## Introduction to the UCM/ULTI

The Comfort system supports integration to Clipsal's ULTI via the UCM/ULTI Serial Interface module. The RF interface for ULTI is available for 434MHz or 315 MHz (area dependent) frequency band. The ULTI Interface provides a connection to the ULTI wireless lighting control system, allowing for the following benefits:

- telecontrol through any telephone inside or outside the premises to control devices on the ULTI Network
- allows control from Comfort's keypads and touchscreens.
- allows control by Time Programs.
- allows alarm inputs and alarm conditions to be linked to ULTI switches for true integration of alarm and lighting.

## Specifications

- Size 108 x 88 mm baseboard with RF daughterboard.
- Power Supply: 12V 30 mA (supplied from Comfort)
- Sends messages to ULTI switches via RF.
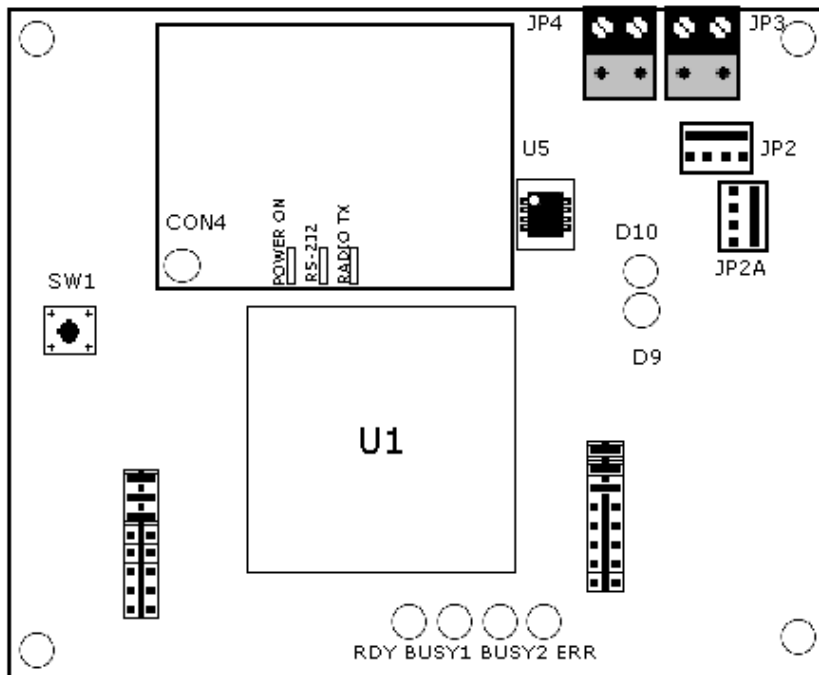- Sets scenes and controls ULTI switches

### Part Numbers

- UCM/ULTI434 - 434 MHz
- UCM/ULTI315 - 315 Mhz

## Equipment

The following equipment is required

- UCM/ULTI Module with a plug-in ULTI daughterboard with firmware version "UCM 6.00" or above.
- Comfort system with firmware version "6.000" or above.

# Setup



## Connections

- JP3 - 12V/COM terminal block. Connect to 12V/COM on Comfort if JP2/2A not used. Do not connect if JP2/2A is used to connect back to Comfort Premise Controller.
- JP4 - KA/KB terminal block. Connect to KA/KB on Comfort if JP2/2A not used. Do not connect if JP2/2A is used to connect back to Comfort Premise Controller.
- JP2 and JP2A - 4 way headers (12V/COM/KA/KB). Either connector can be connected to Comfort's J15 connector via the supplied cable when JP3 and JP4 are not used.  This plug-in cable connection is used when the distance between the controller and ULTI interface is less than 1 meter. For longer distances, use the JP3 and JP4 terminal blocks.

## Jumper Settings

- J2 (RS232/RS485) - insert shunt in "232" position. If this header is not present, it has been preset to the correct state in the factory.
- SW7 (RS485 ID Primary) - set according to ID of the UCM/ULTI (see "UCM ID Switch" settings)

## Buttons

- SW1 - RESET. This button reinitializes the UCM/ULTI module. It does not change any parameters in Comfort or ULTI.

