



COMMANDER®

DOOR PHONE MD-4900



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CAT 5 SPLIT-SYSTEM



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COMMANDER DDOR PHONE MD-4900

DOOR / WALL SPLIT-SYSTEM HANDS-FREE TELEPHONE

USER HANDBOOK

SECTION	CONTENTS	PAGE
1	Introduction	1
1.2	Overview	1
1.3	Description	2
1.4	Features	2
2	Installation	3
2.1	Installation Block Diagram	3
2.2	Mounting details	4
2.3	Connections	6
2.4	Wiring Diagram For Door Latch & Output Mode	7
2.5	Push Button Light	7
3	User Instructions	8
3.1	To store the telephone number to be dialed	8
3.2	Call from the Door Phone	8
3.3	Call to the Door Phone	8
3.4	Door Opener	8
3.5	Speaker Volume	9
3.6	Force Disconnect	9
3.7	Silence Disconnect	9
3.8	Total Call Time Limit	9
3.9	PIN	10
3.10, 11	Automatic Disconnection	10
3.12	Relay Timer	10
3.13	Master Reset	10
3.14	Busy Tone Detect Selection	11
4	Specifications	12
5	Packing List	14



The logo for Commander, featuring the word "COMMANDER" in a white, sans-serif font on a dark blue background.

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COMMANDER DOOR PHONE MD-4900

SPLIT-SYSTEM HANDS-FREE DOOR TELEPHONE

1. INTRODUCTION

The **COMMANDER Door Phone**, with a line powered inbuilt telephone dialer and hands-free speaker phone, automatically connects visitors at your premises door or gate directly to you on your PABX extension, mobile phone, or any other telephone.

This system is made for the person, household or business that is security conscious and wants things made simple and easy. The door unit is a small and slim (standard GPO size), robust yet unobtrusive.

The **COMMANDER Door Phone** means the end of 'no answer' and allows visiting friends, relatives and colleagues to contact you with push button ease from outside when you're inside or when you're out and about.

The **COMMANDER Door Phone** is ideally suited for all types of domestic and commercial security and communication uses. An easy D.I.Y. installation kit is provided for 'plug and play' operation.

Knowing that one of the first things that potential intruders will do is to ring the doorbell, why not deter them with an answer? As standard, the **COMMANDER Door Phone** has a relay output to control an electric door strike/latch etc.. Optionally, the **COMMANDER Door Phone** can be ordered with alarm inputs to report alarm events, and with more outputs to activate CCD cameras so that images can be captured on your personal computer.

Things that make this unit unique are its small size, slim style, performance and compatibility with any phone system analogue extension. All electronic circuitry is safely tucked away inside in the hide-away unit so that replacement of the doorplate is inexpensive, should this ever be necessary.

Pride has been taken in the making of this unit, with as much emphasis placed on the electronic design as there was with the superb appearance.

1.1 OVERVIEW

The **COMMANDER Door Phone** Model MD-4900 looks and sounds similar to a conventional intercom plate. When you press the button at the front door, you hear dialing tones coming from the doorplate followed by telephone service tones, eg. ringing tone when the inbuilt telephone dialer is activated and a call is set up to your pre-programmed telephone number.

When you receive a call from your **Door Phone**, it is just like any other telephone call. To end the call, press *9 for instant disconnect or just hang up. It is that easy!

1.2 DESCRIPTION

The **COMMANDER Door Phone** consists of two main stainless steel / zinalume components:

1. The Front Door Plate

This is a standard switch plate size unit (113 mm x 70 mm) supplied with a half depth surface mount block. (The unit may be mounted with or without the block). It contains the weather resistant push button, microphone and speaker.

2. The Inside Hide-away Unit

This is the control unit containing all the electronics, programmed data, auto-answer setting, and dialer. There are connectors for the front door plate, the telephone line, switched transistor output for a door/gate latch and optional power for when line power is insufficient. Optional sockets are available for another switched relay output, an external alarm input, and an RS232C serial port.

The front door plate and the inside hide-away unit are simply connected to each other using the eight-wire cable provided (longer cables up to 30 meters to order). The inside hide-away unit is connected to any working telephone socket (pins 2 & 6 on a 610 socket or centre pins 3 & 4 on an RJ12 jack). RJ style plugs are provided.

