TECHNICAL MANUAL

25H/DDA/2W
One button DDA audio intercom kit

VIDEX
The Power to Secure

INTRODUCTION

This disability friendly door entry kit has the following features as standard:

- **Electronic call tone -** Upon a call being initiated, the telephone will attract the attention of the occupant with up to 9 rings.
- **Timed door release -** Upon pressing the door release button on the telephone, a dry contact relay within the door panel will energise for 2.5 - 10 seconds dependant on programming.
- **Visual indication of call progress on the door panel –** In standby, the door panel call button will be illuminated awaiting being pressed. Upon pressing the button a reassurance tone will be heard. When the occupant answers, the yellow SPEAK light will illuminate and when the door is released the green OPEN light will illuminate (Reassurance beeps will also be heard during door release).
- **Call tone volume adjust –** The volume can be adjusted using a three position volume control located on the telephone.

COMPONENTS

The standard components of the kit are as follows:

- **Door panel (VR1N/DDA/2W) -** A one button vandal resistant flush fitting door panel with large illuminated call button with raised letters and Braille, speak LED and open LED.
- **Audio telephone (3171) –** A white ABS plastic wall mountable telephone with three position call tone volume adjust, door release button and spare service button.
- **Power supply (521) –** A 13.5Vdc DIN rail or wall mountable power supply unit capable of supplying up to 800mA continuous or 1A surge.

CONNECTIONS

DOOR PANEL

AMPLIFIER	
NC	Normally closed connection of relay
C	Common connection of relay
NO	Normally open connection of relay
PTE	Push to exit button input (Switch to 0V)
SL	Switched 0V output (0V during a call for video power supply switching)
BS	Busy signal to other panels (12Vdc in standby, 0V during a call)
L	Bus connection approx. 7.5Vdc
-	0V for bus
+12	12Vdc input to power the amplifier
-	0V from PSU

BUTTON	
SW	Normally open switch
SW	Other side of normally open switch
LAMP	One side of button illumination +12Vdc
LAMP	Other side of button illumination (Switched 0V)

There are three POTs available on the amplifier module for speech volume adjustment. This system uses only one wire to carry both directions of speech and so it is necessary to use a balance POT to adjust the gain of the two speech directions to the required levels.

 Door panel Microphone volume adjustment

 Door panel speaker adjustment

 Find a balance between speaker and microphone volume adjustment

Balance

TELEPHONE

Art.3171

The Art.3171 includes a three position call tone volume control, lock release push button and spare dry contact push to make button for other services. Up to three telephones can be connected in parallel on this system. A local door bell (LB terminal) is also available. Connecting a push switch between LB & - will ring the telephone to inform the occupant that someone is at there door (The ring will be different to that of a call from the intercom panel).

CONNECTIONS:-

	Function
L	Bus connection to terminal L on the door panel
-	Bus 0V to terminal – on the door panel
LB	Local door bell input (Connect door bell push between LB & -)
AL	Switch 0V alarm button input for use with concierge system
SW	First side of dry contact service push button ●
SW	Second side of dry contact service push button ●
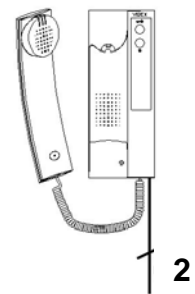
TELEPHONE DIP-SWITCHES

The telephone dip-switches set the address of the telephone in binary. On a one button system the address should be 1. Switch dip-switch 1 ON and the other 7 OFF as shown below. Note: This must be done when the power to the system is switched off.


2
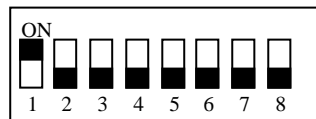
POWER SUPPLY

Art.521

The 521 PSU can supply 800mA constant or a 1A surge. The output is 13.5Vdc and is protected by a fall back circuit (No internal fuses on either the primary or secondary of the PSU. A fused spur should always be used with this type of PSU).

Note: The mains input to this PSU should be connected to the mains via a fused spur or preferably an all pole circuit breaker.

