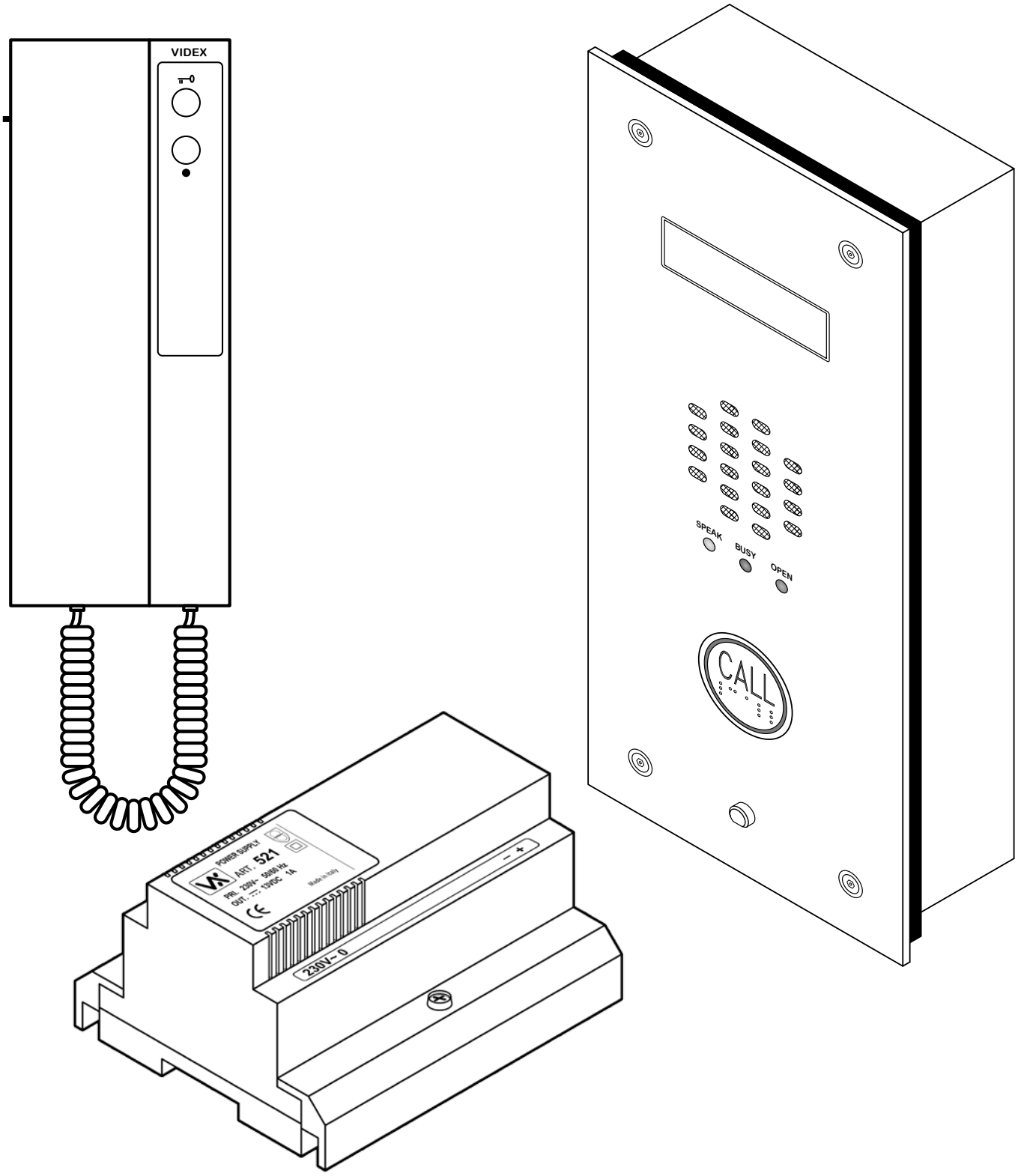
25H/SP/DDA/2W

(1 Way "2 Wire" DDA Audio Intercom Kit)



Technical Manual

25H/SP/DDA/2W EN-UK
V.1.2
04/01/16

WE RECOMMEND
This equipment is installed by a Competent Electrician, Security or Communications Engineer.

CUSTOMER SUPPORT

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CONTENTS

MANUAL INTRODUCTION

The information in this manual is intended as an installation and commissioning guide for the 25H/SP/DDA/2W - 1 way "2 wire" DDA audio intercom kit. This manual should be read carefully before the installation commences. Any damage caused to the equipment due to faulty installation where the information in this manual has not been followed is not the responsibility of Videx Security Ltd.

It is recommended that the audio intercom kit is installed by a competent electrician, security or communications engineer.

VIDEX run free training courses for engineers who are unfamilier or who have not installed this kit before. Technical help is also available on 0191 224 3174 during office hours *(8:30am - 5:00pm MON to FRI)* or via e-mail: ***tech@videxuk.com.***

A copy of this Technical Manual can also be downloaded from the Videx website: ***www.videxuk.com.***

SYSTEM INTRODUCTION

The 25H/SP/DDA/2W - 1 way "2 wire" DDA audio intercom kit includes features to aid users with disabilities and makes the process of calling an apartment more user friendly helping comply with the Equality Act 2010.

The intercom panel is manufactured from 12 gauge 316 grade vertically brushed stainless steel and incorporates a 'speak', 'busy' and 'door open' call progress LEDs. An additional feature is the 2 line 16 digit display which also includes speech annunciation and is used to indicate the progress of a call. It also has a user friendly DDA compliant illuminated braille call button.

A flush back box *(VRFB120x280)* is standard in this kit, however a flush stainless steel bezel back box *(VRBB120x280)* and a surface back box with rainshield *(VRSB120x280)* are also available on request *(refer to page 7)*.

Key Features Include:

- 12 gauge stainless steel intercom panel.
- Illuminated braille call push button.
- SPEAK, BUSY and OPEN call progress indication LEDs.
- Speech annunciation and call progress reassurance tones.
- Dry contact relay output.
- Timed call, speech and lock release.
- Speaker and microphone volume adjustment.
- Audiophone calltone volume adjustment.

KIT COMPONENTS

The kit includes the following parts:

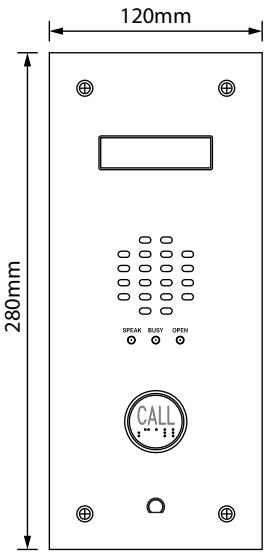
- A 12 gauge stainless steel VR120 intercom panel with 'built-in' braille call button, 138N amplifier and 138-UIM user interface display module *(including flush back box VRFB120x280)*.
- The Art.3171 audiophone *(for the VX2200 digital system)*.
- The Art.521, 12Vdc 1A power supply boxed in a 9 module DIN box type A.

INTERCOM BACK BOXES

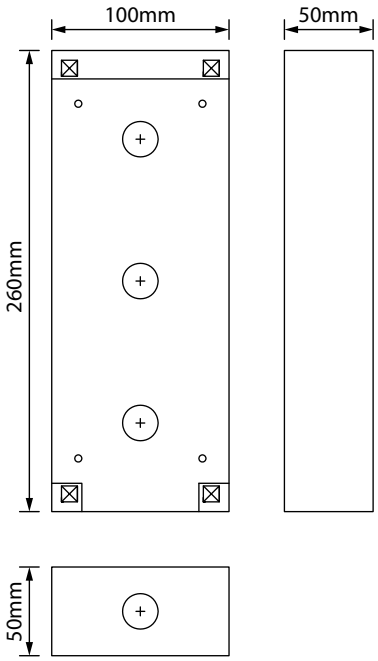
The DDA audio kit comes with a standard flush back box *(VRFB120x280)*. A flush back box with bezel *(VRBB120x280)* and a surface back box with rainshield *(VRSB120x280)*, shown below, are also available on request.

Back Box Dimensions

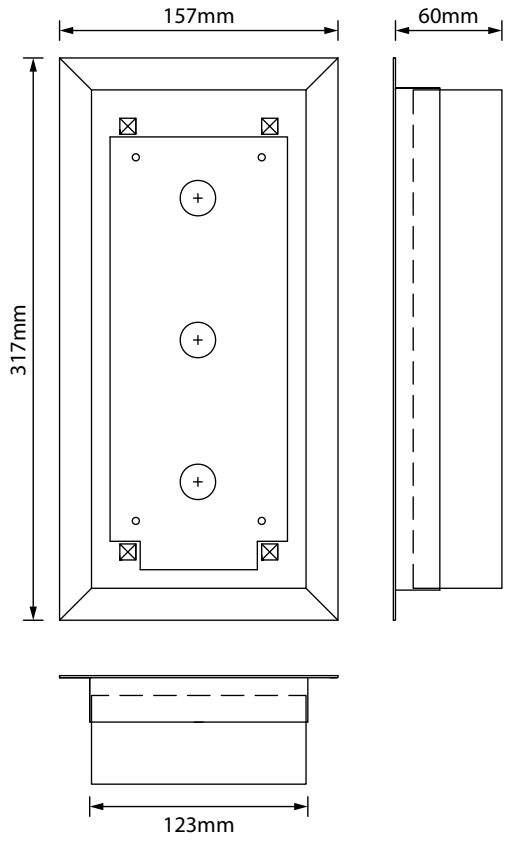
FRONT PANEL



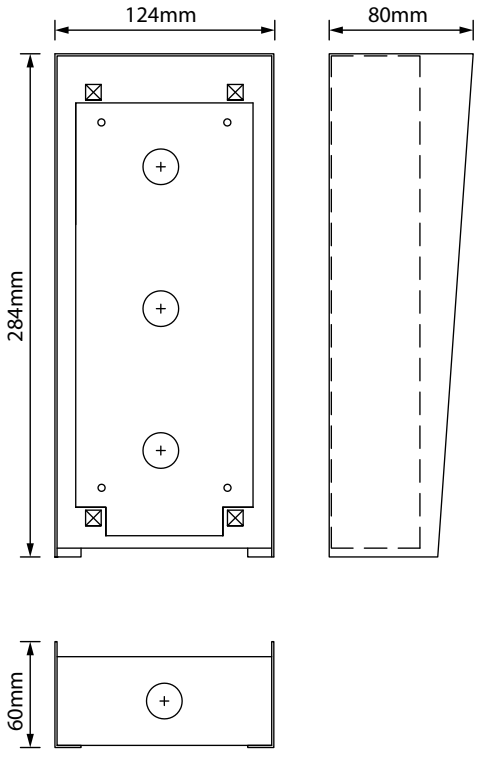
FLUSH ***(VRFB120x280)***



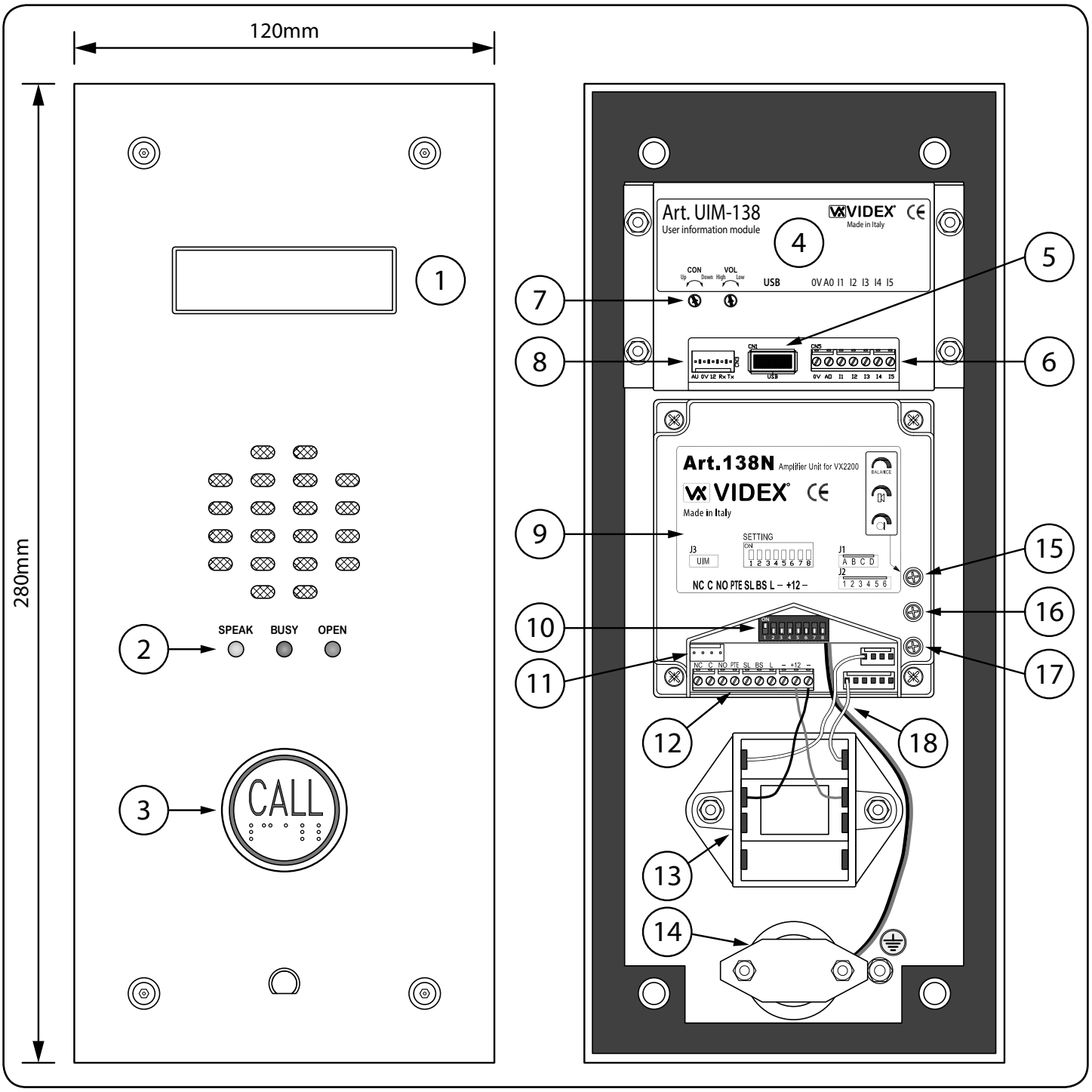
FLUSH WITH BEZEL ***(VRBB120x280)***



SURFACE WITH RAINSHIELD ***(VRSB120x280)***



INTERCOM DOOR PANEL



1. **UIM-138 *(DDA)* 2 line 16 digit display.**
2. **Call progress LEDs *(speak, busy and open)*.**
3. **DDA Braille 'CALL' button.**
4. **UIM-138 User Information Module.**
5. **USB Laptop/PC connection.**
6. **UIM-138 Auxiliary inputs and output.**
7. **Display contrast and volume control adjustment.**
8. **UIM-138/Art.138N harness connection.**
9. **Art.138N Digital Functional Amplifier Unit.**
10. **8 Way dip-switch *(DSW1)* settings.**
11. **UIM-138/Art.138N harness connection.**
12. **Art.138N terminal connections.**
13. **Pre-wired *(US91-15)* DDA braille push button.**
14. **Microphone.**
15. **Balance adjusment.**
16. **Speaker volume adjustment.**
17. **Microphone volume adjustment.**
18. **Pre-wired braille push button wires and microphone cable.**

SYSTEM OPERATION

In standby the door panel's display will show 'PRESS BUTTON TO CALL' , the call button will be illuminated and waiting to be pressed.

