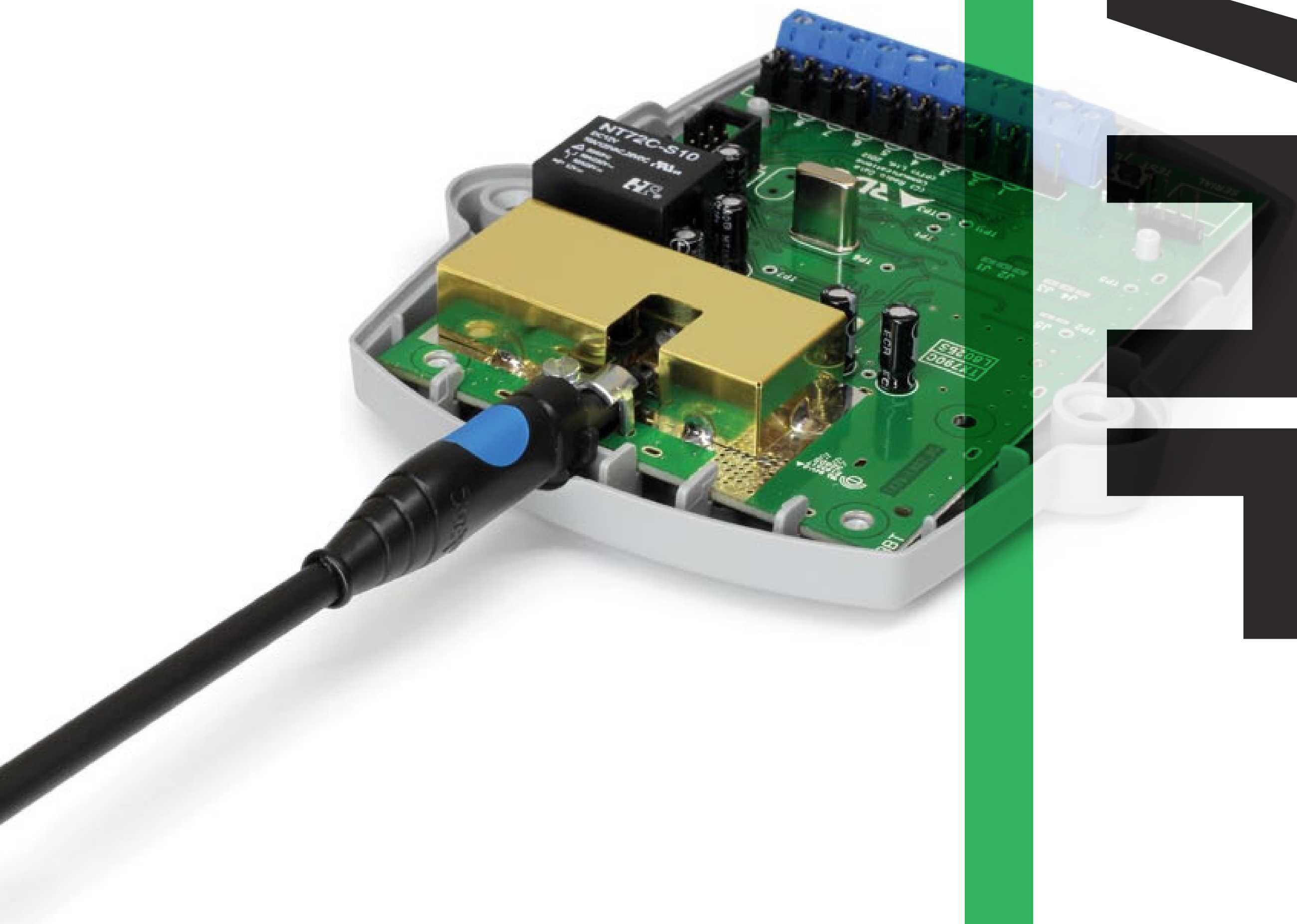
VHF



RDC™

VHFCOMMUNICATION

Still the most cost effective solution

VHF remains the most cost effective and reliable form of alarm communication and is widely used by both large and small alarm companies. It is ideal for companies competing in the increasingly cutthroat monitoring market. RDC's VHF products have been developed and refined over the last 35 years and are widely used both locally and internationally.

