



LP8

User's Manual

Sentry and Guard Doorstations



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1.0 Product Description

- The unit is a one-touch auto dialling loudspeaking telephone with voice recording and playback facilities, and is powered solely from the telephone line.
- The unit can store two 4 second messages, one 8 second and one 16 second message. The unit has an **inbuilt** electronic voice for parameter interrogation.
-
- **Hands free amplifier,**
 - Half duplex handsfree operation.
 -
- **Six direct dial buttons,**
 - Emergency numbers can be up to 16 digits long
 - A second and third alternative number can be called if the first number dialled is busy or unanswered (programmable *option, only for button ONE*).
 - Pause, * and # can be added as part of the number,
 - **Button 5** can be configured as an **INFORMATION** button (handsfree mode only).
 -
- **Call termination,**
 - The unit will terminate the call if busy tone or NU tone is detected. The number of busy tone cycles is programmable (see page 9).
 - The unit will hang up if a programmable period of silence has elapsed.
 - The user can set a time for call duration, i.e. if the unit is on a call for as long as the set time, the call will be terminated,
 - The remote operator in conversation with the unit is able to terminate the call by pressing *** * (83=0)** or *** * * (83=1)** on the keypad (see page 15).
 -
- **Identification made easy,**
 - The unit can identify itself when a call is answered, or when any key is pressed by the remote operator.
 - A choice of a dtmf ID can be sent, or one of four voice messages upto 16 seconds long.
 - The call buttons can also be used for interactive responses when pressed during an established call.
 -
- **Control,**
 - The unit can be fitted with two relays that can be programmed to do various functions, including operating when voice/any key is first detected (relay 2 optional).
- **Easy programming,**
 - Local keypad programming or remotely using a standard touch tone telephone.
 - All parameters can be interrogated using the stored system voice numbers.
- **Remote diagnostics,**
 - The microphone and speaker can be tested by the remote operator by pressing **9 0** on the remote keypad.
 - *****NOTE***** This unit, being a handsfree line powered product, may not work on **ATA (Analog Telephone Adaptor)** units due to the limited current that ATA's supply to the telephone. See page 16.

2.0 Operating Instructions

2.0 - Conversation Mode

To enter conversation mode, call the unit. When it auto-answers it will beep twice, then 3 seconds later there will be a single beep. After the single beep, the unit enters conversation mode. The 3 second delay is required by the unit to listen for the remote programming PIN code to be entered if required (see page 6). If any of the CALL buttons are used to initiate a call, the unit immediately enters conversation mode.

In conversation mode the remote telephone keypad has the following functions:

- 8 0** Replays the selected message as programmed with option **59** (see 3.7 - page 9) Also cancels **ALTERNATIVE** number dialling (3.6 - page 9).
- 5** Decreases microphone sensitivity, cancels **ALTERNATIVE** number dialling and resets the RUN timer (default 3 minutes).

This tests the speaker and microphone. The amplifier and speaker are internally disconnected from the telephone circuit and
- 9 0** DTMF digits 1,2,3 are played twice out of the speaker. If the digits can be heard by the caller, then the speaker and microphone are operational.
- 2** Increases microphone sensitivity.
- 3** Increases volume
- 6** Decreases volume
- 8 8** Plays the ID number (voice).
- 8 1** Plays message 1 (two beeps if disabled)
- 8 2** Plays message 2 (two beeps if disabled)
- 8 3** Plays message 3 (two beeps if disabled)
- 8 4** Plays message 4 (two beeps if disabled)
- # 2** } **Relay code**
0 2 } Using '#2' relay code immediately switches the unit to conversation mode (no 3 second delay).
7 2 } Operates relay 2 (see page 8 for details)
A tone (lower frequency than the standard keypad beep) will be heard when the relay operates.

2.0 Operating Instructions

LIFT mode enabled - see 3.5 - relay operation, page 8

Relay code

- 4 1** The relay will operate 1 second on, 1 second off flash rate
- 4 2** The relay will be steady ON when the unit is on hook (hung up) the relay contact remains operated.
- 4 3** Switches the relay off.

LIFT mode disabled - see 3.5 - relay operation, page 8

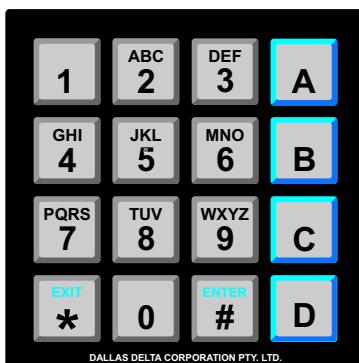
Relay code

- # 1** Using '#1' relay code immediately switches the unit to conversation mode (no 3 second delay).
- 0 1** Operates the relay for programmed ONTIME.
- 7 1** A tone (lower frequency than the standard keypad beep) will be heard when the relay operates.