## LED Indicators on Baseboard

- D1 "RDY" (Green) – should be on at all times.
- D9 (Red) –  RS485 Transmit to Comfort
- D10 (Green) – RS485 Receive from Comfort
- D12 (Red) – RS232 Transmit Data to RF daughterboard

## LED Indicators on RF Daughterboard

- POWER ON LED – indicates that the RF daughterboard is powered up
- RS232 LED – blinks when receives data via RS232 from Comfort
- RADIO TX LED – blinks when transmitting data to the ULTI network via RF.

## ICs

- U1 - Microcontroller IC. Label indicates the firmware version number "UCM5.XX"
- U5 - RS485 Interface to Comfort.

## UCM ID Switch

Comfort is able to support up to 8 UCMs. SW7 is a set of 3 headers which determines the UCM ID, according to the table below:

| ID | SW7- A | SW7- B | SW7- C |
|----|--------|--------|--------|
| 1 | Short | Short | Short |
| 2 | Open | Short | Short |
| 3 | Short | Open | Short |
| 4 | Open | Open | Short |
| 5 | Short | Short | Open |
| 6 | Open | Short | Open |
| 7 | Short | Open | Open |
| 8 | Open | Open | Open |

By convention, ID=1 is reserved for UCM for upload/download. The UCM/ULTI Interface should be set to ID 2 or above so that any RS485 communications failure can be reported by Comfort.

If there is only UCM/ULTI in the Comfort Bus, set the ID to 2. By convention, ID 1 is reserved for the programming UCM. Communications Failure is not reported for ID=1. Up to 8 UCMs of different types (e.g. C-Bus, KNX, GSM, etc.) can be connected to the Comfort network.

# Procedure

1  The UCM/ULTI is connected to Comfort via the supplied 4 way white cable from the 4 pin header JP2 to Comfort's header J15, or Comfort II's RS485 header. This supplies power to the UCM, as well as allowing communications between Comfort and the UCM/ULTI. It is not necessary to switch off the power to Comfort before plugging in this connection. Note that the ULTI antenna should be mounted on the outside of any metal enclosure.

2  Set the ID on SW7 according to the table above.

3  The Green RDY led on the UCM (D1) should light up and remain on. The LEDs D9 (red) and D10 (green) should blink rapidly showing that RS485 communications has been established between Comfort and the UCM. D9 (green) flashing shows that it is receiving communications from Comfort (poll). D10 (red) comes on when the UCM responds to a poll from Comfort.

4  The POWER ON LED on the RF daughterboard should also be lit, indicating that power is supplied to the RF daughterboard.

5  The Red D12 LED flashes when there is data from Comfort to the ULTI Network. D12 monitors raw communications with the ULTI Network. The RS232 LED on the RF daughterboard should also flash. When the data is transmitted to the ULTI Network via RF, the RADIO TX LED should also blink.

## Scanning for UCM/ULTI

Comfigurator can be downloaded from
http://www.cytech.biz/comfigurator.html

In Comfigurator, go to Options > Settings. In UCM Connections, select UCM Interface.



Select Serial, Network or USB from the dropdown list depending on whether the programming UCM is UCM/232, UCM/Ethernet or UCM/USB respectively.

For Serial, select the COM port. For Network select the IP Address and port. For USB, select the USB serial number. For full details about each option, please refer to the UCM Manual which can be downloaded from
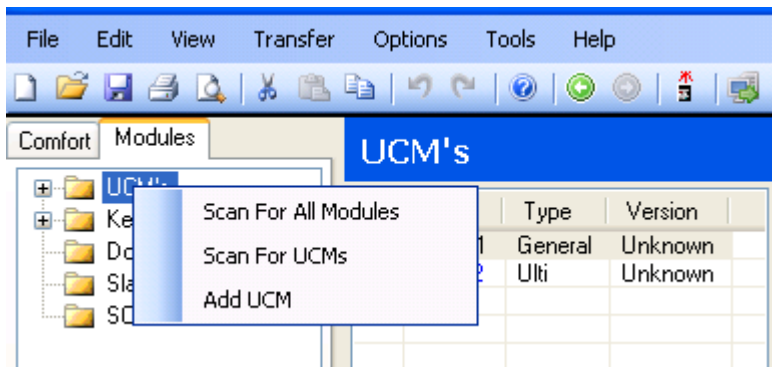http://www.cytech.biz/ucm_manual.html



In Comfigurator, go to the Modules Tab, right-click on UCMs and select Scan for UCMs. Note that this must be done when the UCM/ULTI is connected to Comfort, with the ID set to 2 or above and not conflicting with the ID of any other UCMs in the system.

