

SPECIFICATIONS

Dimensions	:	95 x 89 x 32 mm
Weight	:	225g
Power Supply	:	12VAC or 12VDC/500mA
Power Consumption	:	Idle - 0.5 Watts Voice Call - 0.75 Watts Ringing - 3.0 Watts
Ringer Equivalence	:	0.3 REN
Line In Connector	:	RJ 11 6 pin (2 centre)
Line Out Connector	:	RJ 11 6 pin (2 centre)
Door Station Connector	:	RJ 11 6 pin (Audio 2 Centre)
Lock 1	:	(Lock 1 Pins are 1 & 6)
Power Connector	:	2.5mm barrel connector
ACA COMPLIANT	:	Supplier Number N 782

WARRANTY

Your DS2 Door Station Line Sharer and Door Phone devices are guaranteed against defects from workmanship for a period of two years (24 months) from date of purchase. In the event of failure, you should return the product, along with proof of purchase date, and a written statement about the nature of the problem for replacement.

The Warranty extends only to the original purchaser and is not transferable.

This Warranty shall not apply to any unit which has been subject to alteration, modification, abuse, negligence, accident, external voltage/lightning surge or used in any manner contrary to these instructions. The user is responsible for freight costs to the repair point. Warrantor will be responsible for freighting the replacement unit back to the user. This Warranty gives you specific legal rights and you may also have other rights which may vary from state to state. The obligation is solely to repair or replace the product. The warrantor is not liable for any incidental or consequential damages due to such defects. Damage caused to the line sharer, or attached equipment, by lightning strikes or over voltage surge is not covered under the terms and conditions of your warranty.

**CASE SEALED AT FACTORY
OPENING THE CASE VOIDS THE WARRANTY**

NATIONAL COMMUNICATIONS

Model DS2 P DOOR STATION LINE SHARER

USER GUIDE

Contains important information which is required for full and correct operation



For Technical Assistance, Please Phone:
QLD HEAD OFFICE (07) 5596 5128

Manufactured in Australia by
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DESCRIPTION

This User Guide describes the installation and operating instructions of our **DS2** model DOOR STATION Line Sharer, which is designed to connect to a SPECIALLY DESIGNED Surface Mount or Flush Mount DOOR PHONE.

This product will work with your **ORDINARY RESIDENTIAL TELEPHONE LINE** or it can be fitted to a **PSTN TRUNK** (used or unused) of any Commander or PABX type telephone system.

It also provides relay control of a single Lock or Door Strike.

Alternative Models are available which provide the following features:

DS1 - PSTN connection, no lock control.
DS2 - PSTN connection, single lock control.
DS3 - PSTN connection, dual lock control.
DS4 - PABX EXTENSION connection, no lock control.
DS5 - PABX EXTENSION connection, single lock control.
DS6 - PSTN or PSTN connection, dual lock control, with dial out.
DS7 - As per DS2 - works with telephone instead of Door Phone.
DS8 - As per DS5 - works with telephone instead of Door Phone.
DS9 - As per DS6 - works with telephone instead of Door Phone.

Your DS2 DOOR STATION Line Sharer is completely TRANSPARENT in operation, so that it will not affect the normal operation of your line in any way.

It is designed to operate with a specially designed DOOR PHONE. ONE or TWO Door Phones can be connected to the DS2 unit (they must be connected in parallel with each other).

TROUBLESHOOTING LOCK CONTROL

If you are having trouble controlling the LOCK or GATE STRIKE, please trouble-shoot by using the following procedure :

LOCK 1

1. Test that you receive the correct voltage across the BLUE and WHITE terminals of the break out box, as soon as ** is pressed on the attached telephone.

You should also check that you can hear a faint click in DS2 when the relay switches, to confirm that the relay has closed.

2. If the voltage is not being switched, repeat this procedure with a single telephone connected to the LINE OUT port to ensure that DS2 is receiving the ** command.