The MD-4900 is telephone line powered so the unit continues to operate in the event of mains power failure.

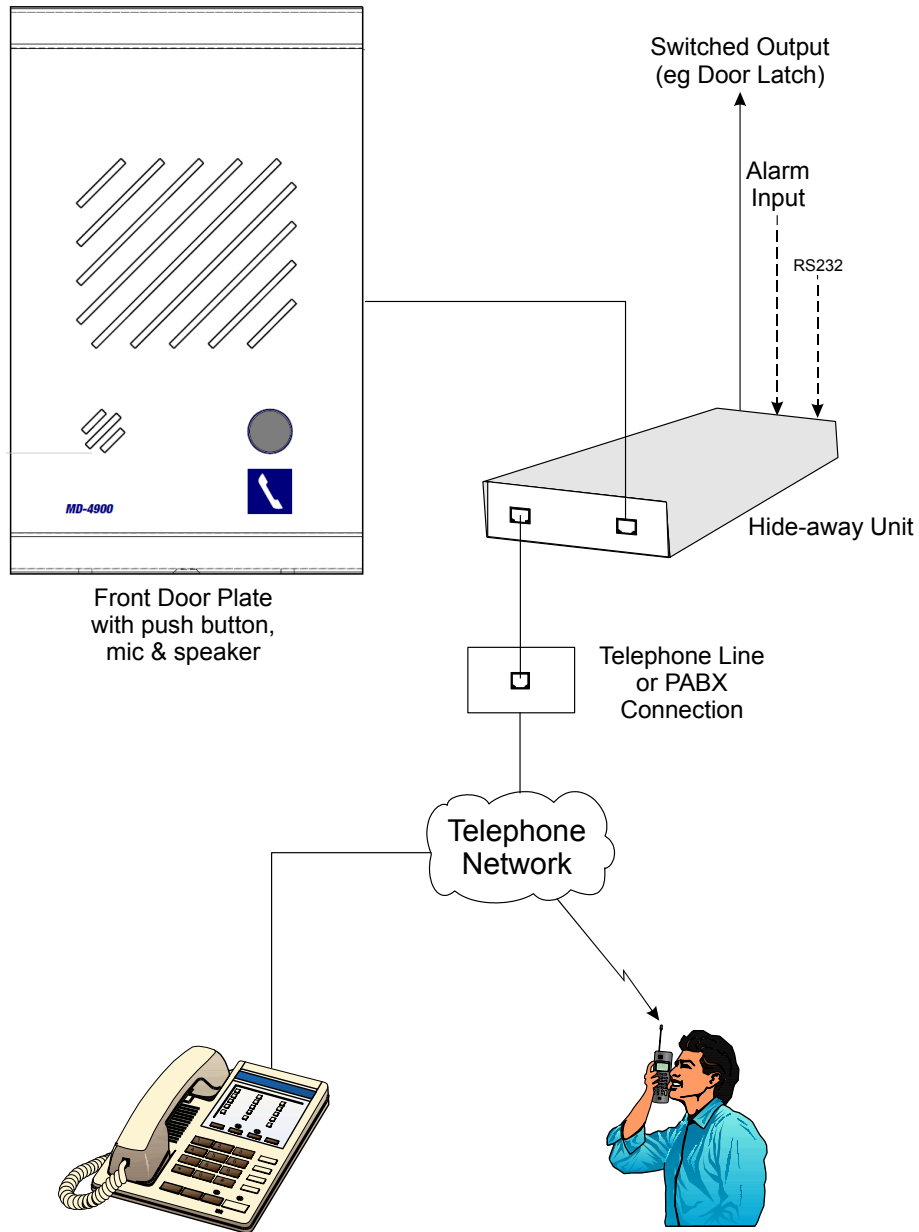
FEATURES

- Hands-free Front Door Telephone
- Security appliance
- Telephone dialer
- Push button activated
- Intercom to your mobile phone, PABX extension, or any other telephone
- Brushed stainless steel finish (brass plating and horizontal mounting optional)
- Back light on door plate (if plug pack is connected)
- Call Progress tones
- Speaker volume control
- Programmable PIN access
- Automatic disconnect
- Automatic push button redial (if the line is jammed up or busy, just press the button and you'll be re-connected!!!)
- Compatible with all analogue telephone lines or extensions
- Programmable telephone number
- Door Opener - relay output to operate electric door strike/latch to open doors or gates etc.
- Alarm input to automatically dial a number in the event of an alarm (optional)
- Easy D.I.Y. installation
- Two Year warranty
- ACMA Supplier's code N468