Press RESET on the UCM/ULTI after changing the ID settings.

The Number of UCMs must be set according to the number of UCMs connected. This can be done by setting the Number of UCMs in the Comfigurator configuration software (under Modules and Settings). Press RESET on Comfort after changing the Number of UCMs

## Programming Comfort to send ULTI Commands

For an understanding of the ULTI concepts, please refer to the appropriate ULTI documentation. It is beyond the scope of this manual to provide details of ULTI's operation and programming.

The UCM/Ulti can be set to 8 ULTI Remote Control Ids (0 to 7). Each Remote Control ID can control 5 scenes (0-4).

In order for the UCM/Ulti to be able to control an ULTI switch, it must be paired with the switch in Learn Mode.

## Programming with Comfigurator

Comfigurator allows programming of Comfort to control ULTI devices and scenes. Comfigurator has a list of standard commands used in ULTI

Set the ID of the UCM/ULTI to 2 or more so that the UCMs in the system have a unique ID from 1 to 8

### The Response Wizard

In Comfigurator, select Events -> Responses, select a Response to program, right click, and Add Response as shown below:
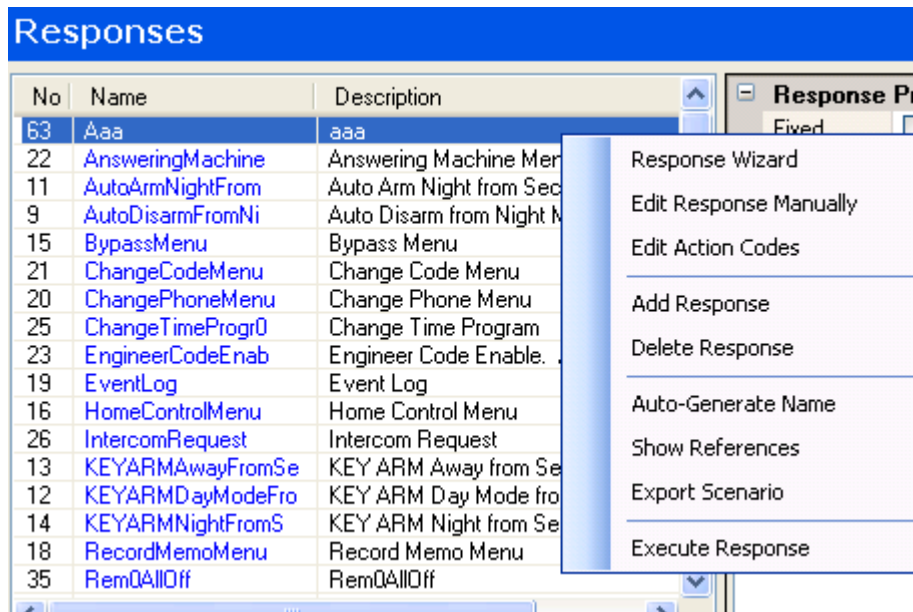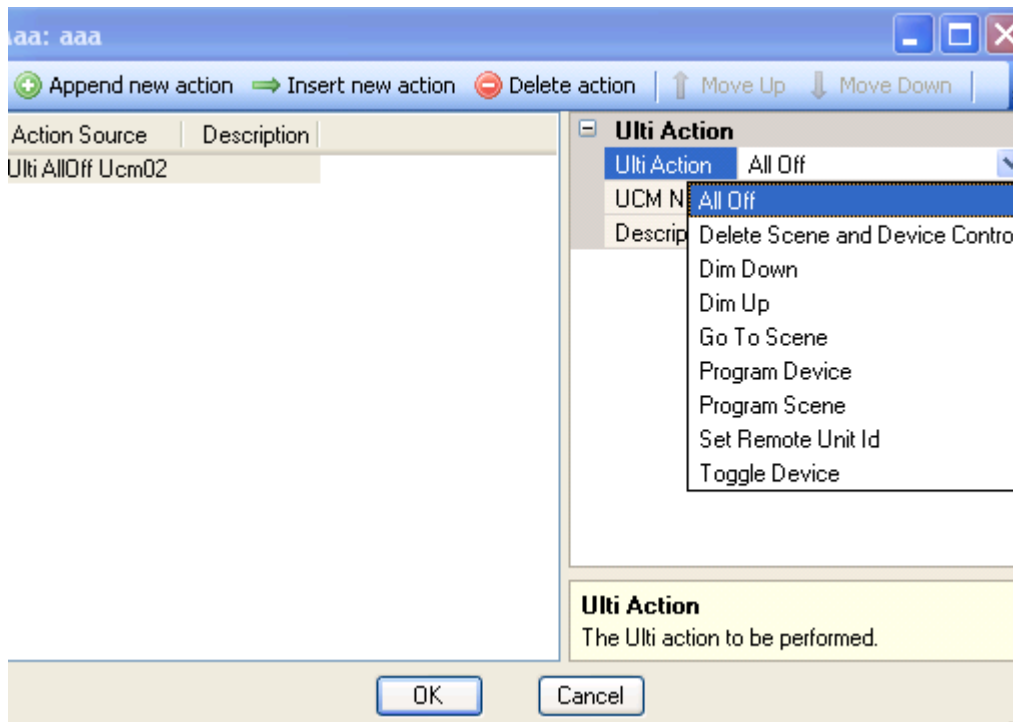
Enter a Description for the new Response. The Name can be automatically generated.

