

**Solution:** Intesis AC interfaces and KNX Protocol translators  
**Country:** United Kingdom  
**Company:** Wave Controls Ltd  
**Summary:** The client wanted a home with automated services, security and luxury features that was easy to operate, while celebrating the history of the building.

### The effects

- Energy efficiency was built into the system.
- Includes basement swimming pool, golf simulator and home cinema.
- Equipment is located behind moving screens to maintain period appearance.



*"We developed a KNX system that displays the status of all the automated features, plus each room's temperature"*

Andrew Ward, Wave Controls

### Luxurious living in London

A large Edwardian house in one of London's most desirable residential districts has been brought into the 21st century with extensive automation and the creation of a 200sqm basement that houses a wine cellar, swimming pool, golf simulator, home cinema and car lift.

The house has energy efficiency in its very DNA, as it was designed and built-in 1902 by William Willett, an early pioneer of Daylight Saving Time. Thus it is very fitting that Andrew Ward of Wave Controls was asked to install an energy-efficient KNX building automation network to manage the lights, shades, heating and cooling, audiovisual system etc.

The client wanted simple intuitive control, creating a home that worked seamlessly. Additionally he specified automatic shut off for lighting in vacant rooms, and restricted Wi-Fi for the children's devices but full access for the parents'. To achieve the clean aesthetic required the TVs and AV were to be hidden behind moving panels and the speakers were blended into the ceiling.

Andrew explains: "We developed a solution that uses a powerful Gira HomeServer to provide visualisation of every part of the KNX system. This allows the client to see and set the status and level of all lights in the house, as well as the position of the blinds in every room and the temperature plus the operating mode for the heating and cooling systems.

"In the basement, motion detectors activate a pleasing light scene as you enter and shut down all eight rooms when vacant."





Automatic lighting is also used for external areas, including front and rear gardens. For security, a side walkway is protected with motion triggered lights and an alert sent to the owner every time they are activated.

All lighting circuits are trimmed to 80% brightness within the KNX dimmers. This is barely detectable to the human eye, especially in rooms that have several lights, yet creates a considerable energy saving overall.

The network has over 150 lighting circuits, 15 zones of heating and cooling, motorised curtains and blinds on every window, and many other automated features, all controlled by the KNX system.

“We sourced all this equipment through HMS Networks Specialist Smart Building distributor Ivory Egg, who were very helpful throughout the design stage,” says Andrew.

“It is one of our largest ever single residential projects. To achieve the high levels of integration we have used 14 Intesis gateways, which seamlessly connect the air conditioning, lighting and home entertainment into the network. We also used the home server to create a bespoke graphical user interface and ensure simple, intuitive control of what is a very sophisticated system. Ivory Egg’s support and assistance throughout the project was first class and helped ensure a very successful outcome.”

Intesis is a range of building automation technologies made by HMS Industrial Networks that can be used to automate a single process or combine to build multifunction systems that control whole buildings and other facilities such as bridges, tunnels, lock gates and transit hubs.

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