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Sentinel MK4 v6.3

User's Manual

Building Security Doorstation





IMPORTANT:

**PLEASE READ THIS MANUAL FROM
COVER TO COVER BEFORE INSTALLING
THIS PRODUCT.**

Contents

1.0	Product Introduction	4
2.0	Operating Instructions	5
2.1	Visitors	5
2.2	Tenants at the gate	5
2.3	Tenants from home	5
3.0	Local Programming via Keypad	6
3.1	ADD a record	6
3.2	EDIT a record	6
3.3	DELETE a record	6
4.0	Programming using Sent-Pro	7
4.1	Logging On	8
4.2	Phone List	9
4.2.1	Phone List Editing	10
4.2.2	Phone List Uploading	10
4.3	Parameters	11
4.3.1	Messages	12
4.3.2	Operating Parameters	12
4.3.2.1	Setting	13
4.3.2.2	Options	14
4.3.2.3	Gate Controls	15
4.3.2.4	Call Divert Numbers	16
4.3.2.5	Changing Access PIN	16
4.4	Events	17
4.5	RFID Records	18
5.0	Connecting	19
5.1	Local connection	19
5.2	Remote connection	19
5.3	Disconnecting	19
6.0	Installation Details	20
6.1	Hardware configure	20
6.2	Suggested mounting technique	20
6.3	Wiring Diagram	21
6.4	Case Dimensions	22
6.5	Case enclosure options	22
7.0	Specifications	23
7.1	Electrical	23
7.2	Communications	23
7.3	Physical	23

1.0 PRODUCT INFORMATION

The Sentinel is a full featured telephone used as a main gate controlling unit to communicate to a tenant via the telecommunication network and has the directory capacity of 1000 rooms on the Sentinel mk4.

This unit also incorporates a keyless entry system for each tenant and includes an event recording capability to help maintain site security.

The on board directory has an easy scan method for searching tenants name or will accept the room number directly. The backlit display provides an immediate response to the telephone's activities.

- ✍ 16 digit Telephone numbers with a 16 character names capacity.
- ✍ Four Emergency Service codes to access gates (Police, Ambulance, Fire, etc.)
- ✍ 4 digit keyless entry code per relay for each tenant.
- ✍ On board storage of gate events with real time clock (RTC) recording.
- ✍ 2 line, 16 character LCD display with back light.
- ✍ Programmable scrolling or fixed messages for both LCD lines.
- ✍ Up and Down Arrow keys for Name Search.
- ✍ Up to 2 on board relays each with individual codes.
- ✍ On board USB cable for local programming and event recording.
- ✍ RTC with backup battery.
- ✍ Remote DTMF activation of relays
- ✍ Remote speaker and microphone level control with 15 increments.
- ✍ Independent Ringer volume settings
- ✍ Battery power supply circuitry for optional battery backup systems.
- ✍ One telephone line only.
- ✍ Non Volatile memory.
- ✍ Programmable Company logo / Building name
- ✍ Optional 8 direct dial inputs (to call reception, site office, security etc.)
- ✍ Hand free communication.
- ✍ Automatic call termination on busy/no answer etc.
- ✍ Optional built in camera.



2.1 VISITORS

2.2 TENANTS AT THE GATE

2.3 TENANTS FROM HOME

* *

3.0 LOCAL PROGRAMMING (USING FRONT KEYPAD)

Initial setup of parameters on the Sentinel is achieved using the **'Sent-pro'** programmer as described within section 4, it is also recommended to use this programme to enter the client telephone and room number records.

However, during service, you may be required to do an update of some records, This can be accomplished locally at the Sentinel via the front panel keypad.

It is possible to Add, Edit and Delete records.

To access local programming, press the **'*'** and hold it on for 5 seconds, after this time the display will show **'Enter your Code #'** type in the same PIN as used by **'Sent-pro'** program and press **'#'**. (please note that only numeric PIN (digits 0-9) can be used here, if your code contains alphanumeric characters, then use **'Sent-pro'** and reassign the PIN to contain only numbers).

On entering the correct PIN the display change to:-

'Enter 1=Add, 2=Edit, 3=Del, 4=RFID'

enter a selection and press **'#'**. Each option is described below.

3.1 ADD A RECORD

'input name'

The first option is to input the clients name. Use the characters associated with each key of the keypad (ie 2= abc2ABC 3= def3DEF) by pressing the same key in succession, the display will show each character in turn (similar to most mobile phones). the 1 and 0 key hold various characters that may be required within the name. On completion press the **'#'** to advance to the next step.

'input room'

Type in the room number for that client, then press **'#'**. (6 digit max)

'input number'

Enter the telephone number required to dial to call this client, again press **'#'**

'input code1 & input code2'

if gate access is required, then enter a code for relay 1 and 2. press **'#'** between each code.

The last **'#'** will save the record to memory.

3.2 EDIT A RECORD

Option 2 will allow you to edit an existing record. On entering, type in the room number then **#** to select the client record.

Follow the steps outlined above 'Add a record', to change the data

3.3 DELETE A RECORD

Option 3 will allow you to delete a record. On entering, type in the room number then **#** to select the client record to delete. To delete it press **#**, or else press ***** to escape. on completion the unit will return to the initial menu. Press ***** twice to return to standby.

4.0 PROGRAMMING USING Sent-pro

Note: Before installing the Sentinel, please make sure you have pre-programmed the Sentinel with a computer or have a laptop with you on site to program the necessary settings. Most settings cannot be programmed without a computer or laptop with the 'Sent-Pro' software installed on your device.

The Dallas Delta SENTINEL Programmer 'Sent-pro' is a windows[®] package that provides access to parameters and tenant details. The package also allows you to save and retrieve client data in a *comma separated variable (CSV)* format (used by **MS EXCEL** etc), and also allows the downloading of gate events and the modification of telephone parameters.

The 'Sent-pro' programmer is used locally via a USB cable or remotely via a modem. The factory set PIN is "123" and should be changed on initial installation.

The programmer is divided into 4 main sections, Phone List, Parameters, Events and if fitted a RFID section. Each section allows for the collection of data from the SENTINEL, this data may be modified (events exclude), saved and reloaded back to the SENTINEL. The 4 sections may be selected by clicking the main menu *Window* label or by clicking on one of the 4 icons.