The Response Wizard has a list of Action categories to select the actions to be used in the Response. Note that the ULTI tab is available when a UCM of type ULTI has been defined.
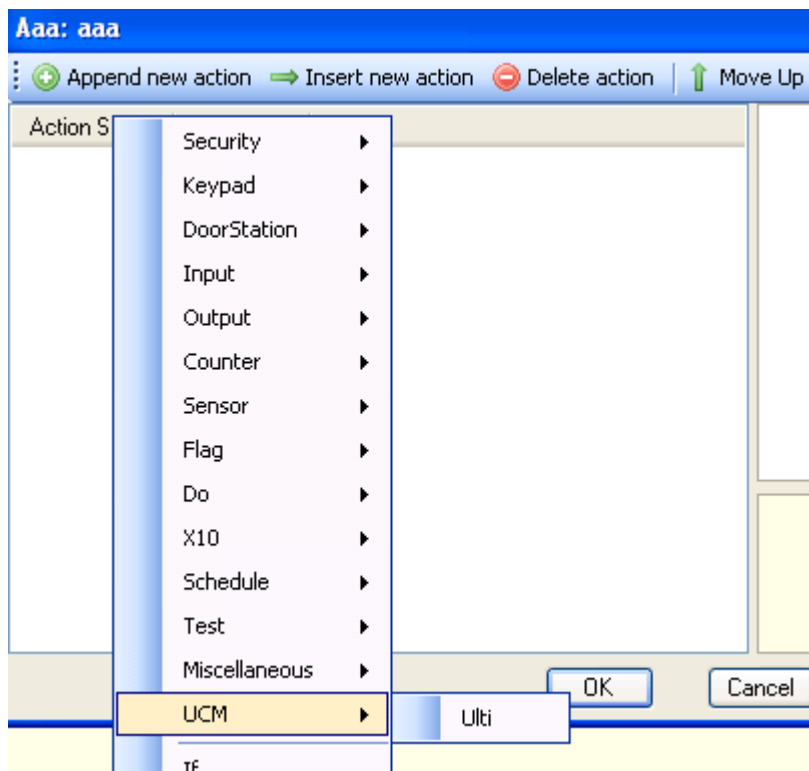


Click on the UCM> ULTI button to open a new window "select Action" as shown below:

The ULTI commands are shown, which includes the All Off, Delete Scene and Device Control and other commands. The right hand side shows the ID of the UCM to be selected, and other selectable options (such as scene number).

## All Off

This switches off all devices just like in the Ulti remote control. The Remote ID 0 to 7 must be selected prior to this.

## Delete Scene and Device Control

This deletes the scene and device control just like in the Ulti remote control. The Remote ID 0 to 7 must be selected prior to this.

## Dim Up

This brightens the devices controlled by the Remote ID just like in the Ulti remote control. The Remote ID 0 to 7 must be selected prior to this.

## Dim Down

This dims the devices controlled by the Remote ID just like in the Ulti remote control. The Remote ID 0 to 7 must be selected prior to this.

## Go to Scene

This activates the scene number 0 to 5 for the remote control ID just like in the Ulti remote control. The Remote ID 0 to 7 must be selected prior to this. The Scene number must be learned using Program Scene beforehand.