On detection of busy tone or NU tone, the unit will release the line. The unit will also release when the RUNTIME has expired or the unit does not detect a suitable sound level for the specified silence detect time.

*** * (83=0)** or *** * * (83=1)** Hang up (Unit will send 2 beeps, then release the line).

Local Keypad



A Manual dialling mode (see 4.1, page 12)

B Dials the number stored in location 1 (1#CALL number##)

C Dials the number stored in location 4 (4#Get number##)

D Enter program mode (hold until a beep is heard)

Useful numbers

- Telstra Get Customer number - 12722123
- Telstra Ringback - 12722199
- Optus Get Customer number - 1272312
- Optus Ringback - 1272399
- All Get Customer number - 1800801920

3.0 Program Mode

3.0 - Local Program Mode (no PIN required)

To enter local programming mode, press and hold the **☐** key until a beep sounds. The options as set out in pages 14 and 15 can now be re-programmed or interrogated. Note that all options in remote and local programming modes must be terminated with a double hash (##). The 'double hash' keystrokes must be entered with **0.5 seconds** of each other. **Not all guard units have a local keypad fitted.**

3.1 - Remote programming (pin number required)

Before any parameters in the unit can be changed remotely, the correct pin number must be entered to place the unit into program mode. The default number is **123#**.

Call the unit from a touch tone telephone (eg, Telstra Touchfone). The unit will answer with 1 beep. Two bips will also be emitted from the units speaker. After the beep, the user has **3 seconds** to begin entering the pin number (Note; the microphone is muted (**except** if option 78 is set to 1 (**78#1##**)) during this time period and a **#** as first digit **Cancels the 3 second timer**). If a dtmf digit is not received within **3 seconds**, the unit will enter *conversation* mode. A beep will indicate when this happens. If the pin number is correct, the unit will answer with 1 beep. Two beeps indicates a wrong pin number. The user is allowed 3 tries to enter the correct pin number, after which, the unit will switch into conversation mode. If a star (*) is entered as the first digit of the pin number, the unit switches into 'PC' mode. In this mode, any parameters that are interrogated will answer with dtmf digits rather than voice digits. This enables the unit to be checked via an automatic PC based maintenance system. With units wired in parallel, such as in lifts, the units must have their pin numbers starting with a different number. For example lift1 unit's pin number could be **123** and lift 2's **223**. When the telephone line is called, both units will answer. To program lift 1's unit enter the pin number thus; **1**23#**. This operation causes lift 2's unit to drop off as the first number does not match the first number detected. To select lift 2, hang up and dial again. This time enter **2**23#**. This will cause lift1's unit to drop off because the first number does not match.

3.2 - Recording messages

Messages can only be recorded for a set length, ie the 8 second message cannot be shortened to 5 seconds, so ensure that the selected messages' length is filled. Messages can be recorded remotely via the remote handset or locally via the handsfree microphone in the unit. Message recording and playback can only be done when the unit is in program mode (ie, pin number correctly entered). The pin number is not required for local programming. For example, to record message 1 (4 seconds long) press **71#0##**. There will be a pause as the old message is erased, then there will be a beep. Speak clearly into the microphone/handset after the beep. When the message limit is reached (4 seconds in this case) there will be a beep. To check message 1, enter **71#*#**. It may require a couple of recording attempts to ensure that the message space is adequately filled.

To **record** message 2 (4 seconds long) enter **72#0##**. To **playback**, enter **72#*##**.

To **record** message 3 (8 seconds long) enter **73#0##**. To **playback**, enter **73#*##**.

To **record** message 4 (16 seconds long) enter **74#0##**. To **playback**, enter **74#*##**.

All the messages can co-exist, but only **one** can be selected to play when the trigger event happens during a call. The conditions that trigger the message are programmable, so refer to the appropriate part of the manual for details.

3.0 Program Mode

To playback the system voice numbers (ie “zero”, “one”, etc) enter **75#*##**. **Note** that you cannot record over the system voice messages. This is a factory programmed operation.

3.3 enabling and disabling messages

All four messages recorded into the units' memory can be disabled. This prevents messages being played when 80...84 is entered from the called telephone. The system voice words are not affected.

