



# Trolley Scan (Pty) Ltd

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## TROLLEYPONDER/ECOTAG/RADAR RFID Newsletter #105

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Your latest copy of our regular newsletter keeping you up to date with developments.

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#### 1. Development of Solar-powered standalone UHF RFID reader

At the request of some farmers wanting to monitor their livestock in remote fields, Trolley Scan have developed a solar powered RFID reader that works in conjunction with the existing Eco-cattle(tm) eartags to provide a self contained RFID system with a 10 metre reading range. The system can be located in a distant location that does not have the conventional utilities such as power and communications.

Although solar power and batteries are well-known technologies, making a RFID reader that can work with these technologies has been a major challenge. A reader operating on solar power has to be able to handle serious power fluctuations when the solar batteries are discharged. The reader has to be able to sense the condition of the batteries, and when they hold sufficient energy, to restart the entire system and to re-establish communications with the remote computer systems. The reader has to send status messages in the dying and coming to life phases so that the remote computers are aware of the current status of readers.

Conventional battery technology and charging systems are not suitable as there might be long periods due to weather when there will not be sufficient solar energy to operate the system and the batteries might discharge to zero volts. To cater for these situations a special battery technology has to be used that can handle full discharge and even over-charge but still gives about a 20 year life.

The components of the reader had to be redesigned to handle lower operating voltage which is available from solar systems.

For communications we have made facilities to communicate either via cellphone networks OR point to point radio communications OR even via wire. The reader has to deal with the challenges of establishing communication, especially in the cellphone network situation where the network might be out of action.

Although this reader has been targeted at farmers both of cattle and wild game, it also has application in other situations where RFID systems are needed in remote situations where there are no power utilities.

The UHF reader works with the entire range of transponders that are that are made by Trolley Scan

For more info

[mailto:info@rfidradar.com?subject=Want\\_info\\_on\\_solar\\_reader](mailto:info@rfidradar.com?subject=Want_info_on_solar_reader)

## **2. Complete remote UHF RFID systems for farm applications coming shortly**

In our next newsletter we are expecting to announce the availability of the Eco-antelope(tm) complete systems for farmers. It provides the hardware and software to allow farmers to monitor remotely on the web from any location, the presence of their animals in a remote field. It makes use of the solar powered UHF reader and the Eco-cattle transponders giving up to 10 metre reading ranges of animals passing near the UHF reader.

## **3. Product range**

Trolley Scan are a manufacturer of UHF RFID systems. Trolley Scan manufacture fixed readers, portable readers, solar powered readers and RFID-radar systems (Real Time Locating systems that give accurate position information) as well as a variety of transponders for different applications. Transponders come in the form of passive transponders with operating ranges up to 20 metres and battery assisted transponders with an operating range up to 40 metres. Trolley Scan also combine some of these components into packages for end users which are supplied with the appropriate software. Typical applications are asset management, notebook tracking, equipment barriers, store control, wild game and cattle monitoring, event logging and sports timing systems.

Trolley Scan have been delivering their RFID solutions for the past 16 years and offer full support for all their equipment.

## **4. Getting your own complete RFID/radar system**

You can order RFID systems or RFID-radar systems from [Trolleyscan.com](http://Trolleyscan.com)

Trolley Scan provide small RFID reader systems which give new users the ability to evaluate UHF RFID and their applications without needing specialised skills.

Trolley Scan provide a variety of easy starter systems for first time users who have an application that needs a solution. Typical packages are :

- ? Standard UHF long range readers with antennas and 100 transponders
- ? RFID-radar system comprising long range reader, antennas and a variety of different transponders.
- ? RFID-asset tracking systems comprising portable reader, antenna and a variety of transponders with software.
- ? RFID-notebook/laptop tracking system comprising reader, antennas, transponders and software
- ? Solar powered RFID reader systems for monitoring livestock.

In addition components such as readers and transponders are available

These systems are already operating in 52 countries.

To find out details of the systems and to order see <http://trolleyscan.com/>