

# VX2200 DIGITAL SYSTEM



TECHNICAL MANUAL  
EDITION 1.4

**VX**  
**VINDEX**  
The Power to Secure



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## MANUAL INTRODUCTION

The information in this manual is intended as an installation and commissioning guide for the VX2200 Digital system. This manual should be read carefully before the installation commences. Any damage caused to the equipment due to faulty installations where the information in this manual has not been followed is not the responsibility of Videx Security Ltd.

VIDEX run free training courses for engineers who are not familiar with the Videx product range. Technical help is also available on 0191 224 3174 during office hours or via e-mail [tech@videx-security.com](mailto:tech@videx-security.com).

## SYSTEM INTRODUCTION

The VX2200 audio system is based on a “2 wire” BUS for audio systems and a “6 wire” bus for video systems. The system meets all the requirements of a small to medium sized installation.

The digital front panels are available in several versions including the 800 series design (With either alphanumeric A-H feature or Name scroll feature), 4000 series design (With either alphanumeric A-H feature or Name scroll feature) and vandal resistant with optional alpha buttons A-H. All digital panels have the facility to call up to 998 users when using 2206N bus exchange devices (180 per block, 150 with 900 Series or 255 for versions combined with 316x telephones), each user has the additional feature of a personal access code to gain access to the building. Functional panels are also available with up to 64 buttons. All intercom telephones are addressed by means of an 8 way dip-switch located within each handset.

## SYSTEM COMPONENTS

### 800 Series Digital Front Panels (2202M, 2202MR)

These units are built into a double 800 series module (stainless steel/**S** or aluminium/**A**) and have a 2 line 16 character LCD display, speaker unit and numeric keypad with either 8 alpha buttons [A-H] (VX2202/2202M) or 3 scroll buttons (VX2202R/2202MR) to navigate the “Repertory Names”. A PC based programming kit is also available (**SP37**) which includes software and serial cable to simplify the programming of large installations.

### Vandal resistant Digital Front Panels (SP300, SP301)

These units are based on the 800 series module electronics and have a 2 line 16 character LCD display, speaker unit and numeric keypad, and 12 gauge stainless steel fascia with bezel back box.

### 4000 Series Digital Front Panels (4202, 4202R, 4202V, 4202RV)

The 4000 Series door panels have the same features as the 800 series version but are based on the 4000 series modular system and can also include mono or colour video within the two module design. Versions with either alpha buttons [A-F] or scroll buttons are available and include a high contrast blue back lit 2 line 16 character LCD display. The face plate is available in either mirror finish stainless steel (standard version) or matt finish anodized aluminium).

#### *Digital panels features:*

- Call up to 998 users (Version 5.0 software or later) (only 150 with 900 Series telephone);
- Call up to 255 users when using 316x telephones;
- Open the door by means of an individual personal access code
- Enter the “programming menu” (by using a programmable master code), where it is possible to assign:
  - a. Trade access code for periodic visitors such as postman etc
  - b. one or more apartment numbers for each telephone
  - c. one or more individual access codes (up to 6 digits)
  - d. User name (Scroll facility door panels only)
  - e. the device number for each outdoor station
  - f. Choose from six languages
  - g. speech play back system
  - h. speech time and door opening time (up to 255 seconds);
  - i. Automatic test mode
- Connect up to 10 entrance panels (main or secondary). An installation can consist of main entrances (Which can call all users) and block entrances (Which can only call users in these blocks). On two level systems of this type a VX2206 bus exchange device is needed per block.

The LCD display will show all relevant information during the call procedure along with acoustic signals and voice annunciation.

### 800 Series Functional module (2203-0, 2203-1, 2203-2)

Built into a single 800 series module and includes the speaker unit and interfaces to the digital bus. Up to 64 push buttons can be added to the interface using the 843, 844, 845 expansion button modules. (The 2203 is available with either 1 button, 2 buttons or no buttons).

### 4000 Series Functional Module (4203-0, 4203-1, 4203-2, 4203-1D, 4203-2D)

Built into a single 4000 series module and includes the speaker unit plus 4 LED's to provide call progress

information. Up to 64 push buttons can be connected (Modules available with button options 0, 1, 2 or 4). Using the standard 4000 series expansion button modules Art.4842, 4843, 4844, 4845, 4842D, 4843D, 4844D and 4845D. The module is available with front plate in stainless steel mirror finished (standard version) or in matt finish anodized aluminium.

#### **Vandal resistant Functional panels. (Art.138, VR4K2W)**

The VR functional panels include the 138 amplifier module. Up to 23 call buttons can be connected and the unit benefits from all the features of the 4000 series module plus a push to exit button input.

#### **Optional 4 way isolation PCB (2204-1)**

This unit isolates the telephones from the main 2 wire bus preventing a single telephone from compromising the system. One PCB is required for every four handsets. (The L & - terminals are isolated by this PCB).

#### **Optional 4 way isolation PCB with full isolation of all signals and bus connection. (2204N)**

This unit isolates the telephones from the main bus preventing a single telephone from compromising the system. One PCB is required for every four handsets. (The L, -, +12, S1 & D terminals are isolated by this PCB). A piggy back video isolation PCB is also available for this audio isolation PCB (Available in both coax and non-coax video versions).

#### **Non-Coax Video Distributor & 20Vdc Video PSU isolation (316I)**

Video splitter PCB for no-coax video systems, One required for every four videophones. This PCB can be used as a piggy back card to the 2204N

#### **Coax Video Distributor & 20Vdc Video PSU isolation (894I)**

As above but for coax video systems.

#### **BUS Exchanger (2206A, 2206V)**

For use with two level systems with main entrances and block entrances. Enables multiple speech paths (One per block). Use 2206A for audio systems and 2206V for video systems.

#### **BUS Exchanger (2206N)**

For use with two level systems with main entrances and block entrances. Enables multiple speech paths (One per block). The 2206N allows up to 998 apartments to be called from a main entrance and up to 180 apartments per block. The unit can also be used to extend a single level system up to 998 apartments using more than one riser bus cable.