The best backbone in the business

Every transmitter in the field relies on the network infrastructure and base station for reliable communication. RDC has continued to develop and refine its VHF network systems to meet the ever increasing demands of the industry. RDC networks are the networks of choice in the industry for areas with difficult terrain.

Legendry VHF transmitters

RDC has supplied over 1.5 million VHF transmitter units nationally and internationally.

Fast and cost effective setup

With RDC SABRE frequencies available nationally, it is fast and simple to set up a VHF monitoring system. Hardware costs are very reasonable and RDC will even help first time users to get started.

Most cost effective communication

There are no data costs for VHF communication. Customers who have their own frequency pay only the annual radio license fee and customers using RDC networks pay a small monthly fee per unit.

In-car monitoring

RDC's in-car monitoring system is designed to improve reaction times for security companies using the RDC system. Signals can be sent simultaneously to the control room and the response vehicle/s, where customer details are instantly available to the patrolling reaction officer.

RDC makes it simple for you

SABRE frequencies available country wide

RDC operates networks around South Africa. Established RDC networks mean that alarm companies can operate without having to set up or maintain their own network infrastructure.

Frequency management

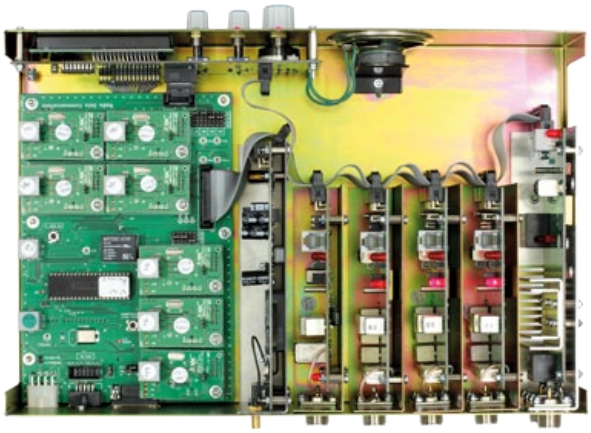
RDC's frequency management department handles all South African frequency related issues for clients, from planning new frequencies and dealing with ICASA applications, to keeping precise records. This means that our customers can concentrate on fighting crime instead of paperwork.

Installation training courses

RDC provides comprehensive installation courses to ensure the highest possible installation standards.

D-20

Base Station / Repeater



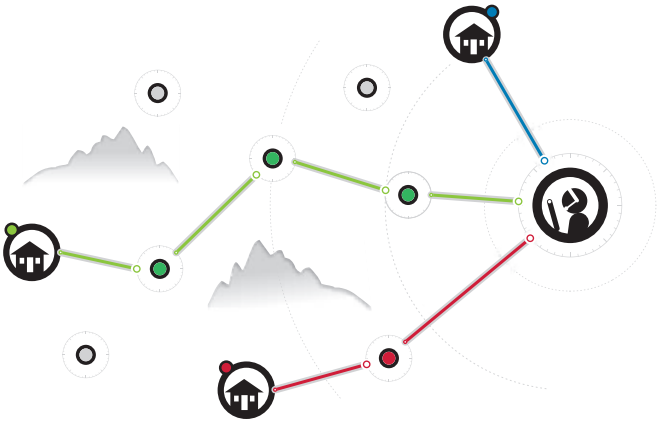
The D-20 unit can be configured as either a base station or repeater unit.

When configured as a base station, the unit is generally installed at an alarm company's control room to receive signals from alarm installations. When configured as a repeater, the D-20 unit can be installed at multiple high sites to form a repeater network. Repeaters are installed at strategic sites to cover the alarm company's area of operation and to extend the range of signals coming from alarm installations.

- **Signal acknowledgement** (handshaking) capability reduces network congestion and increases signal integrity.
- **Pre-programmed signal routing** ensures that signals take the fastest most efficient route to the base station.
- **"Daisy chain" capability** allows signals to be sent out of difficult terrain and over extended distances.
- **High end receiver** with sophisticated front end filtering for interference immunity - particularly important for interference prone repeater high sites. No additional cavity filters are required.
- Each unit is able to accommodate up to 4 receivers, each on their own frequency.
- The unit may be used either as a base station or as a repeater to extend the range of transmitters on the network. One unit provides backup for a base station or repeater.
- Advanced features, yet reasonably priced.
- Compatible with all RDC transmitter models including Contact ID transmitters.
- Powered by an external PSU-100 2.5 Amp switch mode power supply and high capacity battery for load shedding conditions.
- Up to 30 repeaters per network for increased coverage and performance.
- Multi-user facility of up to 400 users.
- Pre-programmed mains-fail and self-test reporting allows for proactive network monitoring.