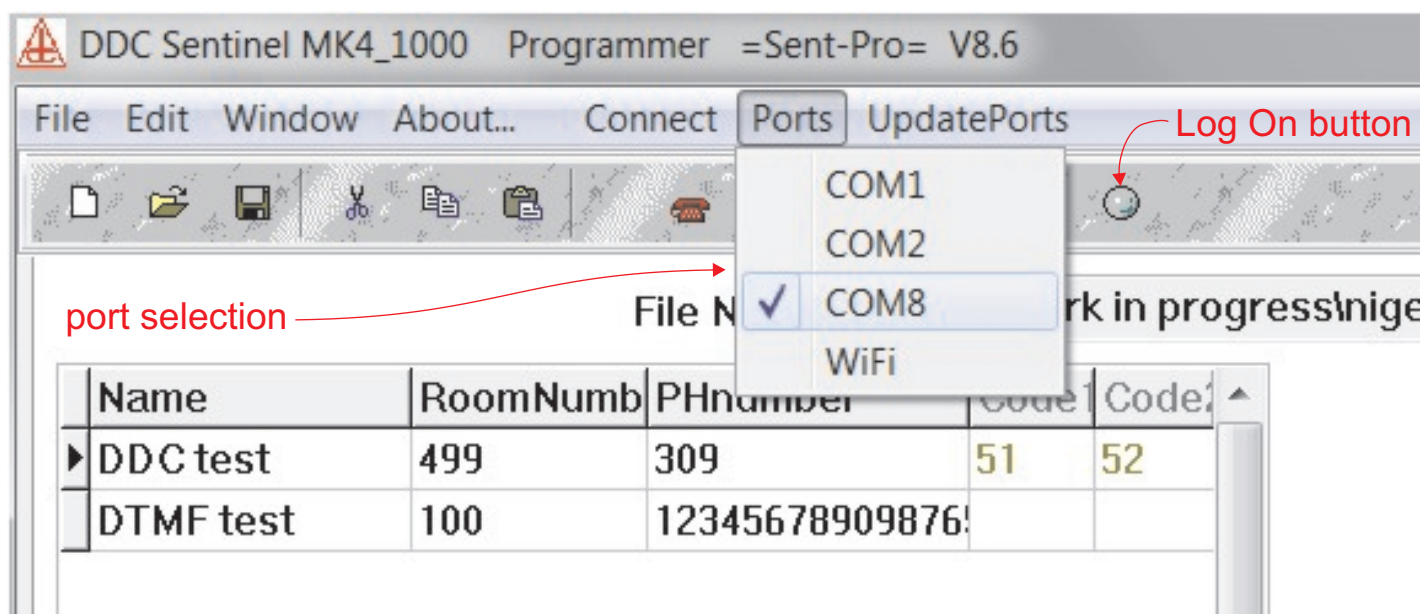


FIGURE 1 MAIN MENU

4.1 LOGGING ON

Local connection is made via the permanently attached USB cable on the SENTINEL to a PC.

Run the **SENT-PRO V8.6** program and set the communication port by clicking on the 'Port' label on the main menu then log-on by either clicking the 'Connect' label or on the grey LED.

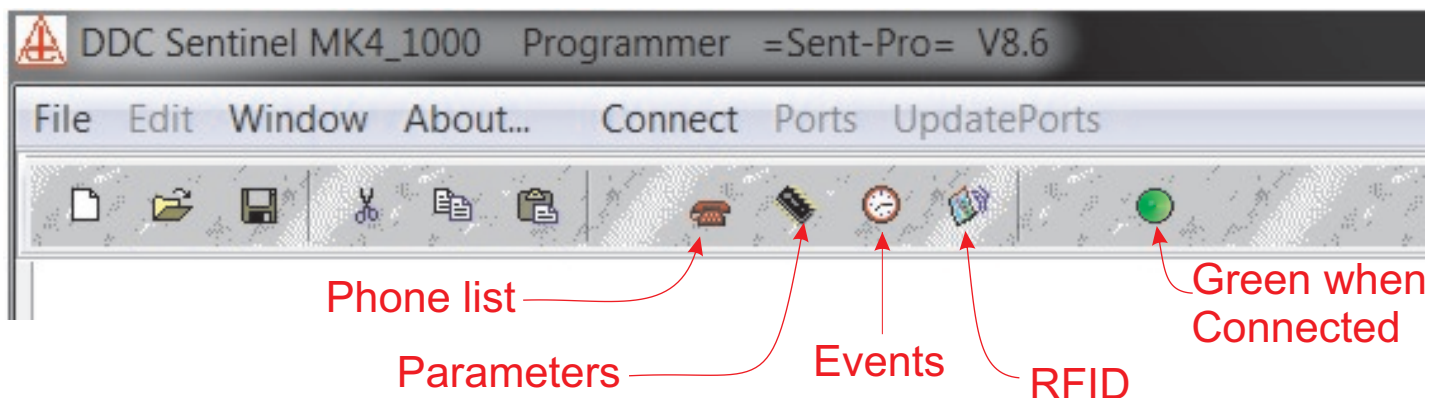



FIGURE 2 LOGGING ON

The **SENT-PRO** will then display a 'log on' dialog box. Enter the SENTINEL PIN as set in section Local Programming. An option to remember the PIN may also be selected, de-select the 'Remote' box, then click 'Ok'. The factory default PIN is '123'.

When connection is successful, the DDC icon  will begin to spin, the virtual LED will switch to green and several buttons on the form will become active which will enable data to be download.

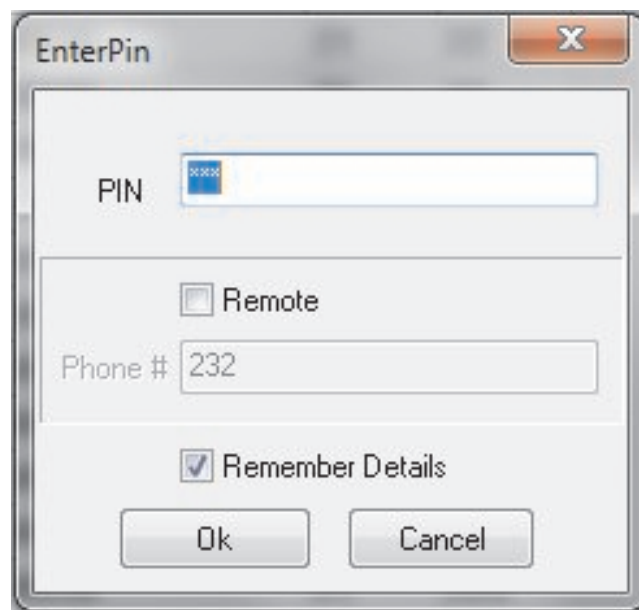


FIGURE 3 LOGIN DIALOG

4.2 PHONE LIST

The Phone List window allows for data transfer from the SENTINEL to hard disk or from a **CSV** file that the client has prepared back to the SENTINEL. Each record may be modified then updated on a one at the time bases or the complete table can be transferred. Each column in the table can be sorted by clicking the name bar at the top of the column.