2. INSTALLATION

2.1 INSTALLATION BLOCK DIAGRAM

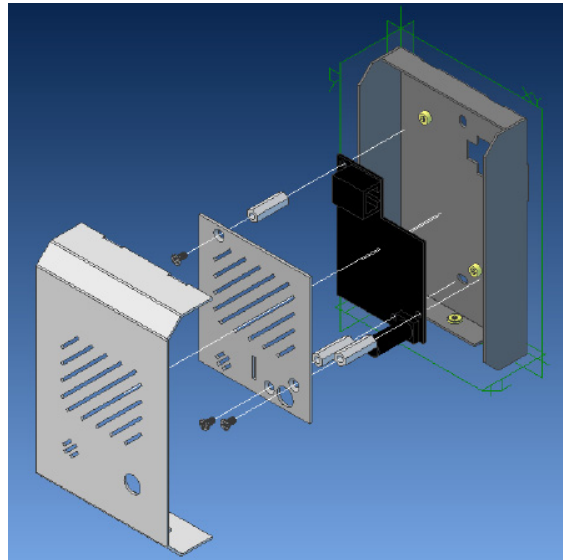
MASTERCALL DOOR PHONE MD-4900



2.2 MOUNTING DETAIL

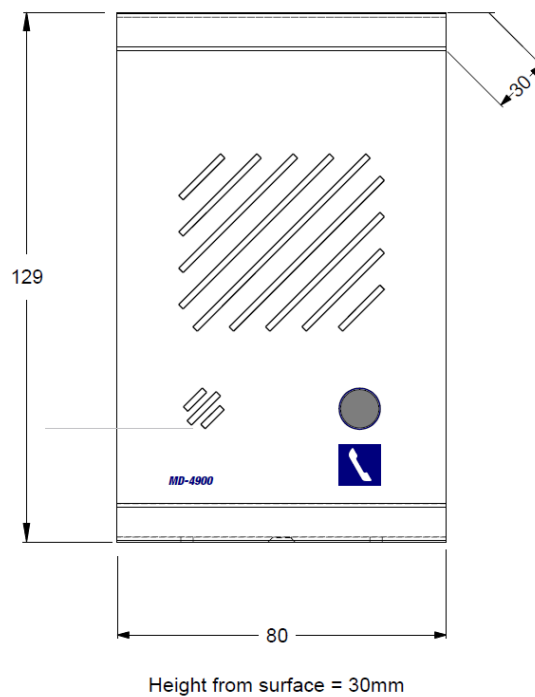
2.2.1 DOOR PLATE

The stainless steel front plate is surface mounted. An exploded view of the assembly is shown here:



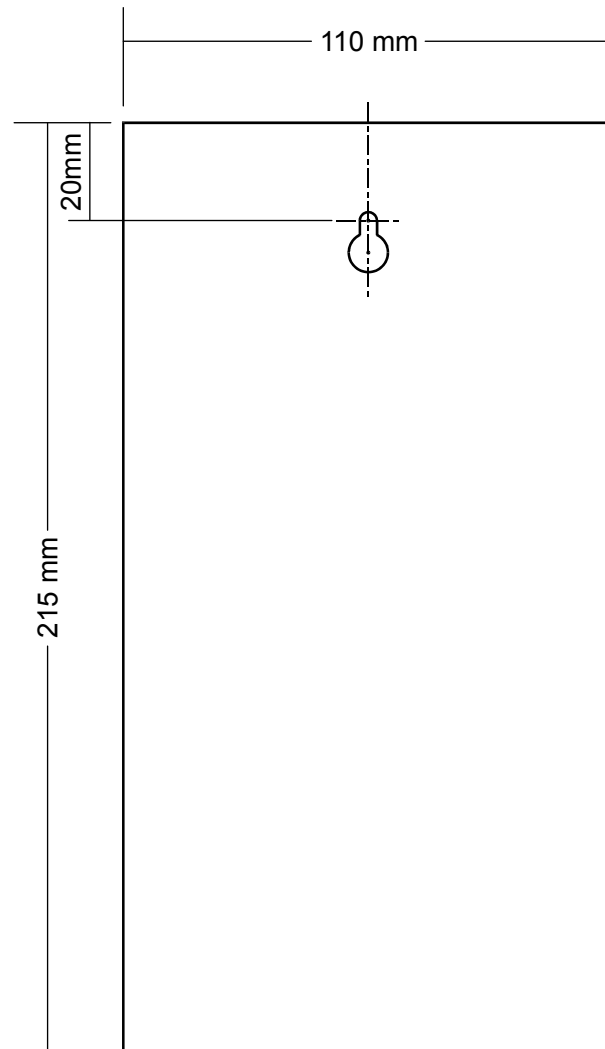
2.2.2 DOOR PLATE DIMENSIONS

The stainless steel front plate is surface mounted. Mounting holes are spaced at standard electrical socket outlet dimensions.



2.2.2 HIDE-AWAY UNIT DIMENSIONS

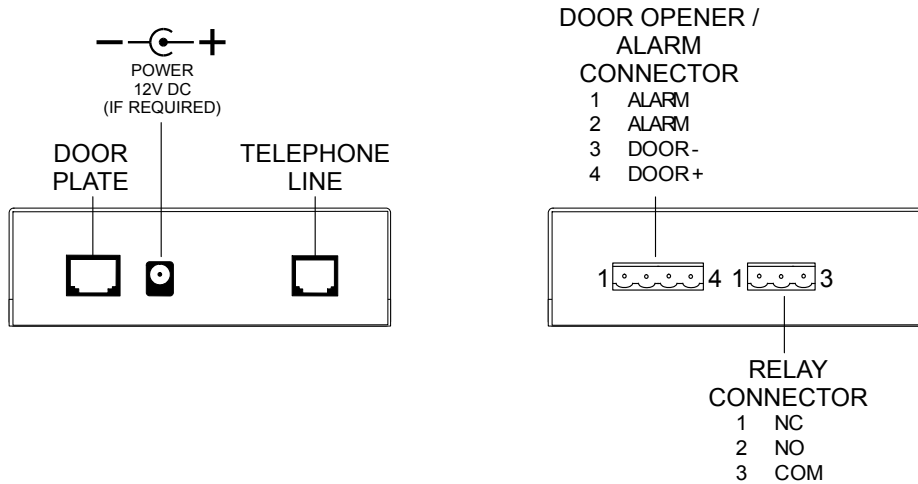
HIDE-AWAY UNIT WALL MOUNTING OPTION



- 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.

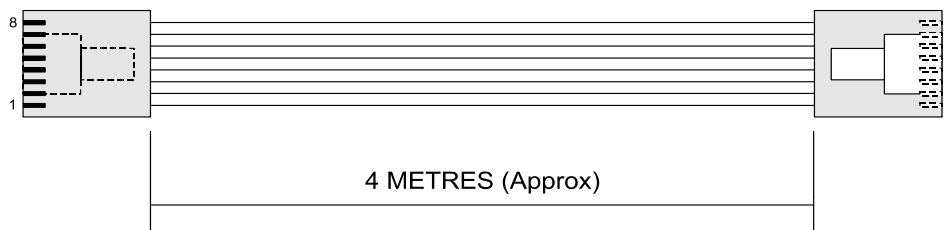
NOTE: SCREW HEIGHT FROM MOUNTING SURFACE MUST NOT EXCEED 8mm (5/16")

2.3 CONNECTIONS ON THE MD-4900 HIDE-AWAY UNIT



2.3.1 DOOR PLATE CABLE

The cable supplied that interconnects the Door Plate and Hide-Away Unit is shown here.