## BLOCK DIAGRAM AND DOOR PANEL DIMENSIONS
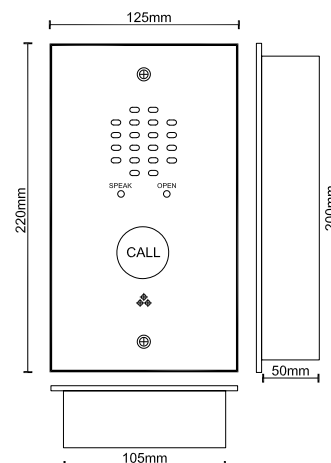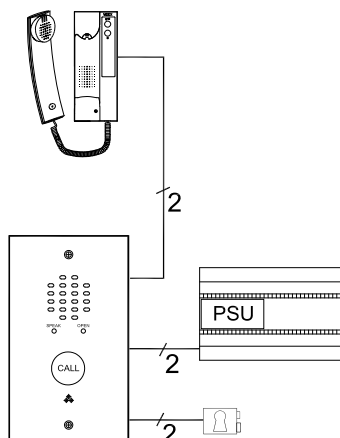
INSTALLATION

The wiring diagram towards the back of this manual should be followed carefully.

- Check that all components are free from damage before installing (Do not proceed with installation in the event of damage).

- Keep all packaging away from children.

- Do not obstruct the ventilation openings or slots on any of the devices.

- All connections to mains voltages must be made to the current national standards (IEE Wiring regulations)

- Install an appropriate fused spur or isolation switch to isolate the mains.

- Isolate the mains before carrying out any maintenance work on the system.

- All intercom and access control cables must be routed separately from the mains.

Lock release protection : A diode must be fitted across the terminals on the lock release to suppress back EMF voltages. The diagram below shows the polarity of the diode when fitted to the release.
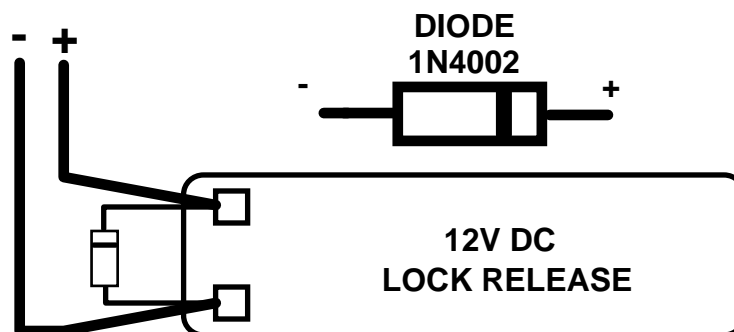
Cable size and type : When running cables for any intercom system, these cables must be installed separately from the mains cables. All multipair cables should be to CW1308 specification. (0.5mm twisted pair telephone cable). Max resistance = 7.5 Ohm.
Lock release wires should be doubled up. Max resistance = 3 Ohm
The cables sizes above can be used for distances up to 50m. On distances above 50m the cable sizes should be increased to keep the overall resistance of the cable below the RESISTANCES indicated above (i.e. double up on the cores to increase the size).

TESTING THE INSTALLATION

- Check all the connections have been made correctly and then power up the system.

- If required, program the system as shown on the following pages (In must cases the default setting will be adequate.

- Call the apartment. Check for call tone to the apartment, speech in both directions and lock release.

- If the volume of speech needs to be adjusted, this can be done by adjusting the presets on the rear of the amplifier at the door panel as shown earlier in this manual.

- If the call tone volume needs adjusting this can be done at each handset (Three position slide switch on the telephone).

PROGRAMMING OPTIONS

Factory reset
To revert to factory default settings as shown in ( ) below, power down the 138 amplifier short PTE to ground, power up and await 6 beeps, remove the short.