#### **Concierge unit (2210A, 2210V)**

The 2210 allows an operator to handle and to transfer the calls from and to the users. Depending on the selected operating mode (day-night-off), it is possible to carry out different functions from the concierge. For video intercom systems, it is necessary to use 2210V (As 2210A but with additional flat screen monitor).

#### **2 wire bus to 4+1 converter (2280)**

The 2280 enables the connection of either the Videx Telephone Interface (380) or the Videx apartment station (500MM) to the VX2200 system "2 wire" Bus.

#### **Audio telephones (3171, 3172 and 3176)**

3000 Series intercoms for the VX2200 Digital System. All 3 intercoms have a door-open/call to concierge button plus an electronic call tone with a 3 level volume control which can be adjusted by the user. The 3171 and 3172 have a dry contact service push button and the 3172 has a slide privacy switch. The 3176 has a timed privacy push button with red privacy LED and a green "door open" LED (The door open LED requires an additional wire).

#### **Audio apartment stations (5178, 5178/CA and 5178/CR, VR5178)**

5000 Series surface apartment stations available in white, silver or carbon fibre finishes. Including features such as half duplex handsfree speech or optional simplex speech mode, timed privacy facility with LED, door open LED and additional service buttons. Also available in vandal resistant flush.

#### **Basic function audio telephone (3161, 3162)**

3000 series low cost telephones with restricted features. The 3161 has a "door open" button and "service" button. The 3162 also includes a slide mute switch. These telephones can only be used on audio systems without isolation or a concierge.

#### **Videophones (3371, 3376, 3471, 3476)**

3000 Series videophones with coax and non coax video options. The 3371 (3471 for colour video) has 5 buttons: "door open"/call to concierge, camera recall/alarm and 3 service push button. The 3376 (3476 for colour video) is similar to the 3371 but also includes timed privacy with red privacy LED, door open LED (Requires one additional wire) and one less service push button.

**Videomonitors (5478, 5478/CA, 5478/CR, VR5478)**

5000 Series videomonitors with coax and non coax video options. Including colour video, timed privacy facility, half duplex handsfree speech (Optional handset kit or simplex speech option) and spare service buttons. A flush mounting kit is also available for these monitors which are also available in white, silver or carbon fibre affect finishes. Also available in vandal resistant flush.

**Extension sounder (512D)**

Extension Sounder in a white plastic wall mount box. Connects directly to the 2 wire bus.

**Extension relay (512DR)**

As the 512D but with a dry contact relay (24V 100mA) instead of the sounder.

**Non-coax camera module (830/NC, 830C/NC)**

800 series camera module with infrared illumination. "No coax" required. (Colour camera 830C/NC has white LED's as oppose to IR LED's)

**Coax camera (830, 830C)**

As above but for coax video systems. Use 830NC /830NC/C for non-coax camera.

**Coax/Non-coax camera (4830, 4830C)**

A 4000 series camera with both coax and non-coax connections. Available in mono or colour.

**1A DIN Rail Power Supply Unit (521B)**

For audio systems with battery back-up facility, 230Vac / 13Vdc/ac – 1 Amp.

**Video Power Supply (893N1)**

For video systems, 230 Vac / 20Vdc – 1 A peak current (0.8 A continuous current).

**Audio control cabinet (SP400, SP405)**

Lockable control cabinet for one door (SP400) and up to 4 doors (SP405) audio systems. Includes a BST/GMT time clock, PSU and facility for a backup battery.

**Video control cabinet (SP410, SP415)**

Lockable control cabinet for one door (SP410) and up to 4 doors (SP415) video systems. Includes a BST/GMT time clock, PSU's for both audio and video, video switching PCB (Multiple door cabinet only) and facility for a backup battery (Audio backup only).

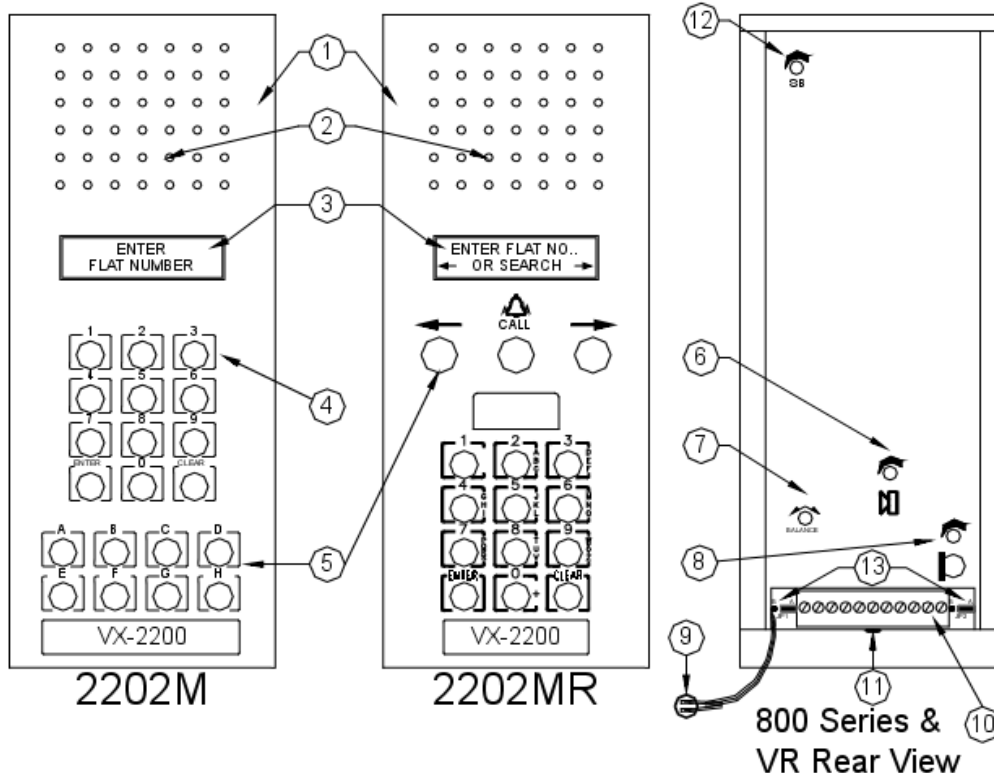
**Non-Coax Video Distributor (316, 316N)**

Video splitter for no-coax video systems, One required for every four videophones.