Upon pressing the button a reassurance tone will be heard at the door panel, the busy LED on the panel will switch ON and the display will show 'CALLING' as the panel announces that it is calling the audiophone. The audiophone will ring.

Once the audiophone is answered the speak LED will switch ON and the display will show 'SPEAK'. The speech will be live between the panel and audiophone.

When the lock button on the audiophone is pressed the open LED will switch ON, the display will show 'OPEN' and the panel will emit a series of beeps to indicate the panel's relay is being triggered. The panel will also announce 'THE DOOR IS OPEN'.

Once the call ends and the audiophone recieiver has been replaced the busy LED will switch OFF and the display will show 'END'. The panel will go back into standby.

ART.138N AMPLIFIER UNIT FOR THE VX2200 SYSTEM

The Art.138N is a functional digital amplifier unit based on the "2 wire" BUS intercom for the VX2200 system. Although the Art.138N amplifier unit can be connected up to 24 call buttons the 25H/SP/DDA/2W panel will already have a US91-15 DDA friendly braille push button pre-wired into the J1 and J2 button harness *(using the yellow (1) and white (A) wires).*

Dip-Switch Settings (DSW1)

The amplifier can be configured as a MASTER or a SLAVE panel depending on the number of Art.138N amplifiers connected on a system, this can be done by adjusting switch 1 on the 8 way dip-switch. The default setting is MASTER *(switch 1 in the ON position).*

switch 1 OFF = SLAVE

switch 1 ON = MASTER

Switches 2 and 3 on the Art.138N configures the 24 push button group indicating the ID's on the phones which can be called.

switch 2 OFF
switch 3 OFF
button group 1 - 24

switch 2 ON
switch 3 OFF
button group 25 - 48

switch 2 OFF
switch 3 ON
button group 49 - 72

switch 2 ON
switch 3 ON
button group 73 - 96

Switch 4 on the Art.138N is used to setup the conversation time between the intercom panel and the audiophone.

switch 4 OFF = 1 minute

switch 4 ON = 2 minutes

Switch 5 on the Art.138N is used to program the door relay time.

switch 5 OFF = 2 seconds

switch 5 ON = 6 seconds

Switches 6, 7 and 8 are used to setup the device number of the Art.138N *(these switches are usually only set when there is a VX2210 concierge unit on the system where the intercom panel making the call needs to be identified on the concierge. It is also used on video systems when camera recall is required for each door).*

switch 6 OFF
switch 7 OFF = device 1
switch 8 OFF

switch 6 ON
switch 7 OFF = device 2
switch 8 OFF

switch 6 OFF
switch 7 ON = device 3
switch 8 OFF

switch 6 ON
switch 7 ON = device 4
switch 8 OFF

switch 6 OFF
switch 7 OFF = device 5
switch 8 ON

switch 6 ON
switch 7 OFF = device 6
switch 8 ON

switch 6 OFF
switch 7 ON = device 7
switch 8 ON

switch 6 ON
switch 7 ON = device 8
switch 8 ON

Volume Adjustments

There are three adjustable POTs available on the Art.138N 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 the balance POT to adjust the gain of the two speech directions to the required levels*.

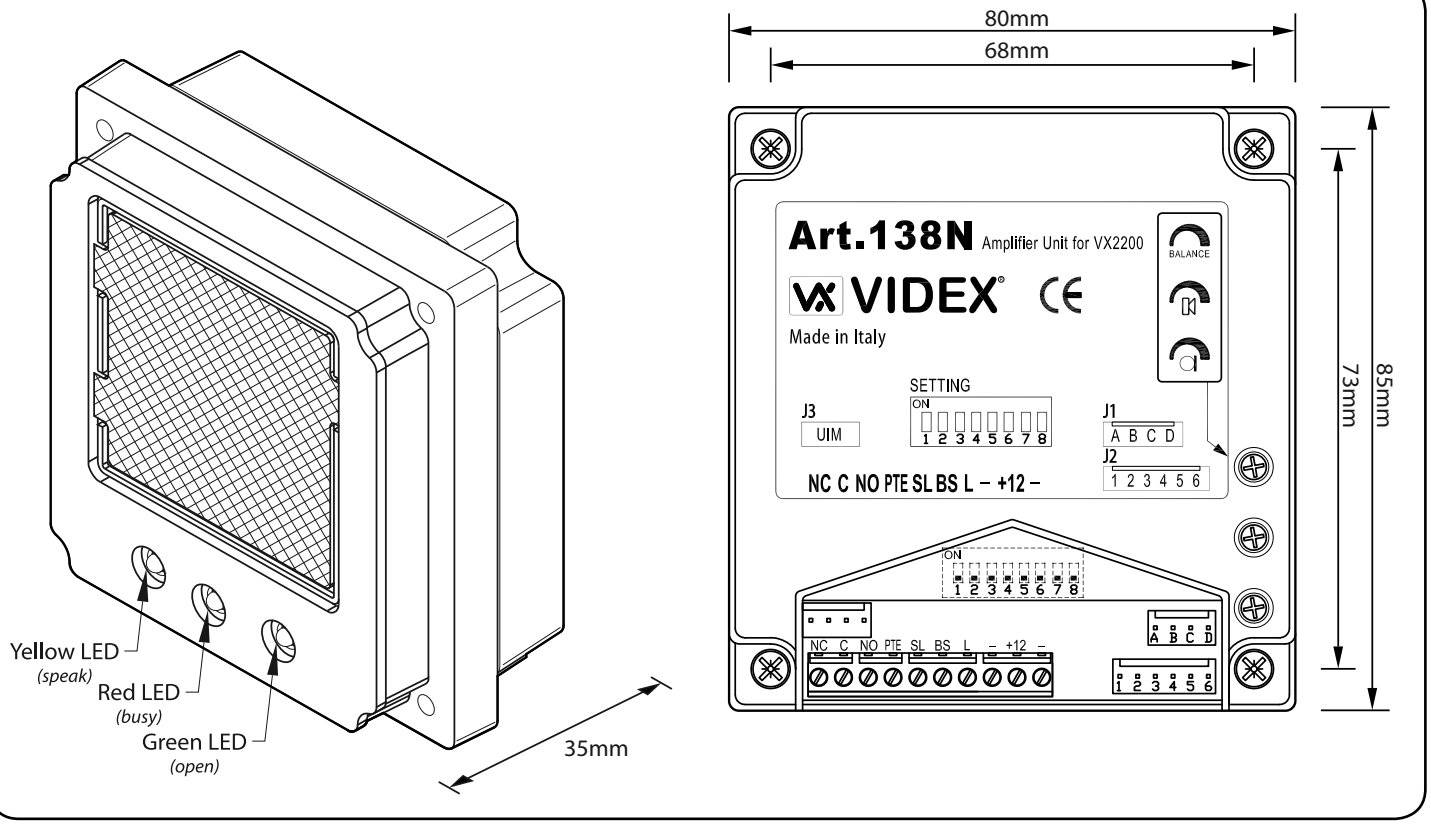
microphone volume adjustment

speaker volume adjustment

balance control for microphone and speaker

*(****Volume adjustment tip:*** *set the speaker and mic POTs to approximately a third of a turn and then during 'live' speech adjust the balance POT whilst rubbing the bottom of the mic cap. Continue adjusting the balance POT to the point at which the minimum volume of speech comes through the door panel's speaker. Finally adjust the speaker and mic POTs to optimal level ensuring that no feedback occurs when the panel is placed back into the back box).*

Art.138N Module Dimensions



Terminal Connections

Terminal	Description	
NC	Normally closed relay contact	current rating 3A @ 120Vac current rating 3A @ 24Vdc
C	Common relay contact	
NO	Normally open relay contact	
PTE	Push to exit input *(active low, when triggered will activate the door open relay)*	
SL	Active low output *(active during a call)*	
BS	Busy signal *(active low input/output during a call)*	
L	BUS line data input	
-	BUS line ground input	
+12	+12Vdc power supply input	
- (GND)	Power supply ground input	
J1	Pins A - D button matrix column terminals *(button commons)*	
J2	Pins 1 - 6 button matrix row terminals	
J3	UIM harness connection *(for connection of UIM-138 display module)*	

Technical Specifications

Memory Capacity : up to 24 users
Working Voltage : 13Vdc +/- 10%
Max. Current : approx. 350mA
Working Temp. : -10 +50°C

ART.UIM-138 DISPLAY MODULE (FOR USE WITH THE ART.138N AMPLIFIER MODULE)

The UIM-138 display module is designed to interface with the 138N amplifier module for the VX2200 system bringing features normally only found on digital door panels to the traditional call button panels. Additional features are included to aid users with disabilities and make the process of calling an apartment more user friendly helping comply with the Equality Act 2010.

The 2 line 16 character blue back lit LCD display is protected behind a 6mm Lexan window and shows call progress information while also producing spoken call progress messages through the speaker of the 138N amplifier.

The UIM-138 can be programmed using the current VX2X00 programming software *(version 7.0.0.7 or later)* allowing user names, apartment numbers and additional displayed messages to be programmed. The module connects to the 138N amplifier module via a *'plug-in'* wire harness and connects to a PC or laptop via a standard USB connection.

Key Features Include:

- 2 line 16 character blue back lit display.
- Voice annunciation output.
- 5 programmable auxiliary inputs.
- A switched 0V auxiliary output..
- USB port.
- Display contrast and voice annunciation volume adjustments.

Display Contrast and Voice Annunciation Volume Controls

There are two control POTs available on the UIM-138 module for adjusting the display contrast and the voice annunciation volume.

Auxiliary Input Modes

The UIM-138 module has 5 programmable auxiliary inputs. The table below shows the operating modes available for each input and is set using the PC software.

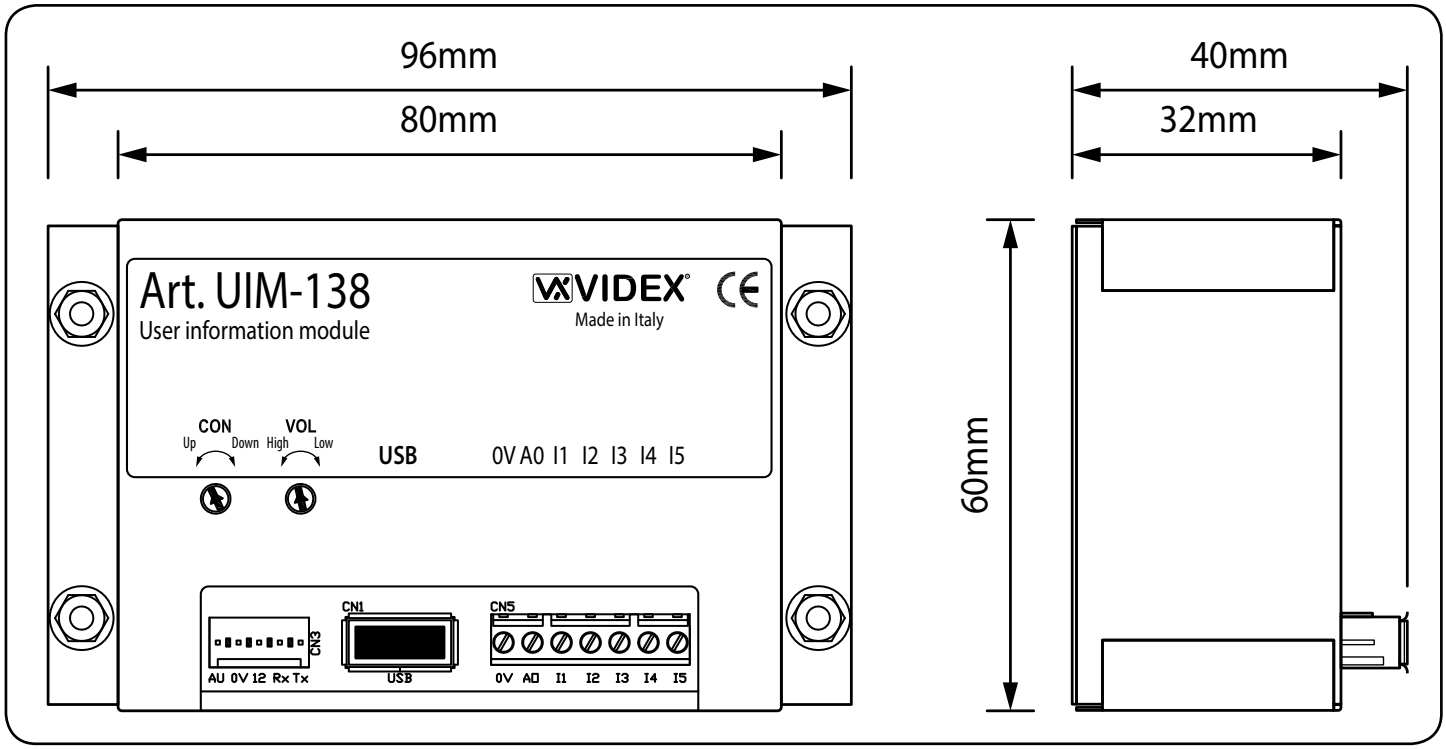
Mode	I1 (Aux 1)	I2 (Aux 2)	I3 (Aux 3)	I4 (Aux 4)	I5 (Aux 5)
1	Auxiliary 1 message	Auxiliary 2 message	Auxiliary 3 message	Auxiliary 4 message	Auxiliary 5 message
2	Call ID.1	Activate AO	currently unavailable	End call	Activate relay
3	Scroll < *(back)*	Call	Scroll > *(forward)*	currently unavailable	End call
4	Call ID.25	Call ID.26	Call ID.27	Call ID.28	Call ID.29
5 - 10	currently unavailable, left for future expansion				

Auxiliary Output Modes

The UIM-138 module has a single programmable auxiliary output. The table below shows the operating modes available for this output and is set using the PC software.

Mode	AO *(Auxiliary Output)*
1	Auxiliary output triggered by auxiliary input I2
2	Auxiliary output triggered for duration of call
3	Auxiliary output triggered for auxiliary output time at beginning of call
4 - 10	currently unavailable, left for future expansion

Art.UIM-138 Display Module Dimensions



Terminal Connections

Connection	Description
0V	0V ground input
AO	Programmable auxiliary output *(this is an open collector output, switched 0V. Please refer to the table above for full list of programmable output modes).*
I1 - I5	5 programmable auxiliary inputs, switched 0V trigger *(please refer to the table on page 9 for full list of programmable input modes).*

Technical Specifications

Input Voltage	: 12-14Vdc +/- 10%
Current *(standby)*	: approx. 29mA
Current *(during operation)*	: approx. 34mA *(max.)*
Harness Connection	: 5 way pin connector
USB port	: USB
Module Dimensions	: 80mm *(L)* x 60mm *(W)* x 32mm *(D)*
Working Temp.	: -10 +50°C

ART.3171 AUDIOPHONE

The Art.3171 audiophone 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 their door *(the local bell audible ringing tone is different to the call tone from the intercom panel)*.