Programming
There are several features of the amplifier that can be programmed into non-volatile memory. Entering each programming stage requires the shorting of certain connections on the button matrix using the connectors 5 & 6 labelled above. Remove the plug from connector ABCD so that the connectors 5 or 6 can be connected to the relevant pin as outlined in the tables below. Beeps are used to indicate the new setting as outlined in the tables below. The procedure to program these settings is as follows:-

1. Power down the 138 amplifier
2. Connect the plug (5 or 6) to A,B,C or D depending on the setting to program as outlined below.
3. Power up the 138 amplifier
4. Listen to the beeps from the 138 amplifier, When the correct number is reached as outlined below, remove the link between the plug and A,B,C or D.
5. A long confirmation beep will confirm the new setting has been stored.

DEFAULTS ARE SHOWN IN ( )

MASTER or SLAVE
Set amplifier as master or slave (Each system requires one master, any additional door's on a system must be set to slave).

Power up with **wires 5 & A shorted**. Wait for correct beeps then remove short.

1 BEEP	2 BEEPS
(Master)	Slave

MAXIMUM CALLING TIME BEFORE ANSWER
Set the maximum length of a call 'wait to answer' before the call is cleared down. This does not affect the conversation time which can be programmed separately.

Power up with **wires 5 & C shorted**. Wait for correct beeps then remove short.

1 BEEP	2 BEEPS	3 BEEPS	4 BEEPS	5 BEEPS
10 Seconds	20 Seconds	30 Seconds	(40Seconds)	50Seconds
6 BEEP	7 BEEPS	8 BEEPS	9 BEEPS	10 BEEPS
60 Seconds	70 Seconds	80 Seconds	90Seconds	100Seconds

CONVERSATION TIME
Set the maximum length of a conversation before the call is automatically cleared down.

Power up with **wires 5 & D shorted**. Wait for correct beeps then remove short.

1 BEEP	2 BEEPS	3 BEEPS	4 BEEPS	5 BEEPS
20 Seconds	40 Seconds	(60 Seconds)	80 Seconds	100 Seconds
6 BEEP	7 BEEPS	8 BEEPS	9 BEEPS	10 BEEPS
120 Seconds	140 Seconds	160 Seconds	180 Seconds	200 Seconds

RELAY TIME
Door open relay time

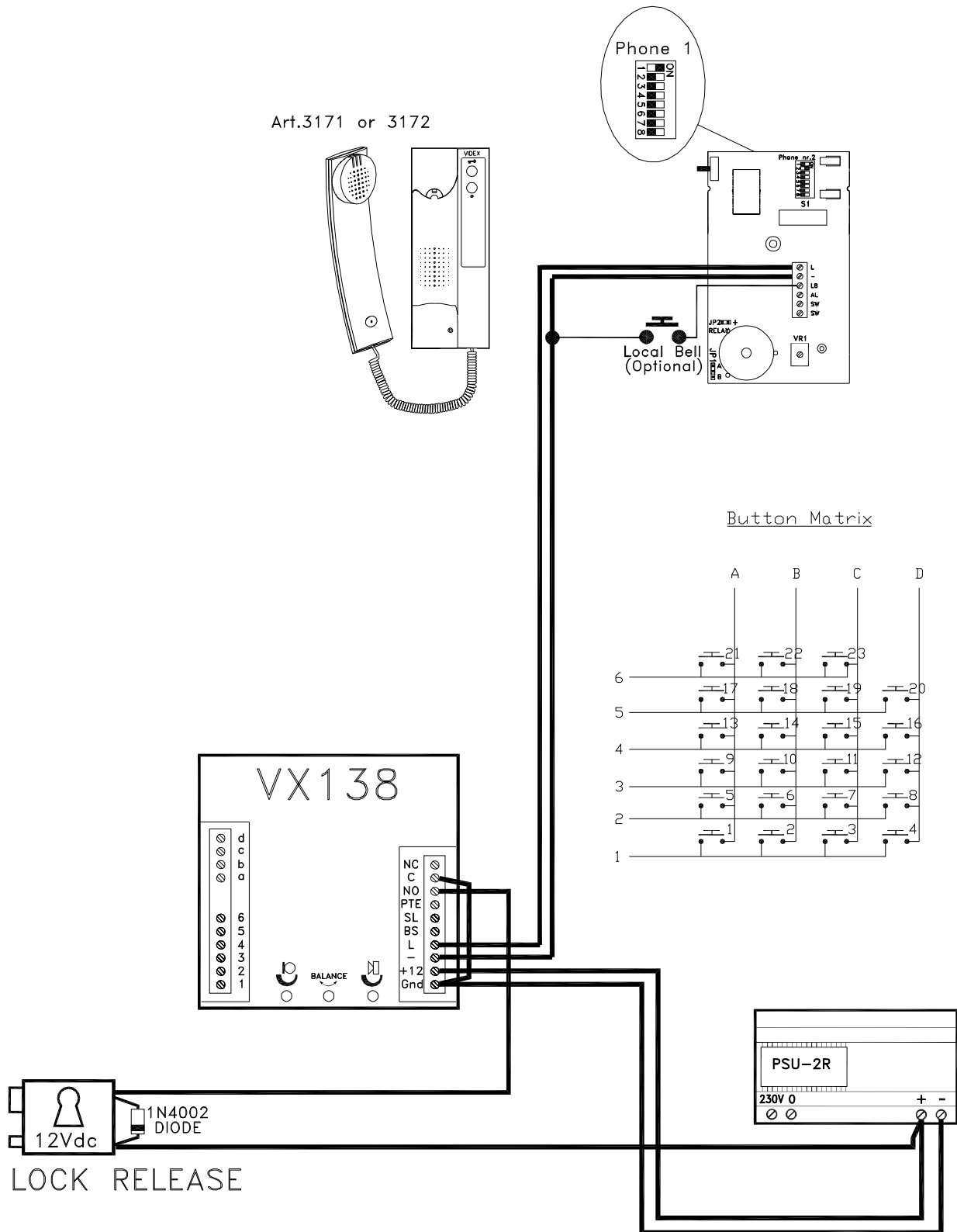Power up with **wires 6 & A shorted**. Wait for correct beeps then remove short.

