



# INTEGRATED CONTROL Ltd

105 Chestnut Drive, Sale, Cheshire M33 4HS.

## Case Studies For C-BUS Control and Management Systems

Project : Integrated Home Entertainment and Lighting Systems

Project No

Revision

Client : Home Owner

**8035**

**A**

### Project Introduction :

ICL were commissioned directly by the home owner to provide the complete Smart Home environment, including a whole House Audio Visual System, Telephone and Data network, Energy efficient Intelligent Lighting, Heating Controls, CCTV, Intruder Alarm, door entry and automatic gates.

ICL worked closely with the Customer (End User), the builder, the architect and the interior designer to provide a seamless integrated solution for all of the house systems.

The system used for the lighting, heating and access control was Clipsal C-Bus provided by Schneider Electrical, this gave ICL all the flexibility needed to provide the customer with the integrated solution they required in this modern home, this future proof system can be expanded or updated without major re-configurations to software or hardware.



ICL provided all the smart home systems and carried out the design and programming for the whole project, whilst Nortec carried out the installation of all the electrical services.

The property has two CBUS networks to deal with the amount of CBUS units on the system. To control the lighting, Leading Edge Dimmer and 10Amp Relay modules were used, which due to the amount of circuits involved in the scheme it was decided to distribute the modules over two panels, one located in the basement that serves basement and ground floors, and a second on the first floor that serves the first and second floors. Reflection Wall switches has been used throughout the home to recall local scenes in each area, or just too simply turn the lighting on/off.

One Saturn DLT has been provided to control the Heating System. This switch type was chosen because of the Dynamic Labelling and the ability to change the text via logic dependant on the system state, thus giving the user instant feedback on the system. The underfloor heating and hot water systems for the home uses the same CBUS network as the lighting, this allows each room to have an individual temperature sensor installed without long cable runs back to the boiler control. A simple data link between the rooms light switch and temperature sensors is all that was needed. The temperature sensors used were based on the e2000 series sensor, however ICL had them modified to have a flat metal plate design to suite the Reflection Switches. The heating and hot water systems are controlled by a CBUS Black & White Touchscreen (with logic) with custom written logic to suite the design of the heating system components. The home owner is able to adjust the temperature set points independently in each room, or even just set the rooms heating off, say the guest suite when not in use.

The CBUS networks are connected to the homes data network using CBUS CNI Modules, this enables the main home control system (Crestron) to communicate with the lighting so that scenes can be modified and set also to adjust timeclocks of the system.

Remote programming access to the CBUS system is also used to keep the system updated. ICL are able to reprogram and also assist the home owner via the internet from our Manchester office, cutting down on what can be expensive callout charges.

The remote access is also used by the home owner to access the system via their mobile phone, to set and un-set pre-defined functions in the system like, away mode, Heating On/Off and Opening the Vehicle Gates.



### System Summary :

Total Networks :- 2  
Total Circuits Controlled :- 173Circuits  
Total Switches :- 73 Total PIR's :- 14  
Network Interfaces :- 124 CBUS units