

C•20 GSM base station



Installation instructions



Output string format

Baud rate 115200 bps
Parity none
Data bits 8
Stop bits 1
Flow control none

The output string is a modified version of the Sureguard message format as follows:

5RRLsMTAAAAAAAAAQXYZGGCC[DCT4]

5RRLs	=	Always 5RRLs	<i>5 characters</i>
MT	=	Message type (always 18)	<i>2 characters</i>
AAAAAAAA	=	Account code	<i>9 characters</i>
Q	=	Event qualifier	<i>1 character</i>
		E - New event or opening	
		R - New restore or closing	
		P - Previously reported	
XYZ	=	Event code	<i>3 characters</i>
GG	=	Group or partition number	<i>2 characters</i>
CCC	=	Zone numbers or users	<i>3 characters</i>
DCT4	=	14 hex (0x14)	

GPRS telemetries

E800 Panic	E801 Alarm	E802 Open	E803 Tele1
E804 Tele2	E805 Tele 3	E806 Tele 4	E807 Tele 5
E808 Close	E809 Eng test	E810 Self test - locked	E811 Power up
E812 AC fail	E813 AC restore	E814 Tamper	E815 Battery low
E816 Battery restore	E817 Self test - open		

Contact ID telemetries coming from GPRS transceivers are transmitted as they are received from the alarm panel. Therefore, standard CID codes apply. Only the account number is replaced by that of the GPRS transceiver.

General

Power consumption Approximately 500mA @ 12V (6 watts)
Input voltage 9Vdc (min) to 25 Vdc (max)

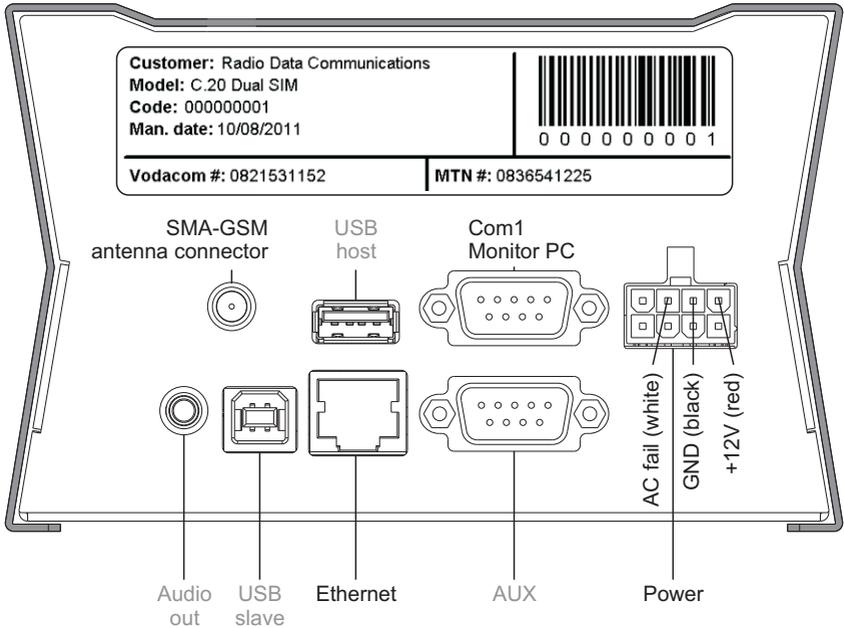
GSM (GPRS module)

Frequency band Dual band(GSM400MHz/1800MHz)
Output power Class 4 for EGSM 900 - Class 1 for GSM1800
Data transfer GPRS multislot class 8

NOTE: When power is removed from the base, wait at least 3 minutes before applying power again to ensure that the server is updated with the base connection state.
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Input and output connection

- 2x DB9 RS232 serial comms interfaces
- 1x 10/000 RJ45 Ethernet connector
- 1x USB host interface (future use)
- 1x USB slave interface (future use)
- 1x 8 pin Molex mini fit Jr power connector
- 1x Audio output, stereo (future use)
- 1x SMA, female, GSM RF connector



Communications

The base communicates to the server by means of a propriety encrypted message format.

The unit can comfortably process 10 messages per second via the GPRS connection (1 message every 100ms), or 50 messages per second via the Ethernet connection (1 message every 20ms)

All messages communicated from the server are acknowledged. If the server does not receive an acknowledgement, it will repeat the message to ensure the base has received the message. The same scenario applies for GPRS transceivers.

Main screen

The service state icon displays the available GSM service state.

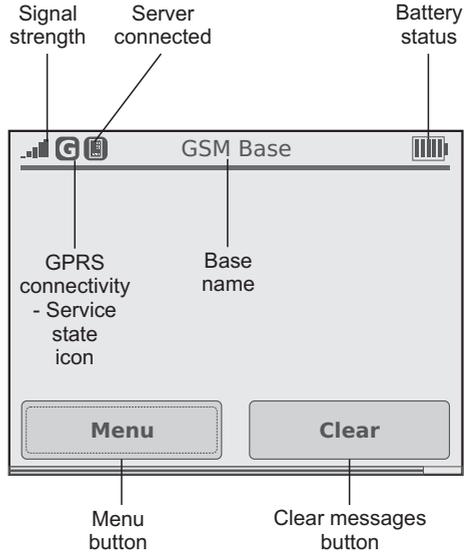
If a GPRS module is populated, the only possible service state will be GPRS, if available. The GSM base can be populated with higher speed grade GSM modules such as EDGE and 3G which will allow for better (faster) service states, if available. If no service state is available, the GSM base will not be able to communicate by means of the GSM network.