IPRS

Advanced network software uses signal routing technology to send data along the most direct path to the base station. Combined with minimum airtime usage and a proprietary protocol, the system is more streamlined than ever. This makes RDC's network offering ideal for areas with difficult terrain and for high traffic networks.

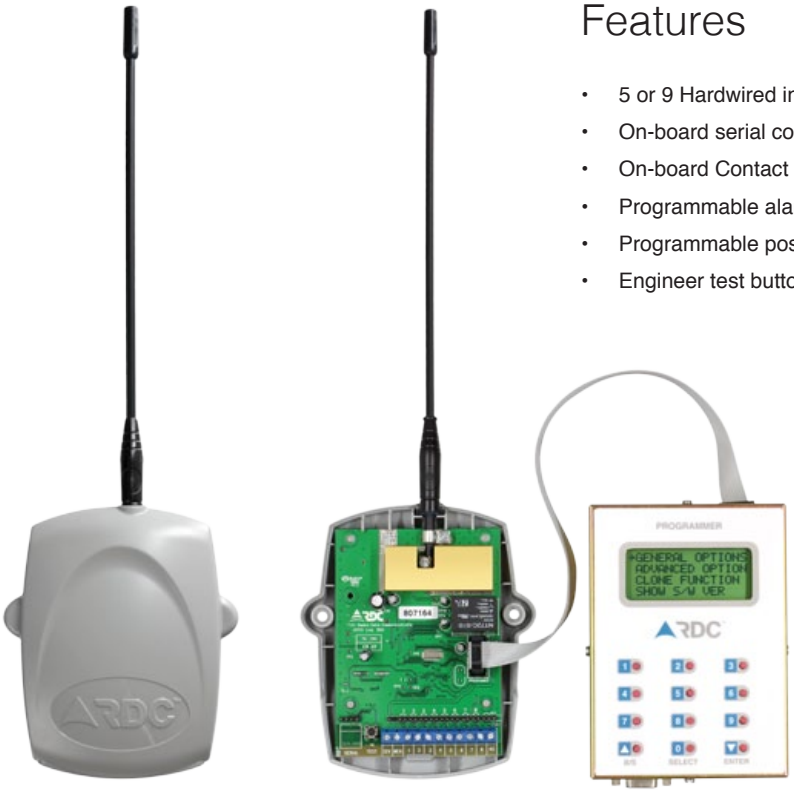


Upgrade to D-20

Upgrading from the existing Reporter 8102 system is simple and cost effective. Simply replace Reporter 8102 units with D-20 units to take advantage of all the additional features including Contact ID reporting. All existing transmitters in the field are compatible. Existing antennas can be used at the control room and at repeater sites.

TX-790

Range of VHF Radio Transmitters



Features

- 5 or 9 Hardwired inputs
- On-board serial connection
- On-board Contact ID option
- Programmable alarm input delay
- Programmable positive or negative trip
- Engineer test button

- **Field programmable features** for on-site convenience.
- **Synthesized design.**
- **Engineer test button** - for easy on-site testing.
- **Low battery reporting.**
- **Multiple lock-on protection features.**
- **Internal pull-up resistors** for negative trip eliminates the need for external resistors.
- **All inputs may be programmed individually** for positive or negative trip, making the transmitter compatible with any control panel.
- **A power-up signal** is sent which can indicate that the transmitter has been tampered with by an insider.
- **Intelligent mains fail/restore signalling** varies signal delays reducing unnecessary network congestion during power failures. The installer, however, is able to test mains fail/restore signals without delay for five minutes after applying power to the unit. The mains fail delay can now be set for between 15 - 250 minutes.
- **Signal buffering** is used when inputs are triggered simultaneously. Signals are stored in the transmitter and sent in event order.
- **The transmitter draws less current** placing less strain on the system battery.
- **LED indicates seven different transmitter conditions** for fast and simple diagnostics.

