

SP300-1 & SP301-1C Audio/Video Digital Front Panel

DIGITAL FRONT PANEL

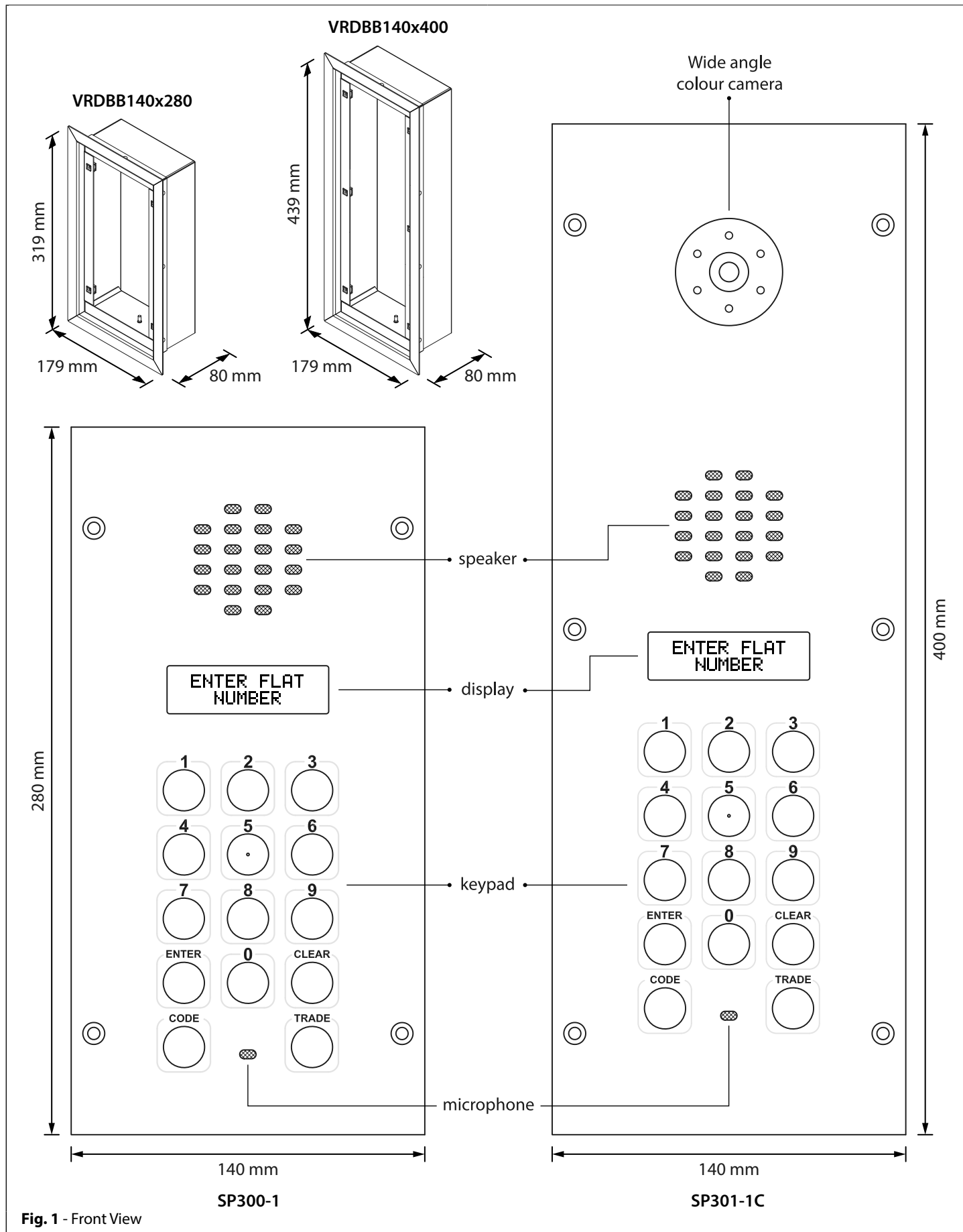


Fig. 1 - Front View

- 1 Wide angle camera
- 2 JP1 = video signal mode
JP2 = camera switching mode
- 3 Camera terminal connections:
SL, SB, V2, V1, V-, SB, +20, +12
- 4 Speechboard volume controls
- 5 Speaker module
- 6 Panel's earth stud.
- 7 Digital display window
- 8 Main 2200-1-pcb
- 9 Microphone and speaker volume controls
- 10 VX2200 pcb terminal connections:
GND, +12, -, L, BS, SL, NC, C, NO, TRD, PTE
- 11 RS232 jack plug for PC connection
- 12 Trade button terminals
- 13 Microphone
- 14 JP1/JP2 = panel mode configuration:
(A = others, B = 316x)

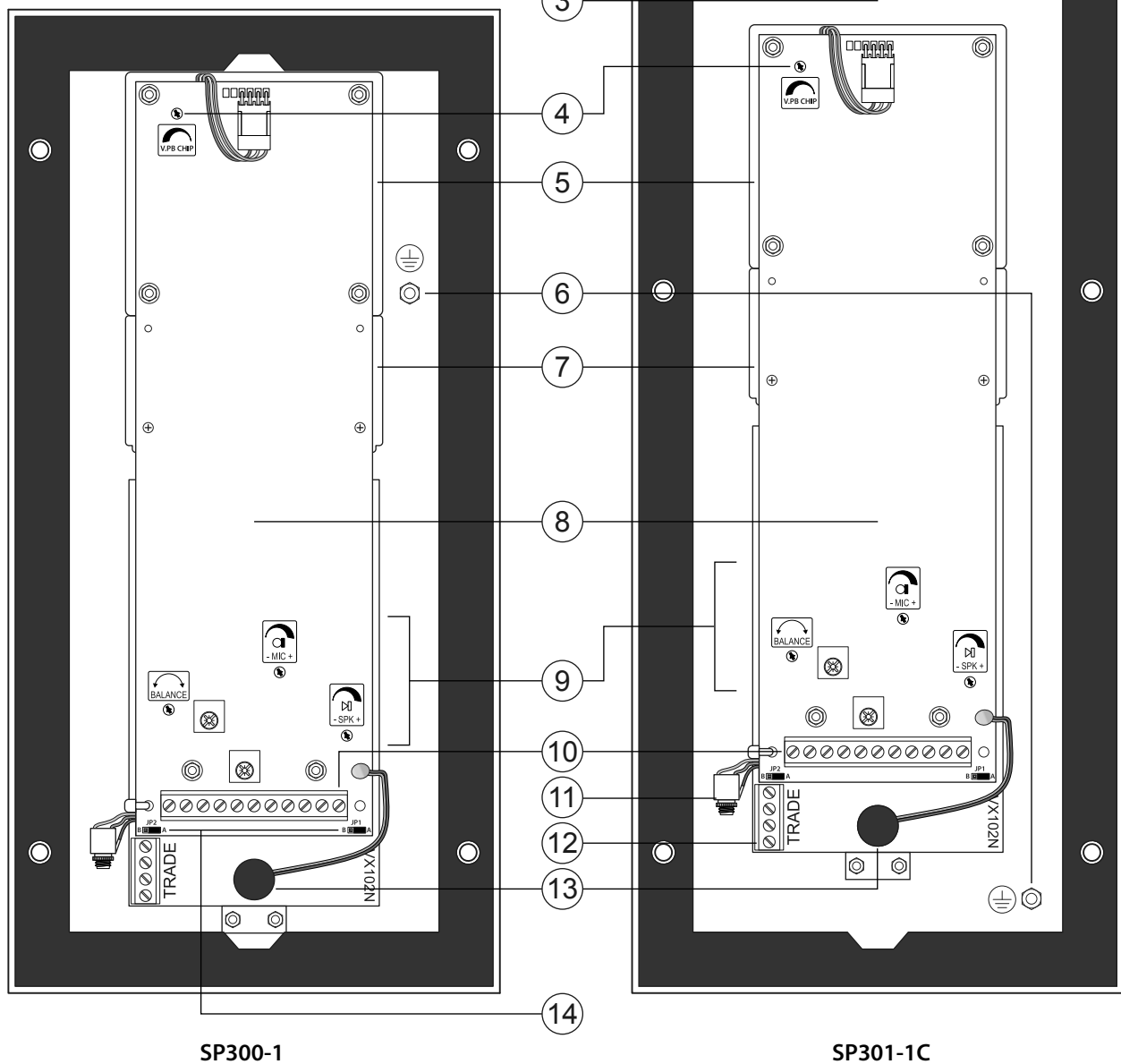
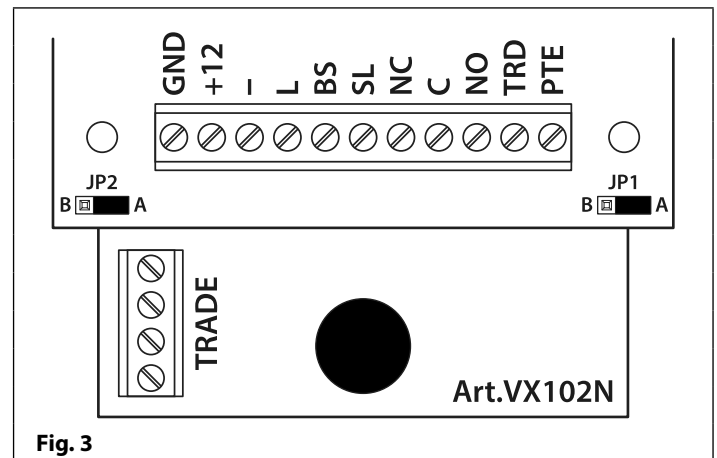


Fig. 2 - Rear View

TERMINAL CONNECTIONS

Both the SP300-1 and the SP301-1C digital panels (see **Fig.1** for front view of panel and **Fig.2** for rear view of panel) share the same terminal connections, see **Fig.3**, and incorporate an **Art.VX102N** button pcb that has an additional 4 terminals for trade button configuration (also see trade button notes on pages 6 and 7). The SP301-1C audio/video panel also includes an **Art.130** wide angle colour camera and appropriate camera connections.

Terminal	Description
GND	0V ground power.
+12	+12Vdc power (500mA max.)
-	Data BUS connection (negative).
L	Data BUS connection (positive, 7.5Vdc).
BS	Busy signal (for multiple entrance systems).
SL	Accessory control signal (switched 0V output).
NC	Relay output - Normally closed connection.
C	Relay output - common connection.
NO	Relay output - Normally open connection.
TRD	Trade input (switched 0V).
PTE	Push to exit input (switched 0V).

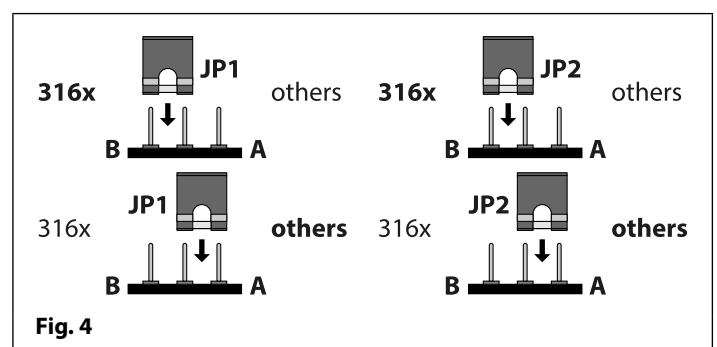


JUMPERS JP1 AND JP2

The two jumpers, JP1 and JP2, are located either side of the terminal block on the main pcb and are used to configure the panel. They both must be set before powering up to initialise the panel in the correct mode, see **Fig.4**.

When using **Art.3161** or **Art.3162** basic audiophones both jumpers must be set to the **B** position (**316x**), for all other audiophone or videophone models then both jumpers must be set to the **A** position (**others**).

By default these jumpers are set to the **A** position for both the SP300 and SP301-1C digital panels.



