

Zwartkops International World of Motoring upgrades communications with NEXEDGE NXDN



Zwartkops Raceway puts safety and efficiency in pole position with the upgrade from analogue radio communications to a NEXEDGE NXDN digital system.



Although in existence since 1988 it wasn't until 1996 that development of the Zwartkops Raceway circuit was started to provide an international standard 2.5km track and additional motorsport related facilities including a new kart track, a circular track with sliding surface, 4x4 Course, Pits, Lecture Suites and a Clubhouse which was completed by 2001.



The circuit is designed on the American 'Amphitheatre' concept with 70% of the circuit visible to spectators which is a major benefit for racegoers.

Zwartkops Raceway is located close to the most densely populated region in South Africa and plays host to a variety of



motorsports events throughout the year on two wheels and four from historic racing to extreme supercars and Superbikes and from club to elite level.

When not hosting International, national and regional racing championship events, the circuit and facilities are used by the AMG (Mercedes-Benz) Driving Academy, BMW Motorrad (Motorcycles) Rider Training, BMW Driving Experience, Volkswagen Driving Academy and Zwartkops' own Traffic Safety Education and Training Course and is the venue for a variety of motor shows.

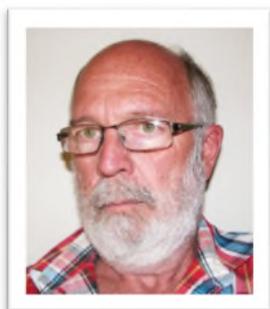
A top-class racing circuit deserves a top-class radio communications system

The management at Zwartkops have enjoyed a relationship with Global Communications, Kenwood's distributor in South Africa spanning many years. Global were responsible for installing the original analogue radio system at the circuit which did everything asked of it until new buildings and infrastructure interfered with coverage of the site; and with the circuit in use



throughout the year staging more races and events, it was decided to upgrade to the increased coverage and improved audio quality of digital two-way radio.

The new Kenwood NEXEDGE NXDN system was designed by Ben Pienaar, Zwartkops' contracted ICT Manager in collaboration with Global Communications which supplied and programmed the radios and provides ongoing support. It was designed to meet several key criteria, specifically to facilitate:



1. Communication between Race Control and all Marshalling Posts around the circuit at all track events
2. Communication between Organisers and Coordinators at other events including Cars in the Park and the 4x4 Outdoor Show
3. Communication between Race Control and Emergency Response Vehicles (Safety Car, Medics, Ambulance and Fire Crews)
4. Communication between the Maintenance Crew during events to carry out emergency repairs

Flexible System Configuration

The 4-channel system can be configured to provide both duplex and simplex channels dependent on the type of event taking place
Ch1: Duplex channel, serving main racetrack for race communications.

Ch2: Simplex channel, providing a backup channel for secondary or race related communication and repeater redundancy.

Ch3: Simplex Channel, used at the Karting circuit when a race meeting takes place at the same time as the main circuit.

Ch4: Simplex Channel, used by Maintenance Personnel across the site.

The system is supported by Kenwood's KAS-10 software suite which is used to monitor and record all voice traffic on the race channel.

Staff working in particularly noisy environments are

provided with headsets incorporating microphones while all portable radios are protected from damage in leather carry cases.



“Without instant and reliable sitewide communications, a motorsport meeting could not take place safely”

The new digital radio system enables a race meeting to take place safely and efficiently for the benefit of participants and spectators alike.

Ben Pienaar reports: “During a race, communication with participants is achieved by Flag Marshals to alert drivers of dangerous conditions and incidents. The Flag Marshals are in constant communication with Race Control over the radio system to receive instructions or report incidents.

They can also hear all other communication from Race Control and the Race Director and can communicate with all or individual drivers at Race Control's instructions; in essence, a motorsport meeting cannot be run safely without a reliable radio system providing instant, clear communication throughout the circuit”.

Mark Kinghorne, Executive Manager at Global Communications commented: "The migration from analogue to digital technology resolves a number of issues inherent in the old analogue system at Zwartkops.



The new NEXEDGE NXDN digital system delivers improved security against casual

eavesdropping, sitewide coverage and excellent audio quality, especially in noisy environments. It also provides the flexibility to be configured to meet the needs of the circuit as required and can easily be expanded to accommodate additional users and groups or to provide additional coverage should the site be extended.

The Kenwood NEXEDGE NXDN devices supplied have been proven with the thousands of users we have supplied in South Africa to be extremely reliable and durable, so we expect them to be giving the team at Zwartkops Raceways many years of trouble-free service".



System Details

System: KENWOOD NEXEDGE NXDN

Type: Digital Conventional

Channel Access: 6.25 kHz FDMA

Air Interface Protocol: NXDN

Repeaters: 1 x NXR-810

Base Stations: 2 x NX-800E

Hand-Portable Radios: 27 x NX320E, 33 x NX320E3

Software: KAS-10 AVL / Dispatch Suite



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