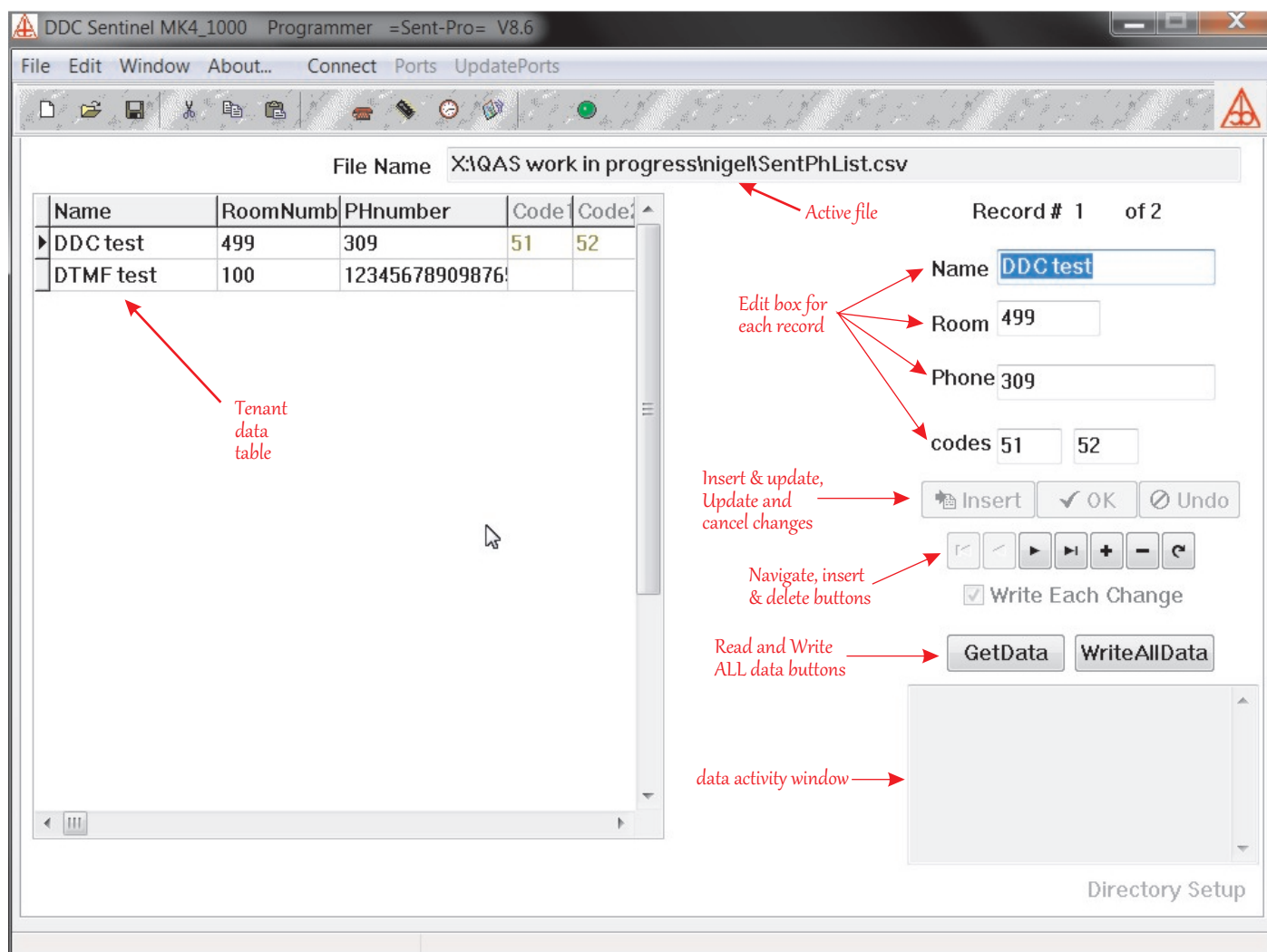


FIGURE 4 PHONE LIST WINDOW

4.2.1 PHONE LIST EDITING

To start a new Phone List select NEW from the main menu and insert each record, do a 'Save As' as soon as possible and save as often as required. It is not necessary to be online when editing a new table as the existing data within the SENTINEL will not match the new file and data can only be modified after an upload or totally replace when online.

You will note that the 'Name' and 'Phone Number' fields will only accept a maximum of 16 characters, the 'Room Number' field **must** have a number 1 to 6 digits in length, and codes maybe left blank if gate access for these tenants are not required.

Record # 7 of 49 ← record indicator

Name

Room

Phone

codes

record navigator
TOP, UP, DOWN, BOTTOM
INSERT, DELETE and REFRESH

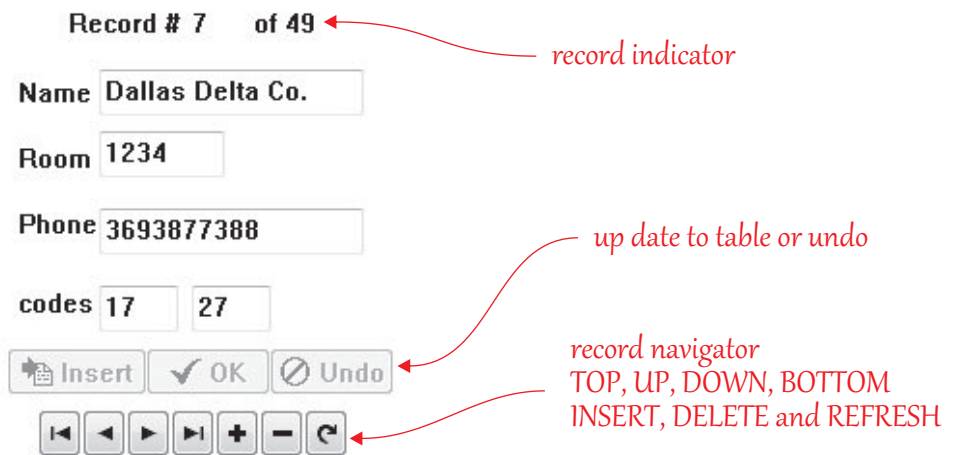


FIGURE 5 RECORD EDIT BOX

4.2.2 PHONE LIST UPLOADING

To retrieve all of the data from the SENTINEL first Connect (refer to *SECTION 5*) then click the 'GetData' button. You will notice that data will commence to fill the 'data transfer' window at the lower left corner and a transfer dialog box in the middle of the screen. At the end of transfer the table will be filled with the records and the 'Write Each Change' tick box will become enabled. When this box is ticked, each change to a record will be updated to the SENTINEL, thereby not requiring a full download, this method is preferred when small changes to the phone list are required.

update each record as
data in modified
Retrieve ALL phone list
data from the SENTINEL

☒ Write Each Change

rewrite all data to SENTINEL

data transfer window

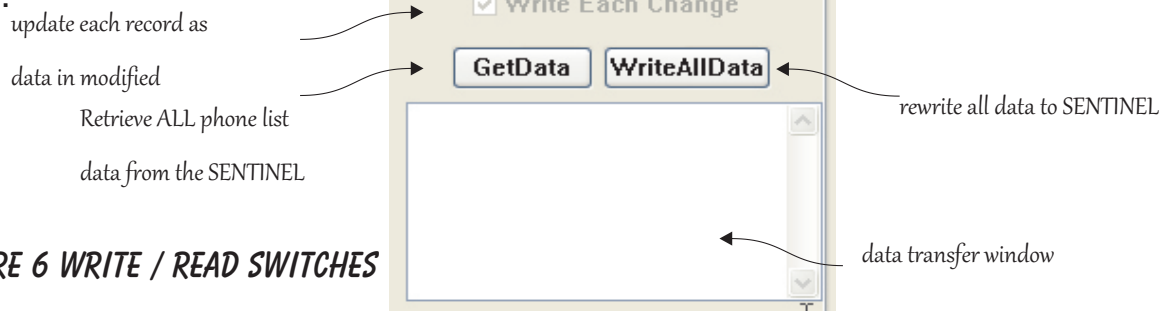


FIGURE 6 WRITE / READ SWITCHES

Similarly, all the data within the table can be downloaded to the SENTINEL when the 'WriteAllData' button is clicked. (You should first save the phone list prior to proceeding). This function will sort the data by 'Name' then erase the current data in the phone followed by a write and test sequence of each record. The Status Bar at the bottom of the screen will reflect this progress. Depending on the size of the table this procedure may take several minutes and should not be interrupted.

4.3 PARAMETERS

The Parameter window will allow for the modification of the telephone options and the LCD messages. This information may be stored and retrieved from hard disk. This saved parameter file has a '.SYS' extension and can only be viewed within the **'Sent-Pro'** program. As shown on figure 5 below the window is divide into 2 sections, Messages and Operating Parameters. The operating parameter dialogue has sub-sections for Setting, Options, Speed Dial, Relay Codes, and changing the PIN