The signal strength icon indicates the GSM signal strength. The icon is updated every 5 seconds.

When visible, the server state icon indicates that the base is connected and verified on the server. The server state icon applies to both GSM and the Ethernet originated server connections.

The base name can be customized. There is no relationship between the base name and the unit ID. The unit ID is used to identify the base on the server. The base name may be a maximum of 14 characters.

The battery status icon is an indicator of the battery voltage. No bars are displayed within the battery icon when the voltage drops below 10.5V. Five bars indicate that the battery voltage is 14V or above. The base will report battery low once the battery drops below 11.3V.



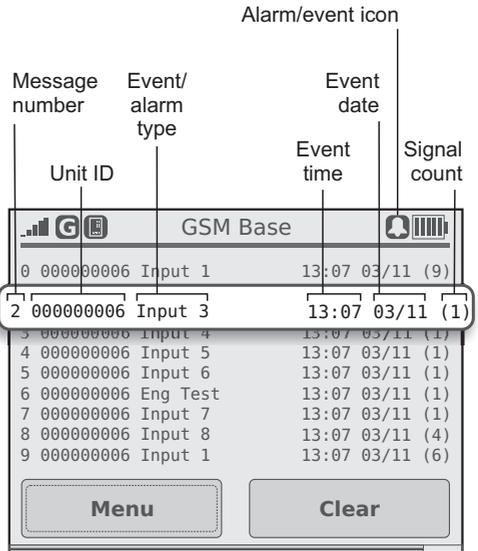
Message display

The base can display 10 messages (10 lines).

Each time a new message is processed it will be added to the bottom of the display. If the exact same message, (same unit ID and event) is repeated and the message is already on the display, the message count of the existing message will be increased.

The maximum count of an existing message on the display is nine. Should the message count for an existing message on the bottom of the display overflow to a count of ten, the message will be added to the bottom of the display.

The messages on the display can be cleared by pressing the "clear" button. This will also remove the alarm/event icon.