For example, to disable message 1, enter **71###**. There will be a beep when it is disabled. When an attempt is made to access this message, either locally, or from the remote handset, two beeps will be heard. If a new message is recorded, it will be automatically enabled.

In addition option **68** allows selective *enabling* and *disabling* of messages. This option works in bit format; **0 = enabled, 1 = disabled**

Bit 0 enables/disables message 1; Bit 1 enables/disables message 2
Bit 2 enables/disables message 3; Bit 3 enables/disables message 4

Bit 3 Msg 4 8	+	Bit 2 Msg 3 4	+	Bit 1 Msg 2 2	+	Bit 0 Msg 1 1	=	Number to put in 68
---------------------	---	---------------------	---	---------------------	---	---------------------	---	----------------------------

For example; **1111 = 15**; this will **disable** all messages: **68#15##**

3.4 - call button options

The default mode of the **CALL** buttons is *PUSH-ON/PUSH-OFF*, ie Push the button to make the call, then push the button again to hang up. If *PUSH-TO-TALK* mode is enabled (**52#1##**), then *PUSH-ON/PUSH-OFF* mode (**50#1##**) is overridden, even if enabled. Either of these modes overrides *INTERACTIVE* mode (**48#1##**) (sends a beep to line every time the button is pressed). **Note**; the microphone remains muted until a number has been dialled except when button 1 is programmed for *hotline* operation - see below.

CALL button **ONE** is the only button with *ALTERNATIVE* number functions. It can also be set for *hotline* operation (**44#1##**) without erasing the associated call number. The other buttons can be set for *hotline* operation by erasing the number (eg **2###** for button 2). When **CALL** button **ONE** is set to *hotline* operation, the microphone is active as soon as the **handset** is lifted **or** the **SPK/H/S** button is pressed.

The **H/FREE** button has an alternative **CALL** button function if required. If option **80** is set to 1, then the **H/FREE** button becomes **CALL** button **6** (see page 15).

Note; **star** (*) **hash** (#) and a 2.5 second dialling **pause** can be inserted into the call number.

To insert a pause press ***** once.

To insert a star (*), press ***** twice (within 0.5 seconds).

To insert a #, press **#** once, then wait a bit before entering other numbers (## within 0.5 seconds will end the call number programming session). Note also the ****** or **###** does not hang up the unit while in call button programming mode.

3.5 - Relay Operation

The default condition for **both** relays is **normally open (N.O.)**, ie to **close** the contact, the relay code must be entered. To **open** the contact when the relay code is entered (ie, **normally closed (N.C.)**), alter the 3 position contact beside the respective relay.

Note; the relay codes are **fixed** and **cannot** be changed.



With *LIFT* relay mode disabled (**53#0##**), relay 1 takes its mode of operation from option **46** and parameter **61** (relay 1 **ONTIME** 0 -99 seconds). With **46#0##**, the relay will turn on for what ever time the parameter **61** is set to. It is activated by the remote handset with either **#1**, **01** or **71** when the unit is in *conversation* mode. With **46#1##** and parameter **61** is set to zero, the relay will switch on for the entire time that the unit is off-hook. If parameter **61** is set to any value other than **0**, the relay will switch on when the **CALL** button is pressed, then switch off when the value set in parameter **61** expires.

With *LIFT* relay mode enabled (**53#1##**) the relay ignores the settings of **46** and **61**. The relay will switch on at a pulsing rate of one second on/ one second off when a trigger event occurs. ID-on-answer (**43**) is automatically **enabled** if this mode is selected.

The microphone remains muted until the call has been answered by the called party.

The remote keypad has the following functions when the unit is in *conversation* mode;

41 Relay 1 will pulse on and off at a 1 second rate.

42 Relay 1 will be steady on. The relay will remain in this condition even when the unit is in the on-hook (hung up) condition.

43 Relay 1 will release.

The relay will also release if the **CALL** button is pressed to make a **new** call.

The contact for **relay 1** appears as an external connection (**RLY1**) and can be either **NC** or **NO** as set by the jumper marked '**Lk2**' on the pcb.

Relay 2 operation - ***If Relay 2 is not installed, 55 and 62 must be 0.***

With **55#0##**, relay 2 will turn on for what ever time the parameter **62** (relay 2 **ONTIME** 0 -99 seconds) is set to. It is activated by the remote handset with either **#2**, **02** or **72** when the unit is in *conversation* mode. With **55#1##** and parameter **62** is set to zero, the relay will switch on for the entire time that the unit is off-hook. If parameter **62** is set to any value other than 0, the relay will switch on when the **CALL** button is pressed, then switch off when the value set in parameter **62** expires.