On-site programming

The purpose-built RDC programmer allows technicians to read current settings and program or re-program as required in the field within seconds. At the same time, sensitive functions are PIN protected to guarantee complete security across the entire network. Below are all the programming features you'll ever need in one compact, easy-to-use unit:

General Options
- Input polarity
- Alarm input delay
- Self-test timer
- Battery reporting
- Mains fail/restore delay

Advanced Options (pin protected)
- Set code
- Set channel

Clone Functions
- Read transmitter configuration
- Write transmitter configuration

Show Software Version

TRANSMITTERMODELS

TX 750C

Mains fail/restore
Telemetry 5

Lock up/open up
Alarm
Panic
A power up signal is sent
when power is connected

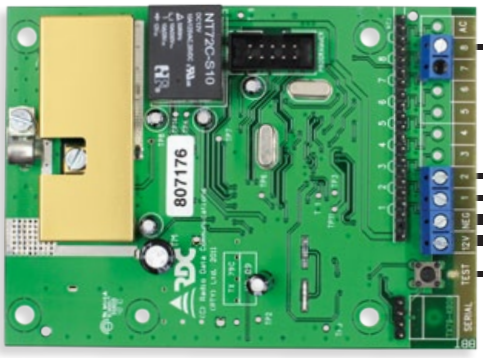
Engineer test button

TX 790C

Mains fail/restore
Telemetry 5
Telemetry 4
Telemetry 3
Telemetry 2
Telemetry 1
Lock up/open up
Alarm
Panic
A power up signal is sent
when power is connected

Engineer test button

TX 790CID



TIP

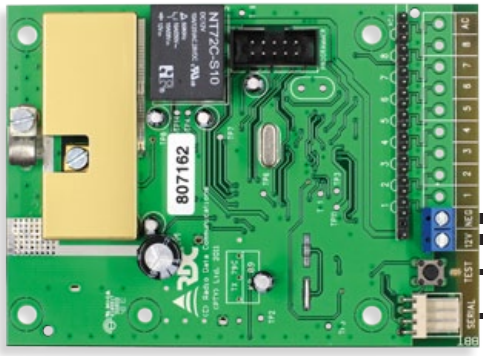
Alarm
Panic
RING

Engineer test
button

A simple two wire installation allows extra data to be sent in the Contact ID format. Open/lockup by user number or alarm by partition and zone can be sent in a single signal.

Up to **4 partitions** supported
Up to **31 zones** supported (zone 32 reserved for universal zone)
Up to **15 users**/key holders supported (user 16 reserved for universal user)

TX 7-serial



Engineer test
button
Serial connection

Panels now supported
DSC, Inhep, Risco LightSys, Paradox, Pima, Texecom

A serial link between the transmitter and the panel offers the following advantages:

- Extended radio telemetry data reporting.
- Eliminates the typical communications delay experienced with TIP & RING Contact ID connections.
- Telephone output on the panel remains available for dual monitoring.
- Provides a neater solution with fewer unsightly wires and quicker, easier installation.

Up to **4 partitions** supported
Up to **31 zones** supported (zone 32 reserved for universal zone)
Up to **15 users**/key holders supported (user 16 reserved for universal user)

TRANSMITTERSPECIFICATIONS

TX 790C Range

Frequency Range	132 - 174 MHz
Channel Spacing	12.5 KHz
Operating Voltage	10.5 to 13.8 Volts DC
Modulation Method	FM
Frequency tolerance	5 ppm
Narrow Bandwidth Spurious Emissions:	Harmonic > 60 dB Non harmonic > 70 dB
Deviation:	Adjustable between 1.5 and 2.5 KHz
Nominal	Approximately 2 KHz
Temperature range	-10 to + 60 C
Class of Emission	F3E
Antenna Impedance	50 Ohms
Current Consumption:	Standby 30 mA Transmit 1.8 Amps at 12V nominal
Overall Dimensions	112mm x 81mm x 24mm
Mounting	2 x 7mm holes
Antenna Socket	Internal tamper proof antenna connection
Transmission Duration	90 - 360 mS

Telemetry Inputs:

Output voltage range: Positive Trip - 10.8~14V Negative Trip - Open Collector 0~0.5V
The transmitter inputs accommodate only the above alarm panel output voltage ranges.
Alarm panels which do not meet this requirement will require a level converter interface.

