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# ***MASTERCALL DIAL-UP PA INTERFACE***

MD-4900PA

**WITH AUTOMATIC DISCONNECT**

ISOLATED VERSION      SERIAL/ITEM 533/nnn

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## **USER GUIDE**

Issue 5, JULY, 2013, AUTHOR: PETER ZEUG

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DESIGNED AND MANUFACTURED IN AUSTRALIA



Est. 1968

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**DESIGN TWO THOUSAND PTY LTD**

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# **MASTERCALL MD-4900PA**

## **DIAL-UP PA INTERFACE**

### **USER GUIDE**

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# **MASTERCALL PA INTERFACE** MD-4900PA

## DIAL-UP WITH AUTOMATIC DISCONNECT

### INTRODUCTION

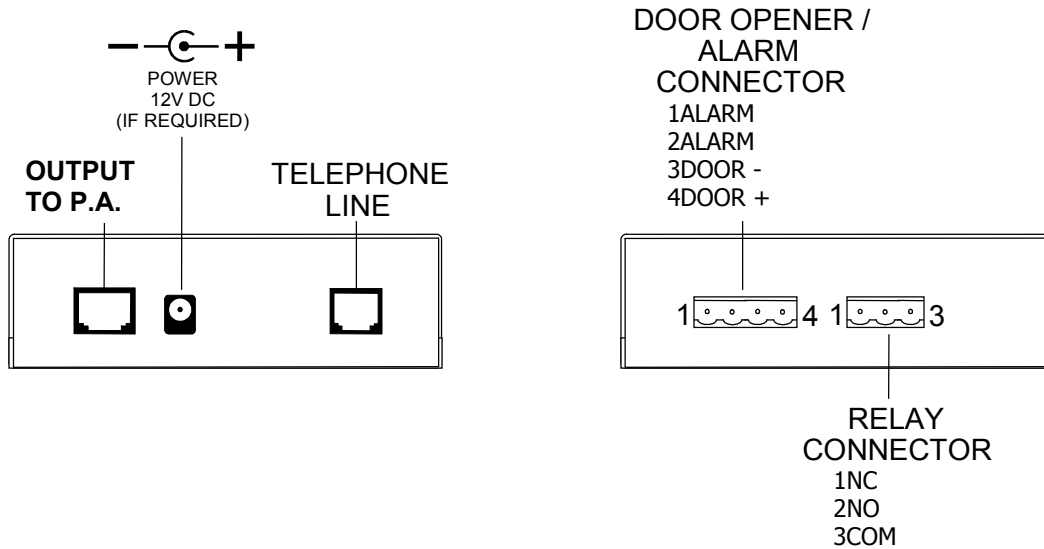
The **Mastercall Dial-up PA Interface**, with an inbuilt line-powered pre-amplifier, interfaces a standard telephone line or analog PABX extension to a line-level input of a Public Address amplifier.

It allows people to make PA announcements from any telephone simply by dialing the PA extension number. An alert tone sounds over the PA just before the announcement is due.

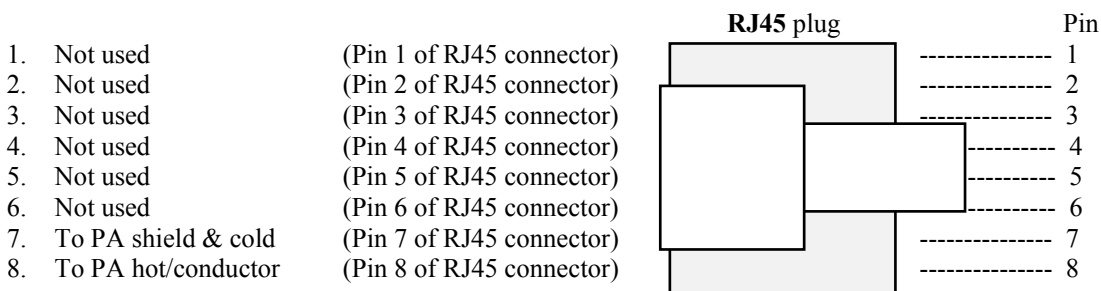
This system is fully ACMA compliant and isolates the telephone line from the PA system.

The MD-4900 has an inbuilt microprocessor controlled busy tone and disconnect tone detector so that calls to the PA disconnect virtually the moment the caller hangs up.