Message display format

```
A BBBB BBBB TT:TT DD/DD(C)
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- A Message number
- B Nine character account number (000000001-536870912)
- T Time
- D Date
- C Message count

System menus

Pressing the menu button on the main screen will display the 3 buttons on the system menu:

- **System settings** - displays the password protected system setting interface from where you can configure all settings for the base.
- **Status window** - displays the system status window that will allow you to view the system activity (initialisation, connection, etc.)
- **Exit menu** - exit to the main screen.



System setting- General 1

If the buzzer is enabled, a short tone will be generated when a new event is processed.

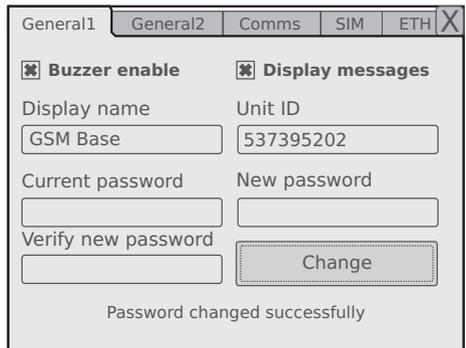
For customers who have very active bases (receiving high numbers of signals per second), it is advisable to disable “display messages” to increase the base performance. Updating the display with a new message uses part of the system resources and will therefore have a direct effect on the bases’ ability to process high frequency messages.

When “display messages” is not selected, the main screen will not display any messages.

The display name field allows for the customization of the base name.

The password field can be used to change the system password. The password may have a maximum of 4 characters and can be composed of any characters (alpha/numeric) available on the keyboard.

The default password is 0000.



Virtual keyboard

To edit a field, simply select the field - a virtual keyboard will be displayed. The text displayed in the keyboard text field is the text that will be displayed in the field being edited. To exit the keyboard press the “done” button.



System setting - General 2

The date and time fields can be used to change the system date and time.

Pressing the 'calibrate screen' button will start the screen calibration utility.

General1 General2 Comms SIM ETH X

Current Time Hour Minute Seconds
12:05:06 12 12 12

Current Date Day Month Year
03/11/2011 12 12 2011

Set new time

Calibrate screen

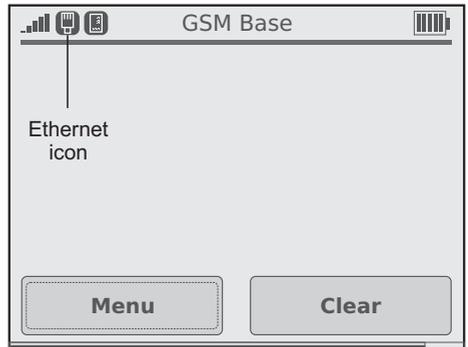
Screen calibration utility

The screen calibration utility will display a crosshair at 5 different locations. With a pointed stylus, gently press the exact centre of the crosshair. Failing to press the exact centre of the crosshair will have a negative effect on the touch screen operation. Once all 5 cursors have been pressed, the base will return to the system settings screen.



Ethernet icon

The Ethernet icon indicates that the base is communicating via the Ethernet interface.



System settings – Comms

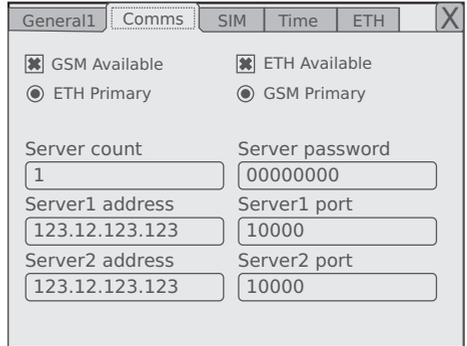
If the GSM module is populated and you would like to communicate via the GSM network, check the “GSM available” checkbox. The same applies for the “ETH available” checkbox.

If both GSM and ETH are available, and you would like one to be the primary communication channel, then select the preferred primary channel.

The base will switch between the two channels should one of the channels fail. If the base is communicating on a secondary channel, it will try and switch back to the primary channel every 30 minutes.

The base can be programmed to connect to two different servers. If it fails to connect to the one server, it will try and connect to the other server.

The server will reject any communications from the base if it has not been verified by its server password. Ensure that the correct server password is programmed.

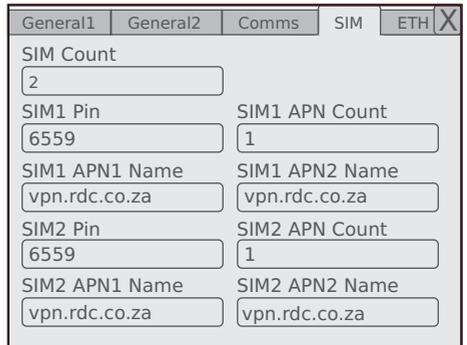


- Server count - 1 min - 2 max
- Server password - 8 characters max
- Server address - 20 characters max
- Server port - 0 - 65535

System settings - SIM

This interface allows for programming of the SIM parameters.

- SIM count - 1 min - 2 max
- SIMPIN - 4 characters max
- SIMAPN count - 1 min - 2 max
- SIMAPN name - 20 characters max



System settings – Ethernet (ETH)

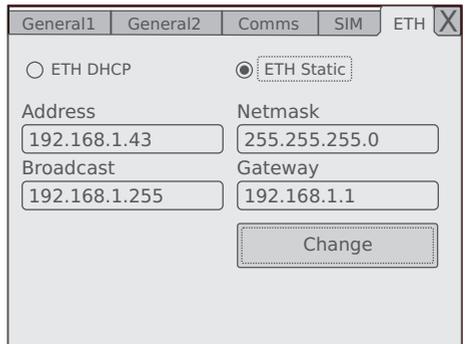
This interface allows programming of the Ethernet settings.

For the base to communicate via Ethernet, it needs to be connected to an internet enabled Ethernet router.

If the router is responsible for providing the base with an IP address, then select “ETH DHCP”. If the base IP address will be static, select “ETH static” and fill in the desired IP address in the “address” field.

The “Netmask” and “Broadcast” selections are for advanced users.

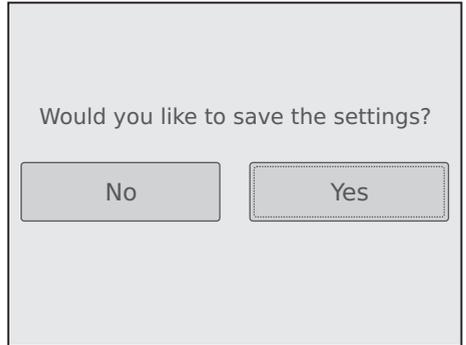
The “Gateway” field is for the IP address of the router.



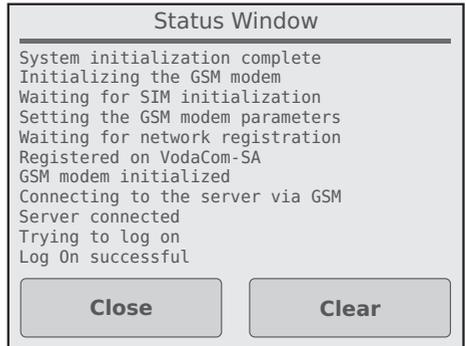
Save system settings

To close the system settings window, press the cross in the right top corner.

Selecting "yes" will save the settings in non-volatile memory and will therefore be available even when the power is removed from the base. Selecting "no" will discard any changes in the settings interface.



Status window



24hr Standby
082 444 7176



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