You should also check that you can hear a faint click in DS2 when the relay switches, to confirm that the relay has closed. If you cannot hear the faint 'click', this would suggest that ADSL or EMI is preventing detection of the DTMF commands. See page 18.

If you can hear the faint 'click', and the lock is still not working, you should now fault find the 12V circuit.

NOTE

Do not use the supplied Door Station Line Sharer 12V plug pack to also provide 12V power for the lock, as this may cause damage to the Line Sharer. You must use a separate 12V source, with a maximum rating of 12V/1A.

TROUBLESHOOTING AUDIO

To prevent sound quality issues due to VOX problems, the telephone used for testing should be at least several meters away from the Door Phone.

If you are having trouble with AUDIO QUALITY, please trouble-shoot by using the following procedure :

1. Adjust the POT located on the back of the Door Phone as described on page 11.
2. If you are still having audio quality problems, they can be caused by

A) ADSL INTERFERENCE

You MUST ENSURE that a HIGH QUALITY ADSL FILTER is fitted on the LINE INPUT immediately ahead of our DS2 Controller. See page 13.

B) EMF INTERFERENCE

From Switch Mode Power Supplies or low end UPS (Uninterruptable Power Supplies).

Switch Mode Power Supplies are well causes of induced interference.

Cordless Phones in particular can suffer or cause EMF problems.

Please TURN OFF all SWITCH MODE POWER SUPPLIES located near the DS2 controller to test for Interference.

If by turning off all nearby power supplies your audio quality improves, you should then reconnect 1 power adaptor at a time to determine the source of the problem. Once identified, the problem source should be relocated away from the DS2 unit, at a suitable distance that overcomes interference.

DESCRIPTION CONT.

Once correctly installed, DS2 will RING all of the telephones that are connected to it as soon as it is activated by a visitor pressing the Call Button of the attached Door Phone.

If you are using an ordinary single telephone line, you will notice that your telephones WILL RING DIFFERENTLY, to alert you that the call is from your Door Phone.

If you are using a Cordless Phone or a Commander/PABX telephone line, your telephones MAY NOT RING DIFFERENTLY, as many of these devices ignore our ring and output their own ring. For this reason, your unit can be set to output FIVE quick 'beep' tones (advice tones) immediately after answer, to advise you that the incoming call is from your Door Phone (refer to Programming Section).

DS2 can be used with MOST CORDLESS PHONE MODELS. However, a small number of CORDLESS PHONE MODELS totally ignore the ring from DS2 and will NOT RING when there is a Door Phone call.

If you have a CORDLESS PHONE that will not ring, it will be necessary to also use one or more CORDED TELEPHONES on your line (or a Ringing Bell Accessory that is available from most retail outlets that sell telephones).

CORDED TELEPHONES will ALWAYS RING, and will alert users of CORDLESS PHONES that do not ring that there is an incoming Door Phone call. You can still ANSWER, COMMUNICATE and CONTROL LOCKS with CORDLESS PHONES that do not ring.

DOOR PHONES

A choice of Two Door Phones are provided for use with your DS2 device and should be ordered separately :

SURFACE MOUNT DOOR PHONE

(Order Code - SMDP) is an attractive moulded plastic unit, designed for easy mounting direct onto your wall surface.

(Dimensions are :
100mm Wide, 133mm High, 32mm Depth).



FLUSH MOUNT DOOR PHONE

(Order Code - FMDP) has an attractive, strong stainless steel face plate, which is designed for mounting flush in to your wall surface. It can be fitted vertically or horizontally.

It has a 10mm camera hole, to allow for easy mounting of a digital camera unit (available from your dealer or installer).

To accommodate the body of the FMDP, you must allow for a MINIMUM recessed area of :
W 80mm, H 160mm, D 35mm.



