

CASE STUDY

LADIES LAKE



An award-winning clifftop property featuring dynamic human centric lighting



St Andrews in Scotland is a place of history, learning and culture, a wonderful coastal resort, and the world's home of golf. For the last two and a half years, it has also been the base for Pyramid AV, as the company worked on one of its most complex home technology projects to date.

Ladies Lake is a new property that replaces an existing dwelling that dates back to 1968. Designed by Andrew Black Design, the stunning three-storey building features panoramic views of the bay, St Andrews Castle, West Sands beach, and Castle Sands beach.



THE BRIEF

The client was looking to create a holiday home that allows the family to have a base in their beloved St Andrews, where they enjoy playing golf and the fabulous location. Their wish was for the property to be energy efficient and unique. Due to the nature of travelling from the U.S. to enjoy their holiday home, the client was very interested in the idea of human centric lighting helping the family to quickly recover from jetlag.

THE SOLUTION

Pyramid AV provided a complex circadian lighting system that mimics natural sunlight throughout the day in order to ensure that human biological rhythms are in tune at all times. Using a custom set of Control4 drivers, the team integrated a hybrid set of DMX and DALI luminaires linked to an astronomical clock and Pyramid AV's own dynamic lighting curve in order to provide fully synched internal lighting.

In addition, Pyramid AV was responsible for the design, supply and commissioning of the cutting edge architectural lighting systems for the entire property and grounds. Incorporating a host of modern lighting solutions, the energy efficient LED system enhances the stunning architecture and interior design.

Integrating various control protocols into this property to ensure the building operates autonomously was a big challenge. The AV and lighting designs took Control4 architecture to a new level.

Via a simple Control4 user interface and app, the client has seamless control over multi-zone audio and video systems, climate control, blinds and curtains, lighting, discrete

video monitoring and door access, a remote HD "wildlife" camera, and gate and door security controls. Remote monitoring of the entire property is also achieved through this setup.

Pyramid AV wanted to provide the client with the best possible audio throughout the property. With the architect and client insisting on no visible speakers in the main entrance, the integrator had to consider invisible speaker technology. This was a challenge, as some of these speakers have limitations in regards to volume and dynamics across the low end frequency range.

The main living spaces feature "best in class" Amina AIW750 HF and LF invisible speakers. To ensure the best possible results were achieved sonically, Pyramid AV used a series of Dante linked Bose ESP DSP solutions, and applied 32 band EQ to all channels. All areas were tuned to suit the client's love of classical music. In addition, EQs were applied to the various Bowers & Wilkins in-ceiling speakers in the bedrooms and bathrooms, as well as outdoor Sonance speakers for the terrace. A total of 39 amplifier circuits were installed.

Ladies Lake was a 30-month project for Pyramid AV, from initial consultation and design, through to installation and commissioning. Managed and installed by its in-house team of engineers, Pyramid AV delivered its most complex and successful residential project in the UK to date.

The project was recently awarded "Best Whole Home Project" in the EMEA Region at this year's Control4 ISE Awards for EMEA.



THE FEEDBACK

"Working with the guys at Pyramid AV, we were very quickly given confidence that they not only knew what they were talking about and had a great eye for detail, but most importantly, understood that we as clients were concerned that technology for the sake of it was not what we were looking for at this property," commented the homeowner. *"We are very happy to report that the systems installed work seamlessly with the minimum of input from us and are easy to use. Further to this, the house looks amazing with the excellent lighting, and we are looking forward to the benefits this innovative system will provide us in our new home."*

"The client is delighted with the outcome, and the property benefits enormously from the well-thought-out lighting and AV systems integration" said Andrew Black of Andrew Black Design. *"Pyramid AV's level of detail and project management ensured that a challenging construction was delivered to the highest possible level."*

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