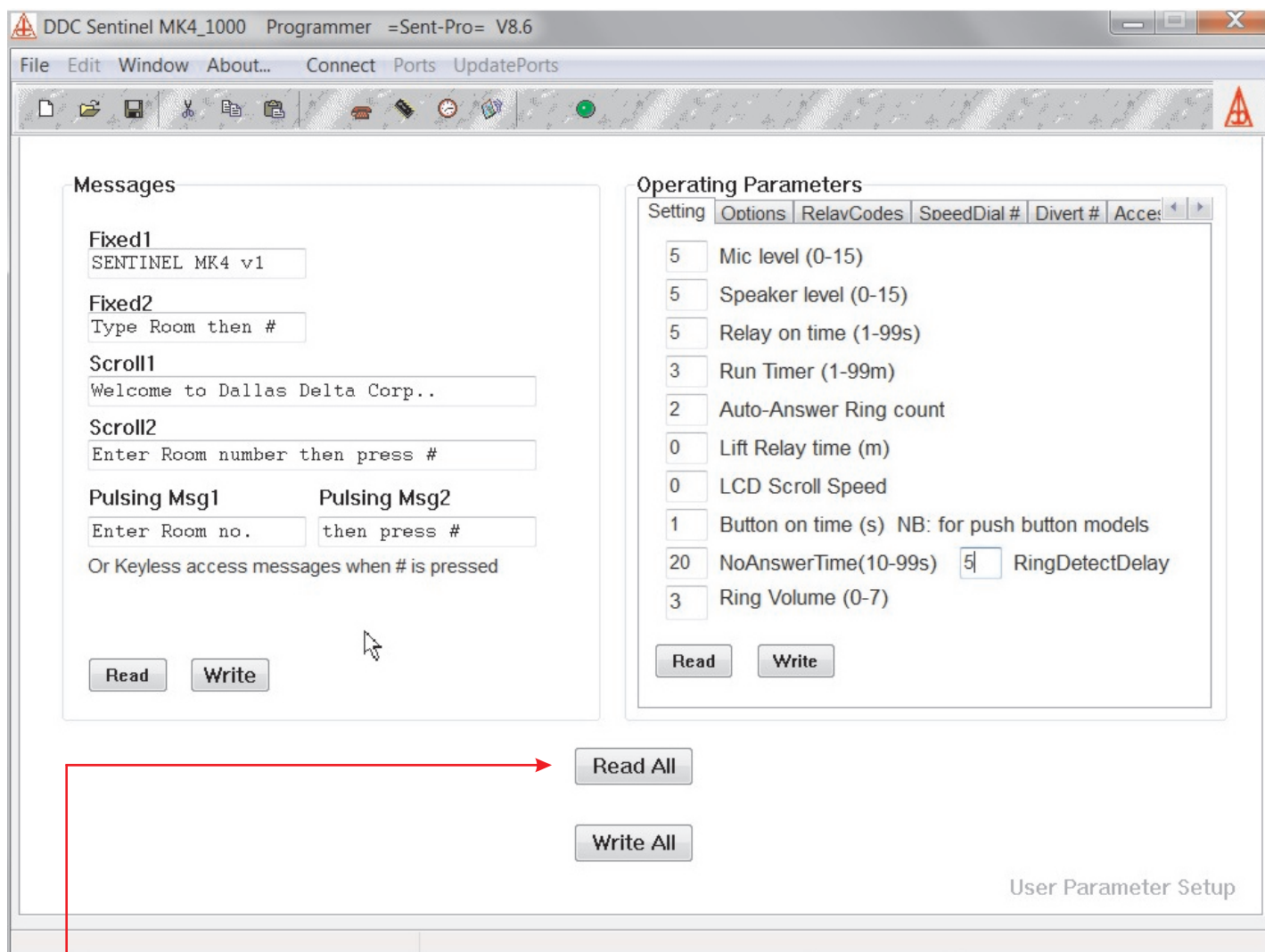


FIGURE 7 PARAMETER WINDOW

Warning: Before making any changes to the parameters of the Sentinel, you must first press the **'Read All'** button to load all the current phone settings into the Sent-Pro.

Making changes to settings can now be done, then press the 'Write' button to save the changes.

Failure to 'Read All' before making changes to the settings will load default settings into the Sentinel.

4.3.1 MESSAGES

Each line of the SENTINEL's display may show either a fixed 16 character message or a scrolling 32 character message. The first two edit boxes hold the fixed message for line 1 and 2, the following 2 display the scrolling message for line 1 and 2.

It is recommended that one line of the LCD displays a brief description on using the telephone for visitors not familiar with it. IE: 'Enter Room then#'. The other line may be used to display a company logo or site Name etc.

Pulsing Msg1/2, These messages will (if enabled), alternate on line 2 of the LCD, and may be used if the 'Fixed2' or 'Scroll2' message are not desired. These options are selected in the 'Parameters/option' section describe next. The Alternative function is as the keyless entry message.

The screenshot shows a web-based interface for editing messages. It has a title 'Messages' at the top. Below it are several input fields: 'Fixed1' with the text 'SENTINEL MK4 v1', 'Fixed2' with 'Type Room then #', 'Scroll1' with 'Welcome to Dallas Delta Corp..', and 'Scroll2' with 'Enter Room number then press #'. Below these are two columns for 'Pulsing Msg1' and 'Pulsing Msg2'. The 'Pulsing Msg1' field contains 'Enter Room no.' and the 'Pulsing Msg2' field contains 'then press #'. Below these fields is a note: 'Or Keyless access messages when # is pressed'. At the bottom of the form are two buttons: 'Read' and 'Write'.

FIGURE 8 MESSAGE EDITING WINDOWS

4.3.2 OPERATING PARAMETER

This Section has 5 tabs to select from, the first tab 'Setting' sets various timer and counter functions that control the way the telephone will respond.

The second tab 'Options' set different switches that the telephone may use during conversation or standby mode.

The third tab sets the relay codes for various types of calls and the forth tab is only required for SENTINEL's fitted with direct dial buttons, the number called by each button will be set here.

The 6th tab labelled 'Access PIN' will allow the changing of the login access PIN's.

4.3.2.1 SETTING

- ☞ Microphone level may be set to 0-15, during a call the remote operator can enter *1 or *4 to increase or decrease the microphone level.
- ☞ Speaker level, can be from 0 to 15, and may be changed during a call by entering *3 to increase or *6 to decrease the speaker level on the remote telephone.
- ☞ "Relay on time" (in seconds) sets the activation period for both relays.
- ☞ "Run Timer", this option will set the maximum conversation time in minutes for both outgoing and received calls.
- ☞ Auto-answer ring count, determines how many times the Sentinel will ring during an incoming call before it automatically connects to the line.
- ☞ "Lift relay time" is used for units that are interfaced to a lift controller card. This period in minutes activate a relay that is used to trigger a floor request command.
- ☞ "LCD Scroll Speed" governs the rate at which the characters move across the lcd (only if a line on the LCD is switched on to scroll mode). Range is 0-50, 0 for slow and 50 for a fast rate.
- ☞ "Button on time", used only for Sentinels fitted with direct dial buttons. The time set here in seconds is the period the button needs to be held down to establish a call.(15 seconds max)
- ☞ "No Answer Ring Time", the period the phone will wait for the remote party to answer the call. if this time has elapsed then the phone will call the alternative number.
- ☞ "Ring Detect Delay" is used to delay the detection of the ring counter when making a call. An example is when making a mobile phone call. The delay between when the Sentinel starts the call and the time the network takes to starts ringing the mobile phone, this delay could be as long as 10 seconds. In this case set the delay time to >10 seconds.
- ☞ "Ring Volume", sets the ring level when receiving an incoming call. (0 to7).

Operating Parameters

Setting	Options	RelayCodes	SpeedDial #	Divert #	Access PIN
1	Mic level (0-15)				
3	Speaker level (0-15)				
5	Relay on time (1-99s)				
3	Run Timer (1-99m)				
2	Auto-Answer Ring count				
0	Lift Relay time (m)				
20	LCD Scroll Speed				
1	Button on time (s) NB: for push button models				
15	NoAnswerTime(10-99s)				
3	Ring Volume (0-7)				
				3	RingDetectDelay

FIGURE 9 SETTING SUB WINDOW

4.3.2.2 OPTIONS

- ✎ “Sw. Off after Gate Releas”. Tick this option if the client prefers the Sentinel to end the call automatically after a gate has been opened during the conversation.
- ✎ “Gate Access on In-calls”. If the tenants do require to call the Sentinel to be able to open the gates, then this switch should be ticked.
- ✎ “Scroll Line 1”. Enable this option to cause the message (set in Scroll 1) to be displayed along the top line of the LCD.
- ✎ “Use Global Gate Codes”. When enabled, the codes the tenants use to activate the gates (**Code1 & Code2** in the telephone list), are substituted with the ‘global Gate Codes’ inside the **RelayCodes** tab. The tenants will still use **Code1 & Code2** in the telephone list, but only as a keyless entry code.
- ✎ “MK1 compatibility relay control switch”. when ticked, the method used to activate the relay for remote access or keyless entry will vary, please refer to page 5 section 2.2 and 2.3 for a description of each. (the preferred method is un-tick this box, and should only be used to maintain compatibility with the MK1 Sentinels that are used on the same site.)
- ✎ “Continuous Tone Detect”. Some PBX’s send a continuous tone when a party ends the call. The Sentinel can be programmed to detect it and disconnect automatically. This option sets the time period (in 0.1 second steps) required before this occurs. If this option is set to 20 then it will switch off the line after detecting a 2 second tone burst. May be set to zero to disable this function.
- ✎ “Silence Detect”. Again, some PBX’s don’t send any tone when a party has hung up. If then the Sentinel detects a long period of silence the unit will hang up automatically. This period set here determines how many seconds of silence is required. May be set to zero to disable this function.

