

## Radius RND 100

Data Radio Diagnostics Tool

putting you in control



Radius is a leading global industrial group within advanced communication and automation technology. With a constant drive for creating high quality solutions to complex problems, Radius is helping customers all over the world to reach their financial and regulatory goals.

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DATA COMMUNICATION



### REMOTE DATA RADIO DIAGNOSTICS FOR THE PDR DATA RADIO

- Safe Supervision
- Increased Protection Level
- Increased System Performance
- Greater Return on Investment
- Better Use of Resources
- Remote Configuration
- Remote Diagnostics

## Desktop Diagnostics Software for Remote Monitoring of Critical Radio Network Functionality

To further protect the assets connected to the PDR radio data network Radius provides the Radio Network Diagnostics tool RND 100 to protect the integrity of that system.

The RND 100 is a software tool, which works in conjunction with the PDR data radio to give the user complete control through a 'real-time' overview of their entire radio network. Thus allowing the users to increase their system performance through;

- Early warning of potential communication risks
- Remote management of the communications network
- Remote interrogation of network parameters
- Online maintenance log
- Remote site reconfiguration
- Status of each repeating path in the network

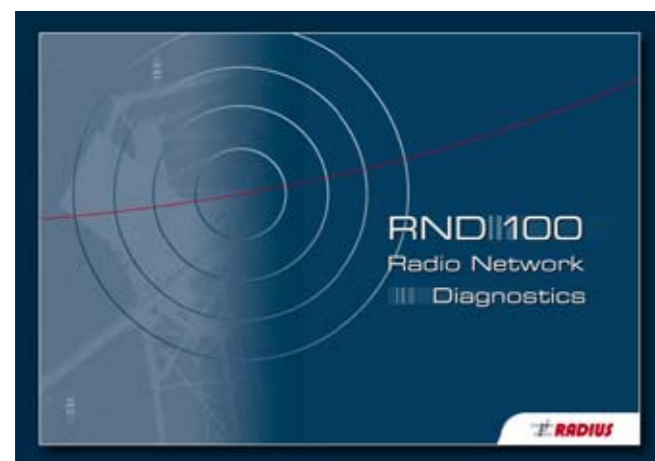
Thus before a potential communication fault manifests itself, it can be easily identified and the relevant action taken.

### COLLECTS DATA FROM THE RADIO TRAFFIC

The diagnostics work through the collection and display of non-intrusive data received along the ordinary data traffic in the PDR radio network. When a data telegram is transmitted through the network, extra information on the status of the network is collected and presented to the user.

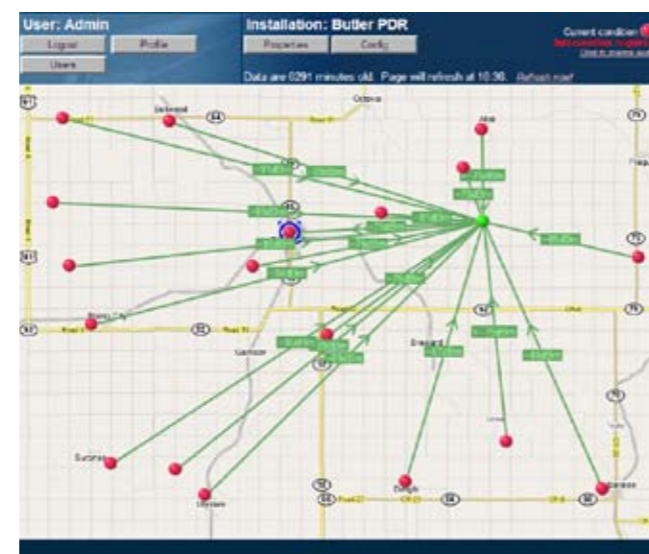
### WINDOWS APPLICATION

The RND 100 runs via a web browser running either locally on a computer connected to the master radio or across the Internet.



### EASY OVERVIEW

If more than one PDR master is being used by the RND 100 then a top-level page displays a symbol for each master along with an Alarm Icon. Should there be any alarms within the network associated with the Master then the alarm will show the appropriate condition state. The user can then 'click' on the PDR master symbol and the entire network for that PDR will be displayed.



The network overview display is graphical and shows the position of the slave sites in relationship to the master and displays the radio links between sites, including all repeating hops. Each slave site has an associated alarm icon, which changes from green, through amber to red depending on the nature of the alarm. The display also shows the status and level of the radio signal strength between sites. Clicking on any of the icons brings up a window, which shows the current status for that slave radio.