The contact for relay 2 comes out to connector **J15** (installed in place of **J6**, an Rj45 connector). Jumper '**J8**', located next to **RLY2**, is used to select either **NC** or **NO** operation.

In **loop** mode the relays will operate after the line is looped, except when the unit is called. In this case, the relays will only operate when *conversation* mode is entered. The relays also **do not** operate in *Manual dialing* mode.

If the relays are **not** required to operate in **loop** mode when the unit auto answers after being called, set option **79** to **1** (**79#1##**).

3.6 - alternative number calling

Alternative number option only works with CALL button one. This mode relies on absence of ring tone, dtmf detection, or voice/noise when the called party answers the call to cancel dialling of any subsequent numbers. **ID-on-answer** is automatically enabled if **ALT number** is enabled. The primary number that will be called is placed at location 1 (**1#call no.##**) the 1st alt number at 14 (**14#Alt no. 1##**) and the 2nd alt number at 15 (**15#Alt no. 2##**). An alternative number will be called if busy tone is detected **or** the **ALTERNATIVE number timer** expires (**63#1-99 seconds##**). The number of numbers to call can be changed in **94#x##** (either **0,1 or 2**). The last **Alt number** called will continue to ring the called party until the call times out or busy tone is detected. If **94#x## = 1**, then only the primary, and 1st alt numbers will be called. Default is **94#2##**.

Note that the units microphone is muted when **ALT number** is enabled. This is to prevent spurious background noises entering via the microphone falsely triggering the unit into assuming that the call has been answered, therefore cancelling any further alternative number dialling.

To enable Alternative Number calling, enter **45#1##**. Default is **45#0##** (ie off).

3.7 - voice message select

Option **59** sets the message number that will replay when voice/any dtmf (**LIFT** mode enabled) or '**80**' (**LIFT** mode disabled) is detected after the **CALL** button is pressed. The default setting is 3 which will cause the 8 second message to be sent to line. The other options for parameter **59** are;

- 0** dtmf ID number will play.
- 1** message number **1** - 4 seconds
- 2** message number **2** - 4 seconds
- 3** message number **3** - 8 seconds (**default**)
- 4** message number **4** - 16 seconds

Note; Pressing '**88**' (unit in conversation mode) on the remote keypad will re-play the ID number in system voice words.

3.8 - handset operation

The handset has three modes;

49#0## is the default condition. When the handset is lifted, the **CALL** button has to be pressed to make a call or simply dial the number using the keypad.

49#1## will enable *handset-dial-on-lift off* mode. When lifted, the unit waits a couple of seconds, then will dial the number stored in the *h/s auto dial number* location;
(**16#h/s auto dial number##**).

For *hotline* operation, the *h/s auto dial number* location must be cleared. This is done by programming the *h/s auto dial number* location (**16####**).

If a handset is not fitted, then links **Lk7** and **Lk8** *must* be in the in the **N.O.** position.

Also see "**4.1 MANUAL DIALLING MODE**" on **page 12**.

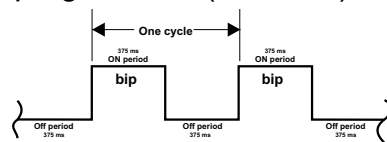
3.0 Program Mode

3.9 - ring tone mask delay

This delay, when enabled (**65# 0 - 99 seconds ##**), masks the absence-of-ring-tone detector. When a mobile phone is called, it can take a number of seconds before ringtone is heard, which means the unit can falsely assume that a call has been answered, disabling the ALTERNATIVE number calling feature. The default is **0** (off).

3.10 -busy tone programming

The cadence of busy tone can vary from system to system. For example, the standard busy tone generated by the PSTN is 375 ms ON and 375 ms OFF, whereas some PABX's have 500 ms ON and 500 ms OFF. Each ON period is a burst of 425 hz. This unit will recognize **all** busy tones of **equal** cadence (ie, the **ON** period must equal the **OFF** period, and the **ON** period must be greater than 160ms) as well as NU tone. The unit recognizes frequencies from 380 Hz to 660Hz as valid busy tone frequencies. In addition, there is an option for the unit to hangup when two seconds of tone is detected. The number of busy tone cycles required to be detected concurrently can also be programmed (default 4).



Typical PSTN busy tone signal

To detect a continuous tone within the specified frequency range, set **42** to one (**42#1##**). The unit will hangup when a continuous tone of **two seconds** is detected.