Inputs Connections: Screw terminals

Models

TX 750C
Reports a 4 digit code number, customer ID and 9 telemetry conditions:
- open/close
- panic
- alarm
- low battery
- self-test
- engineer test
- telemetry 5
- dedicated mains fail/restore

TX 790C
Reports a 4 digit code number, customer ID and 12 telemetry conditions:
- open/close
- panic
- alarm
- low battery
- self-test
- engineer test
- telemetry 1
- telemetry 2
- telemetry 3
- telemetry 4
- telemetry 5
- dedicated mains fail/restore

TX 790CID
Reports a 4 digit code number, customer ID and 2 hardwired telemetry conditions:
- panic
- alarm
- TIP
- RING

Contact ID interface support:
Up to 4 partitions are supported / reported
Up to 31 zones reported
(zone 32 reserved for universal or unknown zone)
Up to 15 users / key holders reported
(user 16 reserved for universal or unknown user)

TX 7-serial (various control panels supported)
Reports a 4 digit code number and customer ID

Serial interface support:
Up to 4 partitions are supported / reported
Up to 31 zones reported
(zone 32 reserved for universal or unknown zone)
Up to 15 users / key holders reported
(user 16 reserved for universal or unknown user)

Network Models
Models are available for managed networks without open/close inputs

Operation
- Low battery and restore reporting.
- Self test programmable between 1-250 hours.
- Internal pull-up resistors for negative trip eliminates the need for external resistors.
- A power-up signal is sent which can indicate that the transmitter has been tampered with by an insider.
- A programmable mains fail/restore delay can be set from 15 - 250 minutes plus a random delay to prevent signal clashing. The factory default is 15 minutes plus the random delay. The installer, however, is able to test mains fail/restore signals without delay for thirty minutes after the installation.
- Engineer test button.
- Signal buffering - when inputs are triggered simultaneously they are stored in the transmitter and sent in priority order.
- LED indicates 7 different transmitter conditions.

TX-PACK

Features

- Long range transmitter
- Short range receiver (optional)
- Remote panic/s (optional)
- 12V 7 AH battery
- Export spec transformer
- Lid tamper switch

A long range transmitter combined with an internal battery and charger/power supply means that the unit always has sufficient power to transmit signals effectively - even during extended power failures.

The optional short range receiver turns the unit into a quick to install all-in-one panic alarm system. Long range panic signals can be sent from a remote panic button/s.

Ideal for installations where the transmitter is mounted far from the control panel and needs to be powered independently.

A tamper switch on the lid will report any unwanted tampering and the ability to monitor the trigger cable (optional on TX 790C) makes the unit ideal for high risk applications.

The TX-Pack is a rugged, proven product already popular in areas of Africa where power supply is often not reliable.

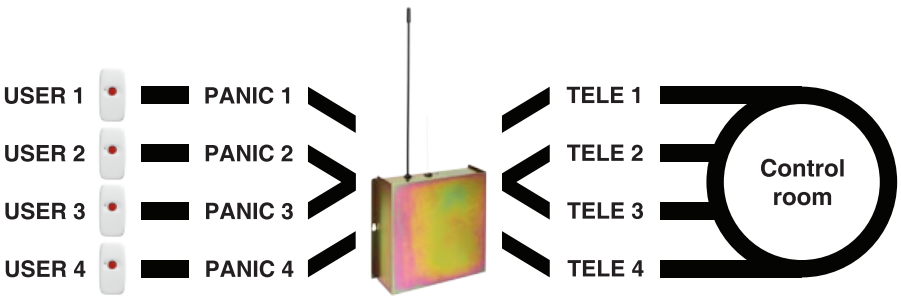
Ideal for estate agents at show houses, old age homes, panic for guards, cash points etc.

