



## Anti-poaching products and solutions

Poaching, the illegal hunting of wildlife, is quite rampant in Tanzania and Africa in general. The common animals that are hunted down in Tanzania are elephants and rhinos mostly for their highly valued tusks and horns.

Poachers have become very crafty and clever in the way they hunt these animals down while at the same time be very evasive thus giving anti-poaching agencies/officers/rangers a difficult time in curbing the menace.

Radiowave Communications Limited, a leading provider of Wireless, Voice and Data solutions, has partnered with World class suppliers and solution providers to help curb the menace through advanced technological means. With advanced technology and equipment, anti-poaching operations can be planned more accurately, effectively and safely executed.

## Company Profile

As the African continent emerges as a leading player in the developing world, communication, and tracking solutions are becoming increasingly more necessary for monitoring assets efficiently and securely using innovative and customized networks.

Organization's personnel need to be free to focus on their primary activities. They should not have to worry about the technological suitability of their communications systems.

Radiowave Communications is one of the leading providers of Wireless & Navigation, Voice and Data solutions in East Africa with over 15 years of experience. We offer a range of internationally recognized best-brand products and a well-established support structure making us perfectly positioned to offer flexible, innovative telecommunications and tracking solutions that are uniquely tailored to the specific requirements of our clients across Eastern Africa and beyond.

We have the expertise, partnership, and networks that enable us to meet the Wireless & Navigation, Voice and Data solution needs of diverse organizations including governments, anti-poaching units, tourism, mining, engineering and security sectors.



## Key Related Customers

For more than a decade we have supplied two-way radio network solutions to Tanzania National Parks, Game Department, Kikosi Dhidi Ya Ujangili (KDU), private NGO's doing activities of anti-poaching, Tanzania Police Force and number of other government departments as well as other private entities.



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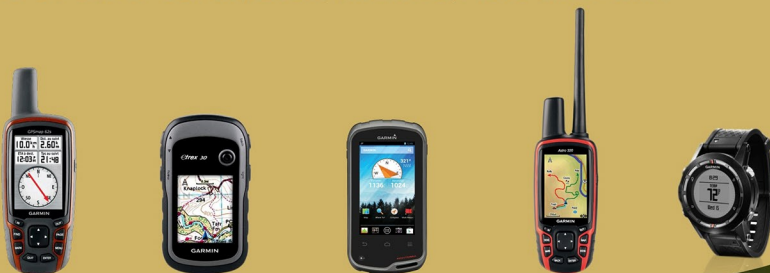
## GPS and How it Works

The Global Positioning System (GPS) is a space-based satellite navigation system that provides location and time information in all weather conditions, anywhere on or near the Earth where there is an unobstructed line of sight to four or more GPS satellites.

GPS devices use the Global Positioning System to determine the precise location of an object or person. The GPS devices also record the position of these objects/people at regular intervals.

The GPS devices can help the Field Rangers to accurately pin-point their precise location which is very important when planning & executing anti-poaching operations or calling for backup.

Radiowave Communications Limited, in conjunction with Garmin, has a wide range of GPS devices that are very crucial in the fight against poaching. These include the GPSMAP series, Etrex, Monterra, Astro and Fenix.





## GPS MAP

GPSMAP is a 3-axis tilt-compensated compass, a barometric altimeter and supports Custom Maps, BirdsEye™ Satellite imagery (subscription required) and photo navigation. Rugged and waterproof, GPSMAP has a high-speed USB connection, a sleek new design and connects wirelessly to compatible handheld devices.

## Features

- Explore    ➤ Get Your Bearings    ➤ Share Wirelessly    ➤ Keep Your Fix
- Add Maps    ➤ Get Connected    ➤ Find Fun    ➤ Plan Your Next Trip

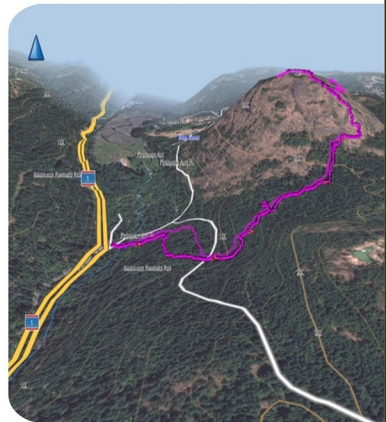
GPS is an essential part of any anti-poach operation





## eTrex

Enhanced 65K colour, brilliant, sunlight-readable display. Durable and water resistant with a built-in 3-axis tilt-compensated electronic compass. The barometric altimeter tracks changes in pressure to pinpoint your precise altitude. The microSD card slot and 1.7 GB of internal memory, allows you to load extra maps. High-sensitivity, GLONASS-enabled GPS receiver and HotFix satellite prediction to locate your position quickly, tracks both GPS and GLONASS satellites simultaneously.



eTrex 30 is a section navigation device with mapping and satellite image background.