DOOR PHONE COVER

If your Door Phone is not under cover, a strong transparent DOOR PHONE COVER is essential to ensure that water from rain cannot gradually permeate through to the electronics of the Door Phone which can cause unreliable operation and can eventually lead to permanent failure of this device.

Door Phone Covers are available for	: \$39.00 incl GST.
Order Code for SMDP Door Phone	: DPC-1
Order Code for Vertical Mount of FMDP Door Phone	: DPC-2
Order Code for Horizontal Mount of FMDP Door Phone	: DPC-3

Separate DETAILED User Guides are provided with your DOOR PHONE.

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TROUBLESHOOTING AUDIO

If you are having trouble with AUDIO COMMUNICATION between the DOOR PHONE and ANY TELEPHONES on your line, please follow the procedure below.

Most problems encountered are caused by site specific conditions. Through a process of elimination, problems can be determined and then rectified. The best way to do this is to isolate our equipment from the existing devices/cable, using the following procedure :

1. Disconnect the telephone cable from the LINE OUT port of your unit and connect a single corded telephone into this port. Now test communication with this single phone.

If satisfactory operation can be achieved, you should then fault find your problem with the wiring or telephones downstream of our unit by connecting them to our unit 1 device at a time.

2. If satisfactory operation cannot be achieved, you should then disconnect the telephone cable from the DOOR PHONE port of your DS2 unit and then temporarily run NEW CAT5 cable from the DS2 to your DOOR PHONE.

If satisfactory operation can be achieved, you should then fault find your problem in the wiring leading to the DOOR PHONE unit.

3. If satisfactory operation cannot be achieved, you should then disconnect the telephone line input to the LINE IN port of your DS2 unit (with the telephone line disconnected, audio communication can be achieved, but DTMF operation will not work.

If satisfactory operation can be achieved, you should then fault find your problem caused by the incoming telephone line. If you are using ADSL, ensure that you are using a high quality central style filter such as the C10 model C10245M device available from Telstra shops and National Communications.

Please call 07 55965128 for additional assistance.

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PROGRAMMING PROCEDURE

1. **TURN OFF POWER TO YOUR UNIT**
2. **SWITCH ON POWER AND PRESS ### (WITHIN 30 SECONDS)**
You must use a telephone connected to the DS2.
3. **YOUR UNIT WILL OUTPUT 3 SHORT 'BEEPS'**
Do not proceed until you have heard 3 short beeps.
If you do not hear 3 beeps, return to the start (1).
4. **ENTER ANY REQUIRED COMMANDS AS FOLLOWS:**
(Note - You can change one or more parameters in any order)
 - A. **NUMBER OF RINGS**
To enter the NUMBER OF RINGS press #1xx
where xx = number of rings and can be 01-99
(for example, press #115 for 15 rings)
 - B. **DOOR PHONE CALL ADVICE TONES**
To disable TONES press #40
To enable TONES press #41
 - C. **MAXIMUM LOCK RELEASE TIME**

To enter the MAX LOCK RELEASE TIME press #6xx
xx = time limit in seconds and can be 01-99
(for example, press #620 for 20 seconds)

TO EXIT PROGRAMMING MODE - HANG UP.

ALL ENTRIES ARE SAVED IN PERMANENT MEMORY.

LOCK CONTROL

Your DS2 is provided with an internal relay which can be used to control a GATE LOCK or STRIKE.

Relay Specification - Dry Relay Contacts rated at 12V/1Amp.

IMPORTANT NOTE - Do not use the supplied Door Station Line Sharer 12V plug pack to also provide 12V power for the lock, as this may cause damage to the Line Sharer. You must use a separate 12V source, with a maximum rating of 12V/1A.

LOCK FACILITY

To OPEN the Door/Gate Lock after answering a call from your DOOR PHONE you need to press ** (twice) on your telephone.

The lock will remain open until you HANG UP your telephone, or a maximum lock time which can be set by the user (default is 15 seconds).