Power Features

- **Efficient, rapid recharging**
- **Low battery load**
  Draws only minimal current in standby and 1,5 A in transmit.
- **Super-long battery life**
  Continues to operate during extended power failures. Uses a 7 AH lead acid battery.
- **Rugged transformer**
  Designed to cope with Africa's harsh conditions and unstable electricity supply.
- **PSU-7 power supply**
  A 2.5 Amp intelligent power supply keeps the battery optimally charged even while under load and has overcharge protection. A LED indicates charge, AC fail and low battery conditions. An onboard boot strap enables power in the absence of AC.
- **Battery low shut off**
  Low battery sensing circuit will automatically disconnect the battery from the unit to prevent battery damage during prolonged power failures.

Multi channel receiver

Allows up to 4 different remotes to be used. The user who pressed the panic button can be identified at the control room.



IN-CAR
Base Station

Features

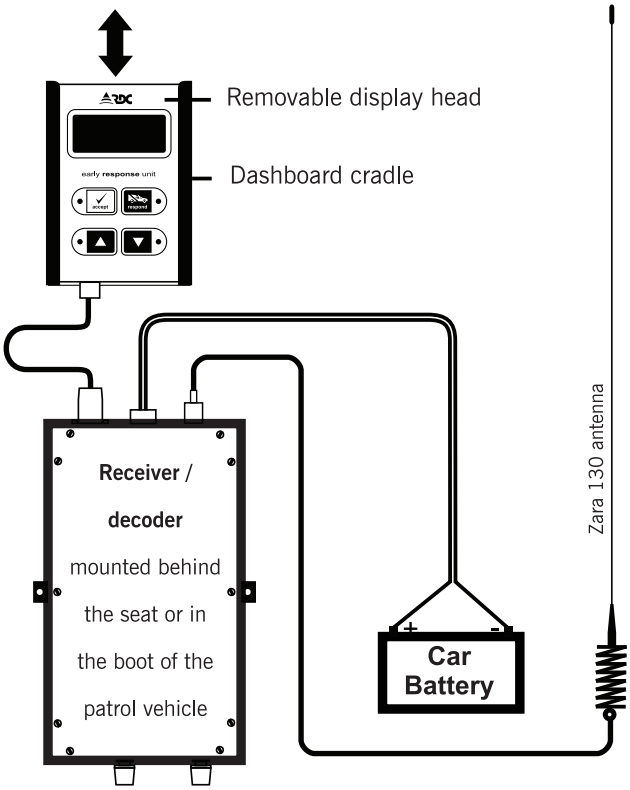
- Signals are sent directly to the response vehicle as well as the control room
- Client name & address are available immediately to the reaction officer to improve response times
- Simple operation for reaction officers
- Download event logs onto a PC

RDC's in-car monitoring system is designed to improve reaction times for security companies using the RDC system. Signals can now be sent simultaneously to the control room and the response vehicle/s, where customer details are instantly available to the patrolling reaction officer. The LCD display shows the customer name and address (can also include contact telephone numbers and cancellation codes if needed). This means that the reaction vehicle can start responding to a critical signal immediately, while the information is still being processed by the control room, dramatically improving reaction times. An audible alarm alerts the officer to critical signals. Operating the unit is very simple for the reaction officer. The system is an opportunity for security companies to gain a significant edge over competitors when targeting specific areas.