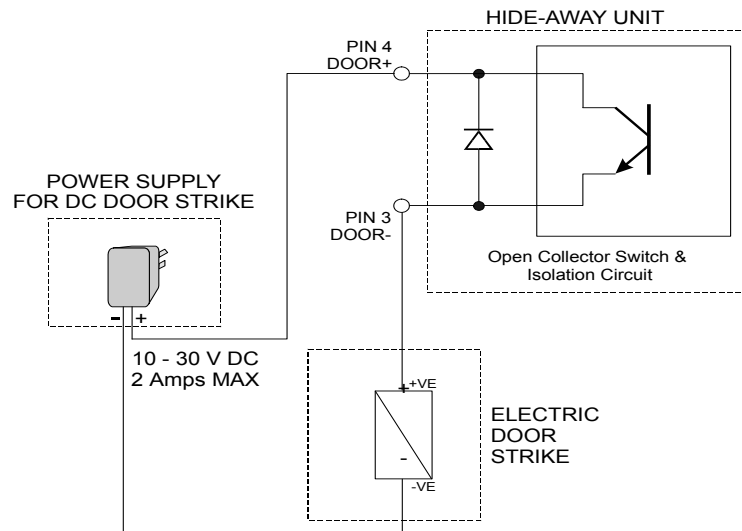


Door Plate Cable

PIN	DESCRIPTION	CAT5
1	MICROPHONE +	WE/GN
2	MICROPHONE -	GN
3	LED +	WE/OE
4	SWITCH 1	BE
5	SWITCH 2	WE/BE
6	LED -	OE
7	SPEAKER -	WE/BN
8	SPEAKER +	BN

Please note: The 4 pair cable between the hideaway unit and the front door plate may be up to about thirty meters (≥ 0.4 mm diameter copper) however noise may be introduced if the cable is unshielded and runs past sources of electrical interference. We therefore strongly recommend that you use the cable supplied wherever possible, or run a special cable with a shielded conductor for the microphone (ie. shield connected to MICROPHONE - and the conductor connected to MICROPHONE +), avoiding close proximity to electrical wires and other powered devices. If using CAT5 cable it is imperative to use a twisted PAIR for the MICROPHONE and a twisted PAIR for the SPEAKER etc. Do not split the pairs. Refer to the standard T568A colour codes above (standard patch cables can be used). For extra long cable runs, Capacitor C1 must be jumpered on the door plate PCB

2.4 WIRING DIAGRAM FOR DOOR LATCH & SWITCHED OUTPUT MODE



Switched Output Mode

The 'door latch' switched output (open collector) and voltage free relay contact normally operate only when ***5 is pressed by the person receiving calls** from the **Door Phone** (please note that the voltage free relay contact requires external 12Vdc power – see note below about power supply). Optionally, the open collector and relay contact can also operate when the **Door Phone** push button is pressed and the line is seized on an outgoing call. This mode can be used to operate security cameras etc..

1. Dial up the Door Phone (set for auto answer) from an independent telephone
2. Wait for it to answer with a double 'pip' tone.
3. Press *, enter your PIN (normally none), then 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 button is pressed and an outgoing call is in progress (DTMF *5 still works for activating the outputs on incoming calls), OR:
Press 2 for the relay to be activated when button is pressed, and the transistor output (DOOR +, DOOR -) to be activated only by DTMF *5, OR:
5. Press 3 for both switched outputs to operate during an incoming call.
6. Press # to store the setting.

- Summary: <* [PIN] 601 [0, 1, 2, or 3] #>

2.5 PUSH BUTTON LIGHT

If a 12Vdc plug pack is connected to the unit, the Push Button light will illuminate permanently. The push button is then visible in dark locations.

Please note: Use only the factory recommended isolated dc power supply. Consult the factory if you intend using another power source.

3. USER INSTRUCTIONS

3.1 To Store the Telephone Number to be dialed

1. Set the 'AUTO-ANSWER' jumper in the unit to ON. (This is the factory default setting anyway).
2. Dial up the Door Phone from an independent telephone
3. Wait for it to answer with a double 'pip' tone.
3. Press *.
4. Enter your PIN (normally none).
5. Press 2.
6. Enter the required telephone number.
7. Press # to store the number.

