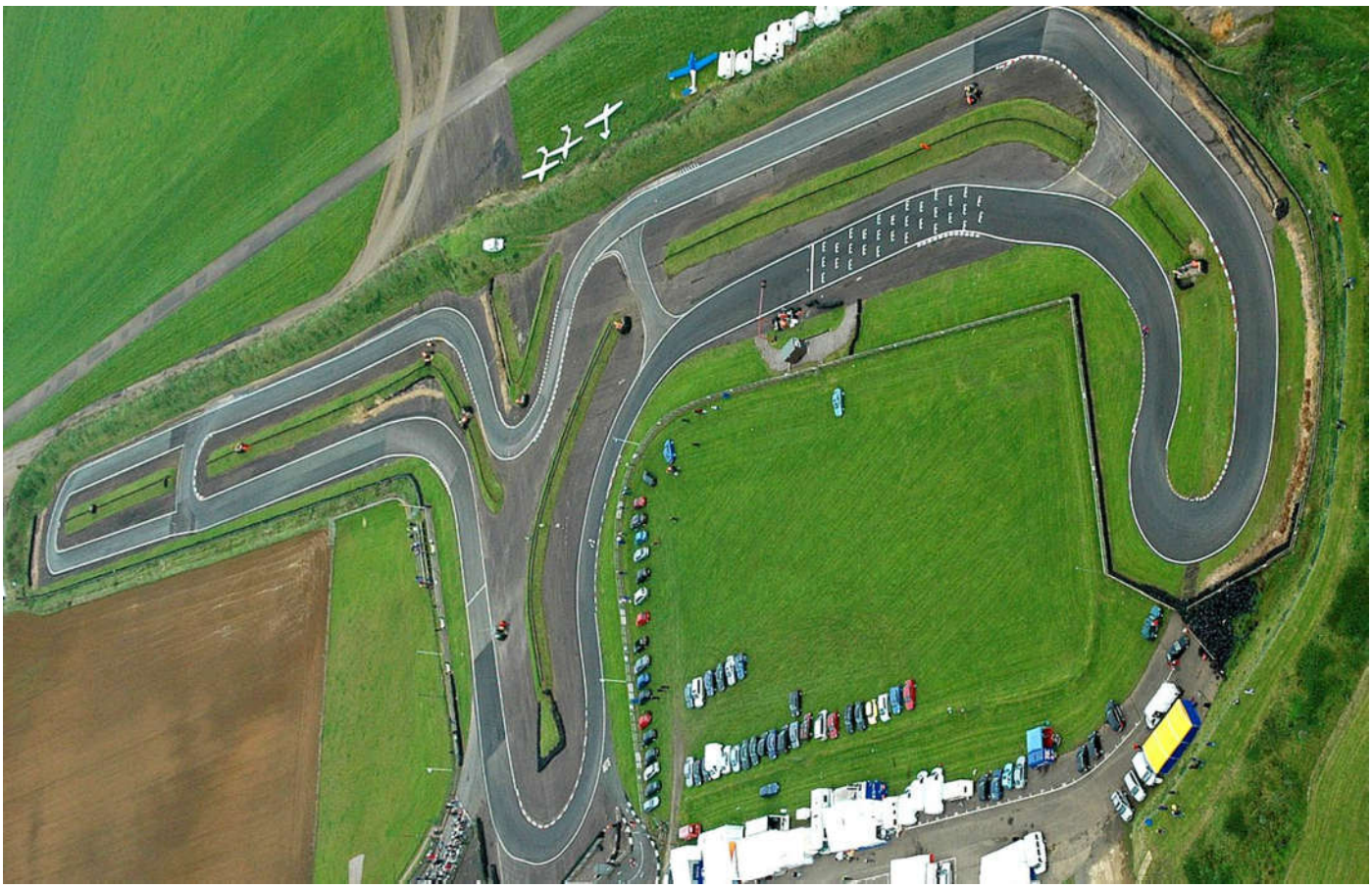
KENWOOD repeater improves existing FM Analogue coverage and paves the way for migration to digital DMR or NXDN.



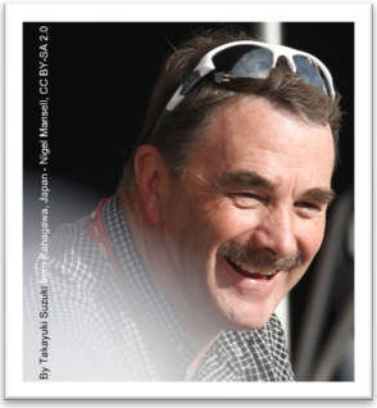
NXR-1700 reinforces safety protocols and improves operational efficient at Shenington Kart Racing Club



Inaugurated in 1959, Shenington is not only one of the oldest kart circuits in the UK, but it is also widely regarded as one of the best.

First introduced to the UK by American airmen in 1958, kart racing has developed to become the training ground of many of the world's most successful motor racing drivers –Senna, Mansell, Prost, Schumacher, Räikkönen, Verstappen, Vettel and Hamilton to name but a few.