1 BEEP	2 BEEPS	3 BEEPS	4 BEEPS	5 BEEPS
2.5 Seconds	(5 Seconds)	7.5 Seconds	10 Seconds	12.5 Seconds
6 BEEP	7 BEEPS	8 BEEPS	9 BEEPS	10 BEEPS
15 Seconds	17.5 Seconds	20 Seconds	22.5 Seconds	25 Seconds

DEVICE NUMBER

Power up with **wires 6 & B shorted**. Wait for correct beeps then remove short.

| 1 BEEP	2 BEEPS	3 BEEPS	4 BEEPS	5 BEEPS
(Device 1)	Device 2	Device 3	Device 4	Device 5
6 BEEP	7 BEEPS	8 BEEPS	9 BEEPS	10 BEEPS
Device 6	Device 7	Device 8	Device 9	Device 10

Phone 1

Art.3171 or 3172

Phone nr.2

S1

L
LB
AL
SW
SW

JP2 +
RELAY

Local Bell
(Optional)

VR1

JP A

Button Matrix

A   B   C   D

6
17 18 19 20

21 22 23

5
13 14 15 16

4
9   10 11 12

3
5   6   7   8

2
1   2   3   4

1

VX138

d
c
b
a

6
5
4
3
2
1

BALANCE

NC
C
NO
PTE
SL
BS
L
—
+12
Gnd

PSU-2R

230V 0   + —

1N4002
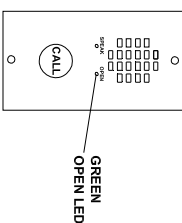DIODE

12Vdc

LOCK RELEASE

CALLING AN APARTMENT

PRESS THE CALL NUMBER AND AWAIT A REPLY. A REASURANCE TONE WILL BE HEARD TO INDICATE CALL IN PROGRESS

CALL BUTTON
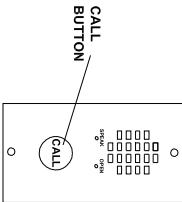
WHEN THE TENENT ANSWERS, YOU MAY SPEAK. THE YELLOW SPEAK LED WILL ILLUMINATE.
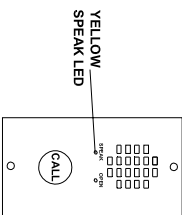
YELLOW SPEAK LED