42 # Continuous tone detect ## beep **0 or 1, 0 = detection disabled**

Where there is a fast busy tone cadence (200 ms on, 200 ms off) it **may** be necessary to raise the number of consecutive cycles that are to be detected before the unit hangs up.

69 # Number of Busy tone cycles ## beep **0 to 10 0 = detection disabled**

3.11 - Interrogate mode ie, see what number it will dial, etc

Any of the programming parameters can be interrogated by entering the **ⓧ** button instead of a value. For example, to see if the unit is in LIFT mode, enter **53#*##**. The unit will respond with the electronic voice 'zero' or 'one'. If the pin number was entered by a PC interface (a '*' as the first digit of the pin code), the unit will respond with a dtmf 0 or 1. Another example; to see what number the units' 4th button is set to, enter **4#*##**. The unit will respond with 'one', 'two', 'three', 'two', 'two', 'one', 'two', 'three' (The default number that calls Telstra's line identification robot).

3.12 - Checking the version number

The firmware version number can be checked from within **program** mode. The version number can be checked either remotely or locally by entering ***#*##**. The number is read out via the electronic voice.

3.13 button on time

Option **57** sets the time that the call button has to be pressed before the programmed number will be dialled. This helps prevent prankster calls.

1 -> 10 is in **100 ms** steps. ie **57#4##** sets the **button-on-time** to **0.4 seconds**.

11 -> 13 is in **3 second** steps. ie **57#11##** sets the **button-on-time** to 3 seconds.

11 The **button on time** is approx. **3 seconds**.

12 The **button on time** is approx. **6 seconds**.

13 The **button on time** is approx. **9 seconds**.

3.14 - information button options

Option **66** sets the message number that will replay when button 5 is pressed. If it is set to **0 (66#0##)**, then the mode is disabled, and the number set for **button 5 (5# call number ## beep)** will be called. This mode **only** works when the unit is in the *handsfree* mode. The default setting is **0** (Call button 5 mode). The options for parameter **66** are;

- 0** **OFF**; will dial call button 5. **(default)**
- 1** message number **1** - 4 seconds
- 2** message number **2** - 4 seconds
- 3** message number **3** - 8 seconds
- 4** message number **4** - 16 seconds

Operation - When the *INFORMATION* button is pressed, the selected message will play out of the units speaker. To play the message, the unit needs power, so the telephone line is looped, the message played, then the line is released. The message **cannot** be played while a call is in progress. If the selected message is **disabled** (see 3.3 page 7) then 2 beeps only will be heard.

Either, **or both** of the relays can be programmed to operate for **two seconds** when the **INFO** button is pressed.

For relay 1, set parameter **81** to **1**. See page 15.

For relay 2, set parameter **82** to **1**. See page 15.

4.0 Hardware Options

4.0 I.D. on Answer

This option allows a message **or** a dtmf ID number (set at **39#ID number##**) to be played when the called party answers a call from the unit.

Note: The unit's microphone is muted until the call is answered. This is to prevent spurious background noises entering via the microphone falsely triggering the unit into assuming that the call has been answered.

The unit will re-play the message if any dtmf button is pressed when LIFT relay mode enabled is (**53#1##**). If the LIFT relay mode is disabled, then pressing '80' will cause the message to re-play. To prevent the message playing, options **43, 45 and 53** must be disabled (**0**).

4.1 - Manual dialling mode

Manual dialling mode allows the technician to use the unit to dial any telephone number using the local keypad. To get into this mode, press the **☒** key. Dial tone will be heard. Any digits, including **A,B,C,D, *** and **#** can be dialled. **Note;** when dialling a '*' there will be a slight pause before the * is dialled. The unit is waiting to see if there will be another '*' within 0.5 seconds (the hangup code). To hangup, dial **☒☒** within 0.5 seconds. **Note;** the relays do not work in *Manual* dialling mode if they are programmed for *loop* operation. If the unit has a **handset fitted**, it is **not** necessary to press the 'A' key. Pressing the 'B' key will dial the number that is stored in location 1 (**1#call number##**). Pressing the 'C' key will dial the number that is stored in location 4 (**4#Get number##**). Location 4 has the Get number **12722123** as a default.

4.2 - Seize explanation

The SEIZE (**51#x##**) condition happens when a telephone first goes off-hook. Basically, it is a 300 millisecond short circuit placed across the telephone line by the telephone circuit. Its purpose is to ensure that the line relay in an old electro mechanical telephone exchange will pull in. Unfortunately, on modern PABX's that supply a limited amount of line feed current, the SEIZE condition robs the telephone circuit of power, sometimes causing the unit to malfunction. To prevent this, the SEIZE condition can be switched off.