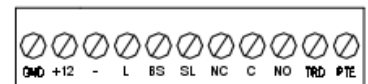
**Coax Video Distributor (894, 894N)**

As above but for coax video systems.

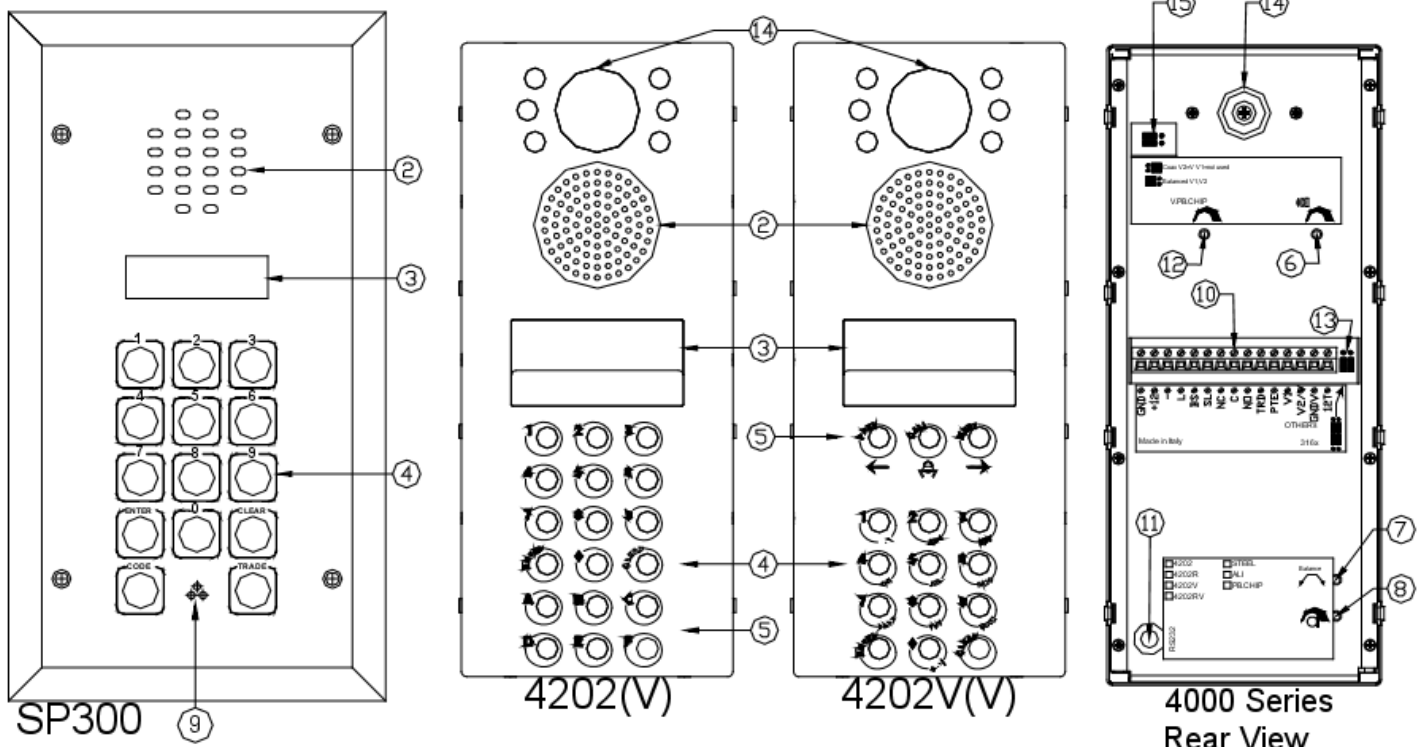
## DIGITAL DOOR PANELS



- PTE** Push to exit button  
**TRD** Trade Signal (from Art.701T)  
**GND** Power supply - ground  
**+12** Power supply - positive  
**-** BUS connection - negative  
**L** BUS connection - positive  
**BS** "busy system" signal  
**SL** Accessory control signal  
**NC** Relay out - normally close contact  
**C** Relay out - common contact  
**NO** Relay out - normally open contact



800 Series &  
VR Rear View



- ① Stainless steel plate 2.5mm thick  
 ② Speaker Unit  
 ③ LCD Hi-contrast display 16x2 characters with back-light  
 ④ Numeric keypad  
 ⑤ Alphabetic keypad -1 / Special "Repertory Name" buttons -1R  
 ⑥ External volume control  
 ⑦ Balance control

- ⑧ Internal volume control  
 ⑨ Microphone unit  
 ⑩ connector  
 ⑪ Female Jack plug for PC connection  
 ⑫ Speech board volume control  
 ⑬ JP1, JP2 B= 316x, A= others  
 ⑭ CCD Camera with adjustable angle  
 ⑮ Coax or Non-Coax Video Selection

## DIGITAL FRONT PANELS

The **VX2200** digital front panel is based on the **"2 wire" BUS** (6 wire for non-coax video systems) system and is available in the 800 series & 4000 series modular design and vandal resistant format. The unit includes a keypad with 18-20 vandal resistant push buttons, 6-8 of which are lettered buttons (from "A" to "H" on 800 series, A-F on 4000 Series and are optional on the vandal resistant panels). Alternatively the 2202MR/4202R version has a keypad with 15 vandal resistant push buttons, 3 of which are repertory buttons ("**←**", "**Ⓚ**", "**→**"). All versions have a 2 line 16 character LCD display with back lighting and polycarbonate protection and include the speaker unit. It's possible to program up to 998 users (combining phone ID. And apartment number & block) into 998 memory locations (max 180 devices can be addressed using the 3000 series phones allowing multiple blocks with up to 180 apartments and more than one memory location can link to a single flat with different access codes and user names). A coded access facility is available on all panels offering a unique access code per user. Panels can be programmed either through the door panel keypad and LCD display or a PC interface (Recommended on large systems).