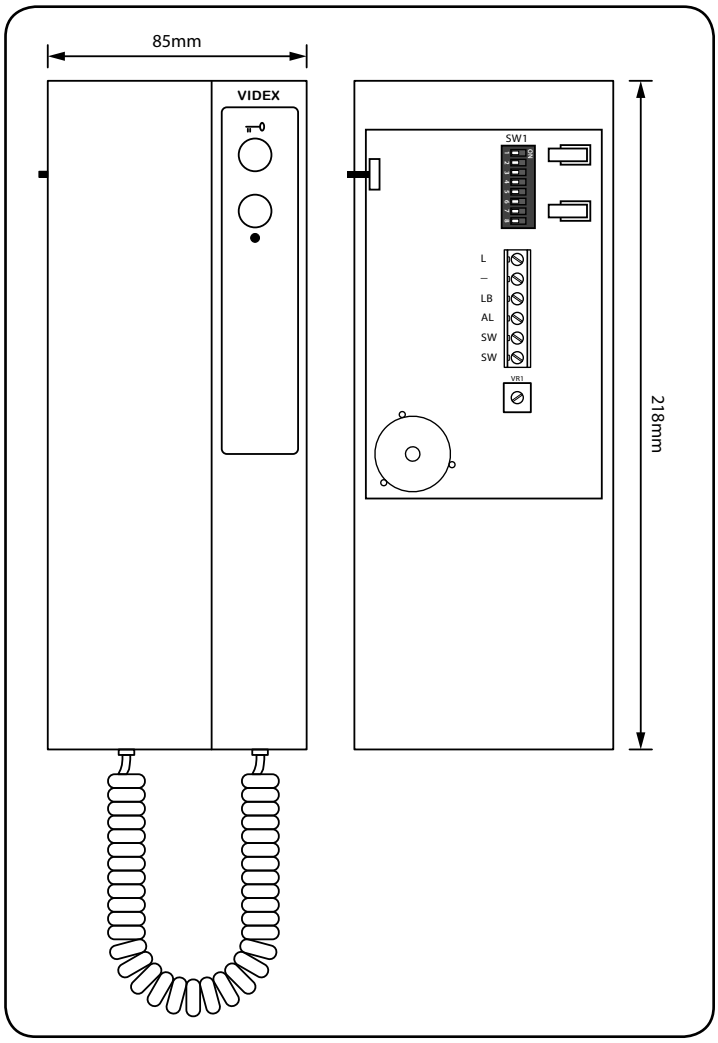
A minimum of 2 cores are required to connect the Art.3171 audiophone to the Art.138N amplifier module. For internal use a CW1308 twisted pair telephone cable is recommended and for external use a CW1128 twisted pair telephone cable is recommended.

Audiophone Dip-Switch Settings

Internally the Art.3171 audiophone has an 8 way dip-switch to set up the phone ID and is based on binary addressing *(for the 25H/SP/DDA/2W audio kit the default address for the Art.3171 audiophone should be set to phone ID.1 as shown below)*.

Dip-Switch No.	1	2	3	4	5	6	7	8
	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF

Art.3171 Terminal Connections and Dimensions



Terminal	Function
L	BUS line data input
-	BUS line ground input
LB	Local Bell input *(switched 0V)*
AL	Alarm input *(switched 0V, for use with concierge)*
SW	Dry contact switch connections
SW	

Technical Specification

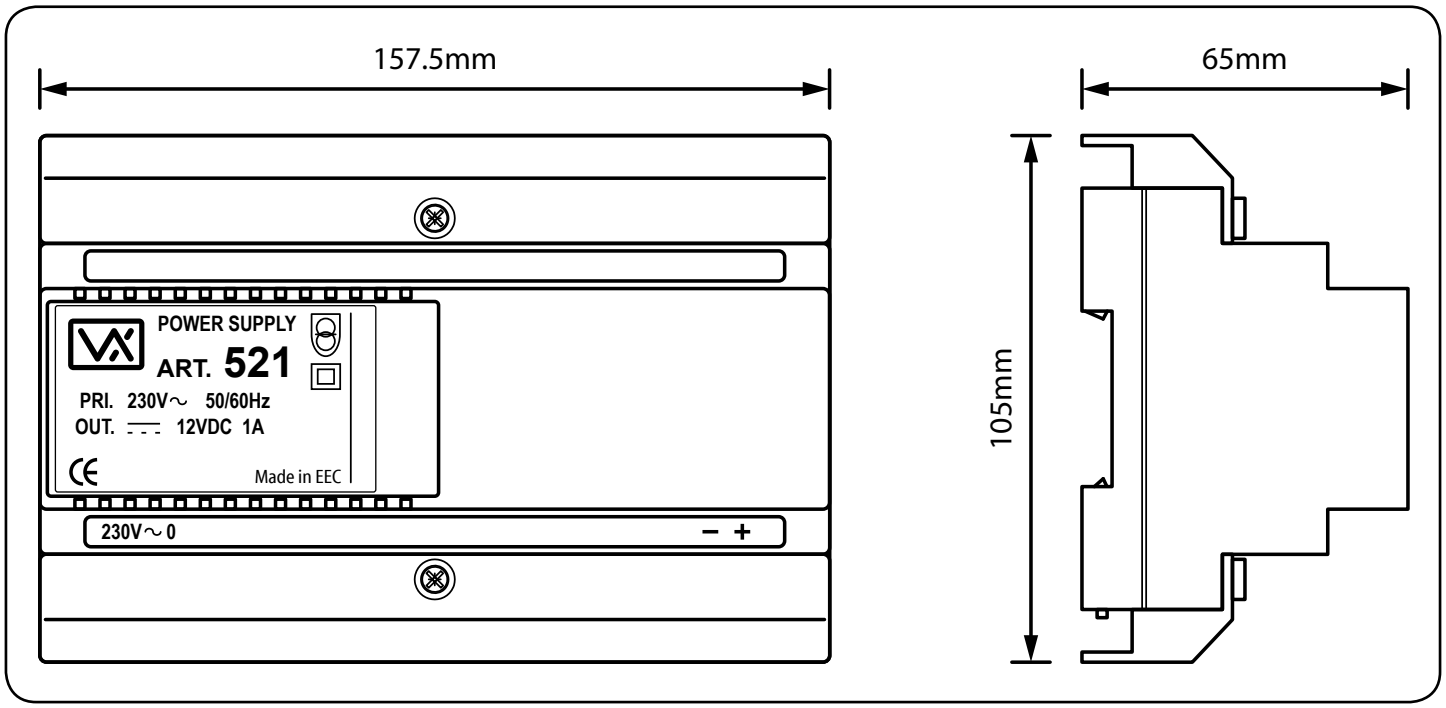
Bus Voltage	: 7.5Vdc
Current *(during call)*	: 15.5mA
Current *(during conversation)*	: 78mA
Current *(during lock release)*	: 80 - 105mA *(max.)*
Audiophone Dimensions	: 85mm *(W)* x 218mm *(L)* x 55mm *(D)*
Working Temp.	: -10 +50°C

ART.521 POWER SUPPLY

The Art.521 power supply will supply an output voltage of 13.5Vdc *(800mA continuous or a 1A surge)* and is protected by a fall back circuit *(there are no internal fuses on the primary or secondary side of the transformer)*. A fused spur should always be used with this type of power supply. It is contained in a standard 9 module A type DIN box for mounting on a standard DIN rail.

IMPORTANT NOTE: The 230Vac mains input terminals on this PSU should be connected to the mains supply via a fused spur or preferably an all pole circuit breaker *(refer to pages 29 - 30)*.

Art.521 Dimensions



Terminal Connections

Terminal	Function
+	13.5Vdc output *(800mA continuous, 1A max.)*
-	0V *(ground)*
230V~	Mains input *(live)*
0V	Mains input *(neutral)*

Technical Specifications

Input Voltage	: 230Vac @ 50/60Hz +/- 10%
Output Voltage	: 13.5Vdc +/- 10%
Current *(continuous)*	: 800mA, *(surge 1A max.)*
Module Dimensions	: 157.5mm *(L)* x 105mm *(W)* x 65mm *(D)*
Working Temp.	: -10 +50°C

SOFTWARE INSTALLATION AND SETUP

Before connecting the UIM-138 module to a PC or laptop please ensure that the USB driver has been installed from the software CD *(refer to the quick USB driver setup guide on page 35)*.

After the USB driver has been installed ensure that the UIM-138 is connected to the 138N speaker amp using the 'plug-in' wire harness and any necessary auxiliary inputs/outputs are connected *(this will depend on the users requirements)*. Ensure that the latest VX2X00 version of software is installed on the PC or laptop *(version 7.0.0.7 or later, refer to the quick software setup guide on page 35)* and there is 12Vdc power connected into the 138N amplifier. After the software is installed connect the UIM-138 display module to the PC or laptop using the USB cable provided, as shown in Fig.1 below.

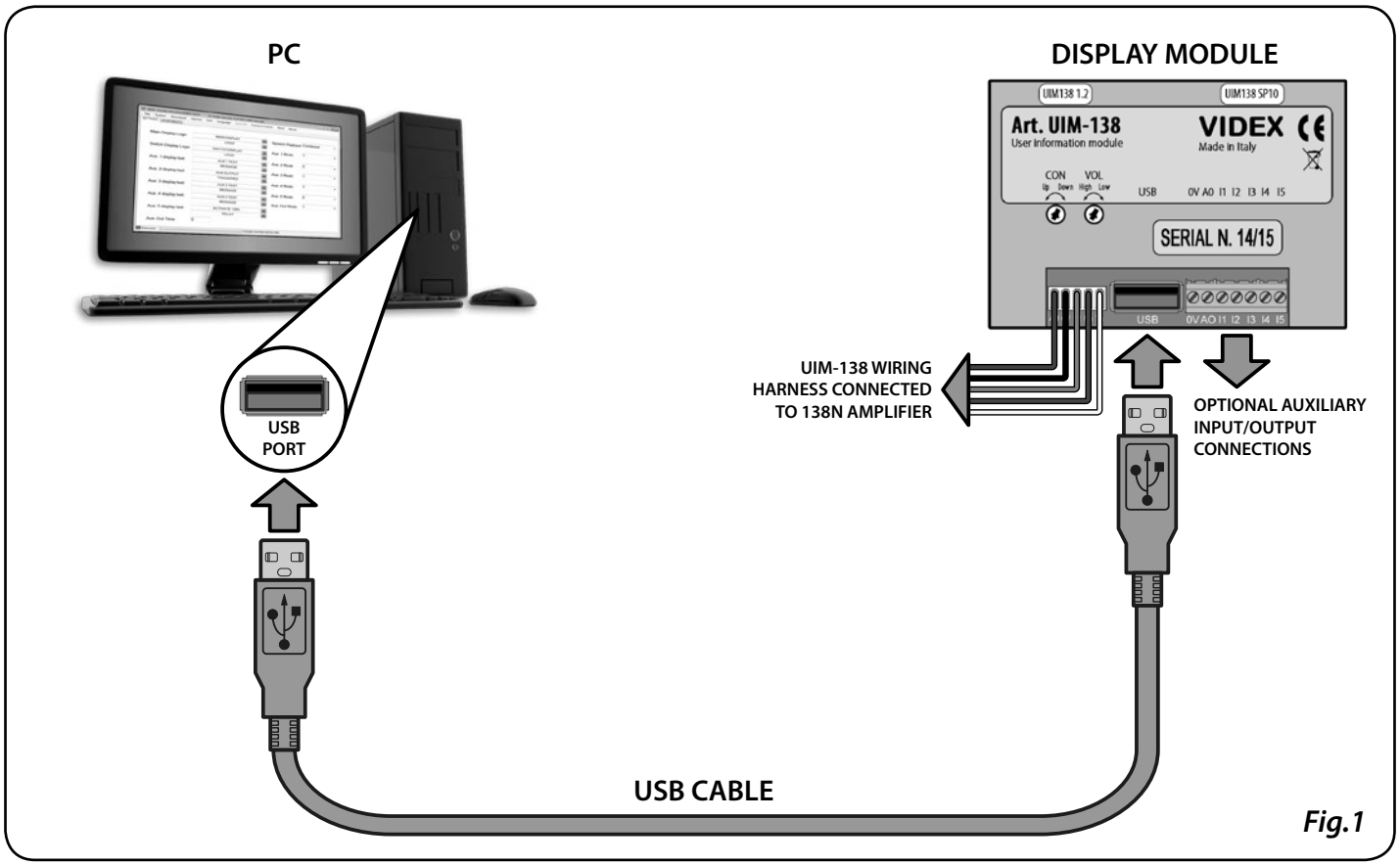


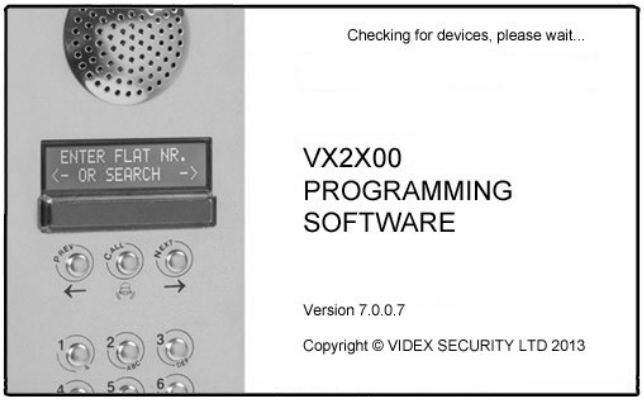
Fig.1

Launching the Software

Launch the 2X00PC software by double clicking on the desktop icon.

2X00PC

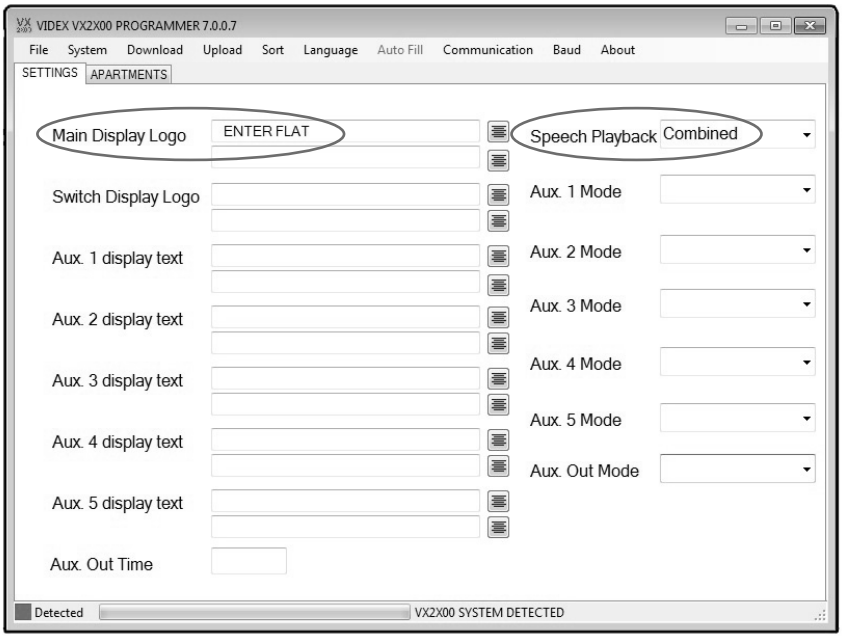
The initial launch window will appear *(as shown to the right)*. At the top of the window the software will show that it is checking for any devices connected to the PC or laptop.



After a brief period the main programmer screen will appear.

THE MAIN PROGRAMMER SCREEN

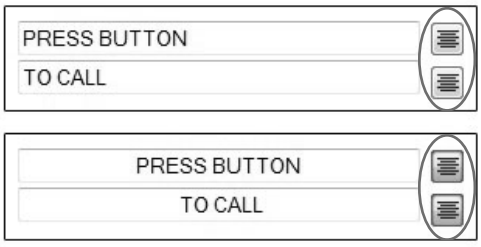
If a device has been detected this will be shown at the bottom of the main programmer screen with a green square *(see below)*. On this screen several programming options can be selected.



The main programmer screen shows several menu options at the top *(although several menu options are shown at the top not all options will be applicable when using the UIM-138 display module)* and two selectable windows on the main screen; 'settings' and 'apartments'. The default tab selected is the 'settings' tab and the main display logo field will already have 'ENTER FLAT' inserted into the field and the speech playback field will already have 'combined' selected from the drop down menu *(seen at the top of the settings window)*.