4.3 - 'Hang-up-after-relay-operates' delay

When enabled (**92#1-99##**), the unit will automatically release the line (**1-99**) seconds after either relay **1 or 2** (for door release, etc) has released after the time set in **61** (or **62**) **ONTIME** has expired. **92#0##** disables the feature. This feature enables the gate release code (**#1,#2, etc**) to open the gate, then hang up without any further operation from the caller or the called person. **Not** for **relay 1** in **LIFT MODE (53#1##)**.

4.4 - conversation mode delay

This delay, when enabled, prevents the unintended operation of the units various functions (like door release **#1**, etc) for a period as set in 93 (**93#1-99##**) after the button is pressed, but **only** when the unit is programmed for **HOTLINE** operation. Some PABX's send out DTMF tones when the PABX is programmed for hotline operation, which can cause misoperation of the doorstation unit.

5.0 Programming Parameters

<i>Programming Instruction</i>	<i>Range</i>	<i>Factory Setting</i>
1 # Call number ## beep	up to 16 digits	123
14 # Alt number 1(butt 1)## beep	up to 16 digits	cleared
15 # Alt number 2(butt 1)## beep	up to 16 digits	cleared
2 # Call number ## beep	up to 16 digits	123
3 # Call number ## beep	up to 16 digits	123
4 # Get number ## beep	up to 16 digits	12722123
5 # Call number ## beep (<u>or</u> INFO button)	up to 16 digits	123
6 # Call number ## beep	up to 16 digits	123
16 # h/s AUTO dial number ## beep	up to 16 digits	123
38 # Pin number ## beep	up to 7 digits	123
39 # ID number ## beep	up to 16 digits	cleared
40 # Mic level ## beep	0 min - 1 max	1
41 # Silence detect ## beep	0 off - 1 on	1 on.
42 # Continuous tone detect ## beep	0 off. - 1 on. (2 secs)	0 off
43 # ID-on-answer ## beep	0 off. - 1 on. <small>Enabled if 53 = 1 or 45 = 1</small>	0 off
44 # HOT line button 1 ## beep	1 yes. - 0 no	0 no
45 # Alt number enable ## beep	1 yes. - 0 no	0 no
46 # Relay 1 mode ##beep	1 loop or 0 normal	0 normal
47 # AUTO answer ##beep	1 yes. - 0 no	1 yes
48 # interactive button ##beep	1 yes. - 0 no	0 no
49 # handset dial on lift off ## beep	1 yes. - 0 no	0 no
50 # PUSH ON/PUSH OFF ## beep	1 yes. - 0 no.	1 yes
51 # SEIZE DISABLE ## beep	1 yes. - 0 no.	1 yes
52 # PUSH-TO-TALK ## beep	1 yes. - 0 no.	0 no
53 # Lift relay mode ##beep	1 yes. - 0 no.	0 no
55 # Relay 2 mode ##beep	1 loop or 0 normal	0 normal
56 # Runtime ## beep	1 - 99 minutes	3 min

5.0 Programming Parameters

<i>Programming Instruction</i>	<i>Range</i>	<i>Factory Setting</i>
57 # Button on time ## beep (see text page 9)	1 - 10 and 11 - 13 <small>1 - 10 = 100 ms steps 11 - 13 = 3 sec steps</small>	3 (300 ms)
58 # Silence detect time ## beep	0 - 99 seconds	30 secs
59 # Message select ## beep	0 - 4 (0 = ID number)	3 (8 sec msg)
60 # Handset volume ## beep	1 - 4	2
61 # Relay 1 ontime ## beep (not in LIFT MODE)	0 - 99 secs	3 secs
62 # Relay 2 ontime ## beep	0 - 99 secs	0 (see 3.6, page 8)
63 # Alt number dial ## beep	1 - 99 secs	60 secs
64 # Ring cycles ## beep	1 - 10 (cycles before answer)	2
65 # Ring tone mask delay ## beep	0 - 99 seconds	0
66 # INFO button select ## beep	0 - 4 (0 = CALL button 5 mode)	0
67 # Handsfree volume ## beep	1 - 8	8
68 # message enable flags ## beep	see page 7 for details	0 (all enabled)
69 # Number of B\t cycles ## beep	0 - 10 (0 = b/t det. Off)	4
71 #0## beep (71### to disable)	4 sec message	test msg
72 #0## beep (72### to disable)	4 sec message	test msg
73 #0## beep (73### to disable)	8 sec message	test msg
74 #0## beep (74### to disable)	16 sec message	test msg
75 # Play back sys words ## beep	'one', 'two', etc	0123456789*#P
76 #1## beep (76#1##)	Factory (A1/A2 for rly test)	0
78 # mute MIC on auto-ans (3 secs) ## beep	0 = yes, 1 = no	0 (3 seconds)
79 # relays operate on auto-ans (loop mode) ## beep	0 = yes, 1 = no	0 (loop mode only)
80 # CALL butt 6/H_FREE butt ## beep	0 = H FREE butt, 1 = CALL	0 (H FREE butt)
81 # Relay 1 ON 2 secs if INFO pressed ## beep	0 = no, 1 = RL1 2 secs ON	0
82 # Relay 2 ON 2 secs if INFO pressed ## beep	0 = no, 1 = RL2 2 secs ON	0
83 # ** or *** to hangup ## beep	0 = **, 1 = ***	0 (**)
92 #'Hang-up-after-relay-op' delay ## beep	0 - 99 secs	0 (disabled)
93 #'Conversation mode entry' delay ## beep	0 - 99 secs (HOTLINE only)	2
94 #Number of Alternative numbers ## beep	0, 1 or 2	2