The screenshot shows the 'Operating Parameters' window with the 'Options' tab selected. The window has tabs for 'Setting', 'Options', 'RelayCodes', 'SpeedDial #', 'Divert #', and 'Access PIN'. The 'Options' tab contains several settings:

- ☐ Sw. off after gate release
- ☒ Gate access on in-calls
- ☐ Enable MK1 compatibility for relay control
- ☒ Scroll Line 1
- ☐ Use Global Gate Codes
- Continuous Tone Detect (0.1s): 20
- Silence Detect (sec): 20
- ☐ Use the 'Pulsing Msg1+2' as the Keyless entry message
- Relay2 Override**
 - ☒ Normal
 - ☐ On a key press
 - ☐ When Line is looped
 - ☐ When Phone Rings
 - ☐ Don't use timer
- LCD Line2 Options**
 - ☒ Fixed2 message
 - ☐ Show Clock on LCD
 - ☐ Scroll Line 2
 - ☐ Enable pulsing msgs

At the bottom of the window are 'Read' and 'Write' buttons.

FIGURE 10 OPTIONS SUB WINDOW

- ✎ “Relay 2 Over-ride”. The client may require a light or camera to be activated whenever the Sentinel is in use. Relay 2 may be used for this function and can be enabled to operate when a key is pressed or when it loops the line. The other option is that the relay can stay on for the duration of the call or for the period set in the “Relay on time”. If this option is used, then the **Code2** column in the telephone list is not used.
- ✎ “LCD Line2 option”. The bottom line of the LCD may be configured to scroll a message, show a static message or alternate between two messages. The messages are all set as described in section 4.2.1. When **fixed2** message is enabled then it is also possible to display the time of day at the right end part of the screen by ticking the ‘**show clock on LCD**’ box.
- ✎ Use Pulse Msg’s fields as the Keyless entry instruction. If enabled these messages are displayed on line 1 of the LCD when the # key is used to initiate the keyless access function. The build in messages are “Enter Room No. +#” and “Enter your Code”

4.3.2.3 GATE CONTROLS

These alternative relay codes are used for 3 possible scenario,

1)**Global Codes**: To substitute the tenant codes so that all tenants use the same code to activate the relays, or

2)**Incomming Calls**: When a call is made to the Sentinel the calling party will then use a set of codes to grant access to the person at the gate, or

3)**Speed Buttons**: When if the Sentinel is fitted with one touch speed dial buttons, the remote operator may still grant access if they wish using the last set of codes.

Note: Relay 2 may be used as an in-use contact (see *relay2 override*), if so, the colour of the codes above will be in orange.

Also, if global codes are deactivated the colour of relay1 & 2 code will be in orange.

Operating Parameters

Setting	Options	RelayCodes	SpeedDial #	Divert #	Access PIN												
<table border="1"> <thead> <tr> <th>Relay1</th> <th>Relay2</th> <th></th> </tr> </thead> <tbody> <tr> <td>51</td> <td>52</td> <td>Global Gate Codes Global codes currently disabled</td> </tr> <tr> <td>61</td> <td>62</td> <td>Incomming Calls Gate Codes</td> </tr> <tr> <td>6363</td> <td>64</td> <td>SpeedButtons Gate Codes</td> </tr> </tbody> </table>						Relay1	Relay2		51	52	Global Gate Codes Global codes currently disabled	61	62	Incomming Calls Gate Codes	6363	64	SpeedButtons Gate Codes
Relay1	Relay2																
51	52	Global Gate Codes Global codes currently disabled															
61	62	Incomming Calls Gate Codes															
6363	64	SpeedButtons Gate Codes															
<div> <div>Read</div> <div>Write</div> </div>																	

FIGURE 11 RELAY CODES WINDOW

4.3.2.4 CALL DIVERT NUMBERS

Operating Parameters

Setting Options RelayCodes SpeedDial # Divert # Access PIN

After hours Divert numbers

☒ ButtonsOnly ☐ All Calls

AfterHours No. 1 231

Start Time 12:00 12:00 End Time

AfterHours No. 2

Start Time 17:02 17:46 End Time

No Answer Divert numbers

☒ ButtonsOnly ☐ All Calls

Divert No. 1 104

Divert No. 2 104

Read Write

FIGURE 12 CALL DIVERT NUMBERS WINDOW

4.3.2.5 CHANGING PIN

Operating Parameters

Setting Options RelayCodes SpeedDial # Divert # Access PIN

PIN to access Local & Remote

New PIN

Emergency Service Access Codes

NB. First digit must be 1 or 2 to match which relay will be opened
Code length MUST be 6 to 8 digits

Read Write

FIGURE 13 CHANGING PIN WINDOW

After hours and no answer divert options and numbers, The “**Buttons Only**” option is for Sentinels fitted with direct call buttons. (Set the numbers in the “**SpeedDial #**” section for each button installed.) “**All Calls**” will enable call diversion of all calls during the hours set. The same function will occur if the call is not answered within the “**no answer ring time**” period.

Access PIN. The factory set PIN is “123”.

The access PIN’s may be altered here, Please take care in documenting this code’s. The PIN may have characters and digits to a length of 16 digits max., including spaces.

Click on the ‘Write’ button to send the new code to the Sentinel.

Emergency Services Access Codes. These codes will grant access to emergency or maintenance personnel.

Emergency access codes are type in without the use of # or room number.

Simply type the code in and the gate will activate. The first digit “1” or “2” sets which relay to trigger. ie: ‘1000911’ will operate relay 1.

The ‘Write all and Read All buttons will either send all the information to the Sentinel or do a complete refresh of the parameters using the information extracted from the Sentinel.

4.4 EVENTS

Any gate activity is registered in a 'first in first out' type buffer. The SENTINEL will hold the last 128 events. This buffer may be viewed at any time without resetting the data.

The **SENT-PRO** program enables this data to be saved to a *CSV* file and to be sorted by the various fields by clicking on the title bar at the top of each column. The Event Window will also display the SENTINEL time and provides a means to synchronize it to the PC time.

The 'Time' window is updated when the 'Down Load' button is clicked, it displays the SENTINEL and the PC current time, and this information is stored with the file.