VOLUME ADJUSTMENTS

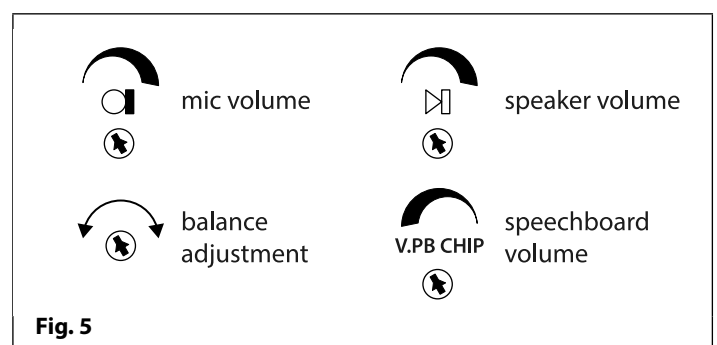
On the main pcb there are 4 volume adjustment POT's to control the speech volume (microphone and speaker controls with a balance control) and a speechboard adjustment POT (**V.PB chip**), see **Fig.5**.

Mic POT: controls the speech volume to the audio/videophones;

Speaker POT: controls the speech volume from the audio/videophones;

Balance POT: controls the balance between the mic and speaker;

V.PB chip POT: controls the speechboard volume.



Adjusting and setting the volumes: Since this system uses only one wire to carry both directions of speech it is necessary to use the balance POT to adjust the gain of the two speech directions to the required level.

With the digital panel placed out of the back box first set the mic and speaker POTs to approximately a third of a turn (clockwise) and then during 'live' speech (to an audio/videophone in an apartment) adjust the balance POT whilst blowing into the mic hole on the front of the panel. Continue adjusting the balance POT to the point at which the minimum volume of speech comes through the panel's speaker. Finally adjust the speaker and mic POT's to optimum level ensuring that no feedback (high pitched whistling sound) occurs when the digital panel is placed back into the back box. Please note that it may be necessary to try this method of adjustment several times until the speech volumes have been set to an acceptable level.

Remember that to increase the mic and speaker volumes turn the adjustment POTs clockwise and to decrease the mic and speaker volumes turn the adjustment POTs anti-clockwise.

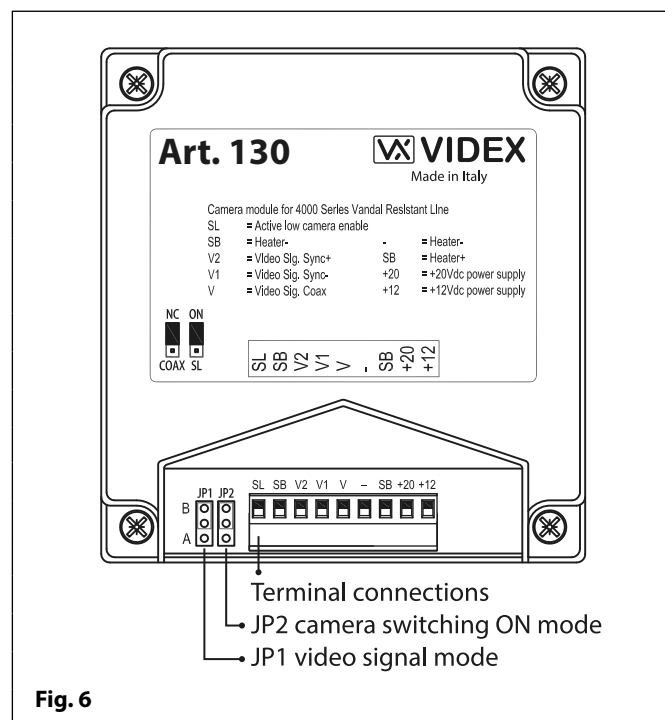
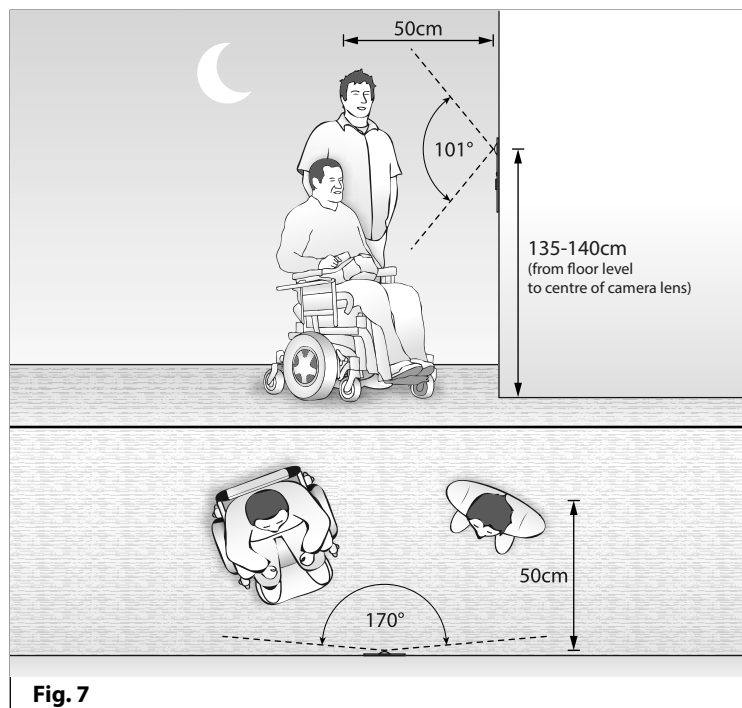
TECHNICAL SPECIFICATION

Working Voltage	: 13Vdc +/- 10%;
Standby Current	: approx. 160mA;
Max. Absorption	: approx. 350mA;
Memory Capacity	: 998 users (max.);
No. of Access Codes	: up to 998 (1 per user);
Working Temperature	: -10 +50°C.

ART.130 CAMERA TERMINAL CONNECTIONS

The **Art.130** colour camera, see **Fig.6**, is only available on the **SP301-1C** audio/video digital panel. It is a CCD high quality day/night wide angle camera incorporating infrared illumination LEDs with a viewing distance of 50cm and a horizontal viewing angle of 170°, see **Fig.7**. The camera can be set for composit video signal output (coax) or for balanced video signal output (V1/V2 twisted pair) by setting the jumper **JP1**. It can be powered using +12Vdc or +20Vdc (see jumper setting options below).

Terminal	Description
SL	Active low input to enable the camera lighting) the jumper JP2 must be set to the SL position).
SB	Internal heater (ground input).
V2	Balanced video signal (sync -).
V1	Balanced video signal (sync +).
V	Coax video signal
-	0V ground signal (also coax screen input).
SB	Internal heater (+12Vdc input).
+20	+20Vdc power input.
+12	+12Vdc power input.



JUMPER SETTING OPTIONS

The jumper **JP1** sets the video signal mode:

- NC** = Balanced video signal (terminals **V1** and **V2**, default);
- COAX** = Coax video signal (terminals **V** and **-**).

The jumper **JP2** sets the camera switching ON mode:

- ON** = The camera switches ON if supplied with +12Vdc (on terminals **+12** and **-**) or +20Vdc (on terminals **+20** and **-**);
- SL** = The camera switches ON when a 0V input signal is applied to the **SL** terminal (with a permanent +12Vdc or +20Vdc required on the **+12** and **-** terminals or **+20** and **-** terminals respectively).

TECHNICAL SPECIFICATION

Working Voltage	: 12Vdc or 20Vdc +/- 10%;
Standby Current	: approx. 110mA on 12Vdc, 128mA on 20Vdc and 25mA on SB heater;
Max. Absorption	: approx. 135mA;
Viewing angle	: 170° wide angled view;
Video Signal	: Balanced (using V1 and V2 , JP1 = NC) or Coax (using V and - , JP1 = COAX);
Video Switching Mode	: Switching with direct voltage +12Vdc or +20Vdc (JP2 = ON) or switching with SL (JP2 = SL);
Working Temperature	: -10 +50°C.

SP300-1 & SP301-1C Audio/Video Digital Front Panel

DESCRIPTION

The **SP300-1** (audio only panel) and the **SP301-1C** (audio and video panel), part of the VR digital range, is primarily used on large systems with more than 20 apartments or offices. Incorporating a numeric keypad, a caller simply types in the apartment number to call. Both audible and visual instructions are given throughout the progress of the call by way of instructions on the back lit LCD display and spoken messages through the speaker.

The digital panel can be programmed manually via the numeric keypad (refer to the programming flowchart on pages 9 and 10) on the front of the panel or via PC based programming software **2x00PC**.

Systems with up to 998 apartments, up to 10 main entrances, 15 blocks each with 10 entrances can easily be created using a bus cabling system. The numeric keypad has 14 vandal resistant push buttons (1 - 9, **ENTER**, 0, **CLEAR**, **CODE** and **TRADE**) with each button incorporating black enamel numbering with yellow contrast rings to each button for the visually impaired. On other versions of the digital panel the keypad can further be expanded with alpha keys from A through to L if required.

The 12 gauge (2.5mm thick) stainless steel panels are available with flush stainless steel bezel back boxes as standard (**VRDBB140x280** bezel box for the **SP300-1** and **VRDBB140x400** bezel box for the **SP301-1C**, also refer to **Fig.1** and see table below for available bezel boxes). An optional surface box with rainshield is also available for all panel variations (see table below for surface back box options).

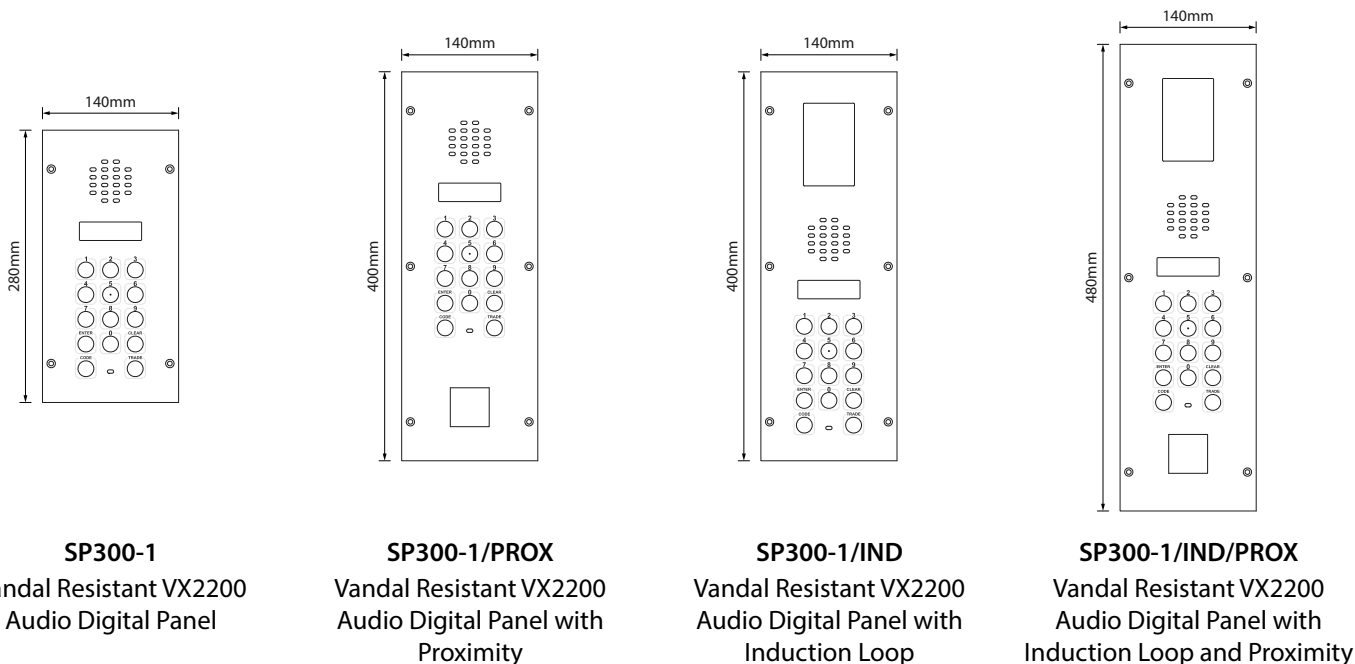
Both the audio and video panels incorporate a 998 coded access facility allowing each tenant to have a unique 4 - 6 digit access code. Optionally, a proximity reader can be incorporated (using a standard 40x40mm reader cutout) as can an induction coil for the hard of hearing along with other panel options. Depending on which additional panel features are required by the user will determine which bezel box or surface box with rainshield will be required.