The roots of Shenington Kart Racing Club stretch back to 1959 when the club was called Banbury Kart Club, based at Shenington (Edgehill) airfield. It hosted its first race meeting in February 1960, attracting a staggering five thousand spectators who came to see the twenty or thirty drivers competing. During 1960 and 1961 the club held rounds of the first World Kart Championship which had other rounds in Italy and USA, culminating at the final in Nassau, Bahamas. Competitors included Sterling Moss and Graham Hill did race karts in that time period. By the mid 1960's the club joined forces with Solihull to become the Solihull and Shenington Kart Club and in the 1970's the club adopted the name Shenington Kart Racing Club.



Nigel Mansell CBE, now the club's President, was a regular competitor, first in Juniors and then in the 210 National class. He went on to win both the Formula One World Championship in 1992 followed by the CART Indy Car World Series in 1993 to become the only person to hold both the World Drivers' Championship and the American open-wheel National Championship simultaneously.

Shenington Kart Racing Club today

Shenington Kart Racing Club hosts ten rounds of racing a year featuring multiple classes of karts from Juniors (aged 8-13) to 250 Superkarts.

The club is a non-profit, limited company, with profits reinvested into maintenance and development of the club and its facilities including the Race Control and Scrutineering Building, a Club House and Café. 'Sheny', as it is affectionately known, is considered to be one of Britain's top circuits, regularly holding major championship meetings.

Upgrading the existing analogue radio system while keeping a careful eye on costs and future requirements

With increasing health, safety and environmental considerations at all levels in motorsport, circuit-wide radiocommunication free from reception dead spots has become operations critical – put simply, without the availability of reliable radio coverage between marshals, safety officers and race management, a race meeting could not take place.

The existing FM Analogue system made up from hand-portable radios of different vintages and manufacturers was proving to be inadequate for the club's requirements today, but migrating to a full digital system in one step was not an option.

It fell on Graham Smith, Shenington Kart Racing Club's Technical Officer to explore upgrade options that could be implemented quickly and cost-effectively, utilising existing radio assets and providing a pathway for migration to digital operation in the future.



Graham Smith, Technical Officer:

"The radiocommunication system at the club has evolved over the years as needed and when funds were available.

It is an FM Analogue system where all the hand portable radios share a simplex (single) channel.

However, the increased requirement for clear and instant radio communication between safety and operational teams over the years has exposed the limitations of the existing system and highlighted the need for a simple, cost-effective means to improve circuit-wide communications across the 4km^2 site today within a solution that can meet our needs into

Graham enlisted the expertise of Midland Radio Links and with the help of Chris Duffy, Sales Director, reviewed the options. It was quickly established that the simple addition of an FM Analogue repeater would provide the upgrade to coverage and reception quality required. Repeaters from KENWOOD, Motorola and Hytera were all considered, but ultimately the new KENWOOD NXR-1700 was selected as it offered the performance required today and the flexibility to meet the club's future needs.





Chris Duffy, Sales Director, Midland Radio Links:

"The NXR-1700 is a very well-thought-out piece of kit. It's just one quarter the size of a typical rack mount repeater which makes it easy to install. Despite its entry-level pricing, the performance and features of the NXR-1700 are no different to full-size devices, but what really made sense for Graham and the club is that while the repeater is supplied in the factory default FM Analogue setting, it is in fact a multi-protocol, digital ready device, with onboard capability to be configured for FM Analogue + DMR or FM Analogue + NEXEDGE NXDN digital operation. This is achieved by simply programming the unit and activating the relevant license.

Similarly, the club has invested in several NX-1200DE3 hand-portable radios to add to its fleet. These are currently operating in FM Analogue but like the repeater, are multi-protocol and ready for programming to either DMR or NEXEDGE NXDN digital format when the club is ready. The result is that the club can migrate to digital operation at its own pace and when it does, Graham has the choice between two of the leading digital radiocommunication technologies without having to change the repeater or the NX-1200DE3 radios. It really is a win-win situation".

The radio system primary purpose:

1. Safety on track for drivers and marshals.
2. Control of all people trackside.
3. Allow all club officers involved in the racing to keep in contact throughout the site.
4. General site safety and security including control of all visitors to the site.









System Configuration

The NXR-1700 repeater is set-up as a standalone base station giving conventional FM talk though with Continuous Tone-Coded Squelch System (CTCSS) to reduce channel crosstalk while the NX-1200DE3 hand-portables are operating in analogue until the entire fleet migrates to digital.

Operations Support

In addition to the improved coverage and audio clarity in the noisy environment of motorsport, the new full duplex repeater will bring a number of other important benefits to operations and safety, including:

- Streamlining parking and team arrivals
- Managing scrutineering and pit traffic
- Managing spectators
- Supporting Club Officers
- Managing maintenance inspections and works
- Managing Medical, Marshals and Officials
- Facilitating rapid implementation of emergency plans and procedures

Final words

Graham Smith concludes: “We are very happy with this simple but futureproof KENWOOD repeater-based solution which proves that you don’t have to throw money at a problem to achieve a great outcome.

The team at Midland Radio Links have been great - in addition to setting up the NXR-1700 repeater and NX-1200DE3 hand-portable radios, they supplied the earpieces and noise-cancelling headsets and most importantly, they are on hand to support the system to ensure full communications availability at all times.

They will no doubt be alongside the club to guide us when we migrate to digital operation in the future”.

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