### Operation

#### In stand-by mode:

The unit displays alternatively **"ENTER FLAT NUMBER"** ("OR SEARCH" on 2202MR/4202R) and a message which can be customised. It is ready to accept: a flat number via the keypad or search using the "Repertory Name" facility (2202MR/4202R only) pressing call will call the chosen number. A code can be entered by first pressing 0 or the code button (This could be a trade code, access code or code to enter programming mode). To enter a trade code, first press clear then the code. The code will only work if the trade input has first been shorted to ground (i.e. Through a time clock).

#### To call a user:

Enter the flat number (alphanumeric code up to 6 digits for 2202M and numeric code up to 6 digits for 2202MR) and press **"ENTER/CALL"** or scroll the user name on the display by pressing "**←**" and "**→**" buttons and press the "**Ⓚ**" button; the flat number is shown on the LCD display and the call is acoustically signalled. Then **"CALL IN PROGRESS"** appears until the user answers. In case of no answer or mistake, press **"CLEAR"** to end the call. **"SPEAK"** indicates that the flat has answered and a conversation with the user can take place. **"DOOR OPEN"** and an acoustic signal indicate that the user has opened the door. At the end of the conversation, **"END"** will indicate the system has reset and is awaiting another call.

#### To open the door using the coded access facility :

- press the "**0**" or code button, the display will show **"CODE:"**, enter the access code (up to 6 digits), a **"\*\*"** will appear for each digit, then press **"ENTER"**; if the code is correct, the LCD display will show **"DOOR OPEN"** on the second line and an acoustic signal will announce the opening of the door for the time programmed.
- using trade code, press the **"CLEAR"** button; the LCD display will show **"TRADE:"**; enter the trade code (for each digit a **"\*\*"** will appear) and then press **"ENTER"**; if the code is correct, the LCD display will show **"DOOR OPEN"** on the second line and an acoustic signal will announce the opening of the door for the time programmed otherwise a wrong code is signalled by an **"ERROR !"** message.

### Programming guide

The **"VX2202M/2202MR PROGRAMMING"** flow chart shows the procedure for programming the door panel. The programming is carried out using the keypad or PC software. The programming is protected by a master code and enables the following features:

- Change the master code;
- Add/Change the Trade code;
- program the apartment number/user name to the relevant dip switch setting on the telephone (Max. 6 char, numerical characters from "0" to "9" and alphabetical characters from "A" to "H" (numerical characters only for 2202MR);
- program the block number associated to an apartment no (When the door panel is in main mode)
- program an access code for each user;
- program the speech time (1-255 seconds);
- program the door opening time (1 – 255 seconds);
- program the device number; (This is important when using video and or a concierge to allow camera recall and concierge functions to work correctly. (Each door must be a unique number).
- enable speech play back system;
- program the "Master/Slave" setting ( Master for the main station and Slave for all others);
- execute phone address self test.

### How to program

The digital door panel can be set to either **MAIN MODE** or **LOCAL MODE**. MAIN mode should only be used



for panels that call all users and also includes 2206N devices in the system (One per block), use LOCAL mode for all other applications. To set a digital panel as MAIN MODE, power up with the 0 button pressed. To set as LOCAL MODE, power up with ENTER pressed (The mode can also be changed via the PC programming software).

To use the digital front panel with 3000 series intercoms and videointercoms, press the **"ENTER"** button while powering up and wait until the display shows the message **"S3000"**, release the button.

To use the digital front panel with 900 series intercoms and videointercoms, press the **"CLEAR"** button while powering up and wait until the display shows the message **"S900"**, release the button.

The programming allows for both the inserting of new data and the modifying of existing data, therefore, the data in memory, even if empty, will be shown on the display to be either modified or confirmed.

1. From stand-by mode (display shows **"ENTER FLAT NUMBER"**), press **"0"** or code and type in the master code (111111 factory default), followed by the **"ENTER"** button. A short continuous acoustic signal and the message **"ERROR !"** on the LCD display means a wrong code; try again with the right code.
2. The display will show **"NEW:."**: press **"ENTER"** twice to confirm the code or type the new master code (from 1 to 6 characters: numbers from "0" to "9" and characters from "A" to "H") and press the **"ENTER"** button.
3. The display shows **"TRADE C.:"**: press **"ENTER"** twice to confirm the code or type the new trade code (from 1 to 6 digits) and press the **"ENTER"** button.
4. The display shows **"MEM LOCATION:"**, press **"ENTER"** twice to jump to the next programming mode (**step 5**) or type the number of the "Mem Location" (0 for logo1, from 1 to 254 for flats or 255 for logo2) and press **"ENTER"**. After selection of memory location it is possible to insert user information: the apartment number; the Phone Id (Dip-Switch settings on telephone; the door access code and the user name (2202MR/4202R only), up to 16 characters.  
The programming now starts again from step 4.
5. The display shows **"SPEECH TIME:"**, followed by the value of the speech time previously set. Press **"ENTER"** twice to confirm the same time or type a new value from 1 to 255 (seconds) then press **"ENTER"**.
6. The display shows **"DOOR TIME:"** followed by the value of the time previously set. Press **"ENTER"** twice to confirm the same time or type a new value from 1 to 255 (seconds) then press **"ENTER"**.
7. The display shows **"DEVICE N.:"** (Door number) followed by the device number previously programmed. Press **"ENTER"** twice to confirm the current value, or type a new value from 1 to 15 then press **"ENTER"**.
8. The display shows the languages available (the language selected at this stage of the programming refers exclusively to the user messages, while the programming messages are always in English) with a flashing cursor corresponding to the active language: **"0 = ENG (English), 1 = IT (ITALIAN), 2 = SP (Spanish), 3 = POR (Portuguese), 4 = FR (French), 5 = GER (German)"**; press **"ENTER"** twice to confirm the same language or type the number corresponding with the new one; the system will jump automatically to the next programming step;
9. The display shows speech board available settings **"0=NO 1=ST. 2=CMB."** With a flashing cursor corresponding to the active setting: press **"ENTER"** twice to confirm current setting or type **"0"** to disable speech board, **"1"** to enable speech board with individual number spoken (i.e. Apartment 100 would be one, zero, zero.), **"2"** to enable speech board with combined numbers spoken (i.e. 100 would be spoken as One hundred).
10. If the display shows **"MASTER: YES"**, press the **"0"** button to set the unit as a SLAVE, otherwise, if it is a SLAVE (The display shows **"MASTER: NO"**), press the **"1"** button to set it as a MASTER or press **"ENTER"** to leave the programming unchanged.
11. The display shows **"1=TEST FLAT"** on the first row **"ENTER=END"** on the second row. Press **"ENTER"** to exit from the programming menu otherwise press **"1"** to start phone address self test. The test makes calls to each phone installed on the system and will stop if a connection error is found (**"ERR"** message on LCD display). Remove the reason for the error and restart the test again or exit from the programming menu by pressing **"ENTER"**.

