

KENWOOD DMR digital improves sound clarity and coverage at Oakwood Theme Park



An upgrade from analogue to DMR digital communications brings significant operational benefits to the largest theme park in Wales.



Set in 80 acres of Pembrokeshire countryside, Oakwood Theme Park is the largest theme park in Wales and one of its most visited tourist attractions.

Oakwood opened its doors to the public in 1987 as small family park on the site of a former dairy farm and has since grown to become one of the most visited tourist destinations in Wales.

With more than 35 attractions, six restaurants and catering kiosks, picnic areas, gift shop, luggage facilities, dog kennels and even a narrow gauge railway providing a transport between the theme park and the car park, Oakwood offers fun, excitement and entertainment for visitors of all ages from the moment they arrive!

Oakwood aims to deliver a wraparound experience to its visitors in a safe and secure environment, free from the threat of anti-social behaviour, petty crime, personal assault and risk of injury.

Reducing risks while balancing efficiency of operations and maintaining a positive atmosphere can pose challenges.

With the majority of attractions at the park located outdoors across a large area and subject to extreme weather conditions, it is vital that key members of the Oakwood team are able to communicate with each other reliably and instantly to not only ensure every visitor receives the best experience, but also to streamline operations, protect staff and support stringent health and safety procedures.

Radiocommunications underpinning robust health, safety, and security policies

Oakwood has used two-way radio in its operations for many years, but as it has developed with more attractions spread over a wider area, the existing analogue system was stretched beyond its limits – poor audio quality and coverage blackspots combined to hinder the ability for staff to report threats, situations, and status quickly and efficiently and for management to coordinate efforts especially in the event of a major incident where access for emergency services and the safe and rapid evacuation of large numbers of people need to be managed calmly.

The new KENWOOD digital DMR system was designed and supplied by Communic8 Hire Ltd.

System Highlights

The new digital system provides 90% coverage over the entire site, but critically, 100% coverage of all rides and public areas.



Callum Goldthorpe, a director of Communic8 Hire commented:

“Simplicity, ease of use and light infrastructure without a requirement for base stations were important factors in the selection of the technology and devices employed. KENWOOD was chosen due to its excellent audio quality especially in noisy environments, the features and affordability of the NX-1000 Series handsets and the proven durability and longevity of equipment ensuring that the system will be reliable in service and futureproofed.

Aesthetics, dexterity, weight and long battery life of the NX-1000 Series portable devices were also important as the radios will be carried and used by Oakwood staff for long periods and need to be comfortable in use”.

Equipment in use:



- DMR digital conventional UHF configuration
- 2 x TKR-D810 repeaters with each slot allocated to four channels
- 46 x rugged, easy to use and compact NX-1300 hand-portable radios for use by security staff, first aiders, rescue and engineering teams, and ride operators
- 4 x GPS equipped, display and full keypad NX-3320 hand-portable radios for use by managers and team leaders offering voice and, in the future, data and locations services capability if required
- 12 x covert earpieces, for use by managers to convey information discretely in the event of an emergency / lost child etc.

The radio devices and system were programmed by Communic8 Hire and KENWOOD distributor Airsys and supported by a seven day a week call out service with same day replacements to ensure an uninterrupted service availability.

In addition to the improved audio clarity in noisy environments and the extended coverage of the park, the new radio system will bring a number of other important benefits to operations and safety, including:

Operations Support

- Parking management
- Streamlining visitor arrivals
- Managing queues
- Enabling host services
- Coordinating on-site deliveries
- Managing maintenance inspections and works
- Managing facilities teams
- Security and Operations Management
- Flexible Resource Management
- Managing on-site events

Security and Safety Support

- Staff reassurance and protection
- Enhancing observation sharing
- Enabling incident reporting and management
- Reducing incident response times
- Managing First Aid teams
- Protection of property
- Implementation of emergency / evacuation plans

All the portable radio devices incorporate advanced worker safety functions including Emergency Key and programmable Man Down and Lone Worker features which provide staff with the reassurance that even when working out of sight, they are never more than the push of a button away from assistance.

Exceptional audio quality in noisy environments

Background noise from rides and crowds is a big issue for communications in theme parks, making voice communication challenging. Effective noise cancellation results in clearly audible voice communication irrespective of the level of background noise, a crucial safety and security requirement in managing crowds, especially in the event of a major incident.

KENWOOD radiocommunication devices benefit from JVCKENWOOD Group's 60-years' experience in producing consumer audio and visual equipment (Trio, JVC and KENWOOD), renowned for exceptional sound quality.

This transfer of knowledge and experience has led to the development of a number of novel and innovative solutions which overcome the problem of cancelling ambient noise while improving the audio clarity of the transmitted voice - in any operating environment.



Built tough to withstand rain, dirt and the rough and tumble of daily use in theme park settings

The NX-1300 and NX-3320 portables used in the Oakwood setting are built to be robust and able to operate constantly for long periods and in all weather conditions.

As you would expect, all KENWOOD professional hand portable walkie talkies conform to MIL-STD-810 C/D/E/F/G for ruggedness and durability and are IP54/55/67 Water & Dust Intrusion rated, making them suited for use in any environment – most especially at parks with water attractions!

Instant, dependable and clear communications throughout that support daily operations and enable fast, efficient responses to situations - from lost children to First Aid and incidents



Phil Verbinnen, Park Director at Oakwood summarises the project:

"The deployment of the new KENWOOD DMR Kenwood system at Oakwood delivers improved communications quality and availability and eliminates a number of challenges in our day-to-day operations which in turn, will increase productivity.

The KENWOOD equipment and DMR technology has been well received by our staff while the support from the Communic8 team and value for money makes good business sense for us and gives us peace of mind in knowing that our employees are equipped with high quality, easy to use, robust equipment that will support them in providing a great customer experience, keep them safe and make everyday operations less stressful".



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