**GARMIN**





## Garmin Tactix

The field-ready Garmin tactix® is a high-sensitivity GPS navigator plus ABC watch packed with features for training, exploring and more. Inside, it's an altimeter, barometer, 3-axis compass and tracker with 1,000 waypoints, 10,000 track points and TracBack capabilities. Outside, it is water resistant (to 50 meters), matte black and non-reflective with a green LED backlight that won't flare out night vision.

**GARMIN.**



- ✓ High-sensitivity GPS with automatic calibrating altimeter, barometer and 3-axis compass
- ✓ Scratch-resistant, curved lens prevents reflection
- ✓ Negative mode liquid crystal display with green LED
- ✓ TracBack to navigate back to your starting point





## Monterra

Monterra is Garmin's first wi-fi enabled outdoor handheld GPS device that combines powerful location and mapping capabilities and the versatility of the Android Operating System.

With Monterra, Rangers are able to upload pictures or Co ordinates via a wi-fi gateway device from remote locations to any where in the world hence speeding up the actions required.

## Features

GPS Mapping Powerhouse with Android™ OS

- 3D MapMerge
- Quality Photos
- Powerful Battery, Beautiful Display
- Get Your Bearings
- Share Wirelessly
- Rugged and user friendly
- Load Maps and Millions of Geocaches
- Radio





## **Astro® 320 Handheld**

The premier high-sensitivity satellite tracking system for sporting dogs.

Currently Rangers are required to keep a close leash on the dogs because they may be required to spend a lot of time in locating them once they run off. By having Astro collars on the dogs they will be able to let the dogs loose for longer distances and time while tracking their movement.

The Astro tracks up to 10 dogs at one time, so you can see where they are on a the full colour 2.6" handheld display. Astro comes with enhanced maps and can track dogs up to a 9 mile range, you can also set geofence alerts if the anti-poaching dogs go out of range.

The dog collar has a built in transmitter that sends its GPS location to the GPS handheld device, with a built-in 3-axis electronic compass so you know where the dogs are in relation to you.

“GPS is an essential part of any anti-poach operation”

Get the enhanced Astro bundle with DC 50 dog device today.



## **VIRB XE - No Proof, No Glory**

The VIRB XE action camera shoots rich, high-definition, wide-angle footage at 1080p60, 12 megapixel photos at up to 30 frames per second, and captures more of your action. Designed for the toughest environments, VIRB XE can dive up to 50 meter depths without a case, allowing capture of cleaner and clearer audio. Powered by Garmin GPS, G-Metrix allows you to track and overlay how fast, how far, how high and how intense the moment truly was.

- ✓ **Professional Video:** 1440p30, 1080p60, 960p100, 720p120 and 480p240 with image stabilization and zoom levels
- ✓ **G-Metrix:** Built-in Garmin GPS and sensors track your movements in real-time and display it all in powerful gauges, graphs and more
- ✓ **Photo:** 12 megapixels; burst up to 30 frames per second; time lapse
- ✓ **Audio:** Exposed microphone for extremely clear audio even underwater; wireless HD audio from Bluetooth®-enabled headsets or microphones
- ✓ **Waterproof** to 50 meters without a dive case



**Ridiculously Easy to Capture, Edit and Share**



## Command Centre

Command Centers need to be equipped with all the necessary supporting tools and equipment necessary to fight poaching.

Radiowave Communications Limited has the capacity to setup cutting edge Command Centres with all inclusive necessary equipment.

### This includes:

- Backup power systems,
- HF & VHF Base Stations with high gain Antenna Systems,
- Rugged computers and LCD televisions for Tracking Rangers & Vehicles, Mapping and GIS Systems,
- Satellite Communication Systems for Voice and Data
- Any customized communication requirement by the client



## HF Communication

High Frequency (HF) radio allows for first-line and backup communications over long distances in remote regions. This is useful for communication among rangers in large game reserves.

Radiowave has the most cutting edge HF communication solutions in Kenwood and Barrett, Tactical and non tactical, it all depends on client requirements, all our HF communication are exceptional Make and Models, which offers outstanding voice quality, rugged, meets military standards and very secured by frequency hopping, scrambler and more military standards securities.

The solutions can be supplied as base stations, mobile units or man pack with all supporting equipment and accessories.



**KENWOOD**  
Listen to the Future

# Training



Radiowave Communications Limited has been installing High Frequency (HF) two way radio systems for over 13years. We believe that system planning and efficient operation of any two way radio system is the key to the client enjoying the full benefits from their investment. We champion this belief by offering full training to our clients in the use of the two way radio system.