BACK BOX OPTIONS

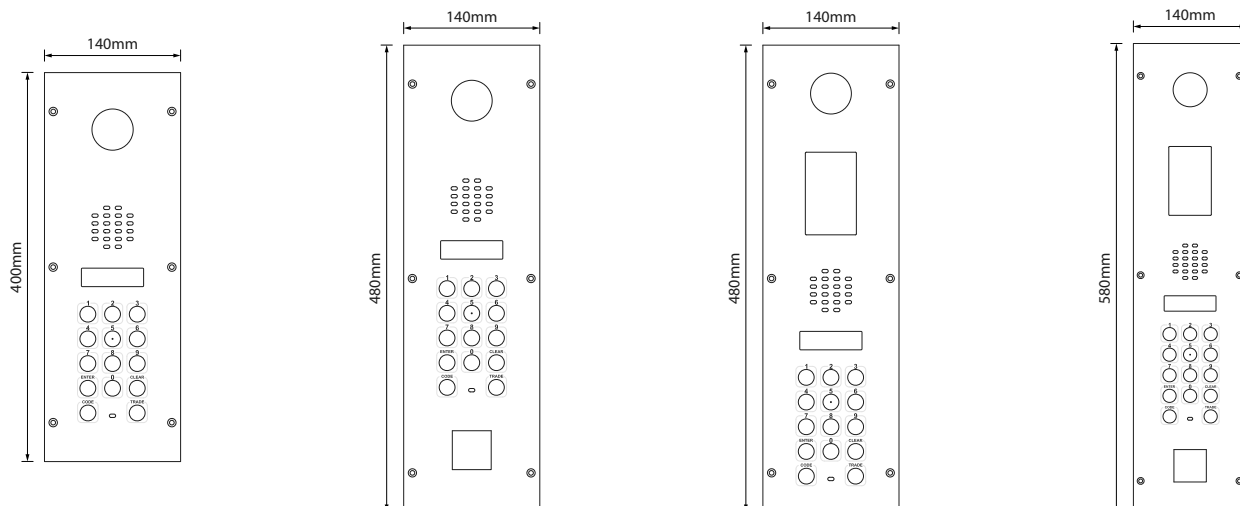
Bezel Box Part No.	Dimensions (mm)	Surface Box Part No.	Dimensions (mm)
VRDBB140x280	Bezel: 179 x 319; Box: 143 x 283 x 80	VRDSB140x280	Rainshield: 143 x 284 x 100; Box: 141 x 280.8 x 70
VRDBB140x400	Bezel: 179 x 439; Box: 143 x 403 x 80	VRDSB140x400	Rainshield: 143 x 404 x 100; Box: 141 x 400.8 x 70
VRDBB140x480	Bezel: 179 x 519; Box: 143 x 483 x 80	VRDSB140x480	Rainshield: 143 x 484 x 100; Box: 141 x 480.8 x 70
VRDBB140x580	Bezel: 179 x 619; Box: 143 x 583 x 80	VRDSB140x580	Rainshield: 143 x 584 x 100; Box: 141 x 580.8 x 70

PANEL VARIATIONS

AUDIO ONLY VERSIONS



AUDIO/VIDEO VERSIONS



SP301-1C

Vandal Resistant VX2200
Audio/Video Digital Panel

SP301-1C with Proximity

Vandal Resistant VX2200
Audio/Video Digital Panel
with Proximity

SP301-1C/IND

Vandal Resistant VX2200
Audio/Video Digital Panel
with Induction Loop

SP301-1C/IND with Proximity

Vandal Resistant VX2200
Audio/Video Digital Panel with
Induction Loop and Proximity

SYSTEM OPERATION

STANDBY MODE

In standby the two line digital display will show the default welcome screen: 'Enter Flat Number', as shown in **Fig.8**.

The top line of the display can be configured using the 2x00PC software.

```
ENTER FLAT
NUMBER
```

Fig. 8

ENTERING THE MASTER CODE

From standby press the **CODE** button, this will be shown on the top left of the display, as shown in **Fig.9**.

Enter the master code (default = 111111) then press the **ENTER** button. A new master code can be entered, followed by the **ENTER** button and will be shown on the 2nd line of the display, as shown in **Fig.10**.

```
CODE:
```

Fig. 9

```
CODE: *****
NEW: *****
```

Fig. 10

ENTERING A DOOR ACCESS CODE

From standby press the **CODE** button, this will be shown on the top left of the display, see in **Fig.9**. Enter the door access code then press the **ENTER** button. The panel's relay will operate the lock for the programmed door release time and "DOOR OPEN" will be shown on the 2nd line of the display, as shown in **Fig.11**.

Also if the speechboard is switched ON it will announce "the door is open".

```
CODE: *****
DOOR OPEN
```

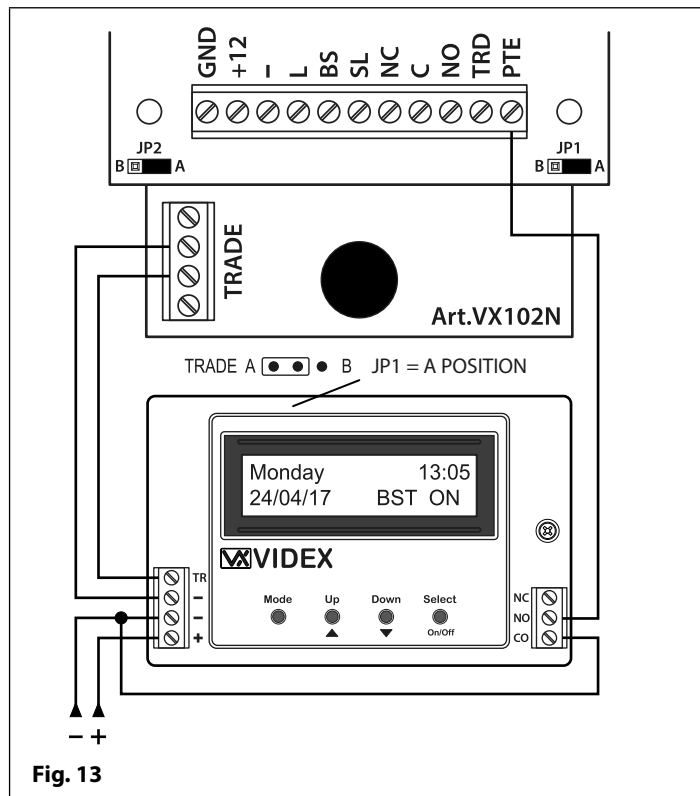
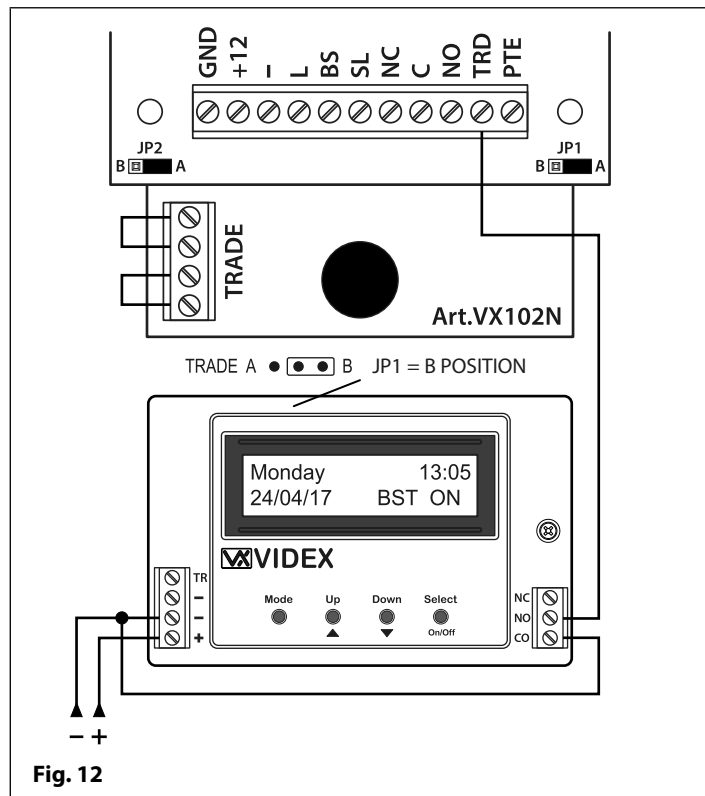
Fig. 11

THE TRADE FACILITY

Before using the trade button the 4 trade terminals on the **Art.VX102N** button pcb must first be configured correctly depending on the user's requirements. There are two trade options: using a trade code to operate the lock release or using the trade button to directly operate the lock release.

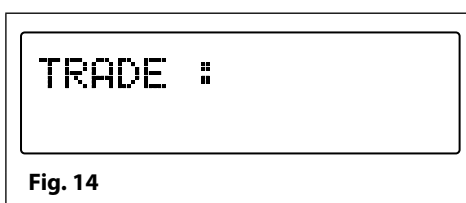
Using a TRADE code: To use this facility the **TRD** terminal on the main 2202-1-pcb must be shorted to ground through the **C/NO** relay contacts of the **Art.701T** timeclock and jumper **JP1** on the timeclock must also be set to the **B** position (timeclock mode). Also the 4 trade terminals on the **Art.VX102N** pcb must be linked out, as shown in **Fig.12**.

Using the TRADE button: Using the trade button to directly operate the lock the **PTE** terminal on the main 2202-1-pcb must be shorted to ground through the **C/NO** relay contacts of the **Art.701T** timeclock and jumper **JP1** on the timeclock set to the **A** position (trade mode). Also the middle two trade terminals on the **Art.VX102N** pcb must be connected directly to the **TR** and **-** terminals on the timeclock, as shown in **Fig.13**.



ENTERING A TRADE CODE

From standby press the **TRADE** button, this will be shown on the top left of the display, as shown in **Fig.14**. Enter the trade code then press the **ENTER** button. The panel's relay will operate the lock for the programmed door release time and "DOOR OPEN" will be shown on the 2nd line of the display, as shown in **Fig.15**.



Also if the speechboard is switched ON it will announce "the door is open".

USING THE TRADE BUTTON

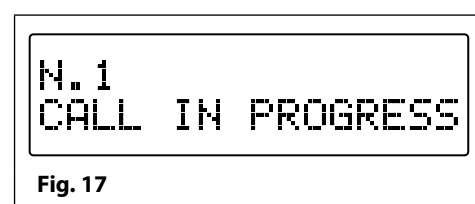
From standby press the **TRADE** button, the panel's relay will operate the lock for the programmed door release time (providing the trade button has been configured following **Fig.13** above).

IMPORTANT NOTE: Remember that when the trade facility is being used (trade code or trade button) the panel's relay will only operate the lock release during the specified timeband on the **Art.701T** timeclock, but will operate the lock for the panel's programmed relay time. Further programming and setup of the **Art.701T** timeclock can be found in the following instructions: **66250340-701T-EN-V1-1** (or later version).

MAKING A CALL TO AN APARTMENT AND CANCELLING A CALL

All stages of a call will be acknowledged via the LCD display, voice annunciation (if the speechboard is switched ON) and a series of call progress tones. Additionally, the panel will also prompt the user with information on how to progress to the next stage of the call.

From standby type in the flat number required via the panel's keypad then press the **ENTER** button. The display will show the flat number in the top left corner and on the second line will prompt the user to press the **ENTER** button, as shown in **Fig.16**.