Settings

Each heading on the left of the 'settings' window consists of two editable field lines with up to 16 characters each. To the right of each field line there is a 'centre alignment' button *(as shown on the right)* which allows the text entered into the field line to be centred when shown on the UIM-138 display.



Under the 'settings' tab the following fields can be edited:

- **Main Display Logo -** the main logo text can be entered into each field line. *(The information entered into these fields will be the main logo shown on the UIM-138 display).*
- **Switch Display Logo -** the switch logo text can be entered into each field line. *(The information entered into these fields will alternate between the main display logo, approximately every 5 seconds).*
- **Aux. 1, Aux. 2, Aux. 3, Aux. 4 and Aux 5 display text -** additional text can be entered into each auxiliary field line. *(The information entered into these fields will be shown on the UIM-138 display after the respective auxiliary input I1, I2, I3, I4 or I5 has been triggered).*
- **Aux. Out Time -** the auxiliary output time can be set *(in seconds, from 1 to 99 seconds)* in this field.

On the right of the 'settings' tab there are 7 selectable options each with a drop down menu where the following can be set:

- **Speech Playback -** the default setting in this field is set to 'combined'. By clicking on the drop down menu button (▼) on the right of the field this setting can be changed. The three options available are: none, individual and combined *(if 'none' is selected then there will be no speech playback when a call is made to the flat. If 'individual' is selected then the speech annunciation will playback the individual numbers that make up the flat number e.g. if calling flat 25 the speech will playback "calling two five". If 'combined' is selected then the speech annunciation will playback the combined flat number e.g. if calling flat number 15 the speech will playback "calling fifteen")*.

Clicking on the drop down menu button (▼) on the right of the field the required auxiliary mode can be set *(a table of auxiliary input modes can be found on page 11)*:

- **Aux.1 Mode -** the following modes can be set and will be active when auxiliary input I1 is triggered:

    1. **Aux.1 Message -** when set into mode 1 the text entered into the 'Aux.1 display text' fields will be shown on the UIM-138 display.
    2. **Call ID.1** - when set into mode 2 the UIM-138 will trigger the 138N speaker amp to call phone ID.1 (*particularly useful if a 2210A or 2210V concierge unit is being used).*
    3. **Scroll** < ***(back)*** **-** when set into mode 3 then the UIM-138 display will scroll up through the list of programmed flats that have been setup in the 'name' field under the 'apartments' tab *(refer to page 19)*.
    4. **Call ID.25 -** when set into mode 4 the UIM-138 will trigger the 138N speaker amp to call phone ID.25.

- **Aux.2 Mode -** the following modes can be set and will be active when auxiliary input I2 is triggered:

    1. **Aux.2 Message -** when set into mode 1 the text entered into the 'Aux.2 display text' fields will be shown on the UIM-138 display.
    2. **Activate AO -** when set into mode 2 the UIM-138 display will trigger the AO output.
    3. **Call -** when set into mode 3 then the UIM-138 display will allow a call to be made to a flat that has been selected using the scroll up/down buttons.
    4. **Call ID.26 -** when set into mode 4 the UIM-138 will trigger the 138N speaker amp to call phone ID.26.

- **Aux.3 Mode -** the following modes can be set and will be active when auxiliary input I3 is triggered:

    1. **Aux.3 Message -** when set into mode 1 the text entered into the 'Aux.3 display text' fields will be shown on the UIM-138 display.
    2. **MODE 2 -** currently unavailable, left for future expansion.
    3. **Scroll** > ***(forward)*** **-** when set into mode 3 then the UIM-138 display will scroll down through the list of programmed flats that have been setup in the 'name' field under the 'apartments' tab *(refer to page 19)*.
    4. **Call ID.27 -** when set into mode 4 the UIM-138 will trigger the 138N speaker amp to call phone ID.27.

- **Aux.4 Mode -** the following modes can be set and will be active when auxiliary input I4 is triggered:

    1. **Aux.4 Message -** when set into mode 1 the text entered into the 'Aux.4 display text' fields will be shown on the UIM-138 display.
    2. **End Call -** when set into mode 2 the UIM-138 display will trigger the 138N speaker amp to end the call made to a flat.
    3. **MODE 3 -** currently unavailable, left for future expansion.
    4. **Call ID.28 -** when set into mode 4 the UIM-138 will trigger the 138N speaker amp to call phone ID.28.

- **Aux.5 Mode -** the following modes can be set and will be active when auxiliary input I5 is triggered:

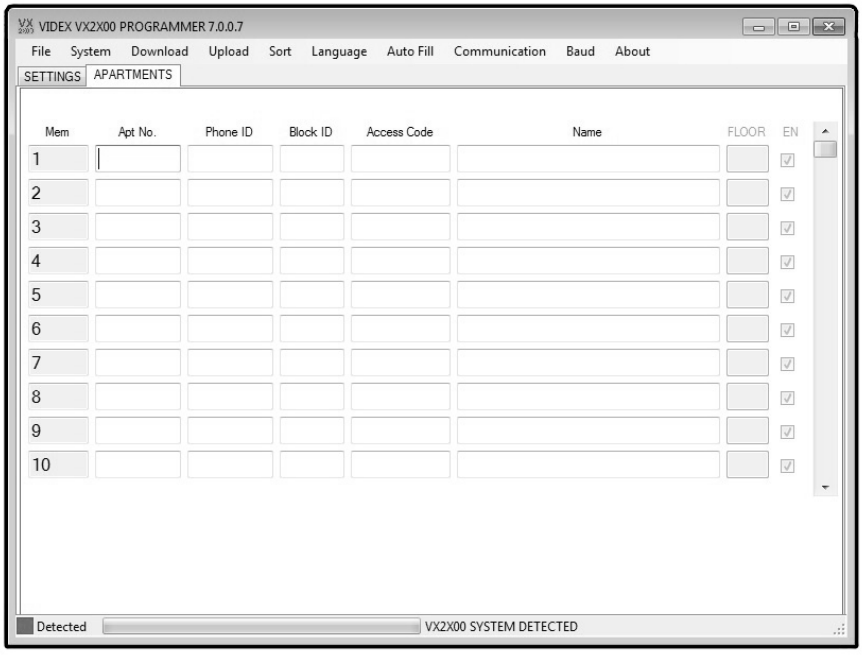
    1. **Aux.5 Message -** when set into mode 1 the text entered into the 'Aux.5 display text' fields will be shown on the UIM-138 display.
    2. **Activate Relay -** when set into mode 2 the UIM-138 display will trigger the 138N speaker amp to activate it's onboard relay.
    3. **End Call -** when set into mode 3 then the UIM-138 display will trigger the 138N speaker amp to end the call made to a flat.
    4. **Call ID.29 -** when set into mode 4 the UIM-138 will trigger the 138N speaker amp to call phone ID.29.

- **Aux. Out Mode** ***(AO)*** **-** by clicking on the drop down menu button (▼) on the right of the field the required auxiliary output mode can be set *(refer to the table on page 12)*. The following modes can be set:

    1. **MODE 1** ***(Aux. Out triggered by auxiliary input I2)*** **-** when set into mode 1 the auxiliary output AO will activate for the time period setup in the 'Aux. Out Time' field *(described on page 16)*. The AO will activate when auxiliary input I2 has been triggered, but only if auxiliary input 2 has been set up in mode 2 *(refer to Activate AO on page 17)*.
    2. **MODE 2** ***(Aux. Out triggered for duration of call)*** **-** when set into mode 2 then the AO output will activate for the entire duration of the call *(from when the call button is pressed on the panel until the handset is hung up in the flat)*.
    3. **MODE 3** ***(Aux. Out triggered for Aux. Out Time at the beginning of the call)*** **-** when set into mode 3 the auxiliary output AO will activate for the time period setup in the 'Aux. Out Time' field *(described on page 16)*. The AO will activate from when the call button on the panel is pressed until the 'Aux. Out Time' expires.

Apartments

The 'apartments' tab is set out with 6 columns; Mem, Apt No., Phone ID, Block ID, Access Code and Name *(as shown below)* and several field rows. The 'Mem' column (*memory location)* is already completed.



Under the 'apartments' tab the following fields can be edited:

- **Apt No.** - the apartment number or flat number can be entered into this field (*The apartment number entered into this field will be shown on the top line of the UIM-138 display when a call is made to that apartment)*.
- **Phone ID** - the address of the intercom phone in the apartment can be entered into this field.
- **Block ID** - if an Art.2206N bus exchange device is used then the block ID can be entered into this field. *(Information completed in this field will only be applicable on multiple entrance systems where an Art.2206N bus exchange device has been used)*.
- **Access Code** - this field is not used.
- **Name** - the name of the user or the apartment or office name can be entered into this field and will be available to select if the 'scroll and call' modes *(described on page 17)* have been setup on auxliliary inputs I1, I2 and I3 on the UIM-138 display. *(The information entered into this field will be shown on the second line of the UIM-138 display when a call is made to that apartment)*.

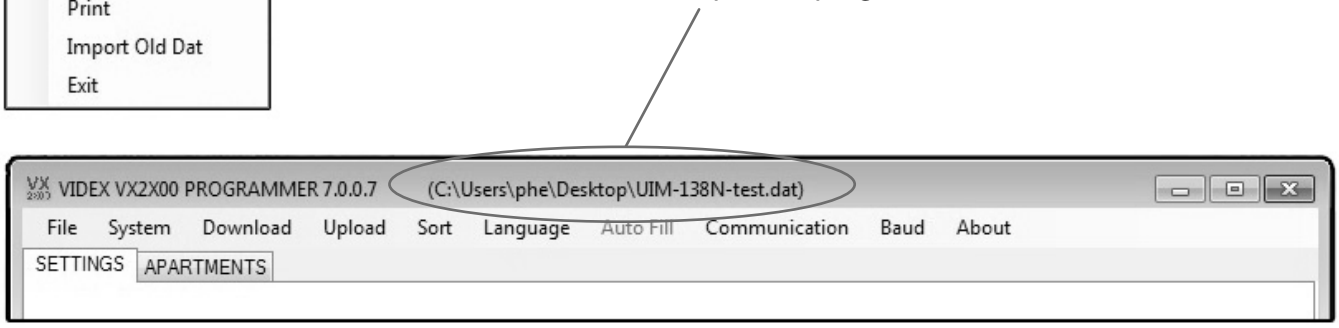
Programmer Screen Top Menu

At the top of the main programmer screen there are 9 menu options available: File, System, Download, Upload, Sort, Language, Communication, Baud and About. As previously mentioned on page 16 not all of these menu options are applicable when using the UIM-138 display module.

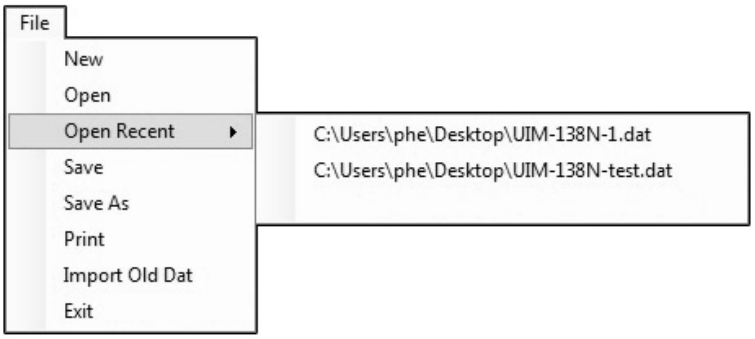
File

From the top menu on the main programmer screen when 'File' is selected the following drop down menu will appear *(as shown on page 20)* and the following options are available:

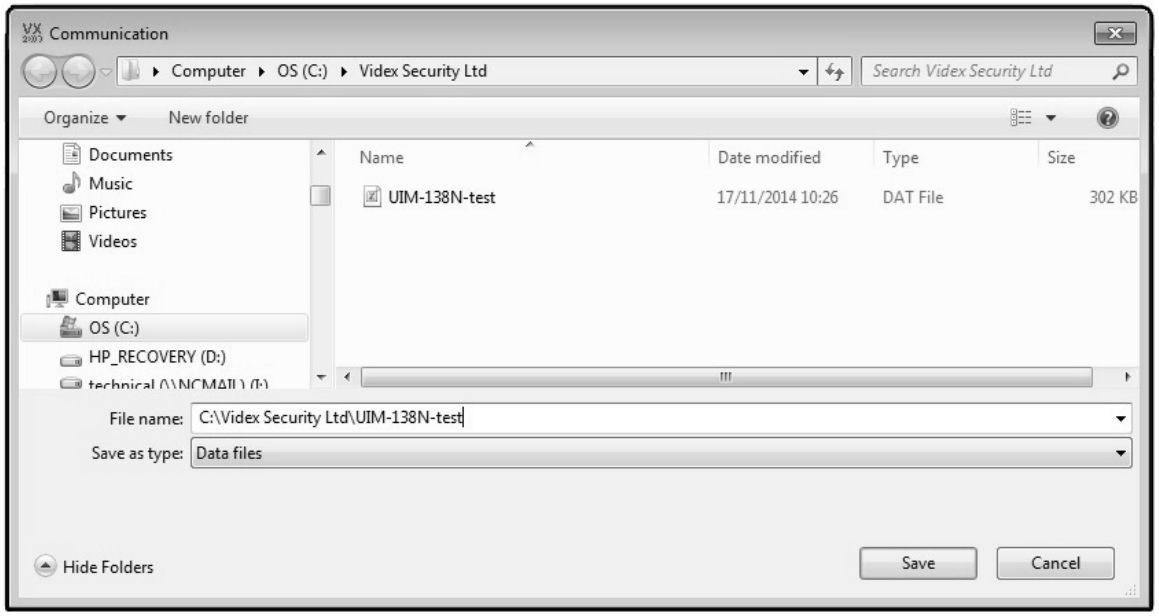
- **New** - selecting this option from the drop down menu will allow a new database file to be created and saved.
- **Open** - selecting this option from the drop down menu will open an existing database file that has previously been saved. *(The file path location and file name will be shown at the top of the programmer screen, see below)*.



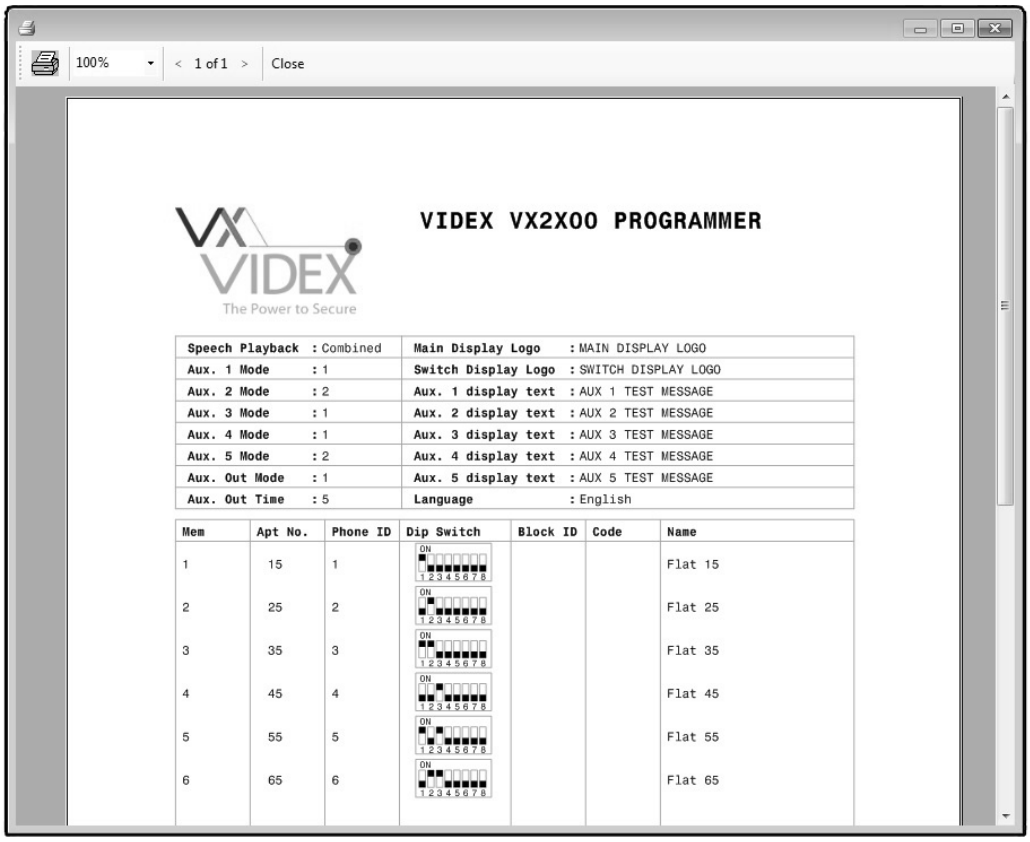
- **Open Recent ▶** - Select this option from the drop down menu and a list of the most recent database files that were previously accessed will be shown. To open select and click on the relevent file required and the 'settings' and 'apartment' tabs will show the saved database information.