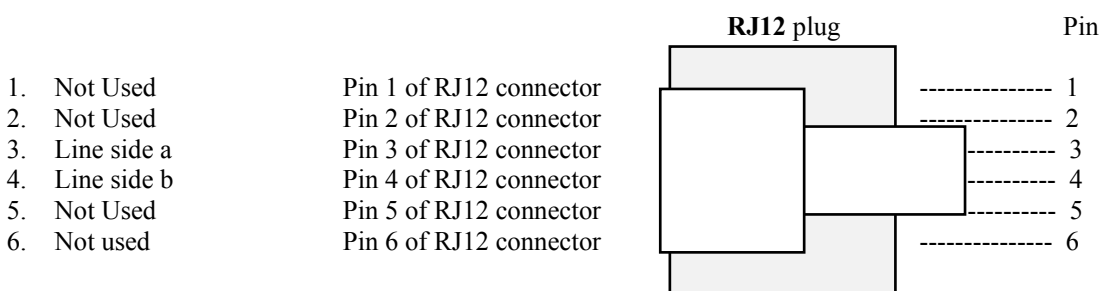
## CONNECTING THE MD-4900 'HIDE-AWAY' UNIT TO THE PA AND TELEPHONE LINE



1. Connection to the PA is made via pins 7 & 8 of the RJ45 PA connector.



2. Connection to the telephone line is made via pins 3 & 4 of the RJ12 Telephone Line connector.

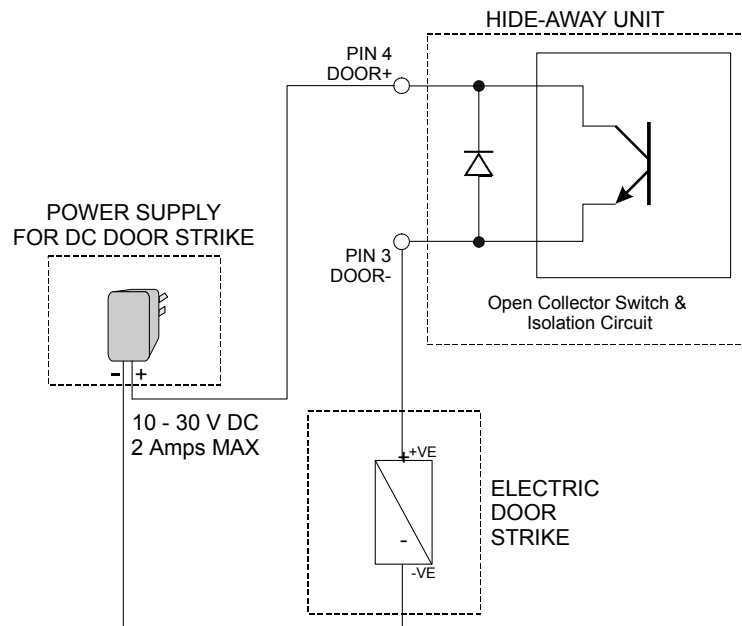


3. The relay output can be used to switch other devices. In the default setting, the relay operates whenever the phone line is looped (seized).