Your Door/Gate Lock can also be OPENED at any time by picking up any telephone and dialling **. The Door/Gate Lock will be LOCKED as soon as you hang up or the max set lock time. You do not need to receive a call from the Door Phone first.

DOOR RELEASE MECHANISM

A Door Release Mechanism is not supplied with DS2, due to the large variation of lock, door and gate types that can be used. Your installation technician will arrange the supply of a suitable Door Release Mechanism if required.

OPERATION

When a visitor at your door or gate presses the call button on your SUPPLIED DOOR PHONE, DS2 will ring all of the telephones connected to your line up to 10 times (the number of rings can be changed).

By simply answering any ringing telephone on your line, you will be immediately connected direct to your visitor, so that you can converse with them.

If you are already on a telephone call, DS2 will instead inject a faint 'Beeping Tone' into the background of your call to alert you. You will then be able to place your existing call 'ON HOLD' and switch to the door or gate by simply pressing the ## key (twice) on your telephone.

To resume your original call, all you need do is to press ## again. This can be done as many times as required.

If you have a LOCK MECHANISM fitted, you can also open a gate or door lock during this call and allow your visitor to enter, by simply pressing the * * key (twice) on your telephone.

**** opens LOCK 1 until hang up**

switch between lines

PROGRAMMING NOTES

The following notes provide important information about the programming procedure :

1) To enter PROGRAMMING MODE you must turn OFF POWER to your unit and then switch POWER ON AGAIN.

2) Using ANY TELEPHONE connected to **DS2**, PRESS **###** within 30 SECONDS.

3) You will hear 3 short 'beeps' to confirm you are in programming mode.

4) Individual Parameter Programming Entries are also carried out by pressing further keys on the attached telephone

5) Your unit will generate 1 short 'beep' to confirm acceptance of command.

6) Your unit will generate 1 long 'beep' to advise of an entry error. If 1 long 'beep' is detected, your command should be repeated.

PROGRAMMING OPTIONS

DS2 has internal flash memory which will retain your settings even if power is disconnected. A number of features are provided to allow you to customize the capability of this device to meet individual requirements :

NUMBER OF RINGS

You can set a limit for the number of rings that DS2 will generate when a visitor presses the Call Button on your Door Phone. You may wish to do so to prevent a Door Phone call being answered by your answering machine.

Allowable Range : 01 to 19 rings
 Default Setting is : 10 rings

DOOR PHONE CALL ADVICE TONES

5 shorts 'beeps' can be injected into the Door Phone call, immediately after answer, to advise you that the incoming call has originated from your Door Station. This facility is very useful for those users which may use cordless phones, that will not ring differently when a Door Phone call is present.