With proper training, the users will be able to run their day to day operations much more efficiently and effectively. We offer:

- ☒ Operator training
- ☒ Supervisor training
- ☒ Systems planning



## VHF or UHF Digital Communication

Digital two-way radio systems allow rangers to be in constant and rapid communication while at the same time keep track of their location. Rangers can therefore communicate more clearly while keeping track of each other's positions which is very crucial in case of an emergency. Radiowave Communications Limited has wide range of digital two-way radio systems to choose from depending on the intended use.



**MOTOROLA**  
**MOTOTRBO**

**KENWOOD**  
**NEXEDGE™**





In the fight against poaching, rangers need to be able to see beyond the limitations of the naked eye. A good pair of binoculars will help them spot & spy on illegal activities taking place in the game reserves at a safe distance. Once the rangers know what they're dealing with they can then put in place an appropriate plan of action.

With a wide range to select from, the rangers can get binos that are best suited for the environment they're working in hence increasing the efficiency and effectiveness of their day to day operations.

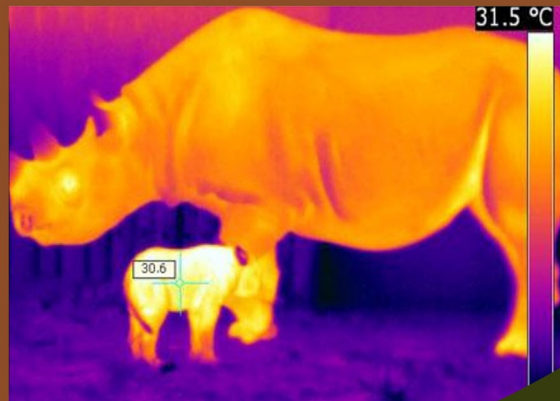
## Night Vision Outdoor Technology



Darkness provides the perfect cover for all illegal activities and the poachers know this very well. This is why most of the illegal operations by poachers take place at night when they're sure that being spotted is quite difficult. Night vision eliminates the limitation by rangers to effectively carry out anti-poaching operations at night by turning night into day using optics with built-in infrared illuminators and advanced light gathering technology.

# Thermal Imaging

All living things give off heat. The heat given off can be used to either produce an image of the living thing or to locate it. This technique of using heat signatures to locate objects is known as Thermal Imaging and can be very useful to Rangers when executing operations in the dark. The rangers will be able to locate poachers by tracing their heat signatures even in the cover of darkness. Radiowave Communications Limited in conjunction with reknown partners and suppliers has a wide range of world class thermal imaging devices suitable for anti-poaching operations.



**Bushnell**



# Satellite Voice Communication

This is telecommunication which involves establishing communication using satellites across the globe. Satellite Communication is vital for Rangers because they will not be limited by the availability of hotspots to keep the communication lines open. We have a wide variety of Satellite products by Thuraya and Inmarsat that will come in handy when running anti-poaching operations.



SatSleeve for Android  
Samsung Galaxy S3, S4, S5



SatSleeve for iPhone  
iPhone 4/4s, 5/5s



Thuraya XT/XT DUAL



Thuraya XT-LITE



Inmarsat

**THURAYA**   
stay close

  
**inmarsat**

“Charge Your Satellite Phones On the Go”





During anti-poaching operations, fast and reliable transfer of data to and from the field is very important. With Satellite solutions from Thuraya and Inmarsat, this is easily achieved.

Radiowave Communications Limited in conjunction with Thuraya and Inmarsat has a wide range of Satellite products suitable for fast and reliable communication anywhere in the vast Game Reserves.



Thuraya IP



Thuraya IP+



Thuraya IP Voyager



Inmarsat BGAN

**THURAYA**   
stay close

  
**inmarsat**

## Features

- Simultaneous voice and data
- Global coverage
- Easy to use
- Applications
- Standard IP
- Streaming IP
- Voice
- ISDN

# GPS Tracking

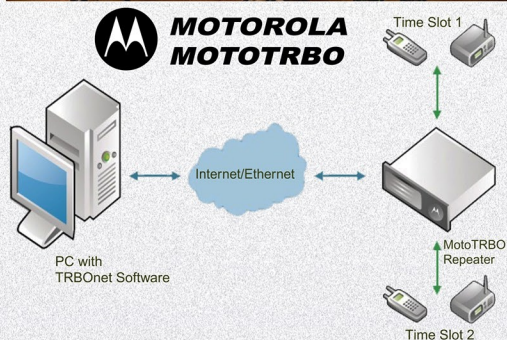
This is whereby a device uses the Global Positioning System to determine the precise location of an asset or person. The device goes further to record the position at regular intervals.