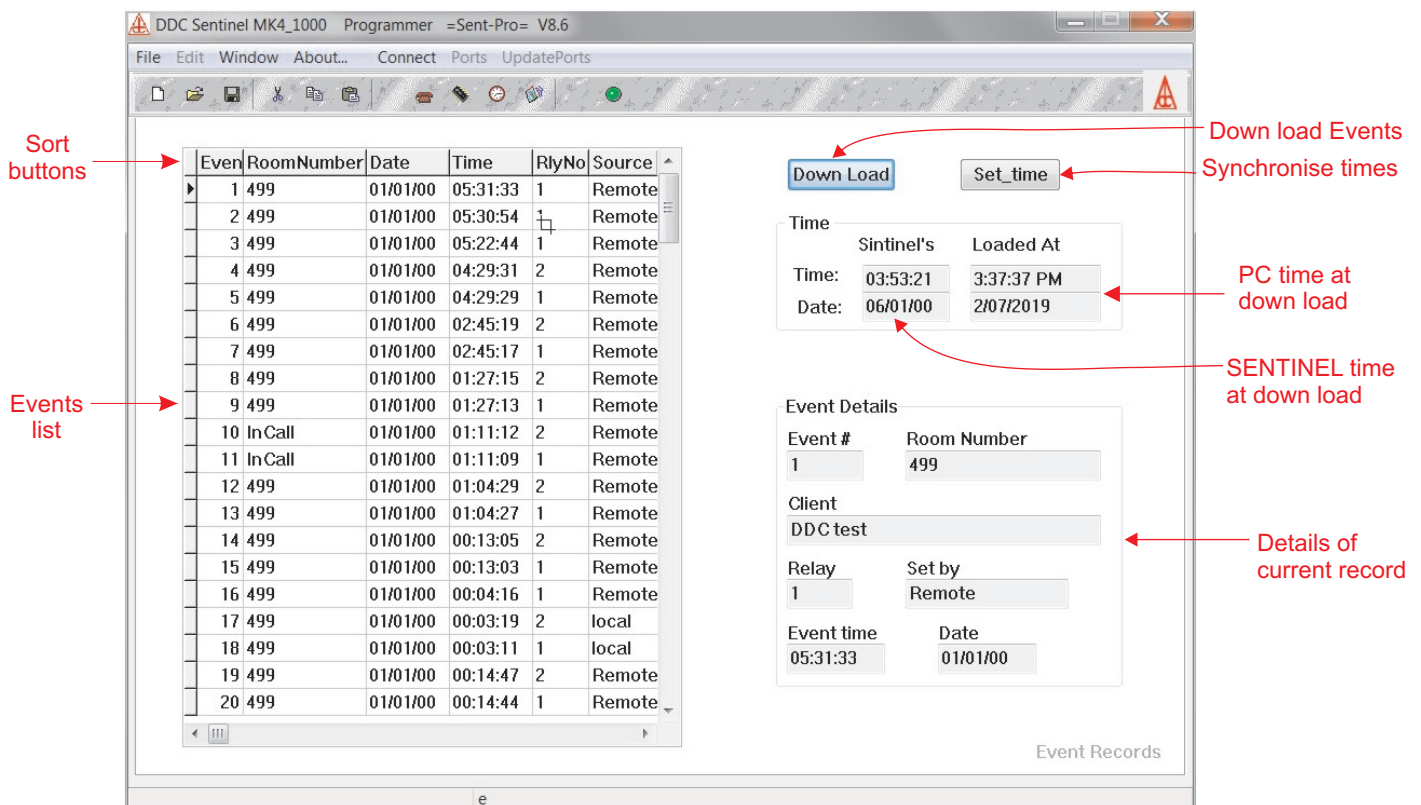


FIGURE 14 EVENT WINDOW

The top of the event list displays the Room number, the relay that was activated, the time and date and Source field.

Any gate activation to or from the Sentinel will be recorded here. The RoomNumber field will show to whom the call was made. Alternatively, if a call is made to the Sentinel the RoomNumber field will show 'CALL'.

If the Sentinel is fitted with Direct Dial speed buttons and the recipient of the call activates the gate then this field will display 'Remote' and the RoomNumber field will show which one of the 8 buttons made the call in the form 'Butt.x', (x= 1 to 8 representing the direct dial button pressed).

The 'RlyNo.' field indicates which of the 2 relays where activated. The time the event occurred is shown in a 24 hour format. The last field will display whether the gate was open from the 'remote' telephone (ie by the tenant home phone) or 'local' if the gate was opened using a keyless entry code at the Sentinel, or display 'RFID' if opened by a valid ID card, (for Sentinels fitted with this option).

4.5 RFID RECORDS

The Sentinel may be fitted with the optional RFID pickup which will enable tenant card holders to gain gate access without the need to enter a code at the gate.

For these tenants each card will first require scanning into the database.

The page shown below provides a means to either input the card number if known or to use the pickup within the Sentinel to scan the code in.

If you know the card number, then first open the client current 'Phone List' file or do a get all from the Sentinel (see section 4.1), then click on the RFID icon. The current tenants list will be displayed along with Room numbers.

The last column will hold the RFID codes.

Now click on the tenant name and enter the 10 digit code into the 'RFID code' edit box, followed by a click on the 'Up Date' button.

This will transfer the code into the database. Continue as above for each tenant.

It is important to do a 'save' as often as possible.

When complete, connect to the Sentinel and do a 'Write All' to replace and update all codes.

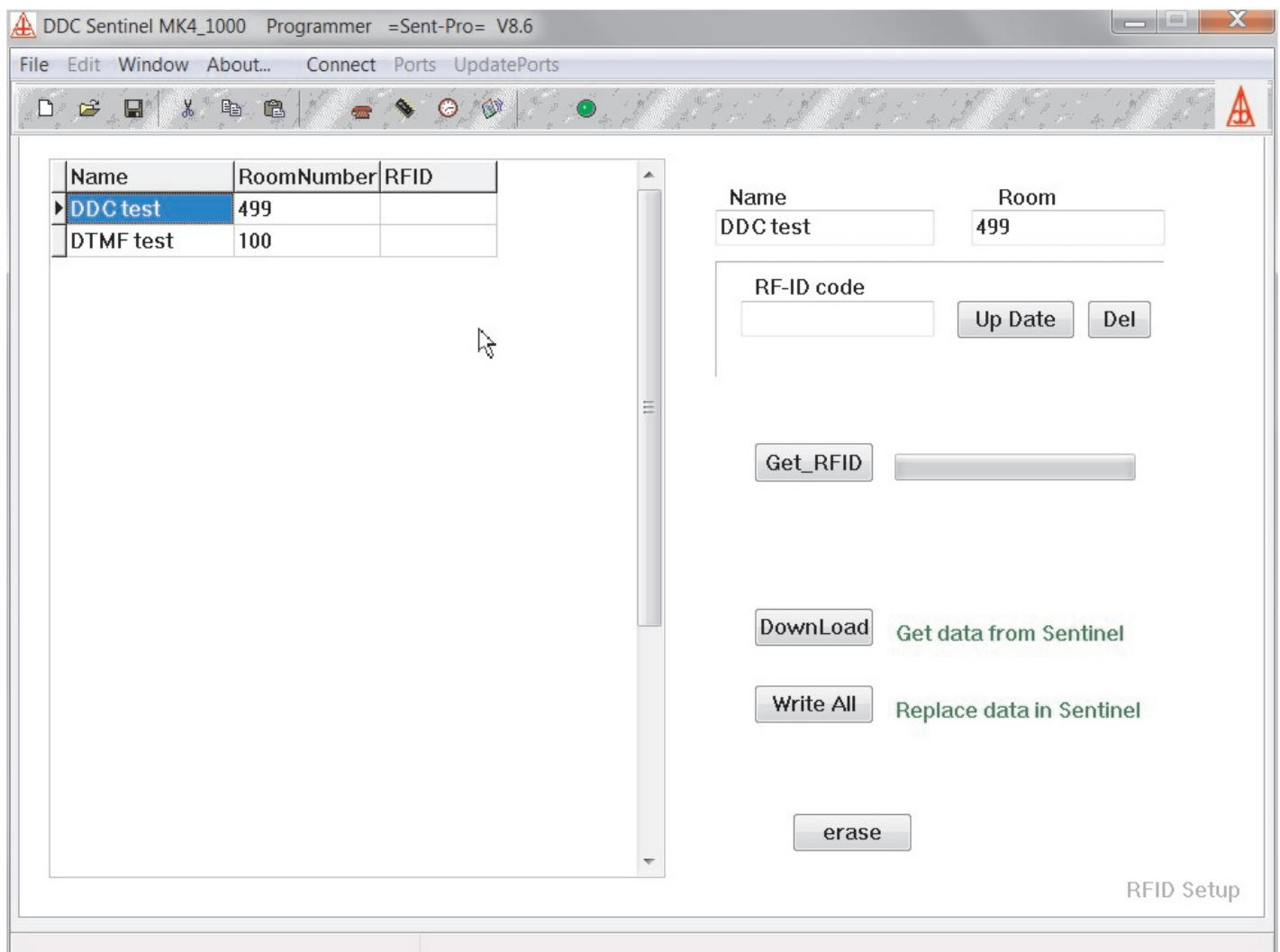


FIGURE 15 RFID RECORDS WINDOW

4.5 RFID RECORDS CONT...

An alternative way to extract the RFID code is via the pickup on the Sentinel.