If the speechboard is switched ON it will also prompt the user and announce **"now press enter"**. Simply press the **ENTER** button to make the call. The panel will make the call to the flat and the second line of the display will change to show **"CALL IN PROGRESS"**, as shown in **Fig.17**, again if the speechboard is switched ON the panel will also announce **"calling number..."**

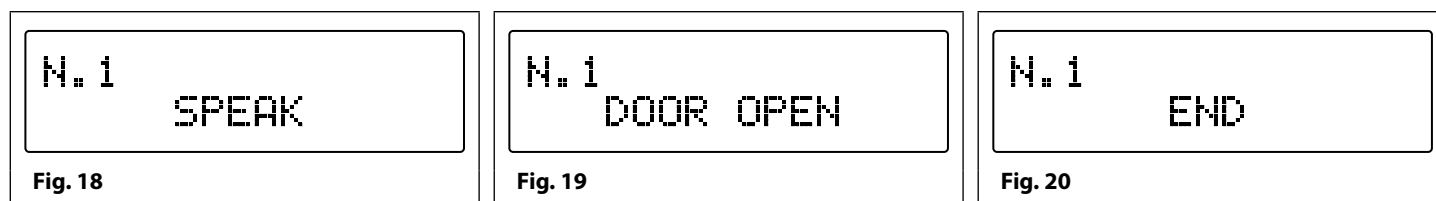
If an incorrect flat number has been entered and the user wishes to cancel the call they simply press the **CLEAR** button, the display will revert back to the default welcome screen (see **Fig.8**) and if the speechboard is switched ON it will announce **"call cancelled"** and the call will end.

ANSWERING A CALL, RELEASING THE LOCK AND ENDING THE CALL

During a call the audio/videophone in the flat will ring. To answer the call simply pick up the handset (or if calling a hands-free device press the **"answer call"** button). The display will show the flat number called in the top left corner of the display and will prompt the caller to speak, this will be shown on the second line of the display as shown in **Fig.18**. The user that has made the call can now start a conversation with the user in the flat.

While the speech is open to the flat the user in the flat can release the lock simply by pressing the lock release button on the audio/videophone. The second line of the display will change from **"SPEAK"** to **"DOOR OPEN"** to indicate to the caller that the door is being released, as shown in **Fig.19**.

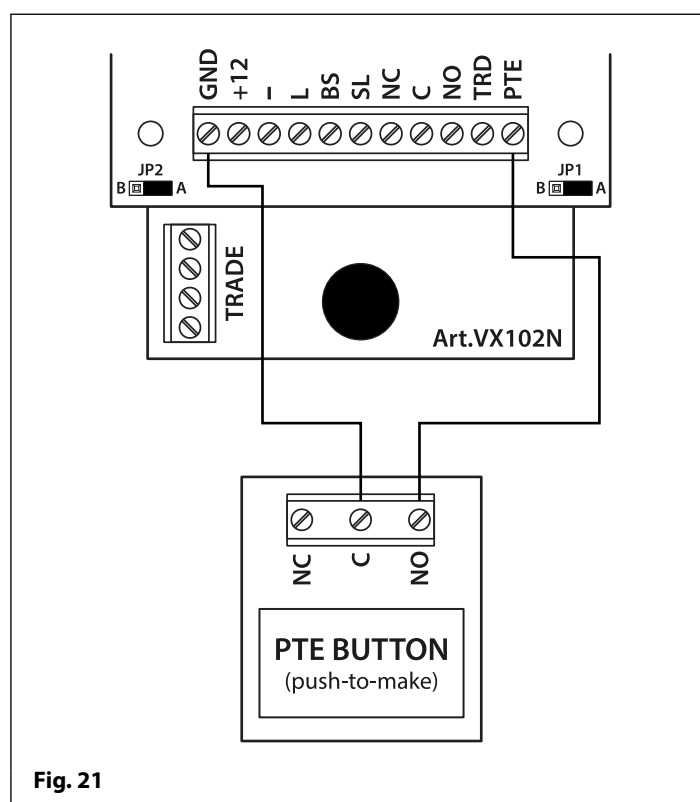
When the conversation between the caller and the user in the flat is finished, to end the call the user in the flat simply hangs up the handset of the audio/videophone (or if a hands-free device was called they simply press the **"answer call"** button again) to end the call. The second line of the display will change again, this time to **"END"** as shown in **Fig.20**, to indicate to the caller that the call is finished.

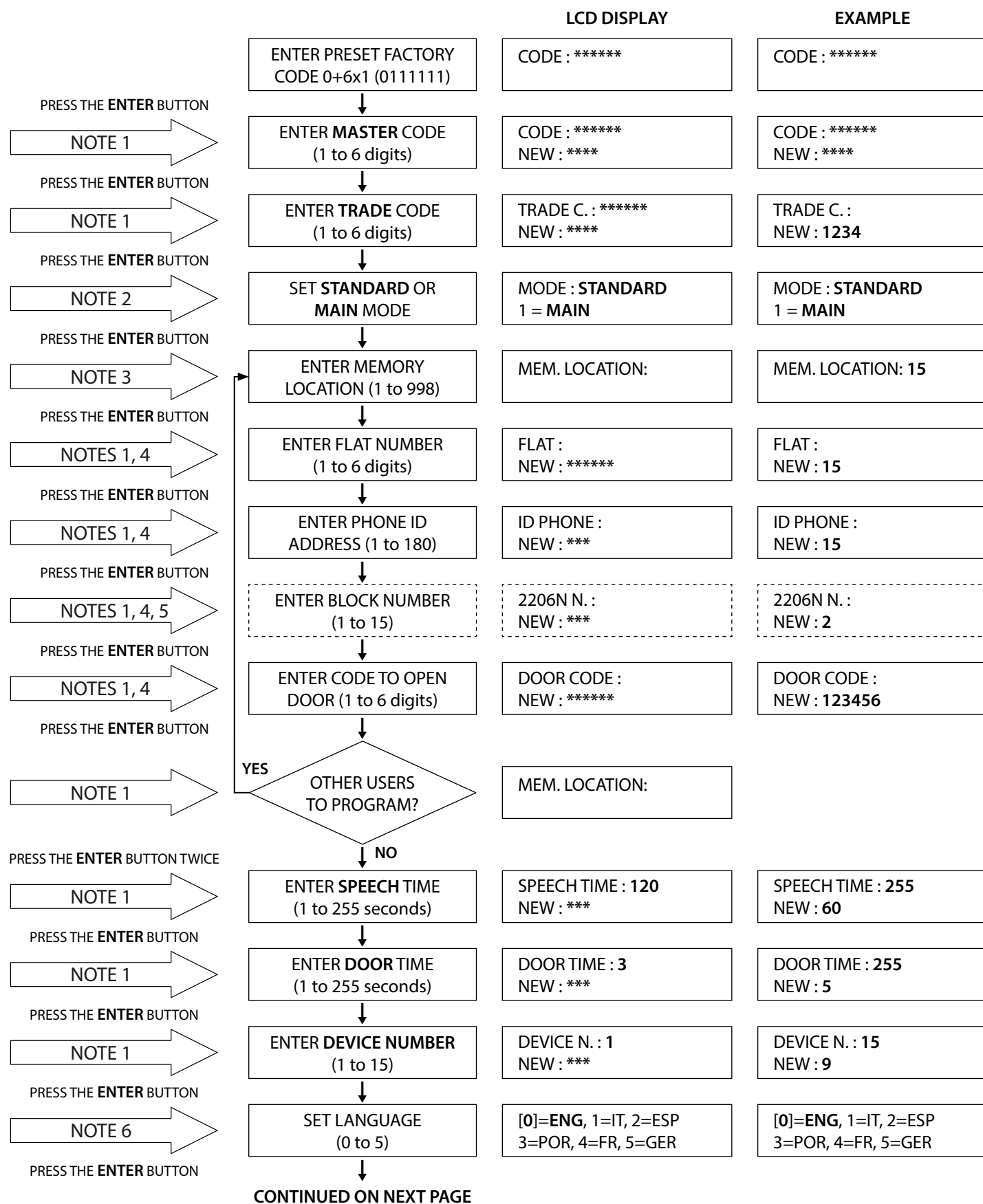


RELEASING THE LOCK USING A PUSH TO EXIT BUTTON

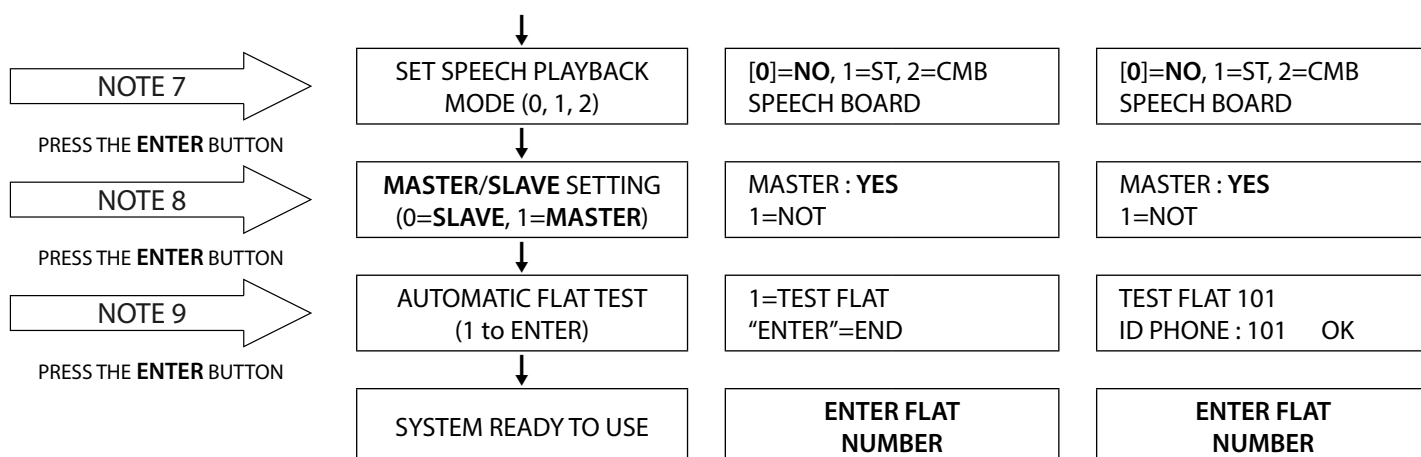
A push to exit button can be connected directly to the **PTE** input on the digital panel and must be configured as a **"push-to-make"** switch (C/NO) connected across the **GND** and **PTE** terminals, as shown in **Fig.21**.

The lock can be released from the panel at any time by pressing the push to exit button.



DIGITAL PANEL PROGRAMMING

CONTINUED FROM PREVIOUS PAGE



NOTE 1 → TO SKIP TO THE NEXT PROGRAMMING OPTION PRESS **ENTER** TWICE, THE EXISTING INFORMATION WILL BE KEPT. TO INSERT NEW DATA TYPE THE NEW INFORMATION THEN PRESS **ENTER** ONCE. IF A MISTAKE IS MADE WHILE TYPING, PRESS **CLEAR** TO ERASE AND THEN RE-INSERT THE INFORMATION AGAIN.

NOTE 2 → TO MOVE TO THE NEXT PROGRAMMING OPTION PRESS **0** FOR STANDARD MODE, **1** FOR MAIN MODE OR **ENTER** TO KEEP THE EXISTING MODE. SET PANEL TO **MAIN** MODE IF CONNECTED TO ONE OR MORE ART.2206N. SET PANEL TO **STANDARD** MODE IF NO ART.2206N INSTALLED (DEFAULT) OR IF THE PANEL IS CONNECTED TO THE LOCAL BUS OF AN ART.2206N.

NOTE 3 → TO SKIP TO THE NEXT PROGRAMMING OPTION PRESS **ENTER** TWICE OR TYPE THE MEMORY LOCATION THAT REQUIRES UPDATING THEN PRESS **ENTER** TO BEGIN INSERTING THE MEM. LOCATION INFORMATION. (FOR PANEL FIRMWARE VERSION 5.0 OR LATER MEM. LOCATION **0** AND **999** ARE RESERVED FOR DISPLAY LOGO WHEN THE PANEL IS IN STANDBY MODE).

NOTE 4 → **WARNING!** IF THE **CLEAR** BUTTON IS PRESSED IT WILL ERASE ALL MEMORY LOCATION CONTENT.