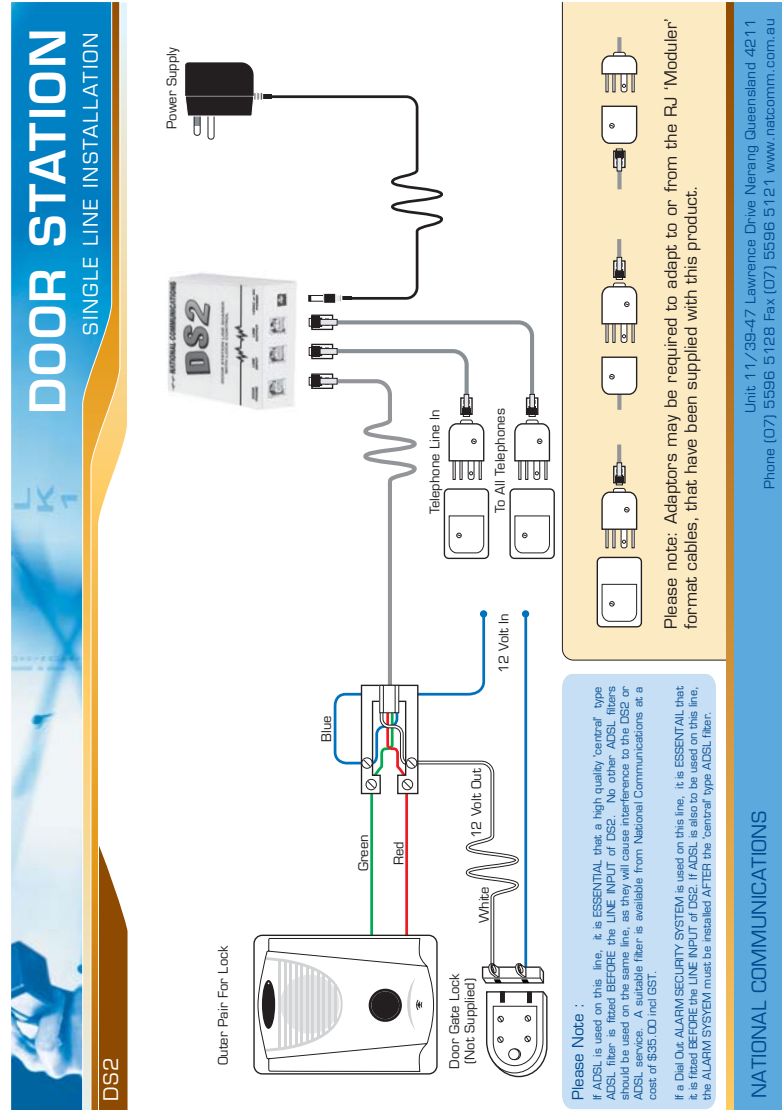
Allowable Range : ON or OFF
 Default Setting is : OFF

LOCK 1 - OPEN TIME

DS2 has a SINGLE LOCK facility fitted as standard. When ** is pressed, the LOCK will remain OPEN for a set period of time (default is 15 seconds) or until hang up. This time can be changed from 01 - 99 seconds.

Allowable Range : 10 to 99
 Default Setting is : 15 seconds

DS2 - INSTALLATION DIAGRAM



INSTALLATION

An ACA approved installation technician will fit your DS2 direct onto your incoming telephone line, immediately ahead of your first telephone socket, so that your telephone line connects to all of your telephone sockets through it. DS2 has been designed so that it will not interfere with the normal use of your telephone line in any way. In the event of a malfunction or power cut, your telephone line will continue to operate.

The contact details of suitable installation technicians in your area are available from National Communications (ph 07 5596 5128).

NOTE - For operation of DS2 on a telephone line fitted with the ADSL service, please refer to page 13.

The following instructions describe a typical installation procedure for fitting DS2 to an ordinary telephone line. Alternative procedures which provide for INCOMING TELEPHONE LINE connection to the LINE PORT of DS2, connection of all extension telephones to the PHONE PORT of DS2 and connection of the DOOR PHONE to the DOOR STATION PORT of DS2, may be used by the suitably qualified installation technician that you are using.

INSTALLATION INSTRUCTIONS

1) Your DS2 unit must be fitted inside the home or office. It must not be fitted outside, next to the Door Phone.

Fit a NEW 611 TYPE telephone socket next to the ORIGINAL first telephone socket. It is best to use a TYPE 611 socket instead of the normal TYPE 610, as this socket contains switching contacts that will automatically reconnect the ORIGINAL telephone socket to the incoming telephone line, should the cable to the DOOR STATION Line Sharer ever be disconnected. (A double telephone socket which contains switching contacts can also be used in lieu of separate sockets). This NEW 611 socket should be labelled DOOR STATION LINE SHARER ONLY. No other devices should be connected to this socket. If a normal telephone is to be used at this location, it should be connected to the ORIGINAL first telephone socket, along with the PHONE PORT of the Door Station Line Sharer, using a normal Double Telephone adaptor.

USERS WITH ADSL

DS2 can be used with ADSL on the same telephone line.