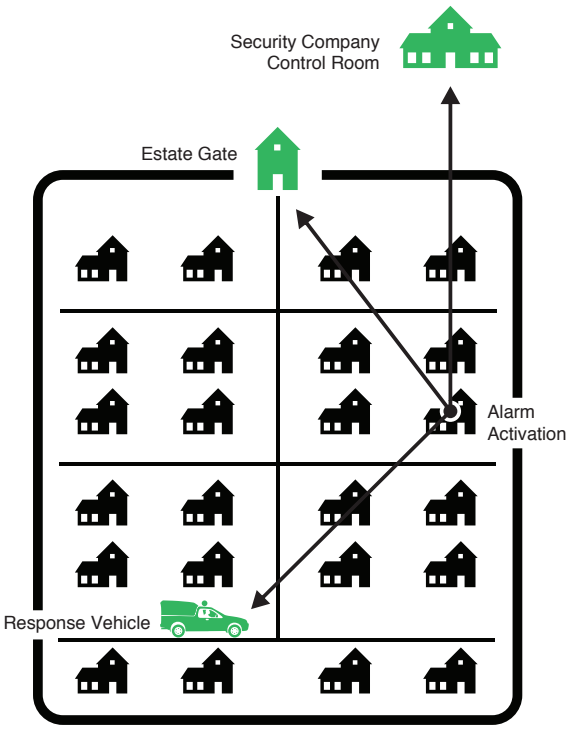
PC software supplied

Customer details can be entered into the display head using a PC or laptop with the custom RDC software provided. An existing client database can also be extracted from your monitoring software (Listener only) and then uploaded into the unit. The removable display head makes it easy to move the unit from the reaction vehicle for connection to a PC. Event logs can also be downloaded from the display head onto a PC should it be required to track the actions of the reaction officer.

Vehicle installation



ESTATEMONITORING



RDC's alarm monitoring system is ideal for both large and small residential estates. Alarm activations can be monitored internally at the guard house/s and/or by a security company. Alarm signals can also be sent directly to the response officer in a patrol vehicle with an in-car base station while on patrol, to reduce response times.

The low start-up cost and availability of base stations and transmitters means that the system can be set up easily. Shared frequencies are also available in all major areas nationally, which eliminates the need for estates to apply for their own frequencies.

Products

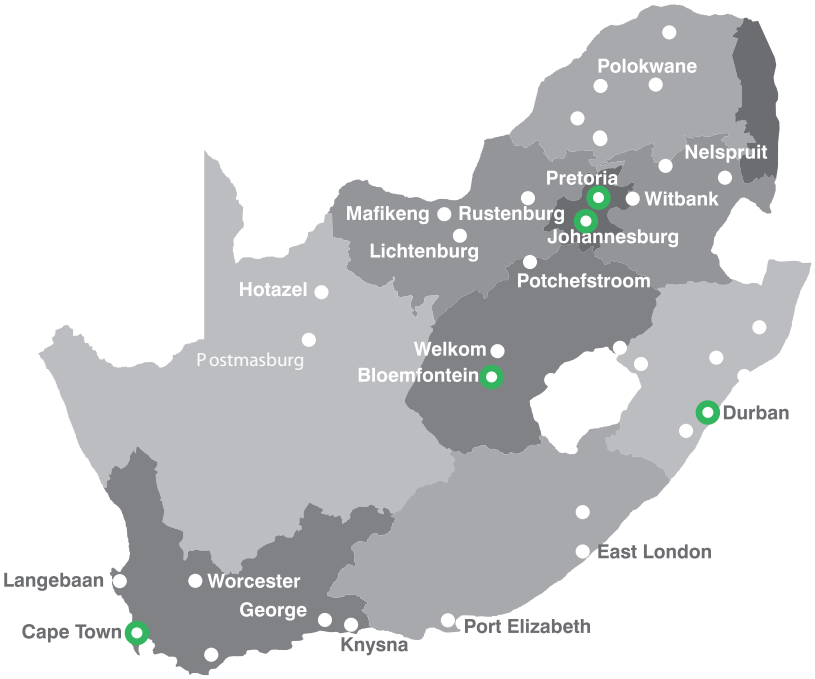
VHF transmitters
Transmitter units are installed at each home and send alarm signals from the residences to the base station/s and in-car base stations.

D-20 base station
These static base stations receive alarm signals at the guard house/s and/or security company control room. Add a printer to the base station for a simple guard house monitoring station with no computer or monitoring software required.

In-car base station
Installed in the reaction vehicle/s, these units receive alarm signals directly, to cut down reaction times. The customer address and other details are immediately available to the reaction officer.

FREQUENCIES

Management and managed networks



SABRE frequencies available country wide

RDC operates frequencies around the country for the exclusive use of our customers. With the shortage of frequencies, particularly in the major South African centres, the availability of RDC networks makes it easy for new companies to start operating quickly. It also means that security companies can operate on established RDC networks without having to set up or maintain their own network infrastructure.

Managed networks

RDC offers managed networks in the major centres. Because of the size and complexity of these networks, RDC offers a fully managed service. Congestion levels are managed to reduce signal traffic at busy times. The networks are also monitored 24 hours a day.

Frequency management

RDC's frequency management department handles all South African frequency related issues for clients, from planning new frequencies and dealing with ICASA applications, to keeping precise records. This means that our customers can concentrate on fighting crime instead of paperwork.