Notes:

1. A dialing pause can be entered by pressing * #.
2. A star (*) can be entered by pressing * *.
3. A hash (#) can be entered by pressing # #.
4. If no number is entered, the MD-4900 will 'hotline' when the push button is pressed.

- Summary: <* [PIN] 2 nnn...#>

3.2 How to make a call from the COMMANDER Door Phone

1. Simply press the 'CALL' button for about half a second or more.
2. Listen for the dialing sound followed by ringing tone.
3. Talk as required.

Note: Pressing the push button during a call will re-establish the call. This is a fabulous feature designed to overcome the possibility of the system ever locking up the line.

3.3 How to call the COMMANDER Door Phone

1. Set the 'AUTO-ANSWER' jumper in the unit to ON. (This is the factory default setting).
2. Dial up the Door Phone from an independent telephone and wait for it to answer with a double pip tone.
3. Talk as required.
4. Hang up when finished.

3.4 How to Open the Door

1. While talking to the door phone party, simply press *
2. Enter your PIN (normally none).
3. Press 5 and listen for the confirmation tone.
 - The output relay will then stay activated for 10 seconds, allowing the calling party to enter.
 - Note that for your security this will only work from the remote telephone, the person standing outside cannot do it.

- Summary: <* [PIN] 5 "beep">

3.5 How to Change the Speaker Volume

1. While talking to the door phone party, simply press *
 2. Enter your PIN (normally none).
 3. Press 3 to turn up the volume or 4 to turn down the volume, and listen for the confirmation tone.
- Repeat steps 1 to 3 as required.
 - Summary: <* [PIN] 3 (up by 2dB) or 4 (down by 2dB)>

3.6 Force Disconnect

1. While talking to the door phone party, simply press *
 2. Enter your PIN (normally none).
 3. Press 9 and the caller will be instantly disconnected.
- Summary: <* [PIN] 9>

3.7 Silence Disconnect (30 seconds default)

1. Set the 'AUTO-ANSWER' jumper in the unit to ON. (This is the factory default setting anyway).
 2. Dial up the Door Phone from an independent telephone
 3. Wait for it to answer with a double 'pip' tone.
 4. Press *.
 5. Enter your PIN (normally none).
 6. Press 8.
 7. Enter the maximum number of seconds of silence detection on the line side for a door phone 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.
 8. Press # to store the setting.
- Summary: <* [PIN] 8 s...#>

3.8 Total Call Time Limit (10 minutes default)

1. Set the 'AUTO-ANSWER' jumper in the unit to ON. (This is the factory default setting anyway).
 2. Dial up the Door Phone from an independent telephone
 3. Wait for it to answer with a double 'pip' tone.
 4. Press *.
 5. Enter your PIN (normally none).
 6. Press 7.
 7. Enter the maximum number of minutes that a door phone call is allowed to go for before the call is automatically disconnected (1 → 120 minutes). Eg. if you enter 5 minutes, all calls are limited to five minutes in duration (or less if the other party hangs up sooner than the five minute mark).
 8. Press # to store the setting.
- Summary: <* [PIN] 7 m...#>

3.9 How to Change Your PIN

1. Set the 'AUTO-ANSWER' jumper in the unit to ON. (This is the factory default setting).
2. Dial up the Door Phone from an independent telephone and wait for it to answer with a pip tone.
3. Press *
4. Enter the current PIN (normally none).
5. Press 1.
6. Enter the new PIN (four digits, **or no digits if no PIN is required**)
7. Press # to store the new PIN number, and a confirmation tone is heard.

- Summary <* [PIN] 1 pppp...#>

3.10 Automatic Disconnect

The MD-4900 will disconnect the telephone line if:

- Four busy tones are detected.
- DTMF *9 is detected.
- Loop current loss or line reversal is detected
- The push button is pressed and a new call is automatically established.
- 30 seconds of silence on the line side is detected.
- Total call time limit has elapsed.

3.11 Dial (Long) Tone Disconnect (3 seconds default)

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).

