

RIGHT FROM INCEPTION, DEVELOPER JOHN CROFT HAD A DREAM FOR THE HOME HE WANTED TO BUILD IN AN IDYLIC COTSWOLD SETTING. It took a few years in the planning and a lot of patient research and work to make and the results are not only stunning but designed to last for over 200 years.....>

1 MOONSTONE

THE ECO-HOUSE OF THE FUTURE
AMINA TECHNOLOGIES





.....> On the site of some old industrial buildings, the first challenge was to design something that would cope with a valley sloping steeply to a stream. Whilst the isolation of natural waters seeping from the fissured rocky slopes was a massive technical hurdle, the location allowed John the opportunity to create a multilevel (seven in all) dwelling, with a third of the building underground, filled with natural light and unspoilt views of this delightful countryside just outside Cheltenham.

The building is designed to meet or exceed the very highest environmental standards, whilst providing a beautiful and practical

family home. It achieves better than the German 'Passiv-Haus' top standard for efficient energy use by over 65% and, with fastidious attention to detail, John has created an ultra-modern space filled with the best in environmental, security and entertainment technology, without sacrificing an ounce of interior design needed to create a comfortable home setting.

Installed by JK Audio Visual of Telford, this 16,000 sq. foot home has 19 separate zones of audio and video. In order to meet John's demands for clean lines and quite literally no evidence of the technology in the house, JKAV

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introduced John to Amina and their unique invisible speaker solution. Using the theory of natural musical instruments, which, as we know, generates powerful concert hall filling sound from tiny vibrations on the soundboard body of the instrument itself, the Amina product is not only totally invisible once installed but, just like the orchestra, is extremely effective at filling big spaces with an even level of sound – ideal for John's open plan living areas. The convincing moment came though when JKAV made an overall project price comparison between this hidden technology and the conventional seen ceiling speaker: The project would need 76 conventional ceiling loudspeakers to fill that much space with good quality sound. By comparison, only 21 Amina AIWX series invisible speakers would do the same job. Whilst the Amina speakers would cost roughly the same individually, the labour and capital outlay saved through installing fewer units was dramatic. Amina, both from a project cost and a design approach, was the obvious choice.....>

.....> Having found the right loudspeakers to deliver entertainment into the home, John made one further giant stride into the digital future. John wanted to embrace the concept of 'cloud' computing which, in terms of multi-media entertainment, means low cost subscription access to quite literally everything every created on the planet. By streaming data directly from the internet via his Apple iPad or iPhone through a Sonos wireless amplification and control system, John not only saved himself the capital cost of the media and the not-inexpensive hardware to store it all on, but the iPad and iPhone also control the entire home entertainment system remotely without blighting walls with touch panels and switch bezels.

Environmentally, John demanded a 'Positive Energy' design, 'Energy Rich' in operation. PV cell arrays on an outbuilding wallside supply more electricity than the house uses, the surplus being fed back into the grid, generating an estimated income of £3,500 per year. The house is lit entirely with energy efficient RGB based LED lamps. Creating white light from component Red Green and Blue LED's actually uses less energy, capital cost is lower and the overall colour spectrum is much warmer than white LED based lamps. The house is not even connected to a mains water supply - rain water from the immense roof

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area is harvested and stored underground in giant tanks. A two tier vertical reed bed natural filtration system converts black and grey water into a fresh potable supply for drinking, washing and flushing.

All windows are triple glazed, with U values down to 0.7 K and the exterior wall has a full 1/2m of solid stone and a further 1/2 m of solid state of the art extruded waterproof insulation as a thermal skin, giving insulation values 65% better than the very best Passivhaus eco homes in Germany. The inner wall is deliberately constructed from dense concrete block which acts as a heat sink in summer and a heat source in winter. As a testament to the energy

efficiency of this home, John's under-floor heating, powered from a ground source heat recovery system, was used for a total of only six days during the bitterly cold winter of 2009/10,

with the outside temperature plummeting down to minus 13 degrees for over 3 weeks.

Displaying a totally unique and contemporary design, and integrating the very best in quite literally unseen entertainment, security and environmental control and with a non-existent operating carbon footprint, we are sure you will want to see a lot of more this homely gem in the future.

MOONSTONE

