

# Smart Home Technology for a Stunning Home in Hadley Wood

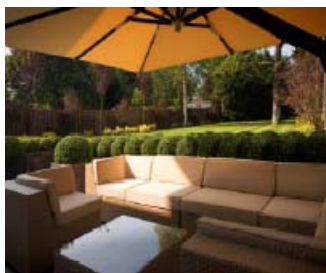
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APH has completed the design and installation of the latest KNX technology within a stunning five bedroom, five bathroom villa in Hadley Wood, Hertfordshire. The success of the installation was, according to Andrew Hemsall, down to good planning and good documentation as well as good quality software writing to complete the project.

APH worked closely with the client to provide a complete and comprehensive smart home system. Andrew reckons it has been one of the most rewarding projects he has worked on because the client – a high-end bespoke homes developer – has embraced KNX technology with both hands and allowed APH to add all the lighting, heating and security controls without exception. “We were then able to illustrate the energy saving potential of KNX and install the best technology for the project with careful integration within the design of the property”, says Andrew.

The structure of the installation and the cabling for electrical powering of devices were also vital and were centralised to a built-in cupboard on the first floor landing. DIN rail mounted devices placed in miniature circuit breaker boards with sensors and detectors then distributed throughout the home. This meant a reduction in the number of devices initially required, as well as a reduction in the amount of cabling needed to connect the whole system together.



The house is heated by water based underfloor heating throughout, in 10 individual heating zones, each room being controlled independently using thermostatic light switches. The KNX system works seamlessly to ensure a constant temperature in each room as required by the owner. Also included in the software is the ability to automatically reduce the temperature in certain rooms when the house is empty or when the inhabitants have

gone to bed - representing a big saving on fuel bills.

This is combined with controls for all the homeowner’s hot water requirements which is automatically managed throughout the day. The house has 11 switched (binary) lighting circuits and 35 dimming circuits that are used to set lighting scenes within each room. The exterior of the home also has numerous lighting circuits which are controlled via the same pushbutton switches from the patio door areas. A motion sensor has been installed outside to detect movement and will turn on the appropriate lighting at night - providing additional security. Garden lights, porch lights and gate releases are all controlled via the KNX functionality.

## SMART HOME TECHNOLOGY FOR A STUNNING HOME IN HADLEY WOOD

The house has an integrated audio system (from WHD in Germany) controlled via the KNX system and provides music throughout the home in 12 zones whilst music preferences and volume can be controlled using the same light switches that control the lighting and heating for that area. The latest in door entry video cameras controlling access for security, together with two fingerprint entry scanners, have also been installed.

“Another satisfying part of the project is that the KNX house functionality can be accessed via the internet from anywhere in the world with functions such as direct heating and lighting control, security monitoring and remote diagnostics. There are several IP camera viewports and email transmissions are made in the event of security breaches, activated smoke detectors and even water leak detection”, says Andrew.



APH were able to use the latest research to illustrate to the client that smart home intelligence, based on the KNX protocol, could reduce energy consumption in a home by up to 50% per annum. The research was conducted for the KNX protocol by the Institute for ‘Building & Energy Systems’ at ‘Biberach University of Applied Science’ in Germany and was key to winning the project.

“Overall, the project represents a huge success. It was implemented without delays and delivered exactly as stated within our tender. No other re-workings were required. The client is able to present a home to his own customer that has everything catered for with every creature comfort at fingertip control from anywhere in the world,” concludes Andrew.

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