Network locations

- Bela-Bela (Warmbaths)
- Bloemfontein
- Burgersfort
- Butterworth
- Caledon
- Cape Town
- City of Tshwane (Pretoria)
- Durban
- Dullstroom
- East London
- Emalahleni (Witbank)
- Empangeni
- George
- Harrismith
- Hotazel
- Johannesburg
- King Williams Town
- Knysna
- Kroonstad
- KwaDukuza (Stanger)
- Ladybrand
- Ladysmith
- Langebaan
- Lichtenburg
- Mafikeng
- Mbombela (Nelspruit)
- Makhado (Louis Trichardt)
- Mosselbay
- Mthatha (Umtata)
- Polokwane (Pietersburg)
- Port Elizabeth
- Port Shepstone
- Postmasburg
- Potchefstroom
- Rosetta
- Rustenburg
- Tzaneen
- Vaalwater
- Vanderbijlpark
- Worcester

VHFACCESSORIES

D-20 accessories

PSU-100
The 2.5 Amp switch mode power supply is designed to power RDC's D-20 & C-20 base stations, utilizing either 7.2a/h or 18 a/h batteries. The PSU-100 has added features like battery low protection and battery polarity protection by fuse ensuring no damage is caused to your battery during a total power failure.

Thermal printer
Connects directly to the base station and prints signals in simple English text with time and date stamp. This is ideal where a computer and monitoring software are not required. A buffer prevents messages arriving in quick succession from being lost.

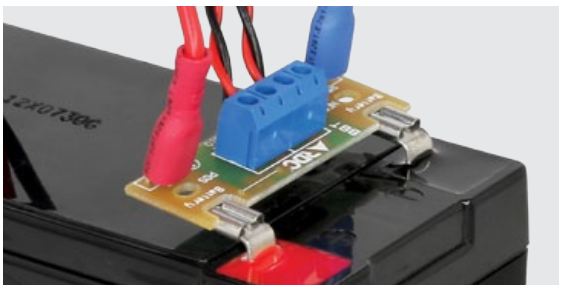
D20 printer module
Converts output from base station into plain English text and sends to a dot matrix printer with a time stamp and a date stamp. An internal buffer prevents messages arriving in quick succession from being lost.

Weather resistant cabinet
A lockup unit that safely houses and protects high site equipment from the elements, vandalism and tampering. The unit houses two D20 or 8102 repeater units, chargers and batteries.

Antenna tamper bracket
Secures antenna connections at commercial or communal high sites.

NEW BTE-7 battery terminal extender

The battery terminal extender provides a positive connection between your 7A/H battery and VHF radio, G-TX transceiver or SMS units. The board fits securely onto the battery terminals and provides screw terminals to connect power to devices for professional installations. A fusible link track provides dead short protection. Every professional installation must have one.



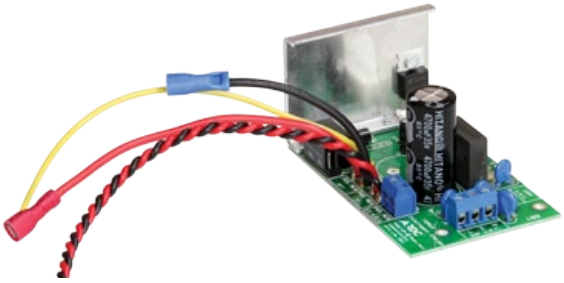
VHF antennas

Black Max antenna
A high performance dipole antenna designed for poor reception areas or to extend the range of signals. It is suitable for the entire South African alarm spectrum. The aluminum and plastic construction makes it corrosion resistant and ideal for coastal areas. The antenna is supplied completely assembled either with or without a PL-259 connector.

Whip antenna
A cost effective antenna suitable for most installations. The length of the antenna is critical for optimum performance and is frequency specific.

PSU-2 and PSU-7 power supply.

The power supply is used in all RDC's "Packs". It is however available separately in 1 Amp and 2.5 Amp versions to charge 2.2a/h and 7.2a/h batteries respectively. The PSU will keep the battery optimally charged even while under load and has overcharge protection. A LED indicates charge, AC fail and low battery conditions. An onboard boot strap enables power in the absence of AC.



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