## Program Device

This causes the ULTI switch to be programmed for device control. Press the ULTI learn switch, and send the Program device control. For example the following response will set Remote Control ID 0 and send Program Device 0.

```
Ulti SetRemoteUnitId 2 0
Ulti ProgramDevice 2 0
```

This learns the ULTI switch into Remote ID 0 and Device 0. Each ULTI switch has a limit of the number of Device Ids and Scenes that can be learned. Please refer to the ULTI documentation for details.

A home control menu can be programmed with the Program Device command

### Program Scene

This causes the ULTI switch to be programmed for Scene control. Press the ULTI learn switch, and send the Program Scene control. For example the following response will set Remote Control ID 0 and send Program Scene 0.

    Ulti SetRemoteUnitId 2 0
    Ulti ProgramScene 2 1

This learns the ULTI switch into Remote ID 0 and Scene 1 0. Each ULTI switch has a limit of the number of Device Ids and Scenes that can be learned. Please refer to the ULTI documentation for details.

A home control menu can be programmed with the Program Scene  command

### Set Remote Unit ID

This sets the Remote Unit ID 0 to 7 of UCM/ULTI. This allows the UCM/ULTI to act as 8 Remote Ids. All Scene or Device commands from the UCM/ULTI will have the programmed Remote Unit ID, until a new Remote Unit ID is set.

### Toggle Device

This toggles the specified device ID 0 to 4. The example below sets Remote ID 0 and toggles the device 0. The device ID must be learned using Program Device beforehand.

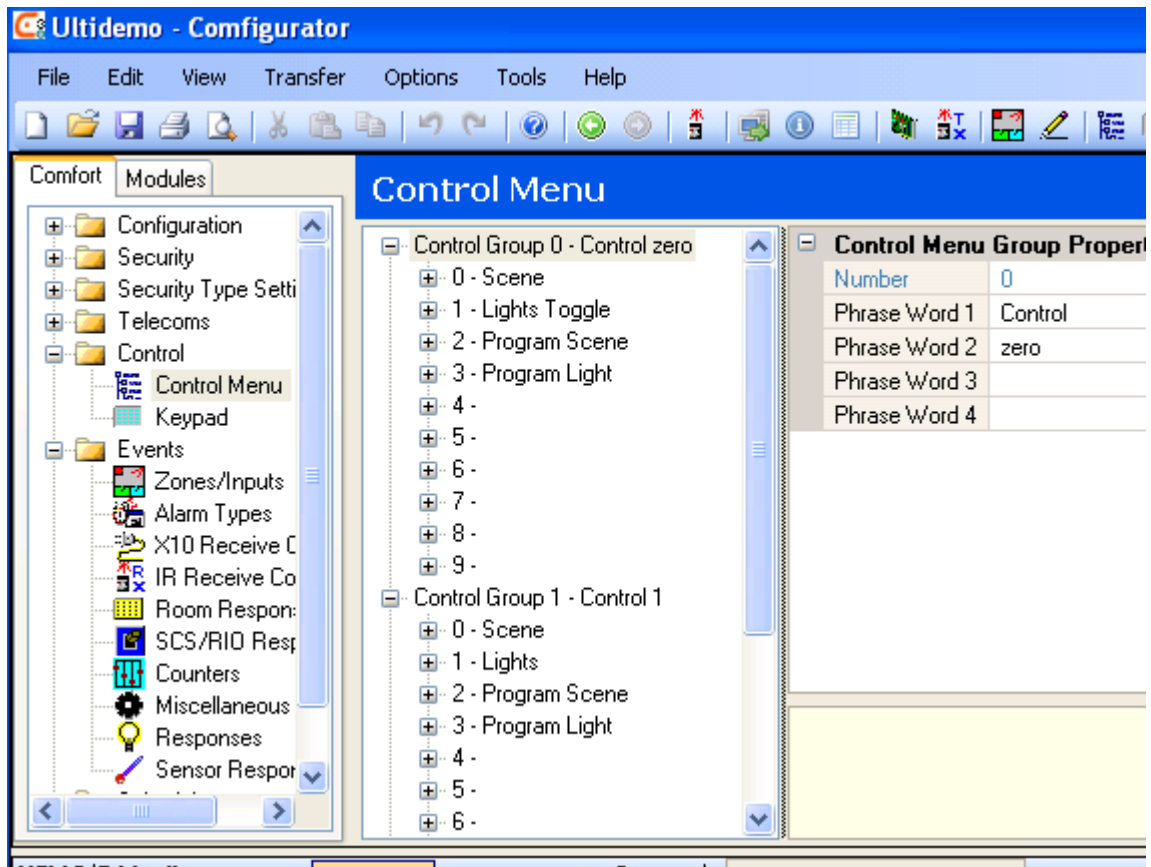    Ulti SetRemoteUnitId 2 0
    Ulti ToggleDevice 2 0