THE TENANT WILL THEN EITHER OPEN THE DOOR OR HANG UP. IF THE DOOR IS OPENED THE GREEN OPEN LED WILL ILLUMINATE. WHEN THE TENANT HANGS UP, THE YELLOW SPEAK WILL WILL SWITCH OFF

GREEN OPEN LED

SECOND BUTTON

THE SECOND BUTTON CAN BE USED FOR A NUMBER OF SERVICES INCLUDING OPENING GATES, ACTIVATING CAMERAS OR SWITCHING ON LIGHTS.
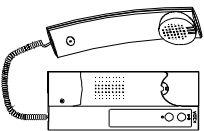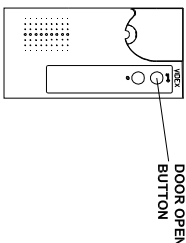
ANSWERING A CALL

WHEN A CALL IS PLACED TO YOUR APARTMENT, AN AUDIBLE TONE WILL BE HEARD FROM THE HANDSET.
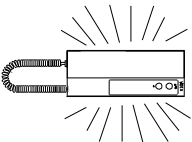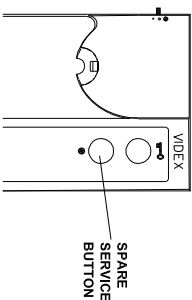
PICKUP THE HANDSET AND SPEAK TO THE CALLER

IF YOU WISH TO LET THE CALLER GAIN ACCESS, PRESS THE 'DOOR OPEN' BUTTON ON THE HANDSET. IF YOU DO NOT WISH TO LET THE CALLER GAIN ACCESS, SIMPLY HANG UP.
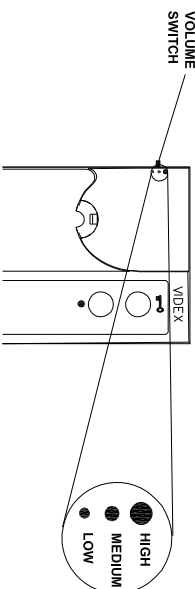
DOOR OPEN BUTTON

CALL VOLUME ADJUST

A SWITCH LOCATED ON THE TOP LEFT SIDE OF THE PHONE IS AVAILABLE TO ADJUST THE RINGING VOLUME. THREE POSITIONS ARE AVAILABLE, INDICATED BY THE THREE DOTS UNDER THE HAND PIECE.

VOLUME SWITCH

LOW
MEDIUM
HIGH

SPARE SERVICE BUTTON

VIDEX SECURITY LTD

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DESCRIPTION:
DDA 2 WIRE AUDIO KIT

DATE: 29/05/2008   INITIAL: RS   REF: 25HDDA2WUSER

TROUBLE SHOOTING

SYMPTOM	TEST
No speech from door panel	Check the three volume POT's at the door panel are setup correctly
Feedback on the speech lines	Adjust the POT's at the door panel until the feedback is removed.
	Check that the amp and microphone at the door panel are securely fitted to the face plate and that the mic holes are not blocked
	Check the microphone at the handset is securely fitted inside the hand piece.
	Try another handset.
No call to handset	Check the door panel is powered correctly with 12Vdc
	Check for 7.5Vdc across L&- at door panel and handset. If this is not there, check that the panel is programmed as master and that there are no shorts on L&-. Also check that 7.5Vdc is coming out of the L&- connections on the panel when there are no wires in these two terminals.
	Try the handset closer to the door panel
	Check that there are no wires in the BS terminal at the door panel.
Lock will not operate from telephone	Check that the relay on the door panel is operating.
	Try the PTE input to see if this activates the lock. If it does, try another handset.
	Remember, the lock button only works during a call and after the handset is lifted.
Hum on the speech lines	Ensure all intercom cables do not run close to higher voltage cables
	Try another amplifier at the door panel.

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