To do this connect to the Sentinel, if require get existing codes from the unit by clicking the 'DownLoad' button, then click on the 'Get_RFID' button. Each time this button is pressed a green bar to the right will indicate time remaining (20 seconds) to pass the RF card across the Sentinel face. When the Sentinel picks up a valid code the information is displayed within the text box to the left of the 'Up Date' button and the green time indicator will clear.

If a code is invalid or it already exist with in the database, you will be prompt to take corrective action.

Again, Save and do a 'Write All' before logging off.

5.0 CONNECTING

5.1 LOCAL CONNECTION

Local connection is made via the permanently attached USB cable on the SENTINEL to a PC.

Run the **SENT-PRO V8.6** program and set the communication port by clicking on the 'Port' label on the main menu then log-on by either clicking the 'Connect' label or on the grey LED.

Please refer to section 4 - Programming using Sent-Pro for further details.

5.2 REMOTE CONNECTION

A **9600 Baud** rate modem will be required to connect remotely. And the Sentinel needs to be connected to the PSTN. Select the COM port of the modem, Then in the LOGIN DIALOG select the remote switch and enter the phone number of the Sentinel. The procedures as set out in the Local programming also apply here.

The Sentinel mk4 has a built-in modem. Use a modem enabled computer to call the Sentinel for remote programming.

5.3 DISCONNECTION

To log off either select the 'Connect' or click on the green LED log on button. This LED will then change to gray and some buttons will become inactive.

6.0 INSTALLATION DETAILS

6.1 HARDWARE CONFIGURE

Notes: The polarity of the LINE connection is not important.
The polarity of the Power in and Battery needs to be correct
Relay 1&2 contacts can be switched to normally open or normally close by J15/J16 located next to each relay as shown.

TO THE REAR COVER VIEW OF BOARD MOUNTED

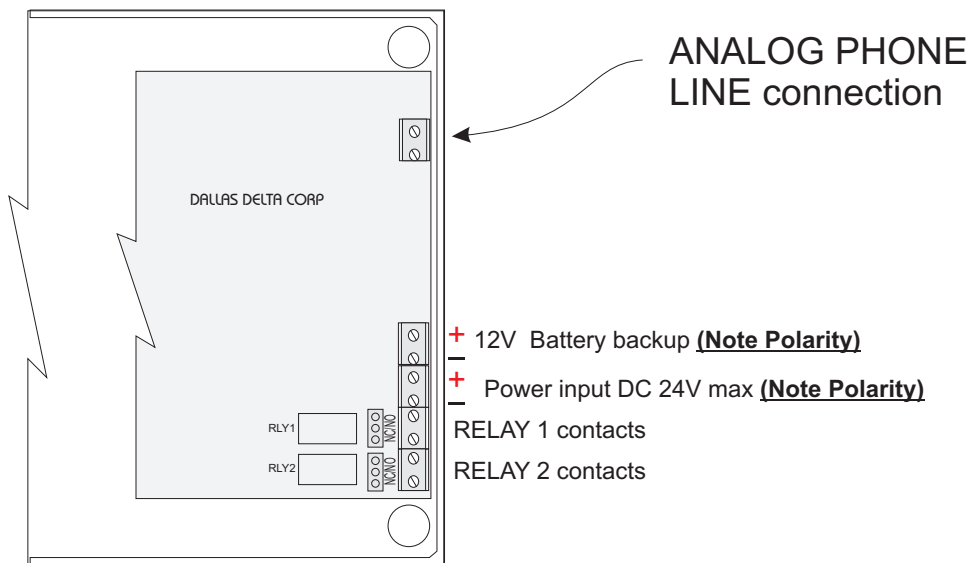


FIGURE 16 HARDWARE SWITCHES & CONNECTIONS

6.2 SUGGESTED MOUNTING TECHNIQUE

- 1) All cables should exit through the sides or bottom of the case.
- 2) To avoid water seepage in behind the unit, ensure that the cavity between the wall and the face panel is suitably sealed.
- 3) If the unit can not be located under cover, then a protection hood is recommended.

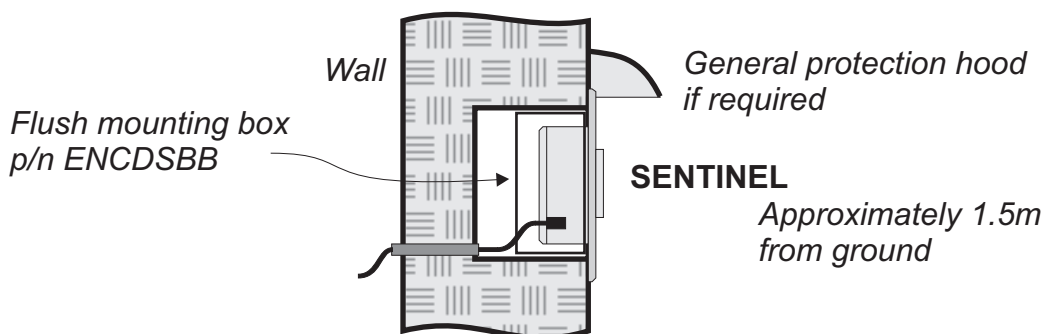
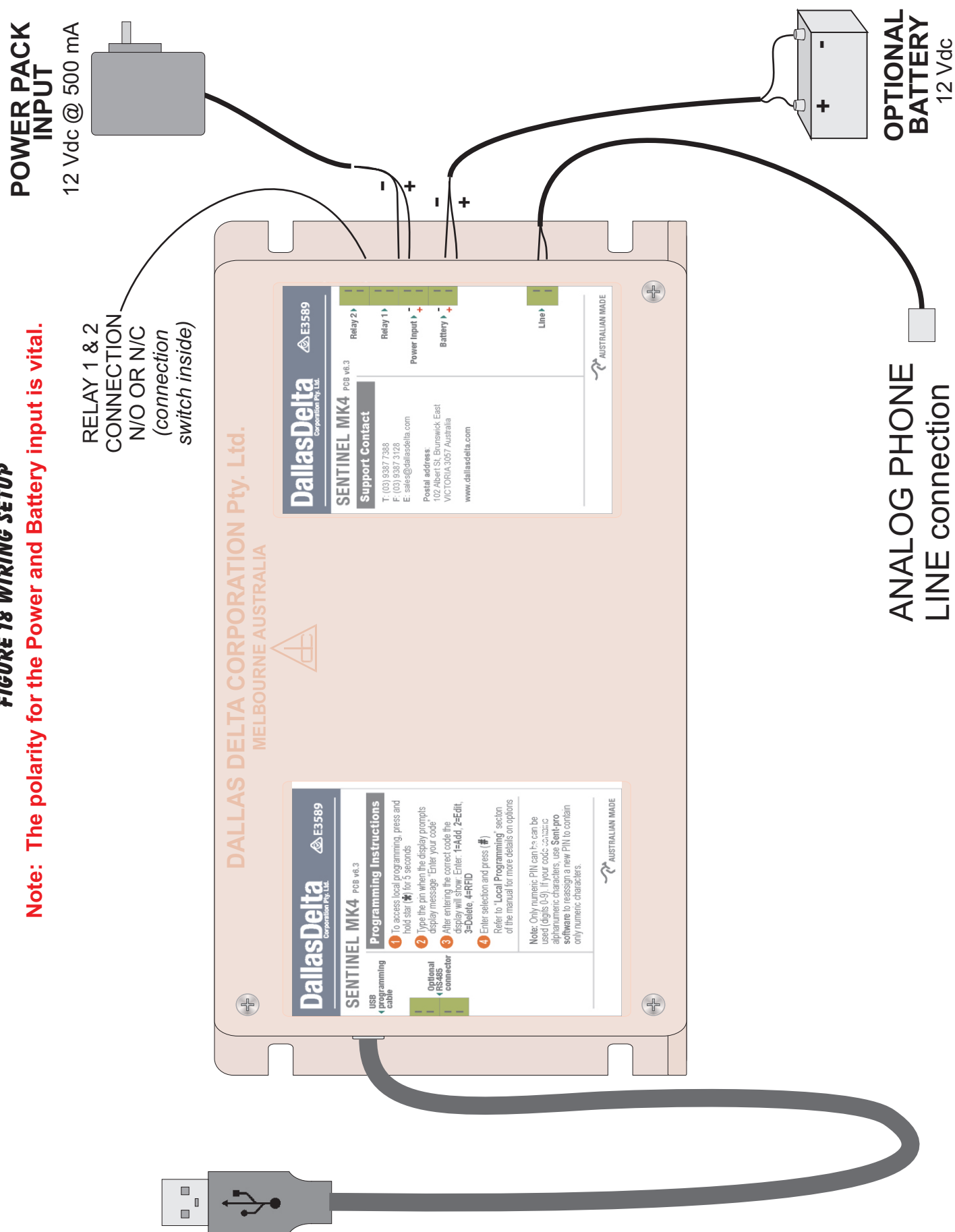


FIGURE 17 WALL MOUNTING

FIGURE 18 WIRING SETUP

Note: The polarity for the Power and Battery input is vital.