NOTE 5 → THIS PROGRAMMING OPTION IS ONLY AVAILABLE WHEN THE PANEL IS SET IN **MAIN** MODE.

NOTE 6 → TO SKIP TO THE NEXT PROGRAMMING OPTION PRESS **ENTER** TWICE, THE EXISTING INFORMATION WILL BE KEPT, OTHERWISE TO SELECT THE DESIRED LANGUAGE PRESS: **0 = ENGLISH; 1 = ITALIAN; 2 = SPANISH; 3 = PORTUGUESE; 4 = FRENCH; 5 = GERMAN.**

NOTE 7 → TO SKIP TO THE NEXT PROGRAMMING OPTION PRESS **ENTER** TWICE, THE EXISTING INFORMATION WILL BE KEPT, OTHERWISE TO SELECT THE SPEECH PLAYBACK MODE PRESS: **0 = OFF; 1 = ST SPEECH PLAYBACK INDIVIDUAL NUMBERS; 2 = CMB SPEECH PLAYBACK COMPLETE NUMBERS.**

NOTE 8 → FOR ALL DIGITAL AND FUNCTIONAL PANELS INSTALLED ON A ONE LEVEL SYSTEM THERE MUST ALWAYS BE A **MASTER** PANEL (PANEL'S DEFAULT SETTING). TO SKIP TO THE NEXT PROGRAMMING OPTION PRESS **ENTER** ONCE, OTHERWISE TO SET THE PANEL'S **MASTER/SLAVE** SETTING PRESS: **0 = SLAVE; 1 = MASTER.**

NOTE 9 → PRESS **ENTER** TO END PROGRAMMING AND EXIT OUT OF PROGRAMMING MODE, OTHERWISE TO CHECK PROGRAMMING AND TEST THE FLATS PRESS **1**. THE PANEL WILL START THE TEST PROCEDURE WITH ALL THE PROGRAMMED DEVICES AND WILL SHOW THE TEST RESULT. IN THE EVENT THAT AN ERROR OCCURS THE TEST WILL STOP. TO RESUME THE TEST PRESS **1** TO CONTINUE OR PRESS **ENTER** TO END AND EXIT PROGRAMMING.

ADDITIONAL PROGRAMMING NOTES

DIGITAL PANEL MODE

The SP300-1 and SP301-1C digital panel can be set to either **MAIN** mode or **LOCAL** mode (default panel mode). **MAIN** mode should only be used for panels that call all users and on systems that include **Art.2206N** bus exchange devices (one per block or one for every 180 additional apartments), otherwise the panel should be set to **LOCAL** mode for all other applications.

To set the panel into **MAIN** mode, power up with the **0** button pressed. To set the panel in **LOCAL** mode, power up the panel with the **ENTER** button pressed. The panel can also be set into **LOCAL** mode or **MAIN** mode using the **2x00PC** software or by following the programming flowchart on pages 9 and 10, also refer to **NOTE 2** on page 10.

Further details on the installation and setup of the **Art.2206N** can be found in the following technical manuals: **VX2K2HDIGSYS Version 1.1** (or later) and **CAB_ENUK_V1-3** (or later).

PANEL SETUP FOR 3000 SERIES AUDIO/VIDEOPHONES (DEFAULT)

To setup the digital panel to work with 3000 series audio/videophones, power up with the **ENTER** button pressed and wait for the display to show the panel's firmware version "**2202MSX.X S3000**" on the top line (where **X.X** is the panel's current firmware version), as shown in **Fig.22**, then release the button.



Fig. 22

PANEL SETUP FOR 900 SERIES AUDIO/VIDEOPHONES

To setup the digital panel to work with older style 900 series audio/videophones, power up with the **CLEAR** button pressed and wait for the display to show the panel's firmware version "**2202MSX.X S900**" on the top line (where **X.X** is the panel's current firmware version), as shown in **Fig.23**, then release the button.



Fig. 23

OTHER PROGRAMMING NOTES

During the programming of the **MASTER** panel all **SLAVE** door panels on the system will be offline (this inconvenience does not occur if the **SLAVE** entrances are connected via an **Art.2206N** bus exchange device on a separate bus).

If the programming of the **MASTER** panel is incorrect (e.g. the panel is programmed as a **SLAVE** panel when it should be programmed as a **MASTER** panel) an error condition will occur and is indicated with an **ERROR!** message on the top line of the display, as shown in **Fig.24**. To resolve this issue press and hold down the **CODE** button on the panel until the display shows **CODE** in the top left corner of the display (refer to **Fig.9** on page 6). Proceed through the programming flowchart, on pages 9 and 10, and reset the panel as a **MASTER** panel, also refer to **NOTE 8** on page 10.



Fig. 24

Alternatively programming a **SLAVE** panel as a **MASTER** panel in error can cause feedback issues (Larsen effect) during the conversation (only one **MASTER** panel should be programmed per level per block). To avoid or resolve any feedback issues that may occur it is recommended that during initial panel setup the notes on **VOLUME ADJUSTMENTS** on page 3 are closely followed.

Pressing the **CLEAR** button at any stage of the programming will clear the current data previously entered.

To enter a number to call a concierge unit (**Art.2210A** or **Art.2210V/C** if present on the system) while the concierge is in **NIGHT** mode, combine the "**flat number**" (the concierge number) with the **ID PHONE** address **ID.1**. Please also note that the **ID PHONE** address for all other devices (audio/videophones) on the system would start from **ID PHONE** address **ID.2** onwards, unless the panel is in **MAIN** mode and an **Art.2206N** bus exchange device is being used in which case the programming of each user will also require the address of the **Art.2206N** bus exchange device (block address 1-15), also refer to the programming flowchart on pages 9 and 10.

GENERAL DIRECTIONS FOR INSTALLATION

CABLE SIZE GUIDE

Refer to the table below for the connections for the power supply output to the digital panel and the lock release connections.

Distance	20m
Cross Sectional Area (CSA)	0.5mm ²

Ideally the power supply should be located as close to the digital panel as possible for best performance. The maximum acceptable resistance for the above cables = 3Ω or less for best possible performance.

For other VX2200 system devices refer to the following table. It is recommended that a twisted pair cable is used for the **L** and -databus connections and for balanced video signal connections **V1** and **V2** (for video systems), unless coax cable is required in which case it is recommended that an **RG59(BC)** coax cable is used for distances up to 200m and for distances between 200m up to 400m an **RG11(BC)** coax cable should be used.

VX2200 System Cable Requirements				
Connections	50m	100m	200m	300m
L	0.4mm ²	0.5mm ²	0.75mm ²	1.0mm ²
-	0.4mm ²	0.5mm ²	0.75mm ²	1.0mm ²
V1 *	0.35mm ²	0.5mm ²	0.75mm ²	1.0mm ²
V2 *	0.35mm ²	0.5mm ²	0.75mm ²	1.0mm ²
+20V *	0.5mm ²	0.75mm ²	1.0mm ²	1.5mm ²
GNDV *	0.5mm ²	0.75mm ²	1.0mm ²	1.5mm ²
+12V	0.4mm ²	0.75mm ²	1.0mm ²	1.5mm ²
GND	0.4mm ²	0.75mm ²	1.0mm ²	1.5mm ²
All others **	0.25mm ²	0.35mm ²	0.5mm ²	0.75mm ²

* - these connections are only required on video systems.

** - these are optional connections (e.g. door monitoring LED).

The maximum acceptable resistance for all the above connections (except **+20V** and **GNDV**) = 7.5 Ohms or less and the maximum acceptable resistance for the video connections **+20V** and **GNDV** = 5 Ohms or less for best possible performance. Please note that all cable sizes shown in the tables above are the minimum cable requirements. Also note that additional consideration should be given when selecting and using internal and external grade cable and should be used where appropriate.

IMPORTANT NOTE: Only bare copper (BC) cable should be used (solid or stranded is acceptable). Please be aware that when selecting a cable 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.

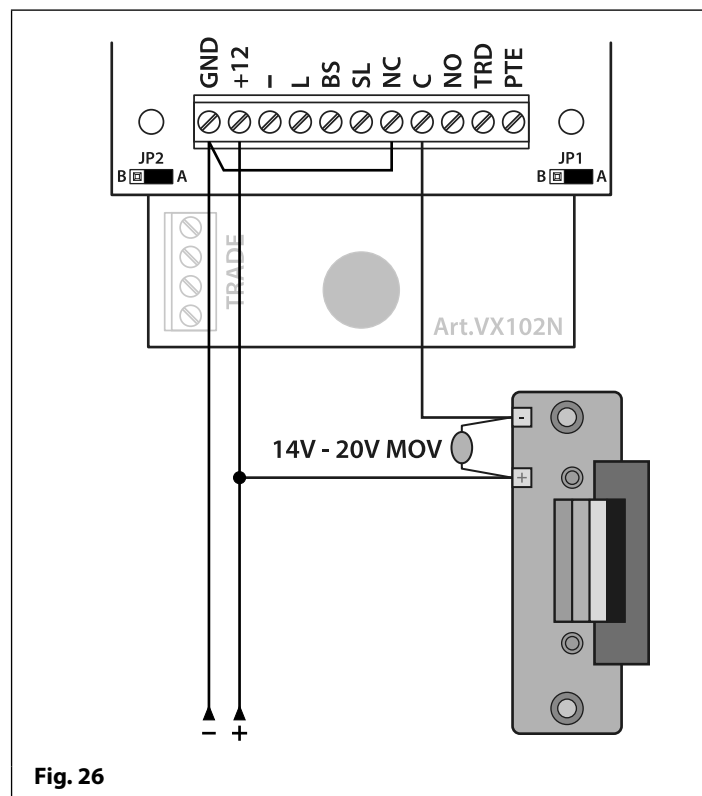
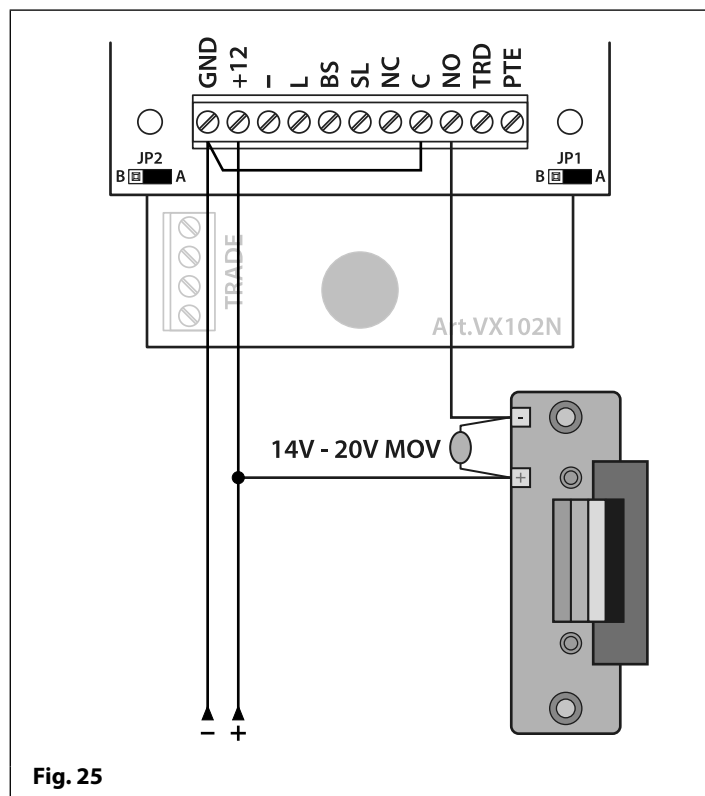
Further cabling information can be found the technical manual **VX2200Blocks1-2** and is also provided in any accompanying installation instructions with the various audio/videophones and hands-free devices.

GENERAL INSTALLATION NOTES

- 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 (I.E.E. wiring regulations for the UK or the appropriate standards of your country).
- Install an appropriate fused spur or isolation switch to isolate the mains where necessary and always isolate the mains before carrying out any maintenance work on the system.
- Avoid water ingress into the rear of the digital panel (or other devices) always seal the panel's back box frame during installation using a suitable silicon based sealant (also refer to back box installation notes on pages 14 and 15).
- All intercom and access control cables must be routed separately from the mains and other high voltage cables (ideally in separate cable ducts/trays or where this is not possible should be kept apart at a distance of no less than 30cm (12" approx.) if running in the same cable duct/tray.