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## WIRING DIAGRAM FOR DOOR LATCH & SWITCHED OUTPUT MODE

PLEASE CONSULT YOUR DISTRIBUTOR FOR FULL DETAILS



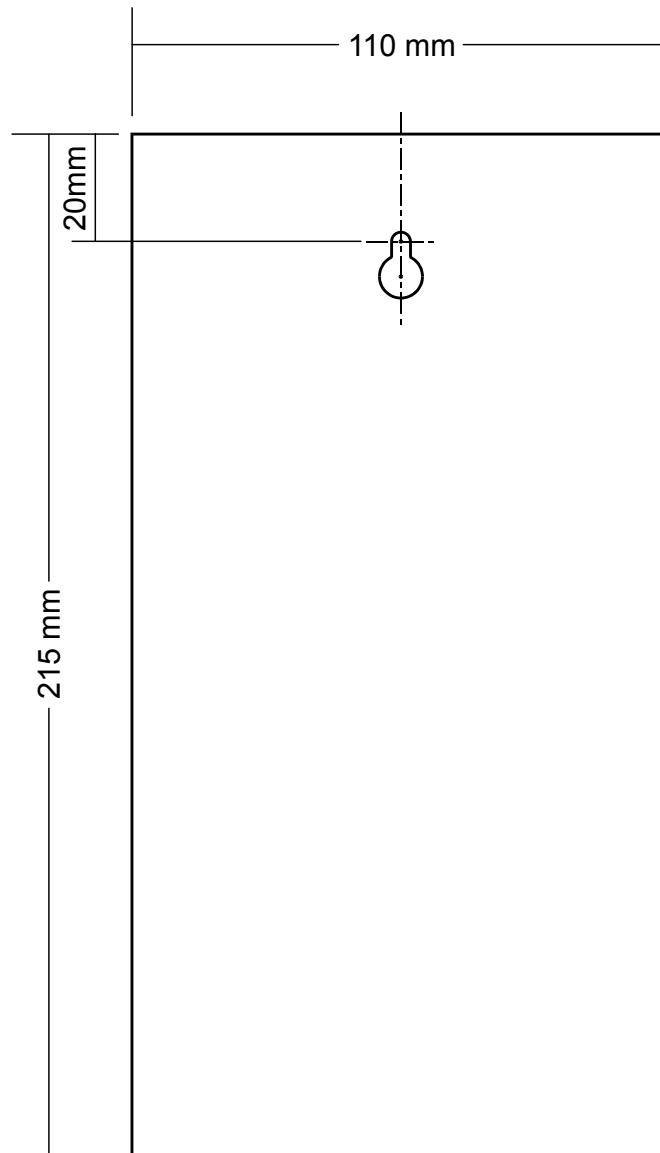
### Switched Output Mode

The 'door latch' switched output (open collector) and voltage free relay contact can be programmed to operate only when \*5 is pressed by the person on the phone. (Please note that the voltage free relay contact requires external isolated 12Vdc, 350mA nominal power. **Use only a transformer type plug pack. DO NOT use a switch mode supply as this introduce noise and hum on the line**). The open collector and relay contact can also operate when the line is seized on a PA call. This mode can be used to operate the PA etc..

1. Dial up the MD-4900.
  2. Wait for it to answer with a double 'pip' tone.
  3. Press \* 601.
  4. Press 0 for both switched outputs to be activated only by DTMF \*5, OR:  
Press 1 for both switched outputs to be activated when an external input triggers an 'outgoing' call (DTMF \*5 still works for activating the output on incoming calls), OR:  
Press 2 for the relay to be activated when an external input triggers an 'outgoing' call, and the transistor output (DOOR +, DOOR -) to be activated only by DTMF \*5, OR:  
**Press 3** for the relay to operate when an incoming call is received and the phone line is looped (**default** for the MD-4900 PA version).
  5. Press # to store the setting.
- Summary: <\* [PIN] 601 [0, 1, 2 or 3] #>

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## HIDE-AWAY UNIT WALL MOUNTING OPTION



- 1 Disconnect all wiring from Hide-away unit.
2. Drill holes for mounting screw as shown in diagram.
- 3 Fit mounting screw to mounting surface and check that screw does not protrude more than 7mm from surface
- 4 Locate Hide-away unit onto mounting screw.
- 5 Connect wiring to Hide-away unit.

**NOTE: SCREW HEIGHT FROM MOUNTING SURFACE MUST NOT EXCEED 8mm (5/16")**

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## USER INSTRUCTIONS

### To Make an Announcement Over the PA

1. Dial the PA extension (or press the PA speed dial button), wait for the double pip tone, make your announcement and hang up.

### Siren Alert Tone (Emergency Services version only with SW-9942602 or later)

1. While talking over the PA, simply press \*5 to sound the alert siren.
2. When the siren stops, continue talking or hang up.

### Automatic Disconnect

The MD-4900 will disconnect the telephone line if:

- One or two busy tones are detected.
- DTMF \*9 is detected.
- Loop current loss or line reversal is detected
- Silence time has elapsed.

### Busy Tone Disconnect

The MD-4900 will disconnect after a programmable number of consecutive valid busy tone on/off periods. Please note that a valid off period is **included** in the counter.

1. Dial up the Mastercall unit and wait for it to answer with a double 'pip' tone.
  2. Press \* 606.
  3. Enter the number of busy tone on/off periods for automatic disconnection (range 1-8, default = 2).  
If you enter 2, you will hear **one** (or perhaps two) busy tones over the PA when you hang up.
  4. Press # to store the setting.
- Summary <\* [PIN] 606 b#>, where b = 1 → 8 (default = 2)

### Dial (Long) Tone Disconnect

Some telephone systems provide dial tone or long tones as the disconnect signal. The MD-4900 may be programmed to disconnect after 1 second to 255 seconds of continuous tone (two seconds minimum is recommended).

- Summary <\* [PIN] 603 t...#>, where t = 1 → 255 (or 0 = off) seconds. (ie. enter a value of the seconds required or enter 0 to turn this feature off).