However to avoid conflict, it is ESSENTIAL to fit a SINGLE High Quality 'CENTRAL' ADSL filter immediately ahead of the DS2 Line Sharer. Failure to do so, or use of additional ADSL filters connected direct to your telephones, WILL cause problems in the operation of your Door Station Line Sharer and ADSL service.

Please Note - Basic ADSL FILTERS, designed for separate connection to each telephone on your line (as usually supplied with ADSL modems) are not suitable.

A High Quality 'CENTRAL' ADSL FILTER (model C10245E), suitable for filtering your complete telephone line, is available as an optional extra at a cost of \$35.00.

You can purchase these from your Dealer, or any TELSTRA shop, or on line at : www.natcomm.com.au

USERS WITH DIAL OUT ALARMS

DS2 can be used with a DIAL OUT SECURITY ALARM on the same telephone line.

However to avoid conflict, it is ESSENTIAL to fit the DIAL OUT SECURITY ALARM on the telephone line AHEAD of the DS2 unit, using a MODE 3 switch.

If ADSL is also to be used on this same line, then it is ESSENTIAL to fit single High Quality ADSL filter immediately ahead of the MODE 3 Switch, being the first point on the telephone. This means that the Security Alarm, DS2 Line Sharer and all telephones connected on the telephone line have adequate filtering from the high frequency ADSL communication.

TRIMPOT - IMPORTANT NOTES

- 1) The trimpot DOES NOT increase or decrease volume. Volume is fixed.
- 2) The trimpot is sensitive and must be adjusted with great care to achieve communication in both directions.
- 3) Door Phone Call Advice Tones (see p 15) must be OFF during adjustment.

INSTALLATION ON A COMMANDER, PABX or other Multi-Line System

Our DS2 DOOR STATION Line Sharer can be fitted in one of 2 ways :

1) ON A SPECIFIC LINE

DS2 can be fitted to **ONE SPECIFIC INCOMING LINE** of a Commander or PABX type system. In this situation, the incoming telephone line, prior to the system controller should be connected to the LINE port of the Door Station Line Sharer and the PHONE port of the Door Station Line Sharer should then be connected to the system controller. Once fitted, the system will operate exactly as described previously, for operation on the selected line.

2) ON AN UNUSED TRUNK LINE

DS2 can also be fitted to an **UNUSED TRUNK PORT or UNUSED LINE PORT** (Line Port) of ANY Telephone System. This means that this particular line WILL ONLY RING when the Door Phone has been activated. In this situation, the PHONE port is the only connection to the system controller.

Note - The LINE port does not connect to an incoming line. It should be fitted with an RJ11/12 (6P6C) plug which has pins 1 & 3 looped and also pins 4 & 6 looped. This plug provides a simulated line voltage to the Door Station Line Sharer. Phone (07) 5596 5128 for further information or assistance.

- 2) Transfer the incoming telephone line (normally a BLACK CABLE) from the ORIGINAL first telephone socket to the corresponding positions 2 & 6 on the NEW telephone socket. Leave all other telephone cables connected to the ORIGINAL socket, as these are the connections to your EXTENSION telephones.
- 3) Now connect pins 1 & 5 of the NEW TYPE 611 socket to pins 2 & 6 of the ORIGINAL telephone socket. By doing so, the incoming telephone line will be automatically reconnected to the ORIGINAL telephone should the cable to DS2 ever be disconnected.
- 4) Connect the LINE PORT of DS2 to the NEW TYPE 611 telephone socket, using the supplied telephone cable fitted with a male plug.
- 5) Connect the PHONE PORT of DS2 to the ORIGINAL telephone socket, using the supplied telephone cable fitted with a male plug.
- 6) Connect the supplied 12V power adaptor to DS2, and switch the POWER ON.
- 7) Connect the SUPPLIED DOOR PHONE to the DOOR STATION PORT of DS2. Please now refer to the separate User Guide supplied with your Door Phone, to obtain important information.