- **Save** - select this option from the drop down menu to save the database file that is open.
- **Save As** - select this option from the drop down menu to save the database file in a specific file location *(a specified file path and location can be selected as shown below)*.



- **Print** - select this option from the drop down menu to print out the settings and the database file *(as shown on page 21)*.



100% < 1 of 1 > Close

VIDEX VX2X00 PROGRAMMER

The Power to Secure

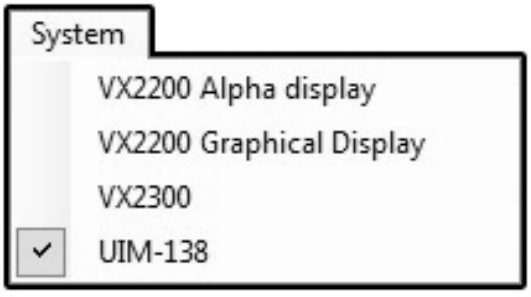
Speech Playback	: Combined	Main Display Logo	: MAIN DISPLAY LOGO
Aux. 1 Mode	: 1	Switch Display Logo	: SWITCH DISPLAY LOGO
Aux. 2 Mode	: 2	Aux. 1 display text	: AUX 1 TEST MESSAGE
Aux. 3 Mode	: 1	Aux. 2 display text	: AUX 2 TEST MESSAGE
Aux. 4 Mode	: 1	Aux. 3 display text	: AUX 3 TEST MESSAGE
Aux. 5 Mode	: 2	Aux. 4 display text	: AUX 4 TEST MESSAGE
Aux. Out Mode	: 1	Aux. 5 display text	: AUX 5 TEST MESSAGE
Aux. Out Time	: 5	Language	: English

Mem	Apt No.	Phone ID	Dip Switch	Block ID	Code	Name
1	15	1				Flat 15
2	25	2				Flat 25
3	35	3				Flat 35
4	45	4				Flat 45
5	55	5				Flat 55
6	65	6				Flat 65

- **Exit -** select this option when all programming is finished to exit out of the programmer software. *(please note that when exiting out of the programmer software a prompt window will appear asking if you want to save the current file before exiting, click on the required button. If saving the file again it will be saved in the same file location as described above under the 'save as' function).*

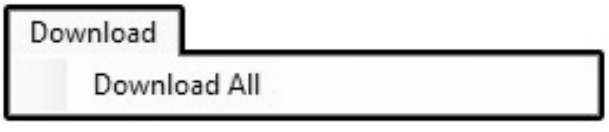
System

From the top menu on the main programmer screen when 'System' is selected the following drop down menu will appear *(as shown)*. There are four options shown on the drop down list, however the 'UIM-138' option will already be ticked. The other three options will not be applicable this is because when the programmer software first loads up it will automatically detect that a UIM-138 display module is connected.



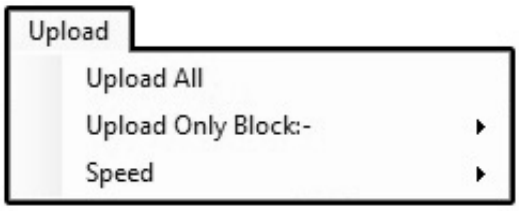
Download

From the top menu on the main programmer screen when 'Download' is selected the following drop down menu will appear *(as shown)*. Clicking on 'Download All' will download all the programming from the existing UIM-138 display module that the programmer software is connected to.

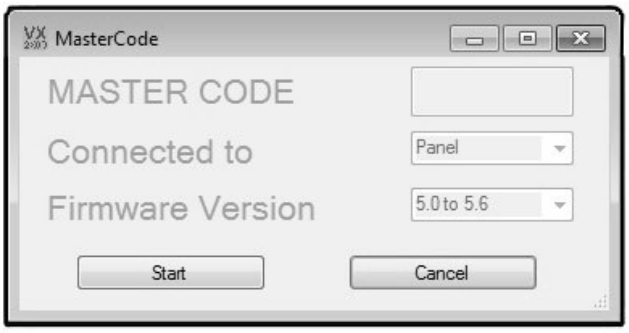


Upload

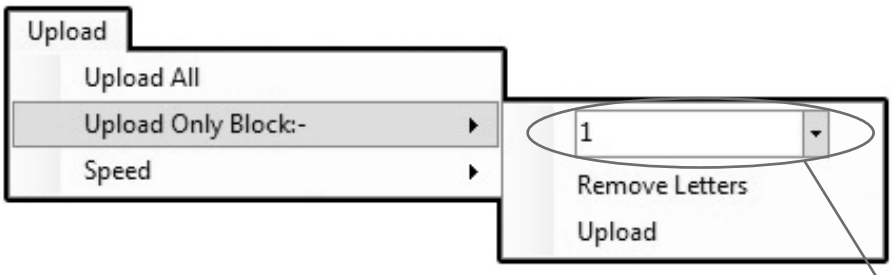
From the top menu on the main programmer screen when 'Upload' is selected the following drop down menu will appear *(as shown on the right)*. From the drop down list the following options are available:



- **Upload All -** select this option from the drop down menu to upload all the information entered into the 'settings' and 'apartment' windows. *(Once the 'Upload All' option has been selected from the drop down list the 'master code' window will appear, as shown on the right. The 'master code', 'connected to' and 'firmware version' options will all be greyed out as these options are not applicable when using the UIM-138 display module. Simply click on the 'start' button to upload or the 'cancel' button to exit out of this option. Please note that when uploading the display will show 'please wait' and a progress bar will be shown on the second line of the display, once complete it will then display 'OK' and then revert to the new message).*



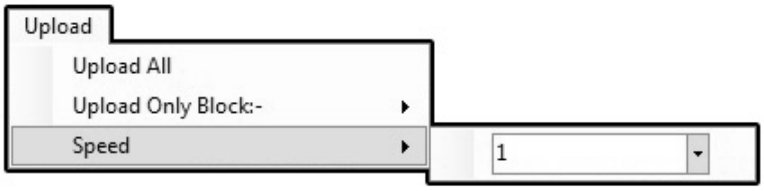
- **Upload Only Blocks -** select this option from the drop down menu to upload information relating to a specific block *(the block number from the drop down list, as shown below, relates to the block ID entered into the Block ID field in the 'apartments' window as described on page 19. This option is generally used on larger multiple entrance systems where an Art.2206N bus exchange device has been used. In most cases the 'Upload All' option described above would be used).*



The block ID in this field relates to the block ID number in the block ID column in the apartments 'tab'.

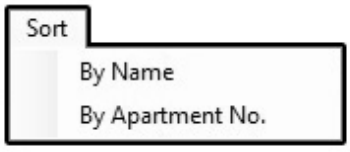
Phone ID	Block ID	Access Code	Name
1	1		APARTMENT 1
2	1		APARTMENT 2
3	1		APARTMENT 3
4	1		APARTMENT 4
5	1		APARTMENT 5

- **Speed** - this option from the drop down menu determines how quickly the information from the programmer software uploads or downloads from the UIM-138 display *(the default setting for this is set to 1 for the quickest speed).*

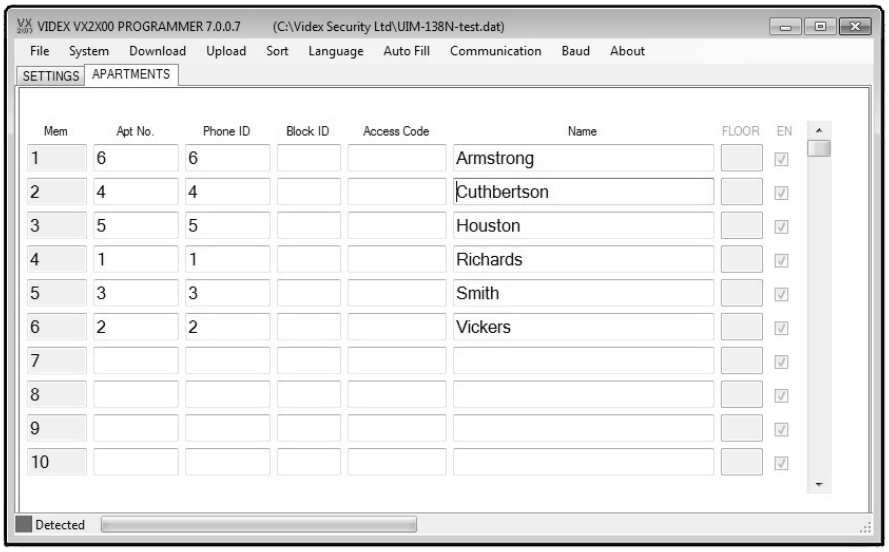


Sort

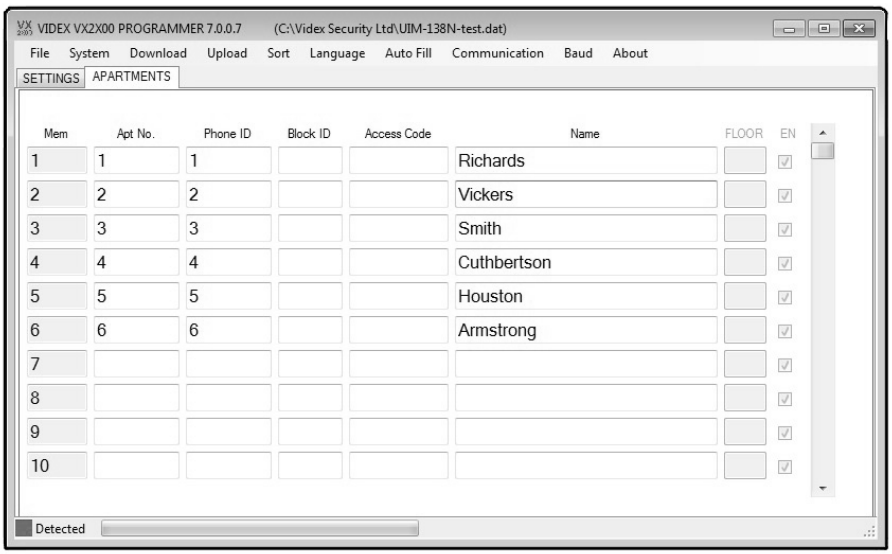
From the top menu on the main programmer screen when 'Sort' is selected the following drop down menu will appear as shown to the right. From the drop down list the following options are available:



- **By Name** - selecting this option from the drop down menu will arrange the list of programmed apartments in the 'apartments' window in alphabetical order, as shown on the right *(if a print out is selected from the drop down 'file' menu the print out will also show this list in alphabetical order).*

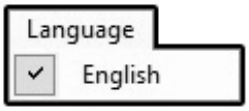


- **By Apartment No.** - selecting this option from the drop down menu will arrange the list of programmed apartments in the 'apartments' window in numerical order, as shown on the right *(if a print out is selected from the drop down 'file' menu the print out will also show this list in numerical order).*



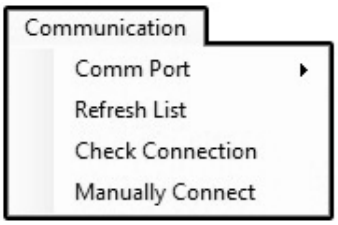
Language

From the top menu on the main programmer screen when 'Language' is selected the following drop down menu will appear, as shown *(the default language is English)*.

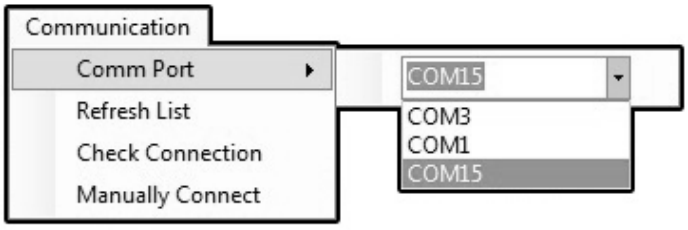


Upload

From the top menu on the main programmer screen when 'Communication' is selected the following drop down menu will appear, as shown below. From the drop down list the following options are available:



- **Comm Port -** selecting this option from the drop down menu will allow an available COM port to be selected *(please note that when the programmer software loads up it will automatically detect if a UIM-138 display is connected and automatically select the COM port).*



- **Refresh List -** selecting this option from the drop down menu will refresh the COM port drop down list *(please note that the COM port that the UIM-138 display is connected to will be included in the COM port drop down list if it hasn't already been included when the programmer software first launched).*
- **Check Connection -** selecting this option from the drop down menu will check and refresh the COM port connection between the programmer software and the UIM-138 display module.
- **Manually Connect -** although shown in the drop down list this option is not applicable.

Baud

The baud rate 9600 will already be selected and all options greyed out. *(When the programmer software first loads up it will automatically check through the COM ports, searching under different baud rates to see if the UIM-138 display is connected).*

About

This option confirms the current version of programming software being used.

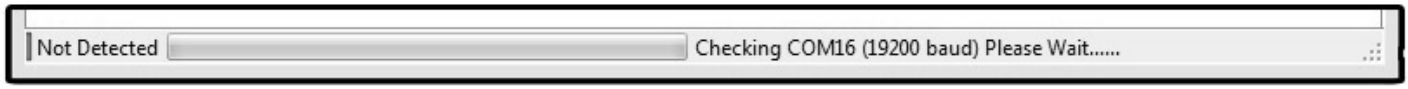
THE STATUS AND PROGRESS BAR

The bottom of the main programmer screen indicates the current status of the programmer software and its connection to the UIM-138 display module. The following notes describe the different statuses the programmer software will show.

- **Not Detected -** this status is shown when the programmer software hasn't detected a device *(UIM-138 display module)* attached to the PC, as shown below.

The 'Refresh List' option can be selected from the 'Communication' drop down list *(from the top menu)* and the status bar will confirm that the ports list has been updated, this can be seen to the right of the progress bar as shown below.

If the 'Check Connection' option is then selected from the 'Communication' drop down list the programmer software will then search for the COM port that the display module is connected to and re-establish a link. This can be seen to the right to the progress bar as shown below.