Accurately pin-pointing where the poachers are located is very crucial for rangers especially when planning & executing anti-poaching operations or calling for backup.

## TRBOnet

TRBOnet is a professional grade application especially developed for Dispatch centers that monitor large amounts of traffic. It supports digital as well as analog channels that could be helpful for clients during their migration period.

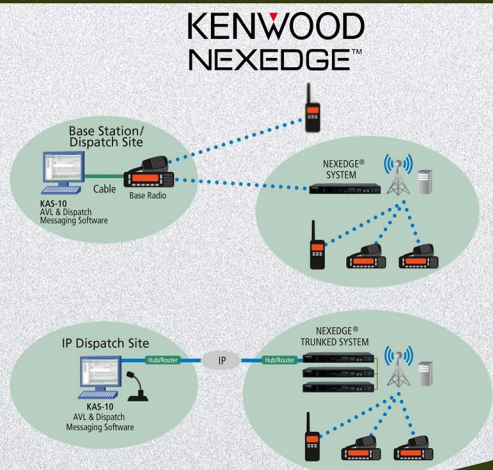
TRBOnet makes response during emergency situations quick and effective, and can be used to link multiple agencies or departments at the touch of a button by the dispatcher.



## KAS 10

KAS 10 is a professional application software developed for GPS AVL and Dispatch centers for NEXEDGE. It supports both analogue and digital channels.

Response during emergencies is faster and more efficient with the KAS 10 and it can be used to link multiple agencies or departments at the touch of a button by the dispatcher.



# Rugged Computers



Ruggedness is the ability of a computer to operate in most types of exposed working conditions. The most common environmental specifications that rugged computers are tested for include temperature range, military standards and IP rating.

The Game Reserves are environments that are generally not best suited for computers to operate in. The rangers therefore need to be equipped with computers that can withstand these conditions and still function optimally in the day to day operations.

Radiowave Communications Limited is in a position to provide world class rugged computers capable of working in these tough conditions for 3 to 5 years of the computer's life expectancy.

## Solar power systems and Portable solar power packs / flexible solar panels

Solar power is power obtained by harnessing the energy from the sun's rays using solar panels.

Rangers are always on the move, working hard to protect the wildlife from poachers. While in the field, the Rangers may need to recharge or power up the electronic devices they use. At this point, portable solar power becomes vital as it can be used anywhere in the field to recharge or power up the devices provided there's access to the sun's rays.



Radiowave Communications Limited has partnered with renowned solar power companies and therefore has the capacity and capability to provide high quality solar power solutions; from complete standalone and grid systems to various portable solutions depending on the client's requirements. Radiowave can also provide solar water pumps as well as wind powered generators.



Poaching is not just limited inland but it also takes place on water on a large scale. Illegal fishing in lakes and the ocean and venturing into protected areas by poachers has led to the depletion of Marine wildlife and if not checked, may result in the extinction of some marine creatures. Some Game Reserves such as Gombe, Saa Nane Island and Mahale are also located in or around lake zones which may require the rangers to use boats to move around and Marine products to communicate & navigate.

# Marine Solutions

Marine products are designed to be able to function optimally and consistently even when they are exposed to unusual wet conditions. They are designed to either be water resistant or water proof thus keeping the communication lines clear and open even after prolonged exposure to wet conditions.

Radiowave Communications Limited has partnered with top suppliers of marine products to provide end users with cutting edge Navigation, Communication and Tracking solutions i.e. Icom, Vertex and Garmin, thereby enabling us to have the capacity and capability to provide these products necessary in the fight against poaching.





# ***Bush Tracker***

DESIGNED FOR THE TOUR OPERATOR



In the fight against poaching, Rangers constantly move from one place to another within the Game Reserves in their vehicles in either pursuit of suspects or general patrol. It is very important that the vehicles' movements are tracked, monitored and traced to ensure accuracy, improved efficiency and faster responses to emergencies in the anti-poaching operations.

Utrack Africa Limited has various solutions that are customized to manage fleets, keep track and locate the vehicles whenever the need arises. The solutions not only work via GPRS but also via Satellite hence increasing their efficiency and reliability. Some of the common and important features include:

- ☑ Detailed Maps (with enhanced park information)
- ☑ Real time automated tracking
- ☑ Emergency button: enables the driver to send out an SOS in case of an emergency
- ☑ Fully web-based solution
- ☑ Wide range of reports e.g. vehicle history, stop hours, speed violations e.t.c



Radiowave Communications Limited is well equipped to provide quality and reliable communication solutions of any scale be it small or large in any type of environment.

We are committed in helping the Game Reserves bring an end to this poaching menace by ensuring that they are well equipped with the right tools for anti-poaching operations.



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