The system is now ready to use.

#### *Programming notes*

- a. During the programming of the master door panel, all slave door panels will be off line. (This inconvenience does not occur if the slave entrances are connected through Art. VX2206 on a separate level);
- b. If the programming of the MASTER device is wrong (Eg. Programmed as a SLAVE when it should be a MASTER), an error condition takes place signalled by the message **"ERROR!"** on the display. To recover from this situation keep the **"0"** button pressed until the unit goes back to the display showing CODE. Perform the programming again correcting the error. Alternatively programming a SLAVE as a MASTER

can cause feedback (Larsen effect) during the conversation (Only one master per level per block allowed).

- c. The entering of values not admitted is signalled by an error message, the unit waits for a valid entry before continuing on with the programming.
- d. Pressing the "CLEAR" button, at any stage will clear the current data previously entered.
- e. To allow the call to the concierge unit VX2210-1/V (if present), combine the "flat number" (Concierge number) to the "ID PHONE" address n.1.
- f. When using the door panel in MAIN MODE, the programming of each user will require the address of the 2206N (Block address) for which that user is connected.

Keys/Pressing times	Once	Twice	3 times	4 times	5 times
1	" " Space	"."	"&"	"I"	Not used
2	"A"	"B"	"C"	"2"	
3	"D"	"E"	"F"	"3"	
4	"G"	"H"	"I"	"4"	
5	"J"	"K"	"L"	"5"	
6	"M"	"N"	"O"	"6"	
7	"P"	"Q"	"R"	"S"	"7"
8	"T"	"U"	"V"	"8"	Not Used
9	"W"	"X"	"Y"	"Z"	"9"
0	"+"	"_"	"*"	"/"	"0"
"←" / A	Delete last character				
"⏏" / B	End text insertion				
"→" / C	Confirm last character				

Text typing with **VX2202M** is similar to mobile phone text typing. This table shows the characters and symbols that can be typed by pressing one or more times the keypad numeric push buttons. The alphabetic push buttons "A/←", "B/CALL" and "C/→" are used for special functions:

- "A/←" button erases the last character like PC keyboard backspace;
- "B/⏏" push button confirm the inserted text and the end of typing;
- "C/→" push button confirms the character inserted (Also the character is confirmed by pressing a different numeric push button).

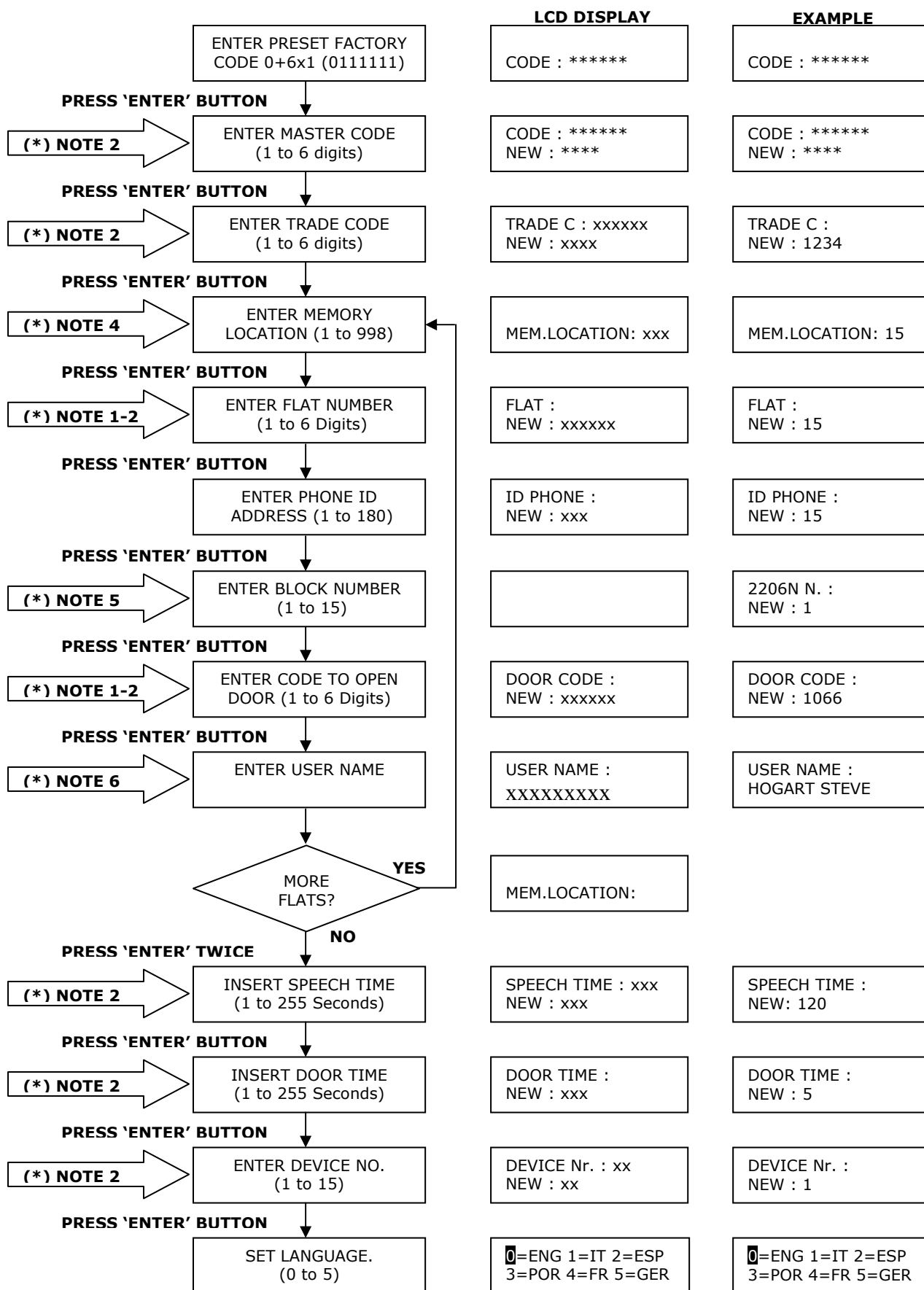
For instance, to type the name "BRASS" it is necessary to press:

- 2 times 2 – "B" button
  - 3 times 7 – "R" button
  - 1 times 2 – "A" button
  - 4 times 7 – "S" button followed by "C/→" button
  - 4 times 7 – "S" button
- Press the "B/⏏" button to confirm the inserted data.

#### Technical specifications

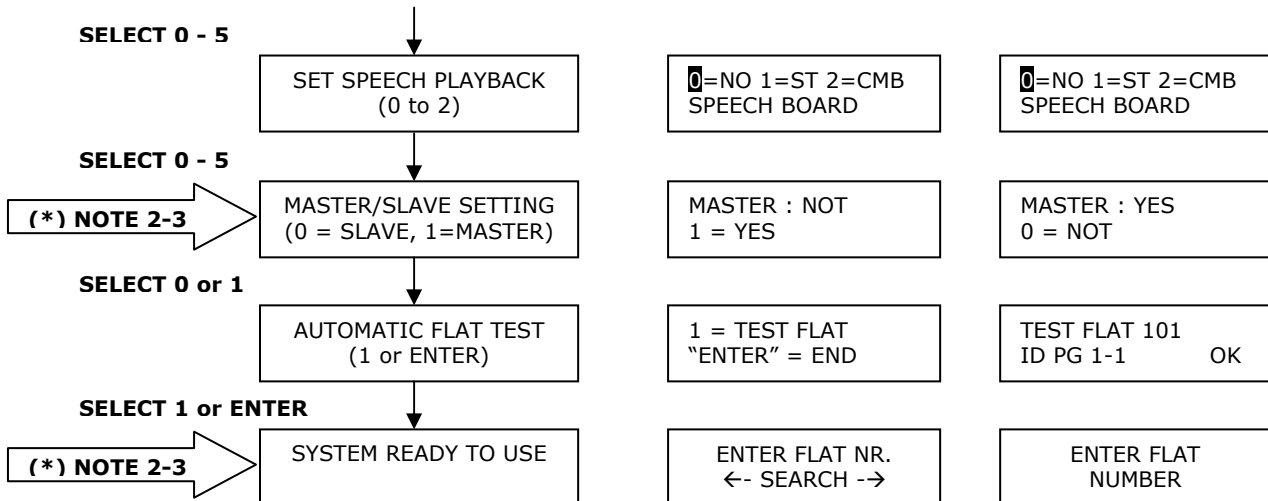
Memory capacity	: 255 users
Working voltage	: 13 Vdc +/- 10%
Max. absorption	: about 350 mA
Working temperature	: -10 +50 C°
Relay contacts	: 3A@30Vdc, 3A@120Vac

## DIGITAL DOOR PANEL PROGRAMMING FLOW CHART



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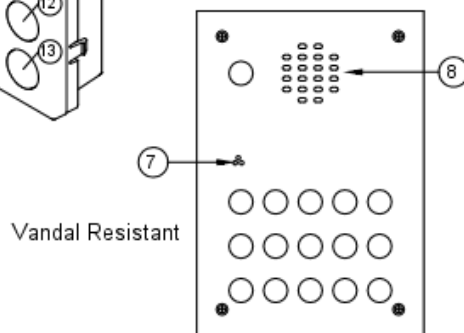
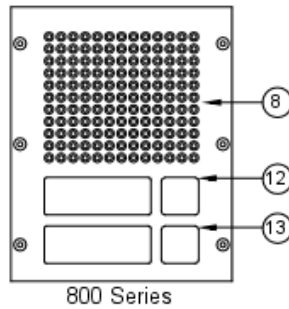
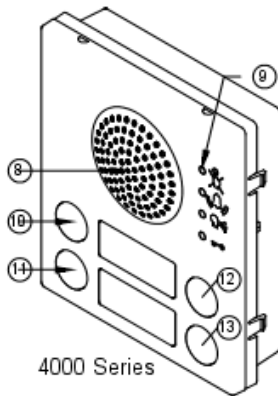