LOCK RELEASE WIRING AND BACK EMF PROTECTION

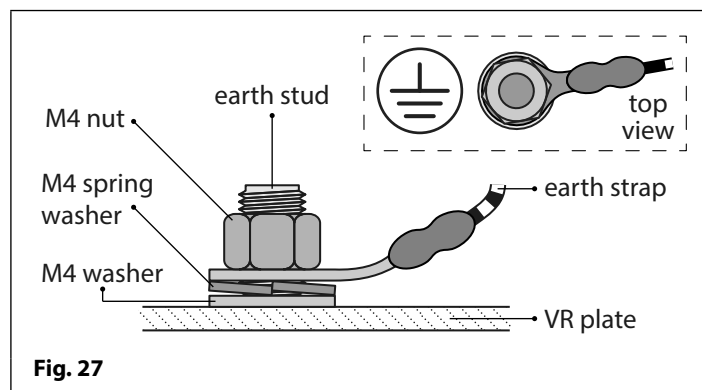
When fitting an electric lock release back EMF protection will be required. When fitting a DC lock release (for fail secure see **Fig.25** and for fail safe see **Fig.26**) a 14 - 20V MOV (metal oxide varistor) must be fitted across the lock terminals as shown.



EARTHING THE FRONT PANEL TO THE BACK BOX

It is important to earth the digital panel's front plate to the back box with the appropriate fixings and earth strap provided. Refer to **Fig.27** and follow the steps below:

- First place the M4 flat washer followed by the M4 spring washer over the earth stud on the front plate;
- Next place the eyelet of one end of the earth strap on top of the M4 spring washer;
- Finally fit the M4 nut on top of the earth strap eyelet and tighten firmly into place;
- Repeat the steps above when fitting the other end of the earth strap to the earth stud inside the back box.



- The earth stud connection inside the back box should then be connected in the same way to the building's earth connection.

PANEL CARE AND MAINTENANCE

As the panel is manufactured from 12 gauge brushed stainless steel it is important that the VR plate is cleaned on a regular basis to prevent dirt build up and tarnishing. A clean and soft cloth can be used with moderate warm water or non-aggressive cleansers. Additional care should be taken to follow the grain of the metal when polishing and always only polish in one direction to avoid light scratching of the plate. Also try to avoid any polish build up around the panel's buttons which may prevent the buttons from operating correctly.

DO NOT USE ANY OF THE FOLLOWING:

- Abrasive liquids;
- Chlorine-based liquids;
- Metal cleaning products (including Sidol stainless steel cleaner as this can affect the engraving);
- Hydrochloride bleaches.

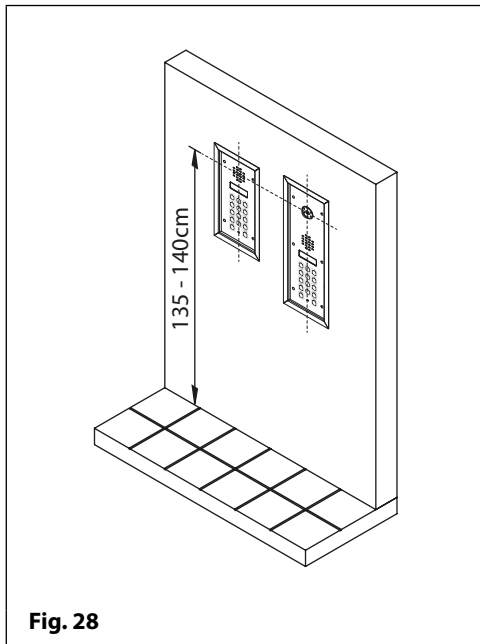
FLUSH BEZEL BACK BOX INSTALLATION (VRDBB140X280 AND VRDBB140X400)


Fig. 28

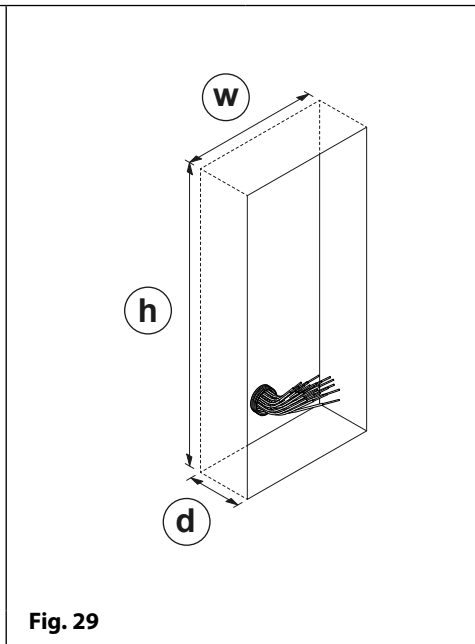


Fig. 29

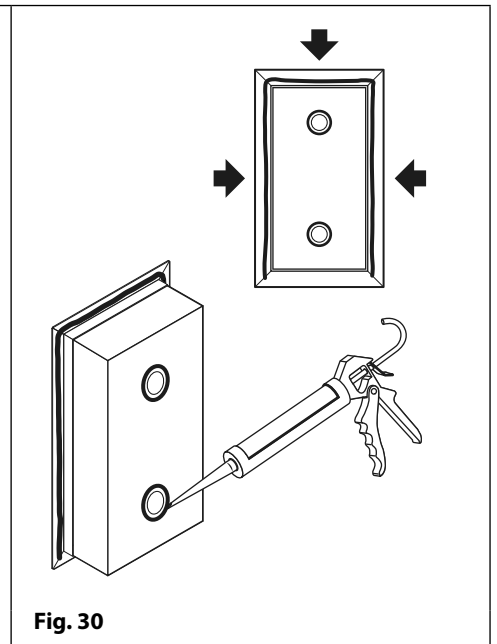


Fig. 30

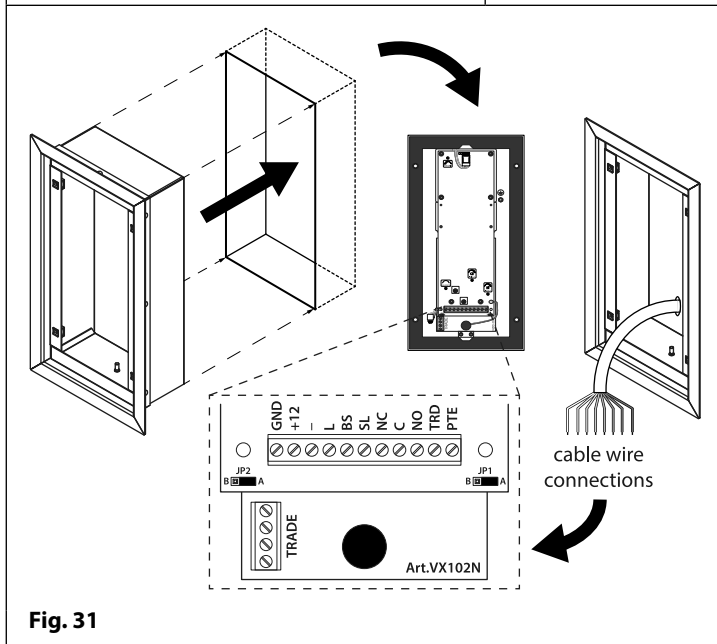


Fig. 31

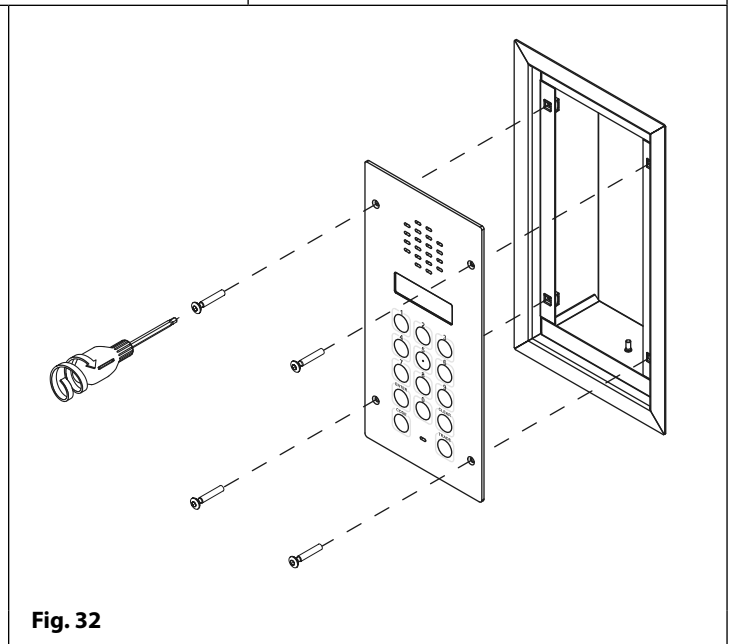


Fig. 32

1. The bezel box should be flushed into the wall. It is recommended that the panel is fitted at a height of approx. 135-140cm from the floor level to the centre of the speaker grill for audio digital panels and from the floor level to the centre of the camera lens for video digital panels, see **Fig.28**;
2. Using the bezel box and the hole dimensions: VRDBB140x280 (w=143mm x h=283mm x d=80mm); VRDBB140x400 (w=143mm x h=403mm x d=80mm), **Fig.29**, use appropriate tools to cut out the recommended hole size in the wall (where necessary wear the appropriate protective clothing when doing this). Allow room for the connecting cables and the 4 bezel box fixing holes;

⚠ In order to prevent water ingress we highly recommend using a silicon sealant between the wall and the bezel box, ON THE LEFT, TOP AND RIGHT SIDES ONLY AND ENSURE ALL THE CABLE ENTRY HOLES ARE SEALED. DON'T USE SILICON SEALANT ON THE BOTTOM SIDE OF THE BACK BOX (Fig.30);

3. Embed the bezel box into the wall. Feed the connecting cables through the knockouts required in the bezel box (see **Fig.31**) and make all necessary connections between the cable and the SP300-1 or SP301-1C digital panel following the wiring diagrams on pages 17-18. Connect the earth strap as described on page 13 (also refer to **Fig.27**);
4. Make any other necessary panel adjustments required (jumper settings, speech volume adjustments etc.). After the system has been tested and is working correctly place the digital panel back into the bezel box and fix it using the screwdriver provided (using the torx end) and the torx pin security screws provided (see **Fig.32**). **Note: do not over tighten the screws more than is necessary.**

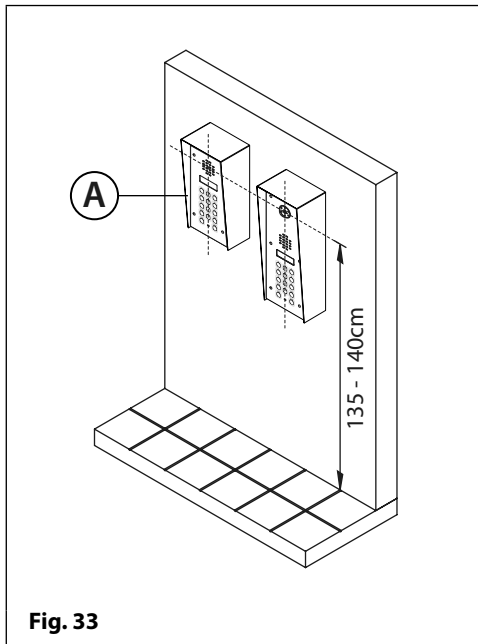
SURFACE BACK BOX INSTALLATION (VRDSB140X280 AND VRDSB140X400)