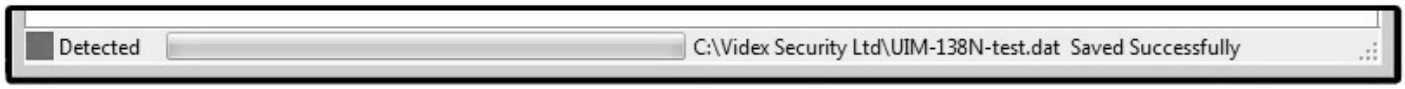


Once the COM port has been found by the programmer software the status bar will update. This can be seen to the left of the progress bar. Confirmation of which COM port the UIM-138 display module is connected to can be seen to the right of the progress bar as shown below.

- **Detected -** this status is shown when the programmer software has found a device *(UIM-138 display module)* attached to the PC, as shown below.

- **Opened File -** this status is shown when the programmer software has successfully opened a saved file using the 'Open' or 'Open Recent' option from the 'File' drop down list. The status will update to the right of the progress bar as shown below.

- **Saved File -** this status is shown when the programmer software has successfully saved an open file using the 'Save' or 'Save As' option from the 'File' drop down list. The status will update to the right of the progress bar as shown below.



- **Downloading Settings -** this status is shown when the programmer software downloads all the existing settings saved on the UIM-138 display module. This is done by selecting 'Download All' from the 'Download' drop down list from the top menu. The status and download progress can be seen to the right of the progress bar as shown below.

- **Uploading Settings -** this status is shown when the programmer software uploads all the current settings from an open file into the UIM-138 display module. This is done by selecting 'Upload All' from the 'Upload' drop down list from the top menu. The status and upload progress can be seen to the right of the progress bar as shown below.

CABLE REQUIREMENTS

The 25H/SP/DDA/2W audio kit follows the same cable requirements for the VX2200 *(audio)* system. The following tables below show the minimum number of cable cores required for this audio kit.

Power Supply, Lock Release, Push to Exit and Break Glass Connections

The Art.521 power supply should be located as close to the door panel as possible, typically between 20 to 30m *(max.)*. The location of the power supply can also serve as a central point for the Art.3171 audiophone connections. Any electric door lock and push-to-exit connections can be cabled directly back to the intercom door panel. If fitting a break glass unit then it should only be wired with a fail safe lock and in series with the lock. The maximum acceptable resistance for all of these connections = 3Ω *(ohms)* or less for best possible performance. Table A below shows the recommended cable type to use*[1].

Table A

Connection	20m	30m *(max.)*
Art.521 Power Supply	2 core YY @ 0.5mm^2	2 core YY @ 0.75mm^2
Lock Release	2 core YY @ 0.5mm^2	2 core YY @ 0.75mm^2
Push to Exit	2 core YY @ 0.5mm^2	2 core YY @ 0.75mm^2
Break Glass	2 core YY @ 0.5mm^2	2 core YY @ 0.75mm^2

(*[1] Please Note: It is perfectly acceptable to use an equivalent cable type if a 2 core YY cable is not being used providing it meets the same cable characteristics as those described above and those shown in table A).

Art.3171 Audiophone Connections

The Art.3171 audiophone requires a 2 core databus connection *(L and -)* with a maximum acceptable resistance of 7.5Ω *(ohms)* or less. For the databus connections a twisted pair cable should be used. Doubling up on these connections to increase the CSA *(cross sectional area)* of the connection and reduce the overall resistance is acceptable, however it should be noted that wherever possible no more than 2 cores per connection should be used as this can cause an increase in capacitance of the cable. The maximum acceptable resistance for all of these connections = 7.5Ω *(ohms)* or less for best possible performance. Table B below shows the recommended cable type to use*[2] and the cable distance shown is the overall cable run between the intercom door panel via the central point, where the power supply *(Art.521)* is located, up to and including where the Art.3171 audiophone is located. If more than one intercom door panel is used on the system *(multiple entrance system)* then an additional core for the BSY *(busy)* connection will be required, but will only need to be connected between the central point and the intercom door panels being used.

Table B

Connection	Min. Cores	50m	100m	200m	300m
Art.3171	2	3 pair CW1308 or CAT5e	4 pair CW1308 or CAT5e	4 pair CW1308 or 4 core 0.5mm^2 YY	4 core 0.75mm^2 YY

(*[2] Please Note: It is perfectly acceptable to use an equivalent cable type if a CW1308, CAT5e or a YY cable is not being used providing it meets the same cable characteristics as those described above and those shown in table B).

IMPORTANT NOTE: Please be aware that when selecting a cable for this audio kit the following **should NOT** be used: Copper Coated Steel *(CCS)* and Copper Clad Aluminium *(CCA)*. While these types of cable may offer a low cost solution they will have a higher resistance than pure copper cable and can affect the overall performance of the system therefore Videx **DO NOT** recommend these types of cable.

BLOCK CABLE DIAGRAM

Fig.2 below shows the minimum number of cable cores required for a 1 entrance 25H/SP/DDA/2W audio kit using the information taken from the tables shown on page 26.

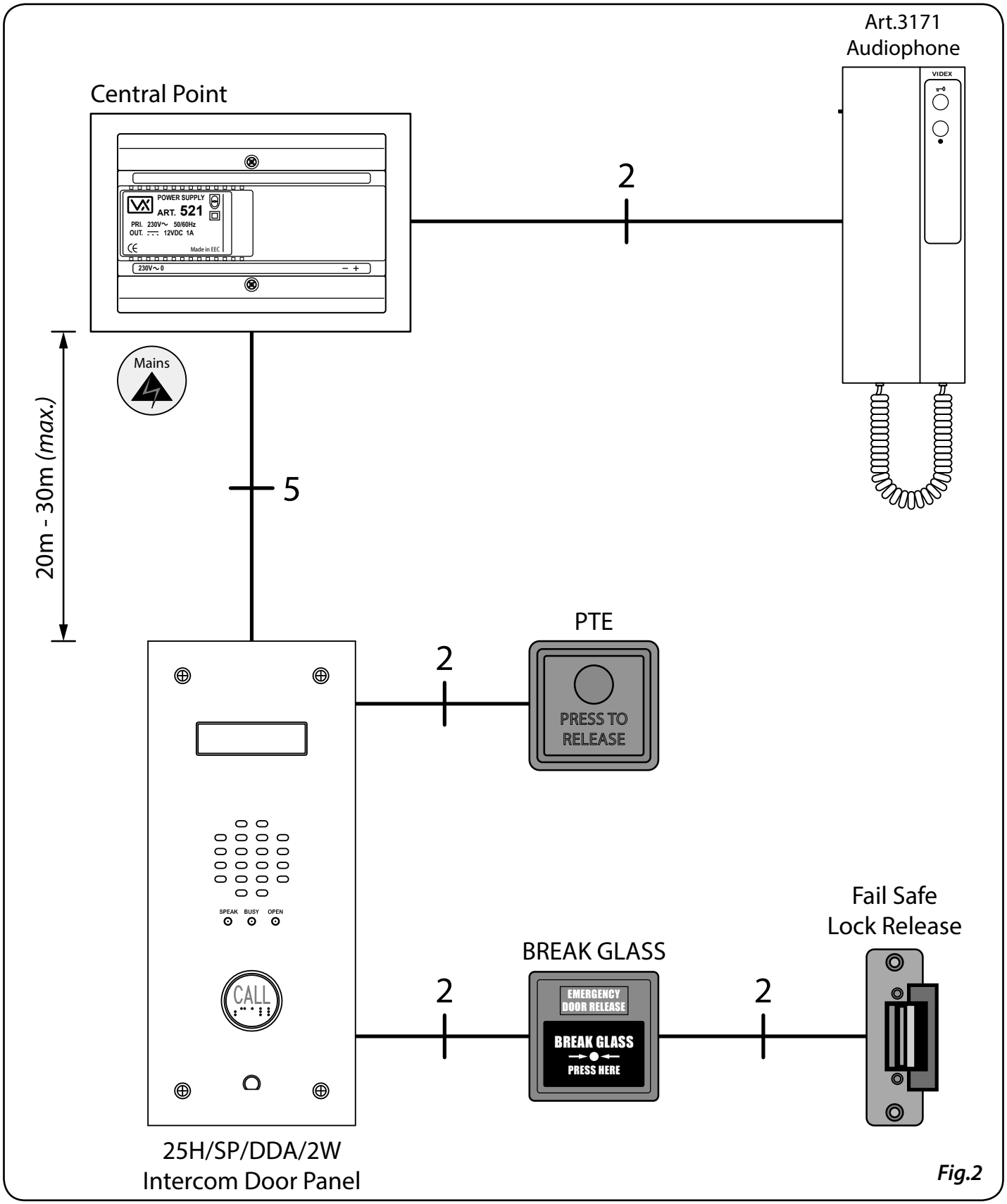
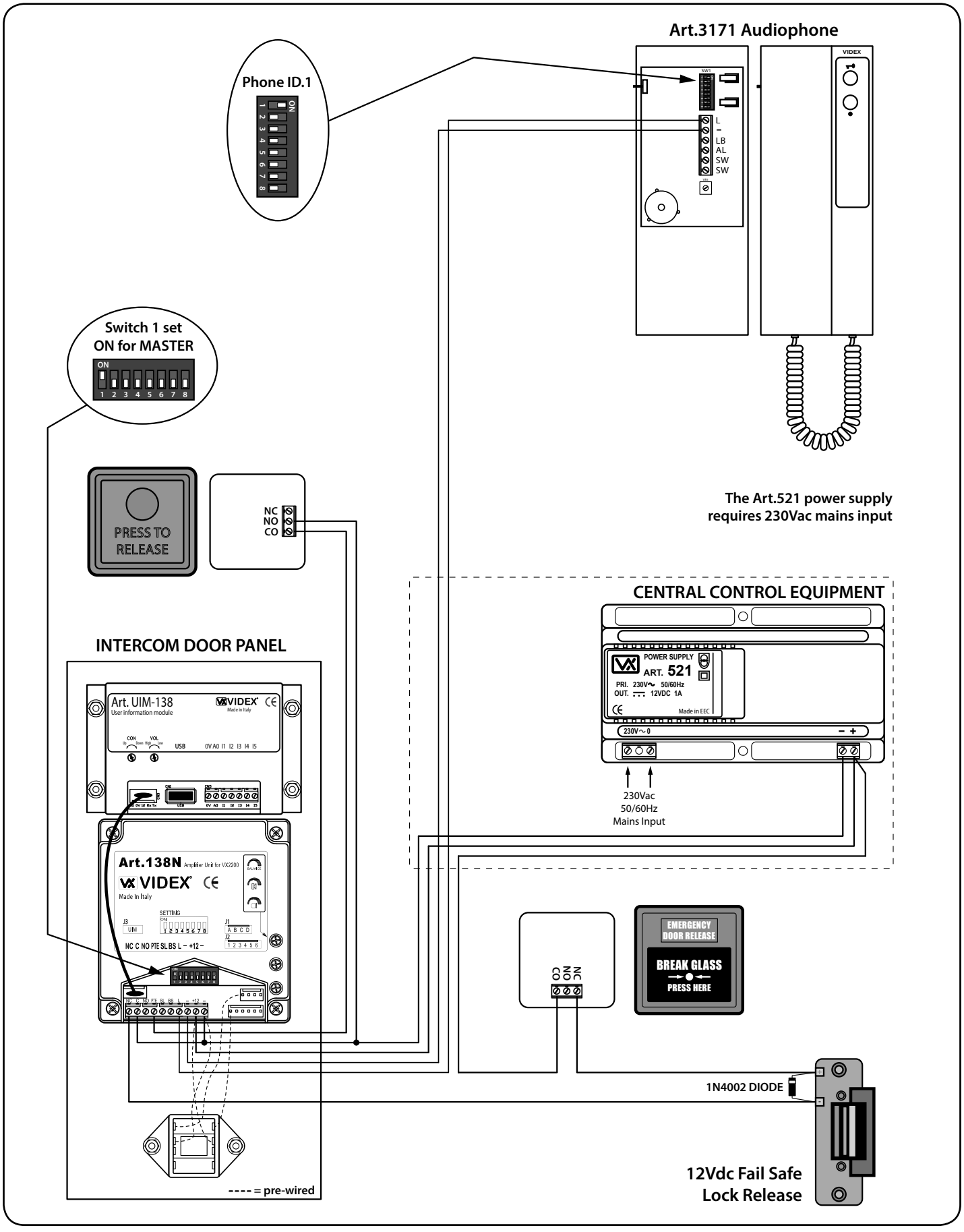


Fig.2

WIRING DIAGRAM



LOCK RELEASE WIRING AND BACK EMF PROTECTION

When fitting an electric lock release back EMF protection will be required. If fitting an AC lock release then a 100nF ceramic disc capacitor must be fitted across the terminals on the lock and if fitting a DC lock release *(fail secure or fail safe)* then a 1N4002 diode must be fitted across the terminals on the lock, this is shown in Fig.3 below.

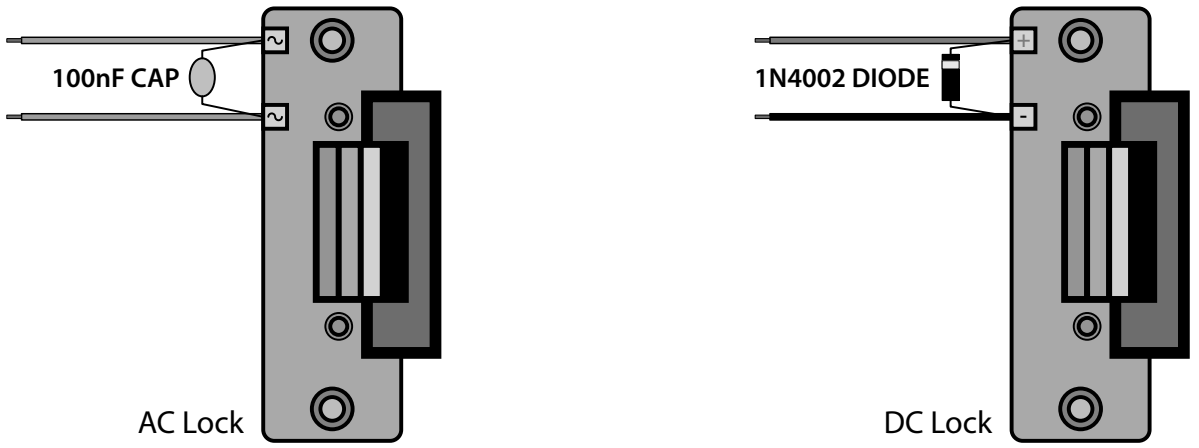


Fig.3

CONNECTION TO MAINS, SAFETY AND GUIDANCE NOTES

IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY BEFORE COMMENCING WITH THE INSTALLATION.

Videx recommends that any cabling and Videx product be installed by a competent and qualified electrician, security installation speclialist or communications engineer.

DO NOT install any Videx product in areas where the following may be present or occur:

- Excessive oil or a grease laden atmosphere.
- Corrosive or flammable gases, liquids or vapours.
- Possible obstructions which would prevent or hinder the access and/or removal of the Videx product.

Mains Connection

The system **MUST** be installed in accordance with the current I.E.E regulations *(in particular I.E.E Wiring regulations BS7671)*, or the appropriate standards of your country, in particular Videx recommends:

- Connecting the system to the mains through an **all-pole circuit breaker** *(refer to Fig.4A on page 30)* which shall have contact separation of at least 3mm in each pole and shall disconnect all poles simultaneously.
- That the **all-pole circuit breaker** shall be placed in such a way to allow for easy access and the switch shall remain readily operable.
- Ensuring that the mains supply *(Voltage, Frequency and Phase)* complies with the product rating label.
- Isolating the mains before carrying out any maintenance work on the system.