**NOTES:-**

- (\*) **NOTE 1** → PRESS CLEAR BUTTON TO CANCEL THE LOCATION
- (\*) **NOTE 2** → DURING THE PROGRAMMING TO CONFIRM THE STORED DATA, PRESS ENTER TWICE
- (\*) **NOTE 3** → TO PROGRAM AS SLAVE ONLY IF THERE IS ANOTHER ENTRANCE PROGRAMMED AS MASTER ON THE SAME BUS
- (\*) **NOTE 4** → DOOR PANEL SOFTWARE VERSION 5.0 or later: LOCATIONS 0 & 999 ARE RESERVED FOR EDITING THE DISPLAY LOGOS.
- EARLIER SOFTWARE: LOCATIONS 0 & 255 ARE RESERVED FOR EDITING THE DISPLAY LOGOS.
- (\*) **NOTE 5** → THIS SCREEN WILL ONLY APPEAR IF THE DOOR PANEL IS IN MAIN MODE. POWER UP WITH 0 HELD IN FOR **MAIN MODE**, POWER UP WITH ENTER HELD IN FOR **LOCAL MODE**
- (\*) **NOTE 6** → THIS SCREEN WILL ONLY APPEAR ON NAME SCROLL FACILITY DOOR PANELS. THE FOLLOWING KEYS ON THE KEYPAD DOUBLE UP AS LETTERS WHEN ENTERING NAMES:-

← or <b>A</b> = Back	<b>CALL</b> or <b>B</b> = Accept	→ or <b>C</b> = Forward
<b>1</b> = .&	<b>2</b> = ABC	<b>3</b> = DEF
<b>4</b> = GHI	<b>5</b> = JKL	<b>6</b> = MNO
<b>7</b> = PQRS	<b>8</b> = TUV	<b>9</b> = WXYZ
	<b>0</b> = +-* /	

## FUNCTIONAL DOOR PANELS

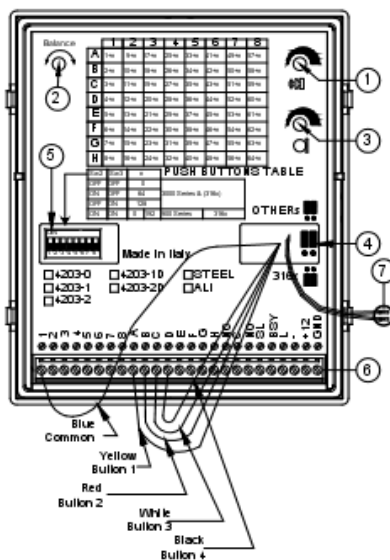


### Operating mode jumpers setting

- To work with intercoms model 3161, 3162
- To work with all other audio/video intercoms

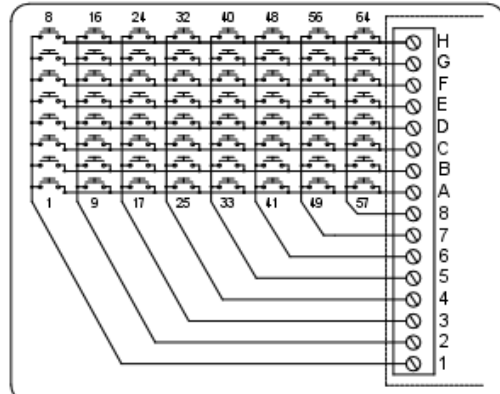
800 Series and  
VR Rear View

4000 Series Rear View

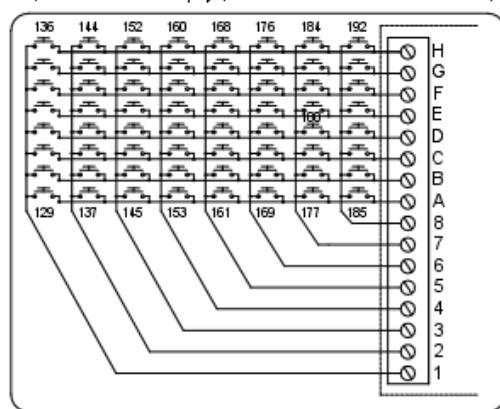


- 1 Speaker volume adjustment
- 2 Balance adjustment
- 3 Microphone volume adjustment
- 4 System setup jumpers
- 5 System setup dip-switch
- 6 Connection terminals
- 7 Microphone
- 8 Speaker
- 9 LEDs for operation signalling
- 10 Push button 4 - black wire
- 11 Push button 3 - white wire
- 12 Push button 2 - red wire
- 13 Push button 1 - yellow wire

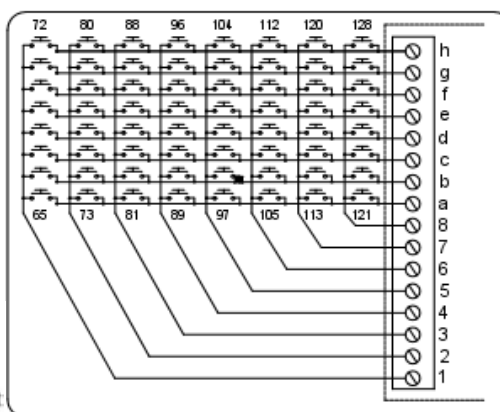
Dip-Switch n°2=OFF n°3=OFF  
or Dip-Switch n°2=ON n°3=ON using 900 Series



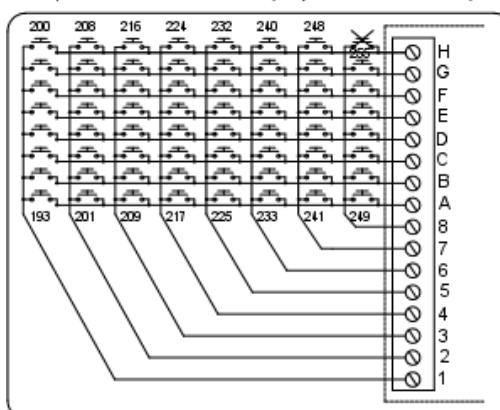
Dip-Switch n°2=OFF n°3=ON (only up to 180 if set to work with other intercom models)



Dip-Switch n°2=ON n°3=OFF



Dip-Switch n°2=ON n°3=ON (only for 3161 intercoms)



## FUNCTIONAL DOOR PANELS

Functional units are available in the 4000 Series, 800 Series and vandal resistant series. They allow panels with individual call buttons to be connected to the VX2200 “2 wire” **BUS**. They incorporate the functional interface connections with the speaker unit and are available with 0, 1 & 2 button versions (4000 Series can also have 1D, & 2D buttons).