# Sample Program

A sample program ULTIdemo.cclx for Comfigurator is supplied, which illustrates the basic programming required.
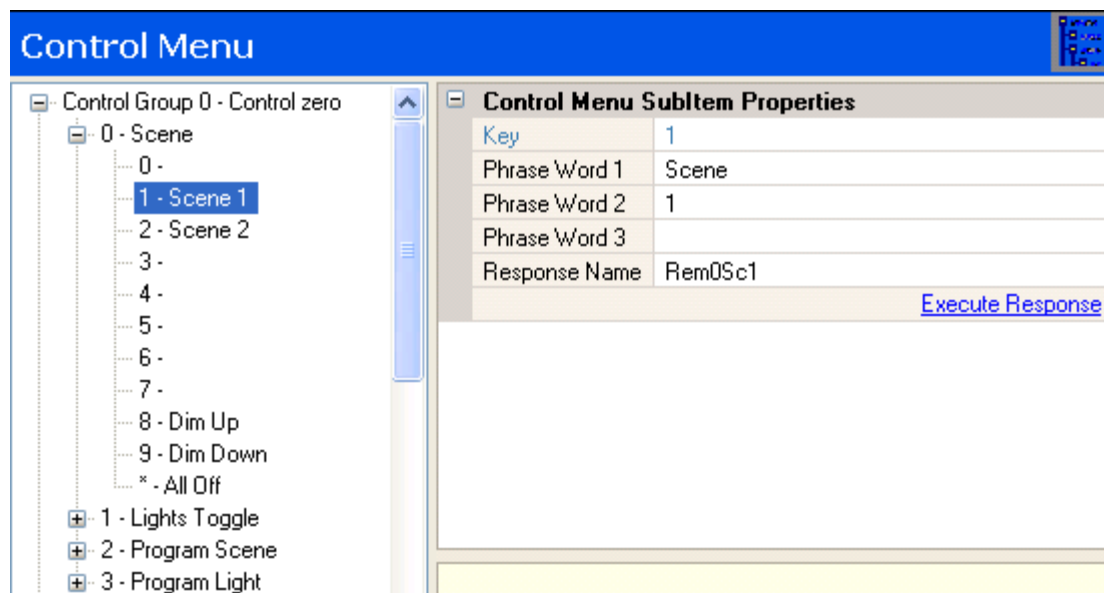
## Control Menu

The Control Menu is programmed according to the screenshot below

Group 0 is for Remote ID 0, Group 1 is for Remote ID 1.

Group 0 > Control key 1  is programmed as follows;



The Response Rem0Sc1 is programmed as follows;

**Select a Response**

| No | Name | Description |
|----|------|-------------|
| 14 | KEYARMNightFromS | KEY ARM Night from Security Off or Day Mode |
| 0 | NullResponse | |
| 18 | RecordMemoMenu | Record Memo Menu |
| 35 | Rem0AllOff | Rem0AllOff |
| 33 | Rem0DimDown | Rem0Dim Down |
| 31 | Rem0DimUp | Rem0DimUp |
| 5 | Rem0ProgDev0 | Remote 0 Program Device 0 |
| 1 | Rem0ProgDev1 | Remote 0 Program Device 1 |
| 27 | Rem0ProgSc1 | Rem0 Prog Sc1 |
| 29 | Rem0ProgSc2 | Rem0ProgSc2 |
| 37 | Rem0Sc1 | Rem0Sc1 |
| 39 | Rem0Sc2 | Rem0Sc2 |
| 3 | Rem0ToggDev0 | Remote 0 Toggle Device 0 |
| 7 | Rem0ToggDev1 | Remote0 Toggle Device 1 |
| 41 | Rem1AllOff0 | Rem1AllOff |
| 43 | Rem1DimDown | Rem1DimDown |

Ulti SetRemoteUnitId 2 0
Ulti GoToScene 2 1

Set Remote ID 0 followed by Go to Scene 1

The Dim Up control key is programmed as follows;