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## **Force Disconnect**

1. While talking over the PA, simply press \*9

## **Silence Disconnect**

1. Dial up the Mastercall unit and wait for it to answer with a double 'pip' tone.
  2. Press \* 8.
  3. Enter the maximum number of seconds of silence detection on the LINE side for a PA call to be automatically disconnected (0 = no silence disconnect or 1 → 255 seconds). Eg. if you enter 30 seconds, any call with a silence period (on the line side) of thirty seconds or more will be automatically disconnected.
  4. Press # to store the setting.
- Summary: <\* [PIN] 8 s...#>

## **How to Change the Speaker Volume**

1. While talking over the PA, simply press \*3 to turn up the volume or \*4 to turn down the volume.
  2. Repeat step 1 as required, then just hang up to save changes.
- Summary: <\* 3 (up by 2dB) or \* 4 (down by 2dB)>

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## BUSY TONE DETECT SELECTION

### Brief

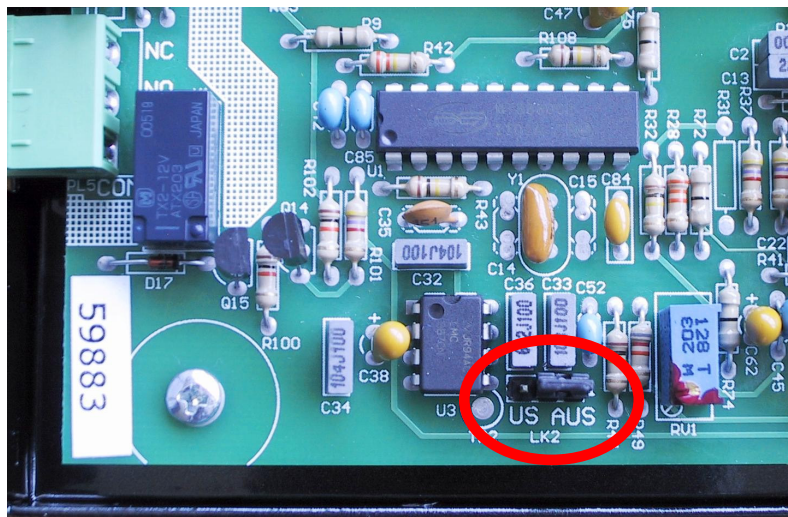
IP based telephone switches and VoIP analogue terminal adaptors can provide either North American busy tone or Australian busy tone. All MD-4900 Series units can be set to detect either “US” or “AUS” (default) busy tones for automatic disconnect.

### Instructions

- 1 Remove the MD-4900 hideaway unit cover:



- 1 Locate LK2 - the three pin “US\_AUS” jumper link circled below in red:



- 1 Position the shunt in either the US or AUS position.
- 1 Test for reliable busy tone disconnect and replace cover.

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## SPECIFICATIONS

Enclosure	Powder coated steel.
Dimensions Hide-away Unit	215 mm x 105 mm x 35 mm.
Power Requirement	Telephone line powered.
Power Consumption	50 $\mu$ A nom. in stand-by mode. 15 mA nom. during line seize.
Operating Temperature Range	-10 $\rightarrow$ +50 $^{\circ}$ C.
Storage Temperature Range	-20 $\rightarrow$ 80 $^{\circ}$ C ambient.
Humidity, Storage and Operating	To 98% non condensing.
Mean Time Between Failure	> 20 years.
Speakerphone pre-amplifier	Motorola MC33218AP half duplex.
Output level	-13.5 $\rightarrow$ 0 dBm adjustable.
Frequency range	300 Hz $\rightarrow$ 3.4 kHz.
Line Interface	Two wire analogue ring in loop out.
Programming method	DTMF
Push buttons (Hide-away unit)	12 button silicone membrane (Optional).
Displays	Off hook dialer LED, Tone detect LED.
ACMA Supplier's Code Number	N468
Warranty	Two years.

*Note: Specifications are subject to change without notice.*



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# **MASTERCALL PA INTERFACE**

MD-4900PA

DIAL-UP WITH AUTOMATIC DISCONNECT

MADE IN AUSTRALIA BY



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## MASTERCALL MD-4900 PA INTERFACE

### Packing List

Quantity	Item	Use
1	Hide-away unit	Electronics and connections
4	Rubber feet	For base of hide-away unit
1	RJ12 to RJ12 telephone lead	Connection to phone line
1	BL-4 screw terminal	dc door strike
1	BL-3 screw terminal	voltage-free (dry) relay contacts
1	Wall plug (drill size 3/16" (5 mm))	Masonry applications
1	6g x 25 mm cross-recess pan head screw	Wall mount Hide-away unit option
1	This manual - Document G/01141B	How to use this Interface



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