24 holidays are programmed for use by Tine Programs
Time Programs – 32 Time programs can be programmed for any day of week and time of day to run a Responses
Reminders – Not applicable for UCM/Logic
Vacation Programs – Not applicable for UCM/Logic
Sunrise/Sunset Times - see http://www.comfortforums.com/forum92/1004.html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

Names

Firmware Upgrading

The firmware of UCM/Logic can be upgraded by right clicking on Modules Tab > Controller and selecting "Check for Firmware upgrades" when connected to the Internet. Alternately if select "Download Firmware Upgrade" and save the cbf file when connected to the Internet and do "Upgrade Firmware from Local File" and selct the saved .cbf file later.



Upgrading Firmware

Document History

14 May 2016 – Initial Release