This window displays the following;

- The radio station Name
- The downlink RSSI level
- The uplink RSSI level
- The radio supply voltage
- The radio battery back up voltage
- The radio temperature



Secure data when and where you need it



### SELF-CONFIGURING

The RND 100 is designed to be very simple to use and configure. The radio slaves are automatically populated as soon as the master radio receives a data telegram. Thus if radios are added to an existing network the RND 100 will automatically detect and display them. The user can upload the background display at any time and set the coordinates of the edges. The user can change the details of any slave radio within a separate self-populating table. Here the user can change radio station names as well as the coordinates. If the user drags a radio icon around the screen then the corresponding coordinates in the table are also changed.

### REMOTE RADIO CONFIGURATION POSSIBLE

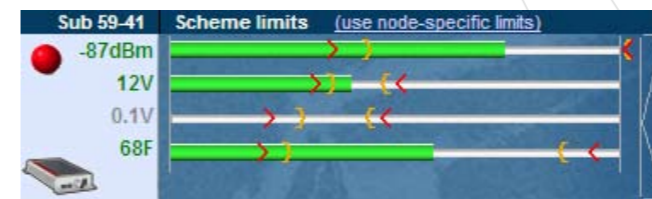
The PDR radio has an additional port that can be used for programming the unit and for collecting data regarding the performance of remote units. Via the RND 100 it is also possible to change the settings of a radio remotely via the radio communication network.

### PROGRAMMABLE ALARM FUNCTION

The RND 100 has preset alarm settings designed around the PDR radio requirements. However the user can change these alarms at any time. This can be achieved either globally for all the radios or individually for a specific radio. Changing the alarm states is as simple as dragging the alarm trigger point along a slider. The value is simultaneously displayed to the user.

Namely;

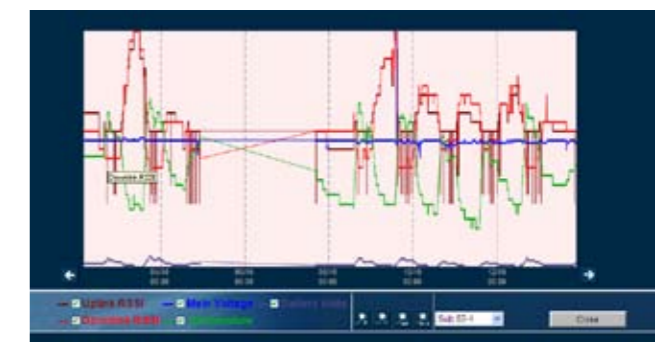
- Alarm Level 0 Clear Normal
- Alarm Level 1 Orange Warning
- Alarm Level 2 Red Danger



When a radio is within its normal parameters it is displayed in green. If values start to deviate from its normal limits the background color changes firstly to orange and then to red as the value reaches the preset alarm limits. This will allow the user to very quickly see the status of the network and react accordingly.

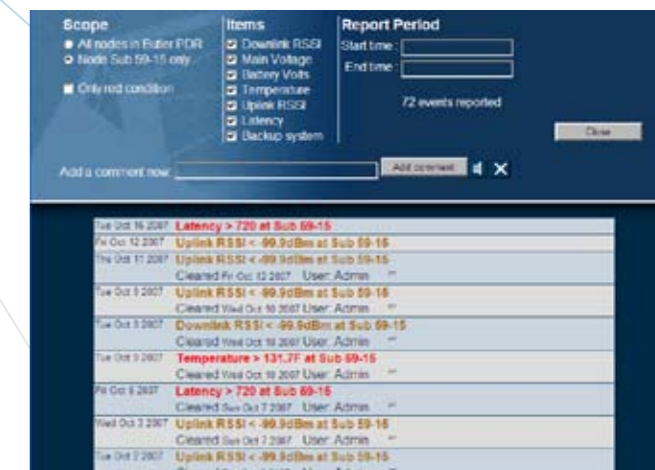
### HISTORICAL DISPLAY

The RND 100 logs all the data from a radio so that historical information can be displayed in graph form. The user can select the time frame and show all or selected parameters from the radio. A zoom function allows the user to zoom in or out with respect to the timescales. The user can also switch between sites with the graphical display.



### EVENT LOG

All alarm events are logged. The log can be interrogated at any time and is user configurable so that all alarms in the network can be displayed as well as selecting alarms from a particular radio or of a particular type as well as selecting the time window for the alarms. The user can add their own comments at any time to the Event Log. Each time an alarm is cleared or a comment logged, the system also records the user name.



### USER NAMES AND AUTHORITY

The user can set user names and passwords and can allocate them 5 different levels of privileges, from an 'administrator', down to a simple 'view only' user.