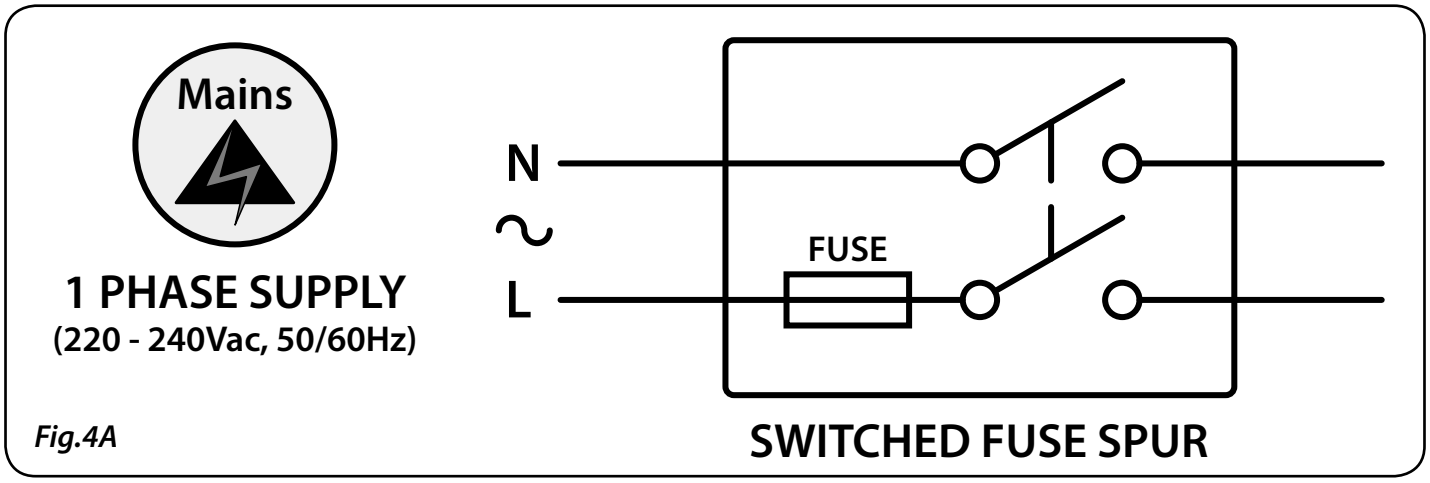


Fig.4A

POWER SUPPLY INSTALLATION

Follow the steps below when fitting the Art.521 power supply:

- First remove the terminal side covers by unscrewing the retaining screws.
- Fix the power supply to a DIN rail *(following to Fig.4B, Fig.4C and Fig.4D)* or directly to the wall using two rawl plugs and two expansion type screws *(refer to Fig.4E)*.
- Switch **OFF** the mains using the circuit breaker mentioned previously on page 29 and then make the connections as shown on the installation diagrams.
- Check the connections and secure the wires into the terminals ensuring that the low voltage *(signal)* cables are routed separately from the high voltage *(mains)* cables.
- Replace the terminal covers and fix them back into place using the relevant screws.
- When all connections are made restore the mains supply.

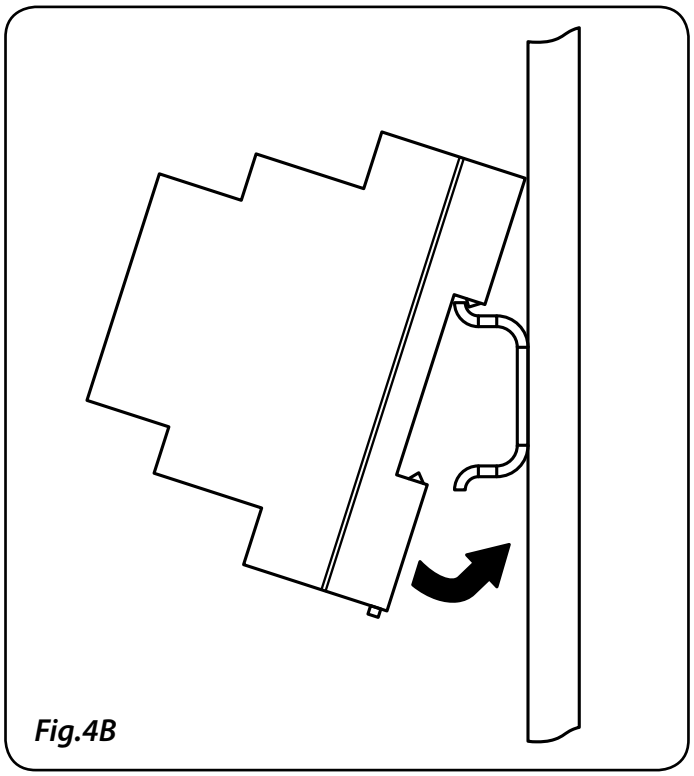


Fig.4B

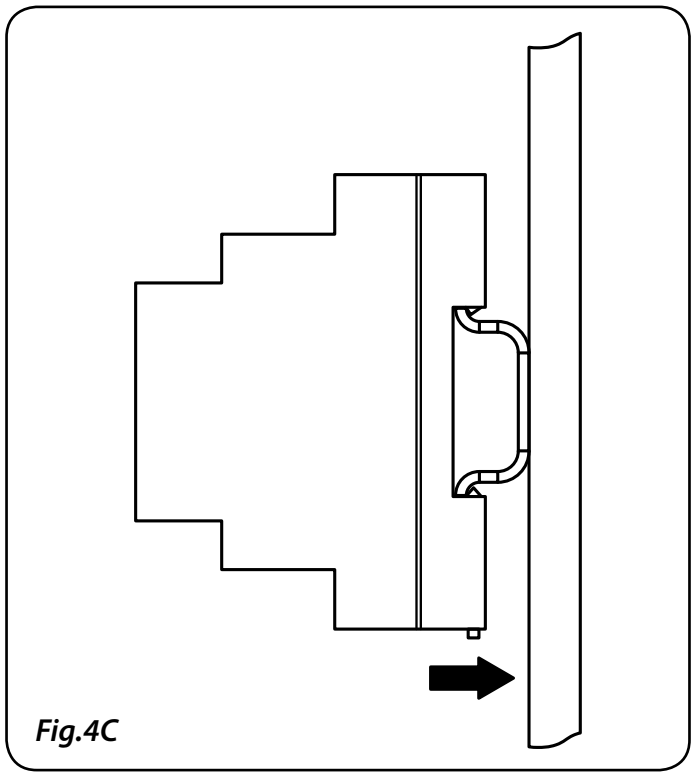


Fig.4C

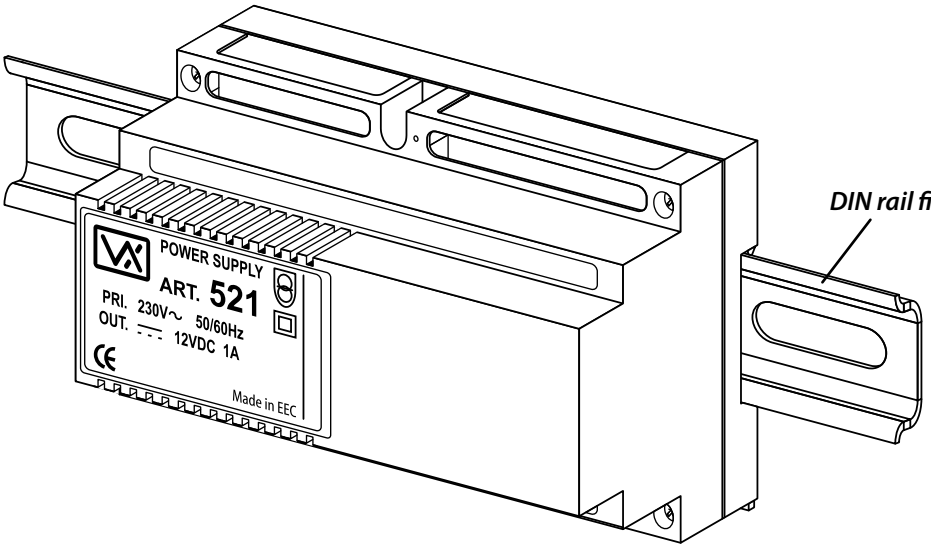


Fig.4D

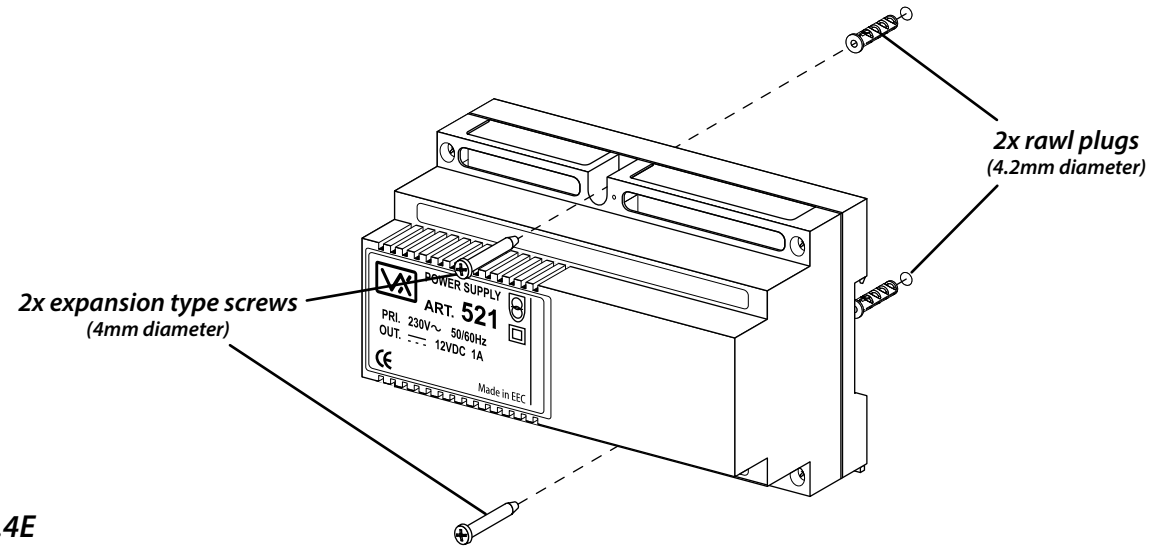


Fig.4E

PANEL AND BACK BOX INSTALLATION

The following guide lines should be followed with respect to the installation and care of the VR panel and accompanying back box. The back box should be adequately secured to the wall to prevent risk of injury.

- To prevent water ingress to the VR120 panel ensure that a good seal between the back box and the face plate itself is made. The neoprene seal on the face plate will offer this as long as the back box front is flush with the wall surface. Always ensure the panel is tightened sufficiently to compress the neoprene seal.
- In the event of gaps due to uneven walls we suggest a silicon sealant be used. In the event of water ingress to the back box we would also suggest drilling 3x4mm holes at the bottom of the back box to allow any collection of water to escape.
- Always ensure all cable entry points are sufficiently sealed to prevent water ingress *(refer to Fig.5, Fig.6 and Fig.7 respectively)*. All cables should loop down and then back up to the termination connections to avoid any water travelling along the cable and onto the pcb.

Earthing the VR Panel and Back Box

The VR intercom door panel must be earthed to its back box *(with the earth strap provided)* and then the back box earthed to the buildings earth connection.

Flush (VRFB120x280)

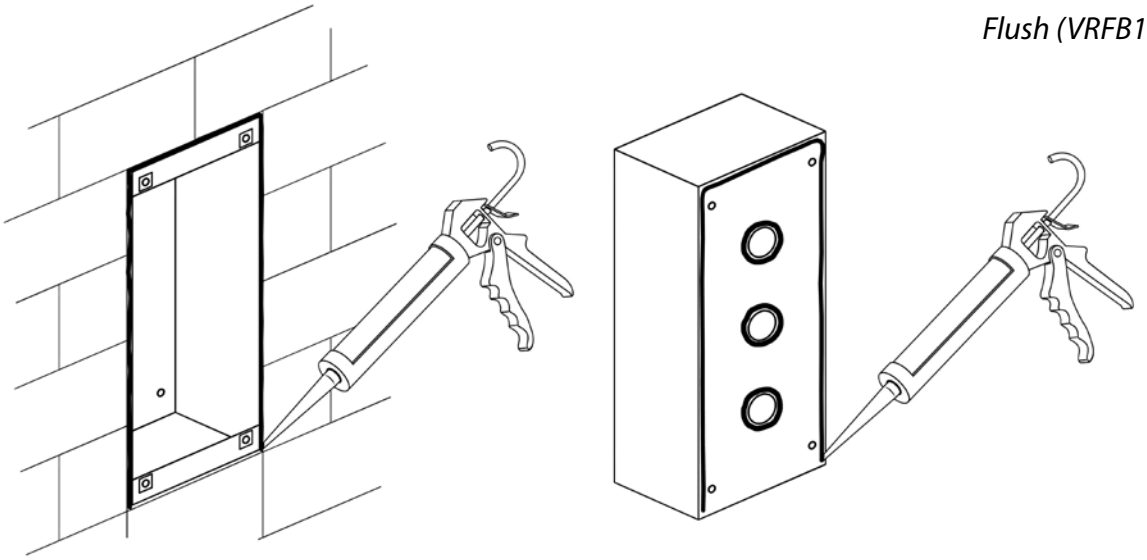


Fig.5

Bezel (VRBB120x280)

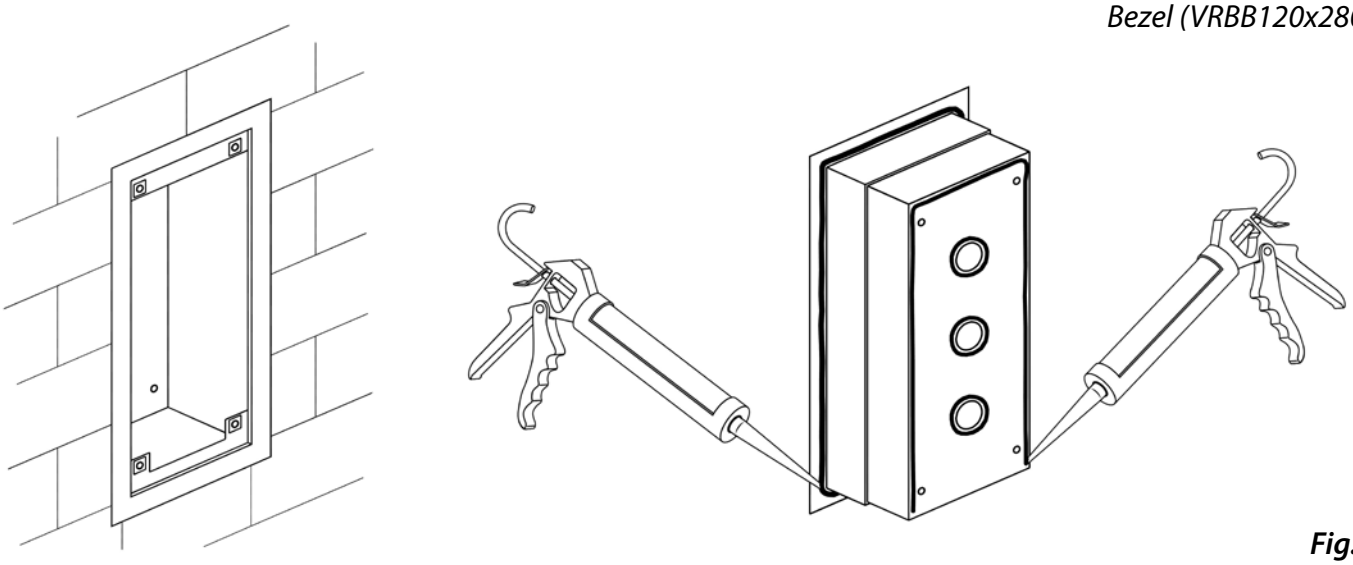


Fig.6

Surface (VRSB120x280)

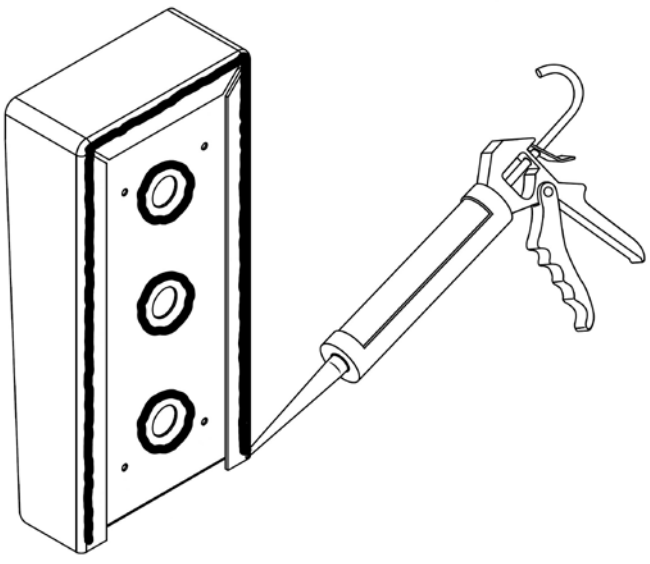


Fig.7

Back Box Mounting Height

A suitable height to mount the back box *(from floor level up to the top edge of the back box)* is anywhere between 160 - 170cm, as shown in Fig.8, *(it should be noted, however, consideration should be taken into account to mount the back box based on user specific requirements)*. The intercom cables can be fed through any of the available 20mm knockouts at the rear of the back box and should be given enough 'slack' to enable the cable wires to be connected to the panel components.