For convenience, an interface unit with screw terminals is supplied and should be connected to the DOOR PHONE PORT using the supplied RJ to RJ cable.

Run a solid core telephone cable (preferably CAT5) between the interface unit.

The Surface Mount Door Phone will require only 2 of these wires. Our Flush Mount Door Phones will require 4 of these wires. Your LOCK (if fitted) will require 2 of these wires.

- 8) Please now refer to the separate User Guide supplied with your Door Phone, to obtain important information.

SURFACE MOUNT DOOR PHONE - Connect the same two wires that are connected to the CENTRE 2 PINS of the RJ12 socket of DS1 (via interface box) to the screw terminals located on the back of the DOOR PHONE. The LED on the DOOR PHONE should now switch ON

Polarity to the DOOR PHONE is not important .The DOOR PHONE should now be mounted onto your wall surface.

With the SMDP, this is done by separating the Door Phone unit from the integral backing plate, secured by a screw underneath the grey plastic label, above the speaker. The backing plate should then be screwed to the wall surface, before re-attaching the Door Phone with the securing screw.

FLUSH MOUNT DOOR PHONE - Audio Connection - Connect the same two wires that are connected to the CENTRE 2 PINS of the RJ12 socket of DS1 (via interface box) to the CENTRE inputs of the supplied Dinkle Plug. Polarity is not important .

Power - Connect the same two wires that are connected to the 2 PINS either side of the centre 2 pins at DS1, (via interface box) to the outside positions of the Dinkle Plug. The LED on the DOOR PHONE should now switch ON after a 10 second delay.

The FMDP unit is screwed direct to the wall with 2 supplied mounting screws.

8) **Lock Control Connection** - Two wires are also used to connect between the LOCK MECHANISM and the interface box. This facility is used to open the Door or Gate. The polarity of the DOOR LOCK control wires is not important.

DS2 : Lock 1 should connect to BLUE and WHITE terminals.

NOTE - Do not use the supplied Door Station Line Sharer 12V plug pack to also provide 12V power for the lock, as this may cause damage to the Line Sharer. You must use a separate 12V source, with a maximum rating of 12V/1A.

TESTING INSTALLATION

Test the DOOR PHONE connection by pressing the Call Button on the Door Phone. Your telephones should now all RING. Have someone answer any telephone and then communicate. The Door Phone has been factory preset for maximum performance, but may need to be adjusted for specific site conditions (see below).

IMPORTANT NOTE

You should test the CONNECTION by using a TELEPHONE INSIDE THE PREMISES (preferably not a cordless phone). If you use a Cordless Phone, you cannot use it right next to the Door Phone, as you will only receive communication in 1 direction. You will need to walk away until you can communicate both ways.

DOOR PHONE TRIMPOT

There is a BALANCE TRIMPOT on the rear of the Door Phone which may need to be adjusted for your environment if you do not achieve audio communication in both directions or if your communication is not clear.

This trimpot adjusts the BALANCE between the Microphone and the Speaker. It DOES NOT alter volume. The TRIMPOT is preset at the factory but it might need adjustment to allow for site specific conditions.

If the TRIMPOT is not set correctly, you may experience 'clipping' of speech or you may only receive communication in 1 direction. The trimpot is accessed with a small screwdriver via a hole on the rear of the Door Phone.

TRIMPOT ADJUSTMENT

- 1) Turn OFF Door Phone Call Advice Tones if they are enabled.
- 2) You should set the Trimpot to the centre of its rotation range (it is a 3/4 turn pot).
- 3) Adjust the POT a small amount in 1 direction and test audio communication quality. If it is improving, carry out a further small adjustment in the same direction and re-test. If quality is becoming worse, please adjust the POT in the other direction and continue with small adjustments until the best communication quality is achieved. Clockwise biases to Door Phone. Anti-Clockwise biases to Telephones.