(P = pause)

To exit Local and remote programming mode, type **☐☐** (83=0) or **☐☐☐** (83=1). The unit will then hang up. Any error while entering data in programming mode is indicated by 2 beeps. The programming option number then has to be entered again, followed by the data.

6.0 Default Parameters

If it's all too much...

To initialize the unit, call the unit and enter programming mode by entering the default pin number (**123#**). After the beep, enter **37#289574###**. **Note**; you have 3 seconds to begin entering the pin number from the time the unit answers. During this time, the microphone is muted. If no pin is entered the unit goes into conversation mode. If a local keypad is fitted, Hold the 'D' key until the beep, then enter **37#289574###**.

A factory reset will **not** clear the voice messages!

The unit will beep if OK. This resets the pin number to 123, and loads in the defaults as noted in the previous pages.

7.0 Specifications

PSTN

Exchange Line or Analog PABX ext.	24-50V
R.E.N	@23-100mA
DTMF	<1
Tone duration	70ms
Inter-digit pause	80ms
Pause	2.5 seconds

Loud Speaker Output > 78dBa/0.5metre

Relays

switching max.

Voltage free output

0.5 Amp @ 60Vdc/40Vac SELV or TNV

It is recommended that a snubber network (**0.047uf/250V capacitor in series with a 100R resistor**) be connected across the relay contact connection when switching an inductive load such as a door strike solenoid. It may be necessary to use a slave relay if the specifications above are exceeded.

Physical

Dimensions (mm)	Sentry	270 x 130 x 40
	Guard mk2	100 x 225 x 45
	Guard mk3	254 x 104 x 42 (wall cutout 245 x 95 x 55)

Weight **180g**

*****NOTE***** This unit, being a handsfree line powered product, may not work on **ATA (Analog Telephone Adaptor)** units due to the limited current that ATA's supply to the telephone (generally about 19 ma).

8.0 Installation Details

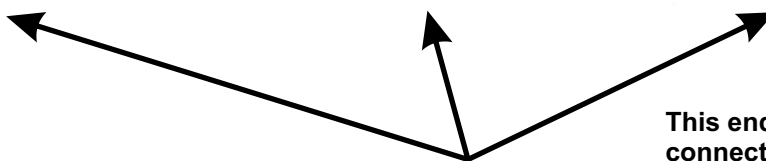
(optional) Sentry surface mount enclosure



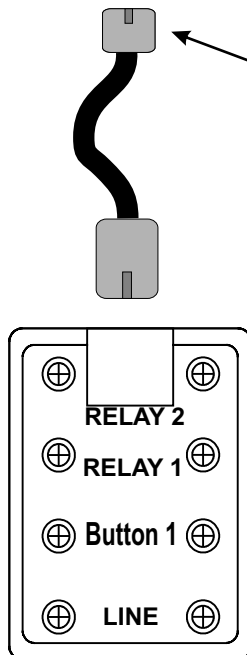
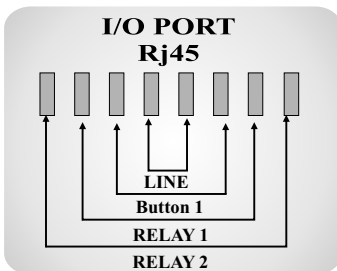
Standard Guard surface mount enclosure



(optional) Guard mk3 hood



This end plugs into the RJ45 (8 way) connector at the lower end of the unit. Note that some GUARD units do not have the RJ45 fitted. In this case there are screw connectors. See next page for details.