6.3 WIRING DIAGRAM



6.4 CASE DIMENSIONS

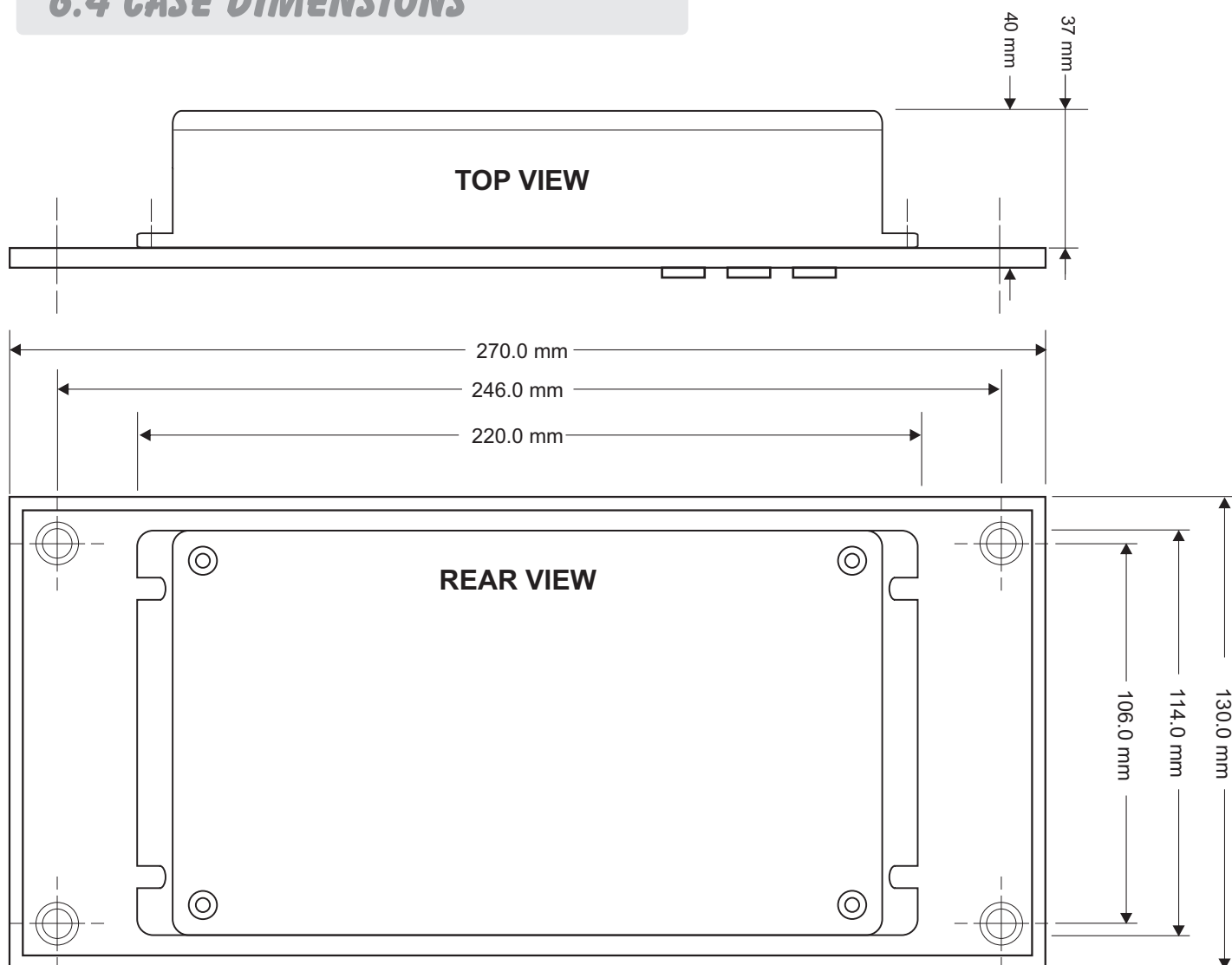
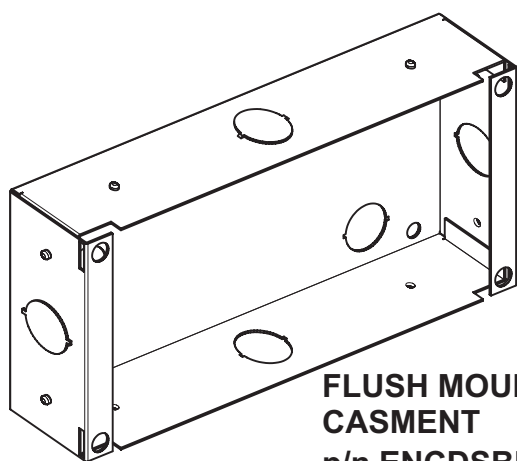
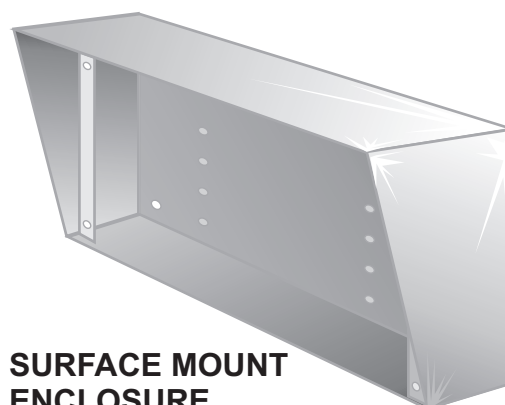


FIGURE 19 PHYSICAL DIMENSIONS

6.5 CASE ENCLOSURE OPTIONS



**FLUSH MOUNT WALL
CASMENT**
p/n ENCDSBB



**SURFACE MOUNT
ENCLOSURE**
p/n ENCDSHSS

FIGURE 20 OPTIONAL ENCLOSURES

7.0 SPECIFICATIONS

7.1 ELECTRICAL:

Power

Input Voltage	6 Vdc	<i>minimum</i>
	24 Vdc	<i>maximum</i>

NB. a minium of 15V is required for battery back systems

Current Consumption

Idle Mode	41 mA @ 12 Vdc
On Call	<110 mA @ 12 Vdc <i>maximum speaker volume</i>

Back-up battery

12V 7A/Hr max. (1.3A/Hr lead Gel battery, will get approximately 12hrs standby)

Relay Contacts

Voltage free outputs
1 A @ TNV Vac
1 A @ 30 Vdc

Temperature

0° C to +70° C

Speaker level

1 watt peak

7.2 COMMUNICATION:

USB *null modem connection USB v1.0, 2.0, 3.0
57600 bps, 8 bits, 2 stop, no parity*

Remote codes *Standard tone type, DTMF*

Line *single telecommunication pair or NO BILL INTERFACE*

Minimum system requirements *Windows XP 600*800screen serial port
64Mb.*

7.3 PHYSICAL:

Dimensions (mm) 270 x 130 *front panel*

Wall Cutout (mm) 225 x 115 x 40 *minimum*

Weight 1 kg *excluding the power pack*

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