3.12 Door Latch/Relay Output Closure Timer (5 seconds default)

The door latch and voltage free relay output normally stay closed (or open) for five seconds when activated by the person receiving a door phone call. The closure (or open) timer can be adjusted from 1 second to 255 seconds.

- Summary <* [PIN] 602 t...#>, where t = 1 → 255 seconds (ie. enter a value of the seconds).

3.13 Master Reset

You can reset all user programmed information back to the factory default condition.

Press *699# after answer. **Take care not to unintentionally enter this command!!!**

3.14 Busy Tone Detect Selection

Brief

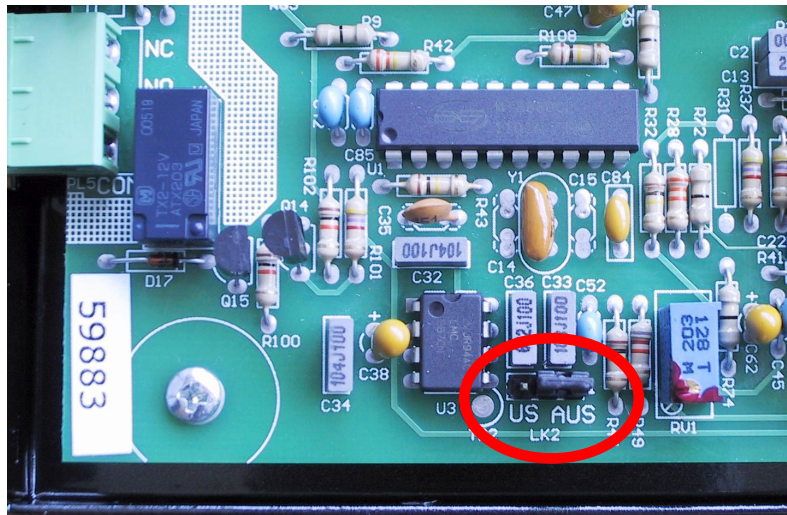
IP based telephone switches and VoIP analogue terminal adaptors can provide either North American busy tone or Australian busy tone. All MD-4900 Series Door Phones can be set to detect either “US” or “AUS” (default) busy tones for automatic disconnect.

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.

4. SPECIFICATIONS

Enclosures	Stainless steel (Grade 316) and powder coated zincalume
Dimensions	129 mm x 80 mm x 30 (fits standard GPO).
Door Plate	215 mm x 105 mm x 35 mm.
Hide-away Unit	Clipsal 449ASD (black, white optional)
Mounting Spacer Block	Telephone line powered.
Power Requirement	Minimum open circuit line voltage 22.5V Minimum short circuit line current 12mA
Power Consumption	50 µA in stand-by mode. 20 mA nom. during dialing and conversation.
Operating Temperature Range	-10 → +50 ° C.
Storage Temperature Range	-20 → 80 ° C ambient.
Humidity, Storage and Operating	To 98% non condensing.
Mean Time Between Failure	> 20 years.
Hands free Speakerphone	Motorola MC33218AP semi duplex.
Output level	-13.5 → 0 dBm adjustable.
Frequency range	300 Hz → 3.4 kHz.
Line Interface	Two wire analogue ring in loop out.
Programming method	DTMF
Push Button (Door plate)	Weather resistant tactile
Speaker	Weather resistant mylar cone 32 Ohm 0.5W.
Vandal resistance	Stainless steel mesh, 4 x anti-tamper screws.
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.

N468
E1287



COMMANDER®
DOOR PHONE



MD-4900
HANDS-FREE DOOR TELEPHONE

“Simply for the security conscious”

MADE IN AUSTRALIA BY

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Est. 1968

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5. PACKING LIST

COMMANDER DOOR PHONE MD-4900

Quantity	Item	Use
1	Front door plate assembly	Grille, speaker, mic, push button etc.
4	Grub screws	Securing grille to base plate
1	Mounting block incl. 2 screws	Surface mounting option
1	Hide-away unit	Electronics and connections
4	Rubber feet	For base of hide-away unit
1	Four meter interconnecting cable	Cable b/w door plate and 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
4	6g x 25 mm cross- recess pan head screws	Mounting block fasteners
5	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/01141C	How to use this Door Phone



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