Fig. 33

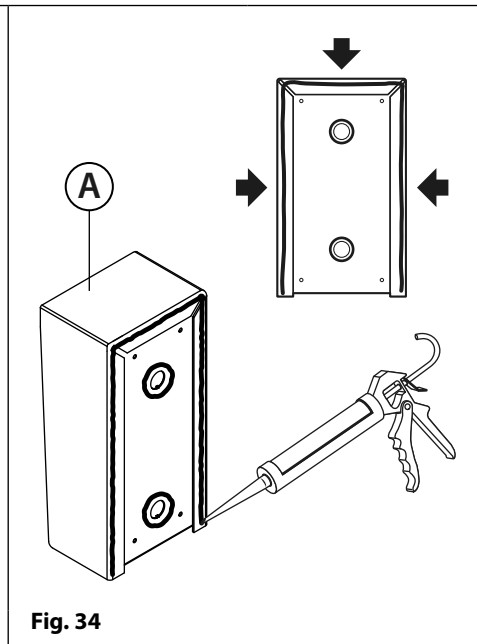


Fig. 34

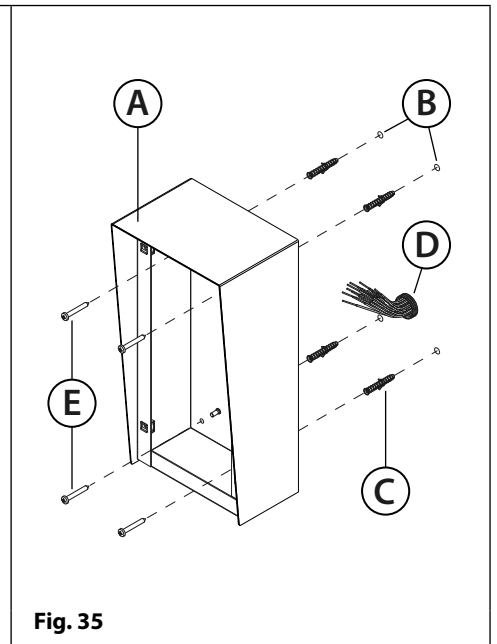


Fig. 35

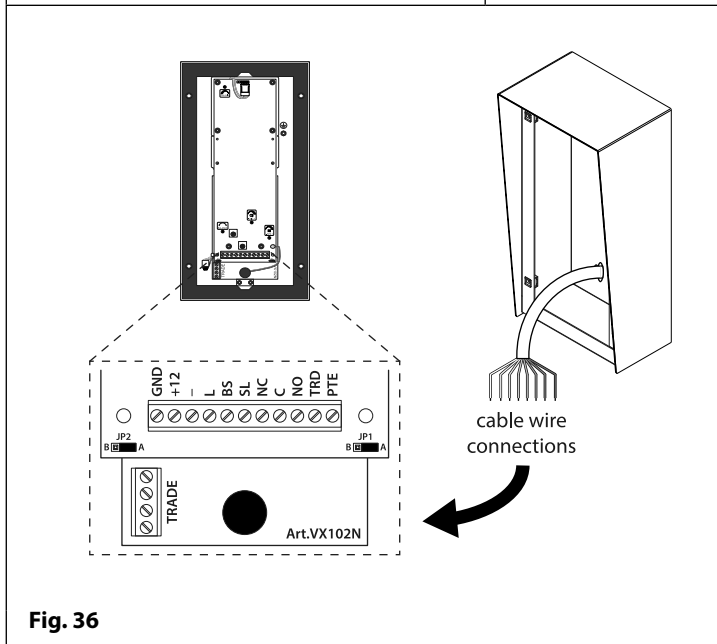


Fig. 36

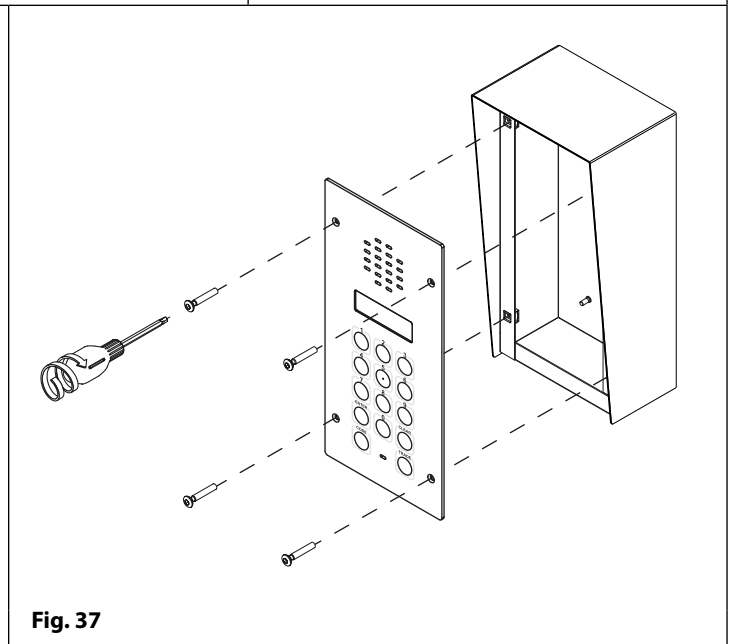


Fig. 37

1. The surface box (A) should be mounted to the wall at a height of approximately 135-140cm from the floor level to the centre of the speaker grill for audio digital panels and from the floor level to the centre of the camera lens for video digital panels, **Fig.33**. Place the surface box (A) against the wall and mark the 4 fixing holes (B) for the wall plugs (C) and the hole for the cables (D), see **Fig.35**;

⚠ In order to prevent water ingress we highly recommend using a silicon sealant between the wall and the surface box (A), ON THE LEFT, TOP AND RIGHT SIDES ONLY AND ENSURE ALL THE CABLE ENTRY HOLES ARE SEALED. DON'T USE SILICON SEALANT ON THE BOTTOM SIDE OF THE BACK BOX (Fig.34);

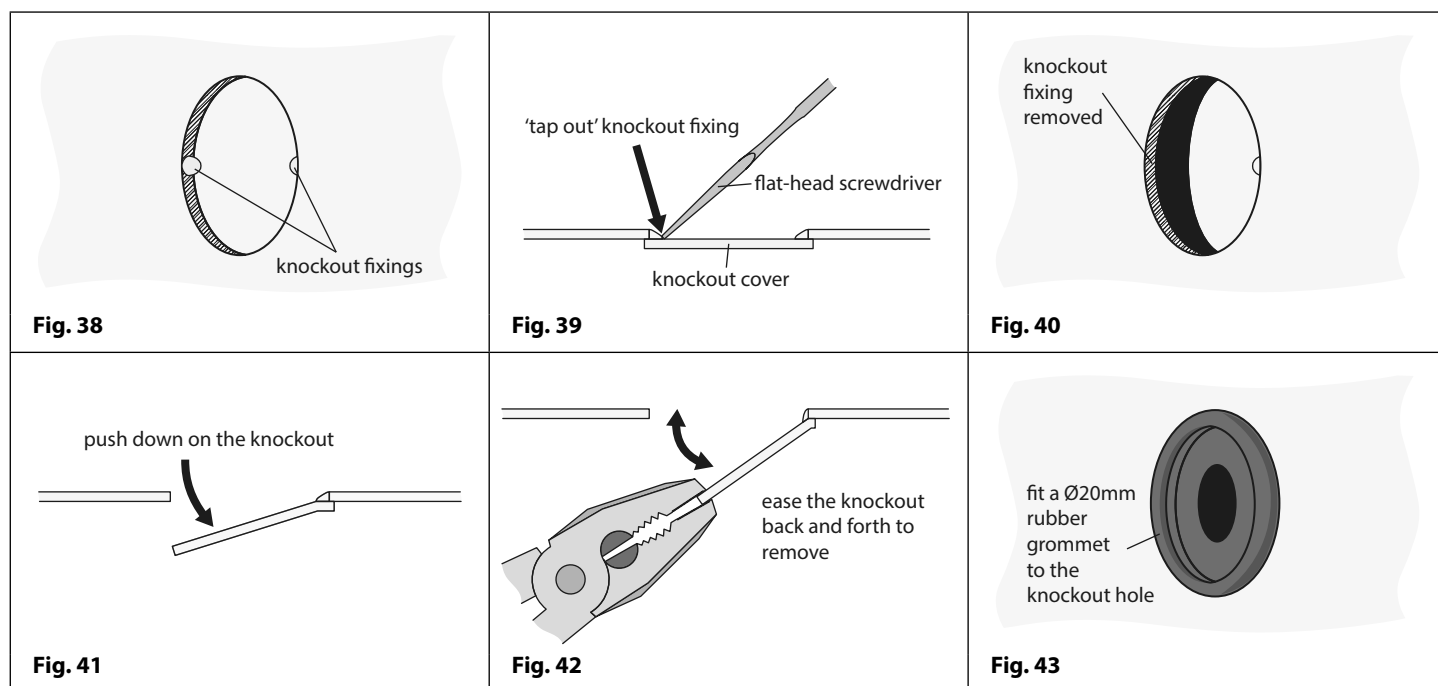
2. Drill the 4 fixing holes (B), insert the wall plugs (C) and feed the cables through the surface box knockout required. Fix the surface box to the wall using the self-tapping masonry screws (E), see **Fig.35**, remember to allow room for the connecting cables;
3. Feed the connecting cables through the knockouts required in the bezel box (see **Fig.36**) and make all necessary connections between the cable and the SP300-1 or SP301-1C digital panel following the wiring diagrams on pages 17-18. Connect the earth strap as described on page 13 (also refer to **Fig.27**);
4. Make any other necessary panel adjustments required (jumper settings, speech volume adjustments etc.). After the system has been tested and is working correctly place the digital panel back into the surface box and fix it using the screwdriver provided (using the torx end) and the torx pin security screws provided (see **Fig.37**). **Note: do not over tighten the screws more than is necessary.**

ADDITIONAL BACK BOX INSTALLATION NOTES

REMOVING THE BACK BOX KNOCKOUTS

Due care should be taken when removing the knockout(s) on the base of the back box to avoid personal injury. Where necessary use the appropriate tools and wear the appropriate protective clothing (gloves, eye protection etc.) when removing the knockouts.

1. Before embedding the bezel box into the wall or mounting the surface box to the wall it is advised to first remove the knockout(s) required;
2. Take a flat-head screwdriver and use the flat end to gently 'tap out' and apply pressure to the knockout fixing, see **Fig.38** and **Fig.39**;
3. Once the knockout fixing has been removed, **Fig.40**, push down on the knockout, see **Fig.41**;
4. Using a set of pliers grip the end of the knockout and ease it back and forth, **Fig.42**, until the other knockout fixing fatigues and the knockout breaks away from the base of the back box. If necessary file down and smooth out any rough edges with a metal file;
5. Fit a Ø20mm rubber grommet into the knockout hole, see **Fig.43**.



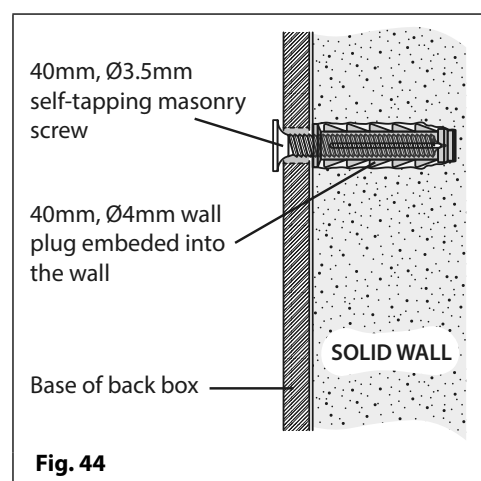
EMBEDDING AND FIXING THE BACK BOX TO THE WALL

The flush bezel box and surface back box need to be embedded or fixed to the wall respectively, therefore a suitable set of masonry screws and wall plugs should be used to do this. It is recommended that 4x **40mm, Ø3.5mm** self-tapping masonry screws with 4x **40mm, Ø4mm** nylon type wall plugs are used, see **Fig.44**.

Where necessary use the appropriate power tools and wear the appropriate protective clothing (gloves, eye protection etc.) when drilling the fixing holes to mount the box and cutting out the hole in the wall to embed the flush bezel box.

USING SILICON

Whenever using silicon sealant remember to wash your hands after use and always discard of any excess silicon waste responsibly.