**Control Menu**

- 0 - Scene
  - 0 -
  - 1 - Scene 1
  - 2 - Scene 2
  - 3 -
  - 4 -
  - 5 -
  - 6 -
  - 7 -
  - 8 - Dim Up
  - 9 - Dim Down
  - * - All Off

**Control Menu SubItem Properties**

| Key | 8 |
|-----|---|
| Phrase Word 1 | Dim |
| Phrase Word 2 | Up |
| Phrase Word 3 | |
| Response Name | Rem0DimUp |

The Response Rem0DimUP is programmed as follows;

Set Remote ID 0 followed by Dim Up

| 0 | NullResponse | |
|----|------|-------------|
| 18 | RecordMemoMenu | Record Memo Menu |
| 35 | Rem0AllOff | Rem0AllOff |
| 33 | Rem0DimDown | Rem0Dim Down |
| 31 | Rem0DimUp | Rem0DimUp |
| 5 | Rem0ProgDev0 | Remote 0 Program Device 0 |
| 1 | Rem0ProgDev1 | Remote 0 Program Device 1 |
| 27 | Rem0ProgSc1 | Rem0 Prog Sc1 |
| 29 | Rem0ProgSc2 | Rem0ProgSc2 |
| 37 | Rem0Sc1 | Rem0Sc1 |
| 39 | Rem0Sc2 | Rem0Sc2 |
| 3 | Rem0ToggDev0 | Remote 0 Toggle Device 0 |

Ulti SetRemoteUnitId 2 0
Ulti DimUp 2

# UCM/ULTI Comfort to Ulti Interface

The Control Key Lights Toggle > Light 1 is programmed as follows;
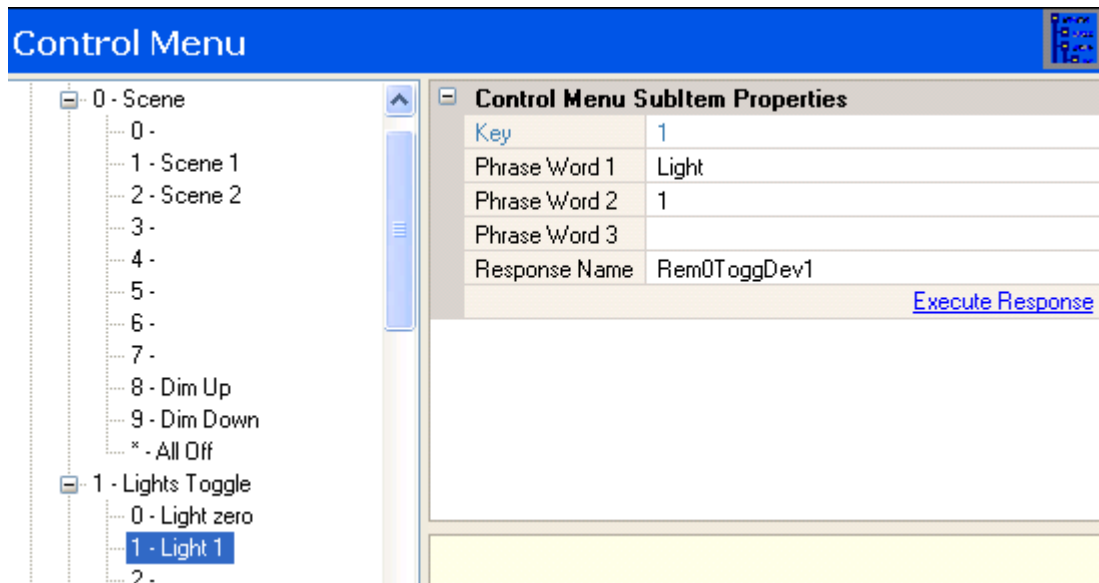


This toggles a device. The Response Rem0ToggDev1 is shown below;

# 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/ucmulti_manual.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:* | *UCM/ ULTI Interface* |
| *Version Number:* | *2.0.1* |
| *Filename* | *ultiman.lwp* |
| *Date Last Modified:* | *Sunday, 04 December, 2011* |
| *Minimum Firmware:* | *6.xxx* |
| *Comfort Min Version:* | *ULT 6.xxx* |

| | |
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*Comfigurator Min Version*     *3.4.0*

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