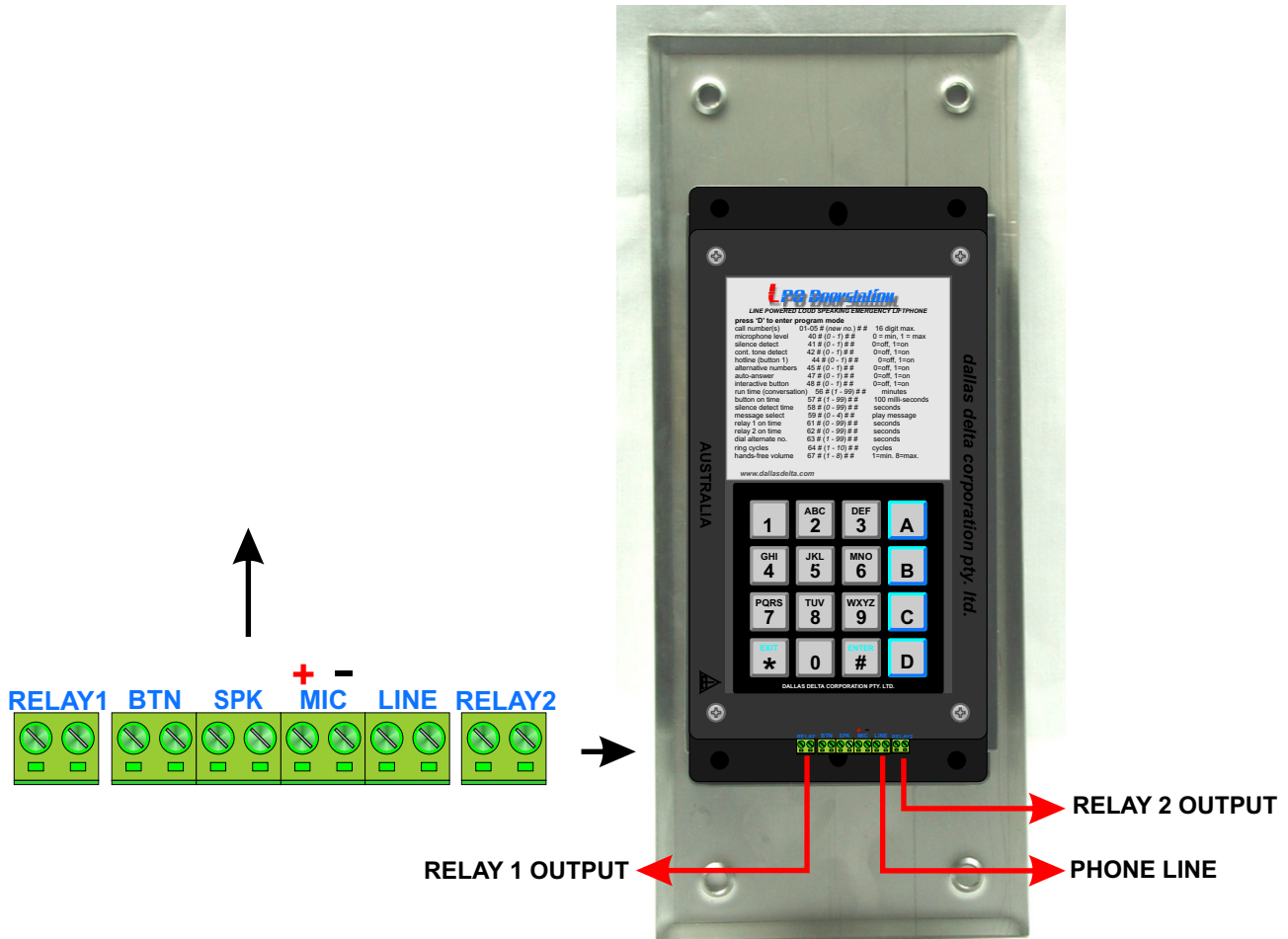
If the unit is supplied with a RJ45 junction box, use the RJ45 jumper lead to link the board and the junction box. All connections are made on the screw terminals at the junction box as illustrated adjacent.

Please Note: All wiring and devices connected to the Lp8 Doorstations must be rated for Telecommunications Network Voltages (TNV).

8.0 Installation Details

Guard mk2

Vertical and Horizontal Guard units





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1.0 Quick Start Guide

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2

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