WIRING DIAGRAMS

Connections for the SP300-1 with several audio devices (**Art.3171**, **Art.5178** and **Art.VR5178**) can be seen in **Fig.45**. For the setup and configuration of each audio device refer to the installation instructions that accompany the device.

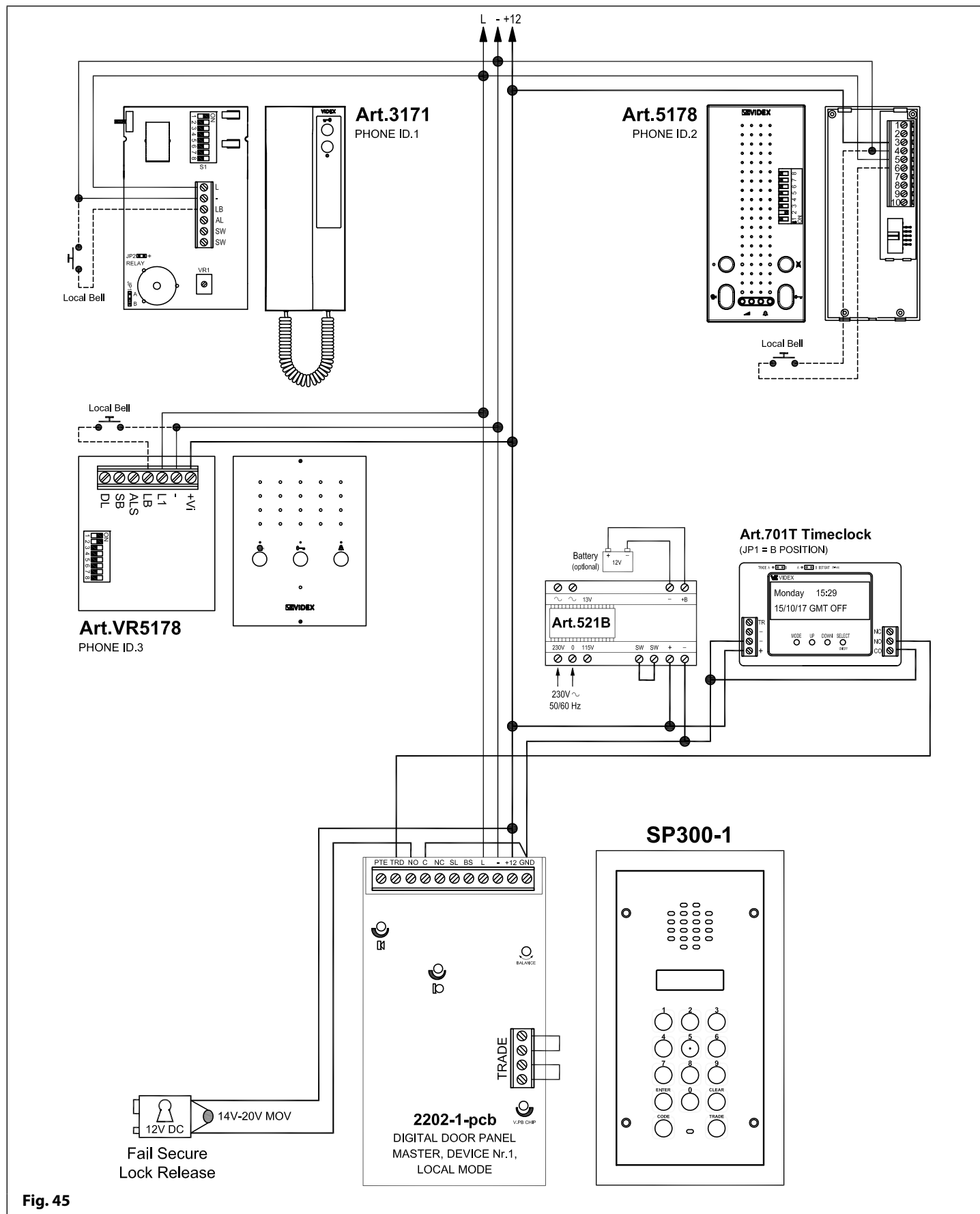


Fig. 45

Connections for the SP301-1C digital panel with several video devices (**Art.6272**, **Art.6378**, **Art.6478** and **Art.6778**) can be seen in **Fig.46**. For the setup and configuration of each video device refer to the installation instructions that accompany the device.

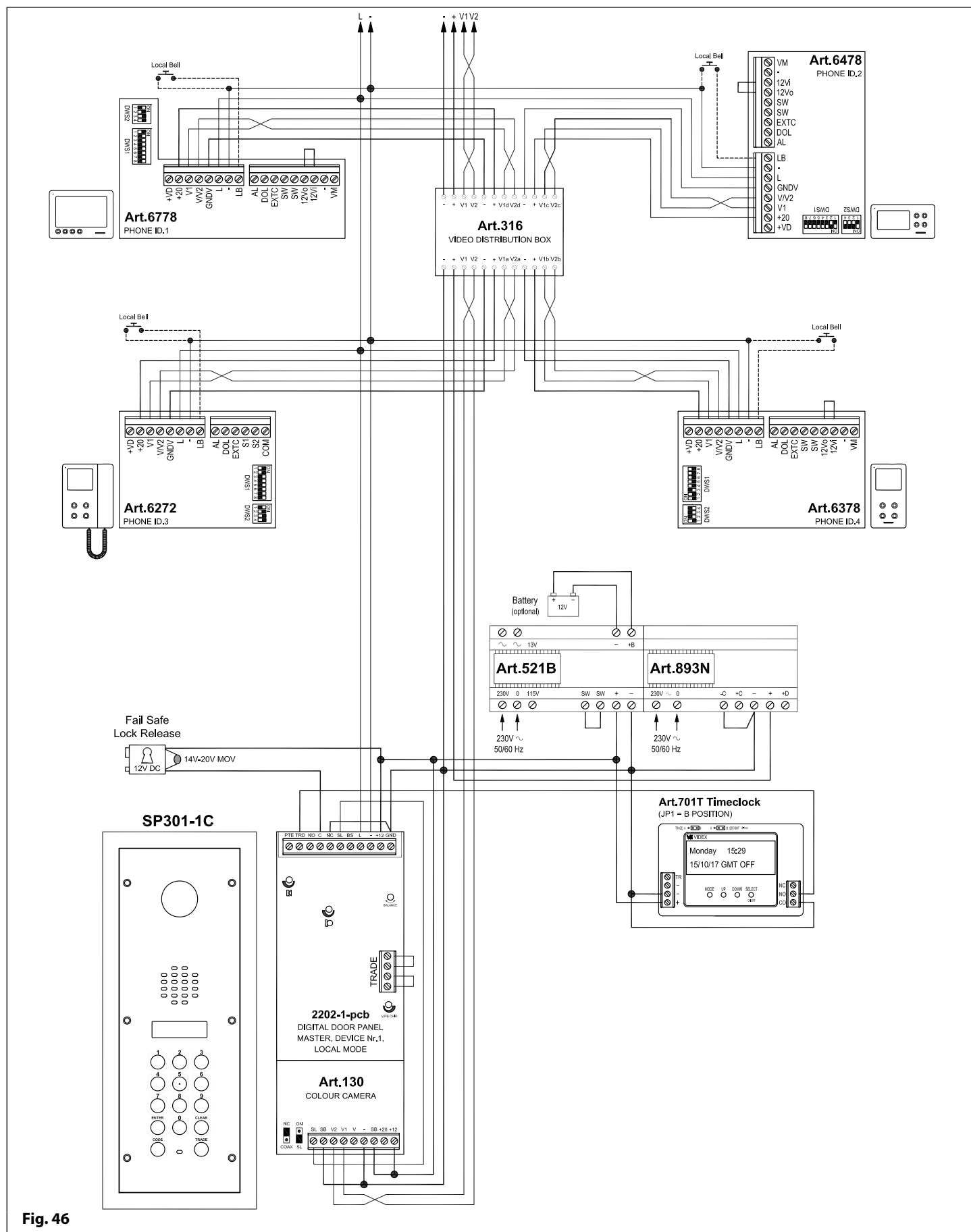


Fig. 46

This image shows a full page of white paper with horizontal dashed lines. The lines are evenly spaced and run across the width of the page, providing a guide for handwriting practice. There are no margins, text, or other markings on the page.

MANUFACTURER FABBRICANTE FABRICANT FABRICANTE FABRIKANT	VIDEX ELECTRONICS S.P.A. Via del Lavoro, 1 63846 Monte Giberto (FM) Italy Tel (+39) 0734 631669 Fax (+39) 0734 632475 www.videx.it - info@videx.it	
CUSTOMER SUPPORT SUPPORTO CLIENTI SUPPORTS CLIENTS ATENCIÓN AL CLIENTE KLANTENDIENST	VIDEX ELECTRONICS S.P.A. www.videx.it - technical@videx.it Tel: +39 0734-631669 Fax: +39 0734-632475	UK Customers only: VIDEX SECURITY LTD www.videxuk.com Tech Line: 0191 224 3174 Fax: 0191 224 1559
	<i>Main UK office:</i> VIDEX SECURITY LTD 1 Osprey Trinity Park Trinity Way LONDON E4 8TD Phone: (+44) 0870 300 1240 Fax: (+44) 020 8523 5825 www.videxuk.com marketing@videxuk.com	<i>Northern UK office:</i> VIDEX SECURITY LTD Unit 4-7 Chillingham Industrial Estate Chapman Street NEWCASTLE UPON TYNE - NE6 2XX Tech Line: (+44) 0191 224 3174 Phone: (+44) 0870 300 1240 Fax: (+44) 0191 224 1559
	<i>Greece office:</i> VIDEX HELLAS Electronics 48 Filolaou Str. 11633 ATHENS Phone: (+30) 210 7521028 (+30) 210 7521998 Fax: (+30) 210 7560712 www.videx.gr videx@videx.gr	<i>Danish office:</i> VIDEX DANMARK Hammershusgade 15 DK-2100 COPENHAGEN Phone: (+45) 39 29 80 00 Fax: (+45) 39 27 77 75 www.videx.dk videx@videx.dk
	<i>Benelux office:</i> NESTOR COMPANY NV E3 laan, 93 B-9800 Deinze Phone: (+32) 9 380 40 20 Fax: (+32) 9 380 40 25 www.videx.be info@videx.be	<i>Dutch office:</i> NESTOR COMPANY BV Business Center Twente (BCT) Grotestraat, 64 NL-7622 GM Borne www.videxintercom.nl info@videxintercom.nl



The product is CE marked demonstrating its conformity and is for distribution within all member states of the EU with no restrictions. This product follows the provisions of the European Directives 2014/30/EU (EMC); 2014/35/EU (LVD); 2011/65/EU (RoHS): CE marking 93/68/EEC.

Il prodotto è marchiato CE a dimostrazione della sua conformità e può essere distribuito liberamente all'interno dei paesi membri dell'Unione Europea UE. Questo prodotto è conforme alle direttive Europee: 2014/30/UE (EMC); 2014/35/UE (LVD); 2011/65/UE (RoHS): marcatura CE 93/68/EEC.

Le produit est marqué CE à preuve de sa conformité et peut être distribué librement à l'intérieur des pays membres de l'union européenne EU. Ce produit est conforme aux directives européennes 2014/30/UE (EMC); 2014/35/UE (LVD); 2011/65/UE (RoHS): marquage CE 93/68/EEC.

El producto lleva la marca CE que demuestra su conformidad y puede ser distribuido en todos los estados miembros de la unión europea UE. Este producto cumple con las Directivas Europeas 2014/30/UE (EMC); 2014/35/UE (LVD); 2011/65/UE (RoHS): marca CE 93/68/EEC.

Het product heeft de CE-markering om de conformiteit ervan aan te tonen en is bestemd voor distributie binnen de lidstaten van de EU zonder beperkingen. Dit product volgt de bepalingen van de Europese Richtlijnen 2014/30/UE (EMC); 2014/35/UE (LVD); 2011/65/UE (RoHS): CE-markering 93/68/EEG.