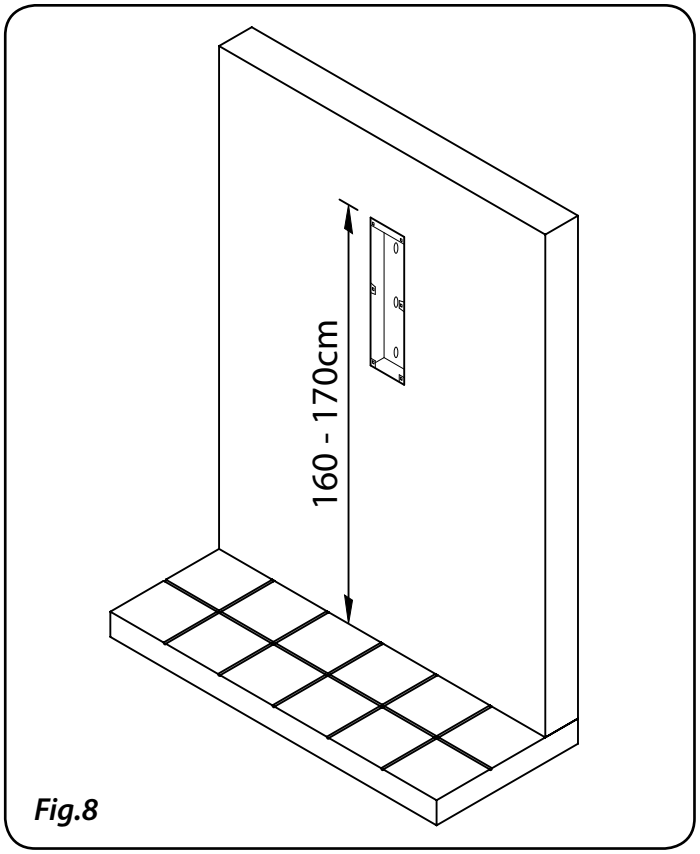


Fig.8

VR Panel Mounting

After the back box has been fitted the VR panel can then be fixed into position using the hex pin security screws provided and using a 'torx' screwdriver, as shown in Fig.9.

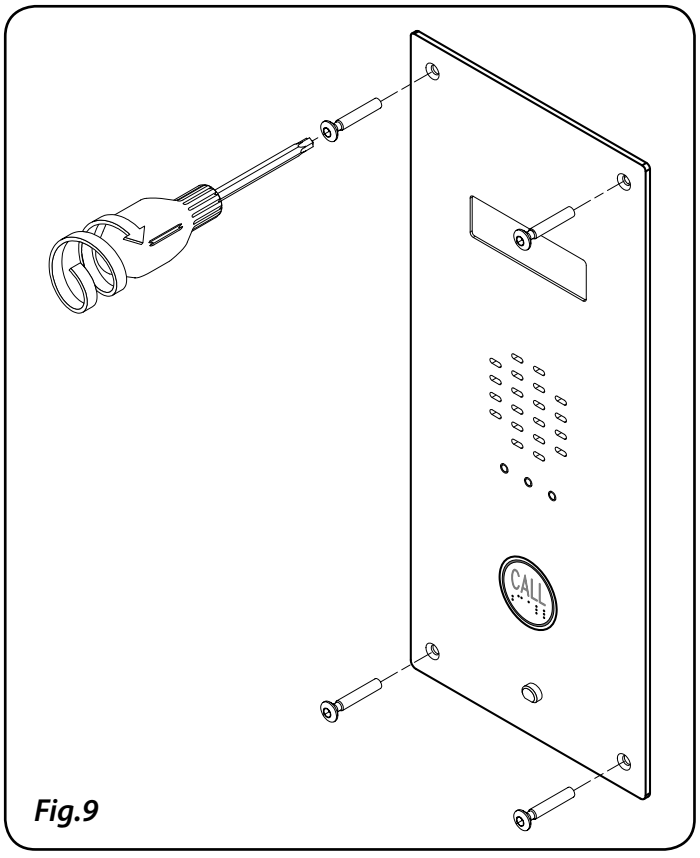


Fig.9

PANEL CARE AND MAINTENANCE

The VR intercom door panel is manufactured from brushed 12 Gauge 304 grade stainless steel. It is important that the fascia is cleaned on regular occasions to prevent dirt build up and tarnishing of the metal. A general household metal polish can be used but care should be taken to follow the grain of the metal when polishing and always only polish in one direction with a soft cloth to avoid light scratching of the fascia. Also try to avoid any polish build up around the call button which may prevent the button from operating correctly.

Table C below identifies the best methods for cleaning and maintaining the intercom door panel.

Table C

To Clean	Method
Finger Prints	Detergent and warm water or a household polish.
Routine Cleaning	Soap, detergent or dilute *(1%)* ammonia solution in warm water.
Staining and discolouration	Mild non-scratching creams and polishes. Take care to avoid build up of creams in the buttons which could cause sticking.

Cleaners that <u>CANNOT</u> be used

- Chloride containing cleaners.
- Hydrochloric acid based cleaners.
- Sidol stainless steel cleaner (can affect engraving).
- Hydrochloride bleaches.
- Silver cleaners.

POWERING UP THE ART.UIM-138 DISPLAY MODULE

After all the connections have been made to the Art.UIM-138 display module power up the system. When the display initializes it will show the part number of the unit on the top line of the display and the firmware version of the unit on the second line of the display, as shown in Fig.10.

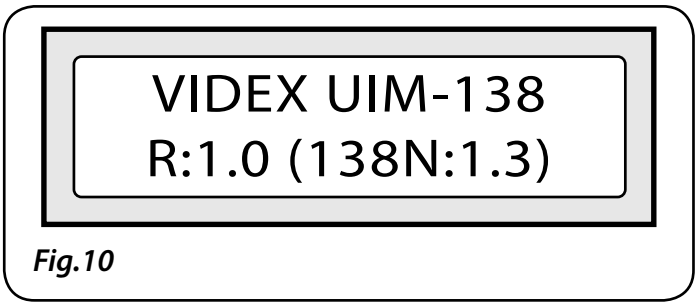


Fig.10

After a short period the display will show the default message *'PRESS BUTTON TO CALL'*, as shown in Fig.11 and will be ready to connect to a PC or laptop for programming *(refer to pages 15 - 25 for software installation and setup).*

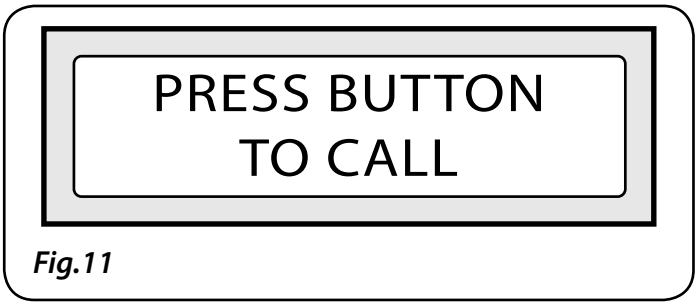


Fig.11

RESETTING THE ART.UIM-138 DISPLAY MODULE

The Art.UIM-138 display module can be reset back to factory default by following the steps below:

1. First make sure that the UIM-138 display is still connected to the 138N speaker amp with the 5 pin connector.
2. Disconnect the 12Vdc power from the 138N speaker amp.
3. Link out terminals 0V and I5 on the UIM-138 display module.
4. Reconnect the 12Vdc power back onto the 138N speaker amp.
5. The display will re-initialize. First it will display the part number and firmware version as shown in Fig.12.
6. Next it will show 'PLEASE WAIT' along the top line and the progress bar along the bottom line of the display as shown in Fig.13.
7. Once the display shows 'OK', as shown in Fig.14, remove the link between 0V and I5. The settings in the UIM-138 display module will be returned back to factory default.

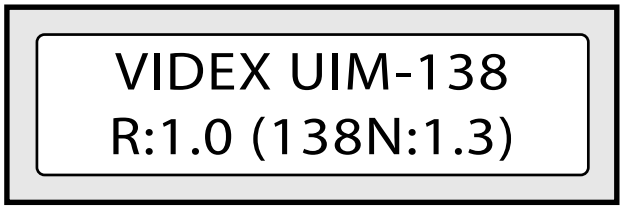


Fig.12

Fig.13

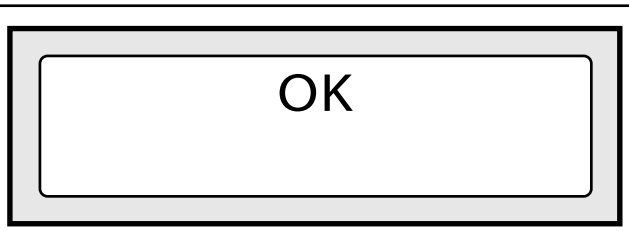


Fig.14

QUICK USB DRIVER SETUP GUIDE

1. Insert the 2X00PC software CD into the PCs CD/DVD rom drive.
2. Select 'RUN' from the start menu.
3. Type in 'D:\CDM20824_Setup.exe' then press the 'OK' button.
4. The relevant driver for the USB cable will be installed.

QUICK SOFTWARE SETUP GUIDE

1. Insert the 2X00PC software CD into the PCs CD/DVD rom drive.
2. Select 'RUN' from the start menu.
3. Type in 'D:\setup' then press the 'OK' button.
4. Follow the on screen instructions to complete the setup.
5. Connect the USB cable between the PC and the UIM-138 display module.
6. Once the Programmer software setup is complete 'double click' on the programmer desktop icon to launch the software.

TROUBLE SHOOTING

Symptom	*Tests / Checks to carry out*
Programmer software not seeing UIM-138 display module.	Check that the USB cable is connected firmly between the UIM-138 display module and the PC or laptop.
	Check the COM port connection via the programmer software using the 'Check Connection' feature *(described on page 24)*.
Nothing shown on the UIM-138 display module.	Check that the UIM-138 display module has +12Vdc power by checking the 138N wire harness is firmly plugged in between the UIM-138 display module and the 138N speaker.
	Check that the 138N speaker has 12Vdc connected, if necessary check the dc psu has a steady 12Vdc output.
	Check that the contrast control on the UIM-138 display module hasn't been turned down. Try adjusting the contrast control until the display shows the programmed message *(refer to page 11)*.
	If there is still nothing shown on the UIM-138 display module try performing a module reset *(described on page 35)*.
No speech annunciation coming through the 138N speaker amp.	Check that the volume control on the UIM-138 display module hasn't been turned down. Try adjusting the volume control until there is speech playback *(refer to page 9)*.
	Check that the volume and balance POTs on the back of the 138N speaker haven't been turned down. Try adjusting the volume and balance POTs on the back of the 138N speaker amp until there is speech playback.
	Check the speech playback setting hasn't been switched off via the programmer software on the 'settings' window *(refer to pages 16 - 17)*.
The auxiliary inputs on the UIM-138 display module aren't performing as expected.	Using the programmer software check that the auxiliary inputs have been setup correctly according to the users requirements *(refer to pages 17 - 18 for the auxiliary input modes)*.
	Check the wiring between the auxiliary inputs and the push buttons or the devices they are connected to are not damaged in any way (*this will also depend on the users requirements)*.
The auxiliary output on the UIM-138 display module is not performing as expected.	Using the programmer software check that the auxiliary output has been setup correctly according to the users requirements *(refer to page 18 for the auxiliary output modes)*.
	Check the wiring between the auxiliary output and the device it's connected to is not damaged in any way *(this will also depend on the users requirements)*.
The system has power but the intercom door panel does not switch ON.	Check the GND and +12Vdc connections on the Art.521 PSU and on panel the Art.138N speaker, also check the voltage output on the PSU with and without load.

Symptom	*Tests / Checks to carry out*
Intercom panel display switches between 'ERROR' and 'PRESS BUTTON TO CALL' and makes an acoustic signal every few seconds.	Check the polarity of the L/- BUS connections between the Art.138 speaker and the Art.3171 audiophone.
	Check the L/- BUS voltage (*should be 7.5Vdc at the intercom panel and at the audiophone).*
	If necessary reset the Art.138N speaker as a 'MASTER' panel *(refer to dip-switch settings on page 8).*
When the call button is pressed the intercom panel is not able to ring the audiophone. The busy LED on the panel comes ON and makes an acoustic signal of 'line engaged', but the display shows 'ERROR'.	Check the L/- BUS connections are terminated properly.
	Increase the CSA of the L/- BUS connection by doubling up on the cable cores.
	Check that the Art.3171 audiophone phone ID is correctly set as phone ID.1 *(refer to phone ID dip switch setting on page 13).*
	Check that the yellow and white wires from the Art.138N speaker wiring harness are connected correctly to the DDA call button *(refer to page 8).*
The Intercom panel makes a call correctly and the audiophone rings, but when answered the communication is cut OFF.	Check the L/- BUS voltage (*should be 7.5Vdc at the intercom panel and at the audiophone).*
	Increase the CSA of the L/- BUS connection by doubling up on the cable cores.
The call rings through to the audiophone okay, but there is only one-way speech.	Check the input voltage to the Art.138N speaker hasn't dropped below 10.5Vdc.
	Check the GND and +12Vdc connections on the Art.521 PSU and on panel the Art.138N speaker, also check the voltage output on the PSU with and without load.
The audio level of the conversation is low.	Check both microphone and speaker POTs on the Art.138N speaker *(refer to page 9)* and adjust in conjunction with the balance POT if necessary.
No lock release from the audiophone.	Check that the 'OPEN' LED comes ON on the intercom door panel.
	Check continuity of the relay contacts on the Art.138N when the lock button on the audiophone is pressed.
	Check the lock connections between the relay on the Art.138N and the lock release.
	Check for voltage on the terminals of the lock *(for fail secure locks 12Vdc should appear across the lock terminals, for fail safe locks 12Vdc should drop off the lock terminals).*

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