These device allow the connection of up to 64 functional push buttons using standard extension module panels from the 800 and 4000 series range (Vandal resistant panels call also have up to 64 push buttons). If a number of push buttons greater than 64 is required, more VX2203M modules can be used to have up to 180 buttons and up to 255 with the low cost intercom Art.3161.

### Operation

Once the unit has been programmed and connected correctly, it will generate on each pressing of a push button, a code corresponding to the PHONE ID (address programmed on the 8 way dip-switch inside each telephone) of the telephone being called.

### To call a user:

press the relevant button: 5 quick beeps will indicate if the system is busy, otherwise the call will be signalled by a slow intermittent acoustic signal until the call is answered, the conversation time expires (programmable time) or the call is interrupted by pressing a push button for a minimum of 2 seconds. A short intermittent acoustic signal indicates that the door is open. If a wrong push button is pressed or if there is no answer, a new call will erase the previous one.

### Programming

The programming is carried out exclusively through the configuration of the 2 jumpers the 8 way Dip-switch on the back side of the unit. Depending on the 2 jumper settings, the 8 way Dipswitches have a different function.

**WITH THE TWO JUMPERS IN THE LEFT POSITION (TO WORK WITH 900 & 3000 SERIES EXCEPT INTERCOM 3161 & 3162), THE 8 WAY DIP-SW ENABLES THE FOLLOWING:**

- Program the unit as a Master or a Slave (switch 1);
- Program the 64 push buttons group (switches 2 & 3);
- Program the conversation time (switch 4);
- Program the door opening time (switch 5);
- Program the device number (switches 6,7,8);

### CONFIGURATION ON THE UNIT AS A MASTER OR SLAVE

Switch	Nr.1	Setting Up
	OFF	= Slave
	ON	= Master (default)

### PROGRAMMING THE 64 PUSH BUTTON GROUP

Switch	Nr.2	Nr.3	Settings
	OFF	OFF	from buttons 1 to 64
	ON	OFF	from buttons 65 to 128
	OFF	ON	from buttons 129 to 180
	ON	ON	from buttons 1 to 64 with 900 series devices

Switches 2 & 3 define the range of Phone IDs generated by the unit when the call buttons are pressed. For example with dip-switch 2 and 3 both OFF, the push button connected between the VX2203 terminals “1” and “a” generates the **ID PHONE 1** while the same push button, with dip-switch 2 ON and dip-switch 3 OFF, will generate the **PHONE ID 65**. The fourth range of push button groups can be used with the 900 series intercoms and video intercoms.

### PROGRAMMING THE CONVERSATION TIME

Switch	Nr.4	Setting Up
	OFF	= 1 min
	ON	= 2 min

### PROGRAMMING THE DOOR OPEN TIME

Switch	Nr.5	Setting Up
	OFF	= 2 seconds
	ON	= 6 seconds

### PROGRAMMING THE DEVICE NUMBER

Switch	Nr.6	Nr.7	Nr.8	Setting Up
	OFF	OFF	OFF	= 1
	ON	OFF	OFF	= 2
	OFF	ON	OFF	= 3
	ON	ON	OFF	= 4
	OFF	OFF	ON	= 5
	ON	OFF	ON	= 6
	OFF	ON	ON	= 7
	ON	ON	ON	= 8

The device number is used by the digital concierge to show from which entrance calls are made and for camera recall on video systems.

#### Programming notes (3000 and 900 series mode)

In case of a wrong Master/Slave configuration (Dip-switch no.1), the following problems can occur:

- if the unit should be a Master but is configured as a Slave, the error is signalled by an acoustic intermittent signal until the problem is resolved;
- if the unit should be Slave but is configured as Master, the impedance of the system will have a lack of balance, causing feedback ("Larsen" effect).

When a system uses a concierge unit VX2210-1 the push button combined to the **Phone ID 1** (only with the switches.2 & 3 OFF = ID Group from 1 to 64) is reserved to call the concierge in day and night mode.

#### WITH THE TWO JUMPERS IN THE RIGHT POSITION (TO WORK ONLY WITH INTERCOMS 3161 & 3162), THE 8 WAY DIP-SW ENABLES THE FOLLOWING:

- Program the 64 push buttons group (switches 2 & 3);
- Program the number of call rings (switches 4 & 5)
- Program the conversation time (switch 6 & 7);
- Program the door opening time (switch 8);

The switch 1 is not used.

#### PROGRAMMING THE 64 PUSH BUTTON GROUP

Switch	Nr.2	Nr.3	Setting Up
	OFF	OFF	= from 1 to 64
	ON	OFF	= from 65 to 128
	OFF	ON	= from 129 to 192
	ON	ON	= from 193 to 255

#### PROGRAMMING THE CONVERSATION TIME

Switch	Nr.6	Nr.7	Setting Up
	OFF	OFF	= 1 min
	ON	OFF	= 2 min
	OFF	ON	= 3 min
	ON	ON	= 4 min

#### PROGRAMMING THE NUMBER OF CALL RINGS

Switch	Nr.4	Nr.5	Setting Up
	OFF	OFF	= 2
	ON	OFF	= 4
	OFF	ON	= 6
	ON	ON	= 8

#### PROGRAMMING THE DOOR OPEN TIME

Switch	Nr.8	Setting Up
	OFF	= 1 seconds
	ON	= 6 seconds





In order to achieve the correct combination between the push buttons and the relevant extensions, it is advisable to refer to the picture at the back of the module for the correct cabling.

**The digital concierge cannot be installed on systems using 3161 intercoms.**

#### Module button wiring colour code:-

Colour	Button
blue	Buttons Common
yellow	Button 1
red	Button 2
white	Button 3 (4000 Series only)
black	Button 4 (4000 Series only)

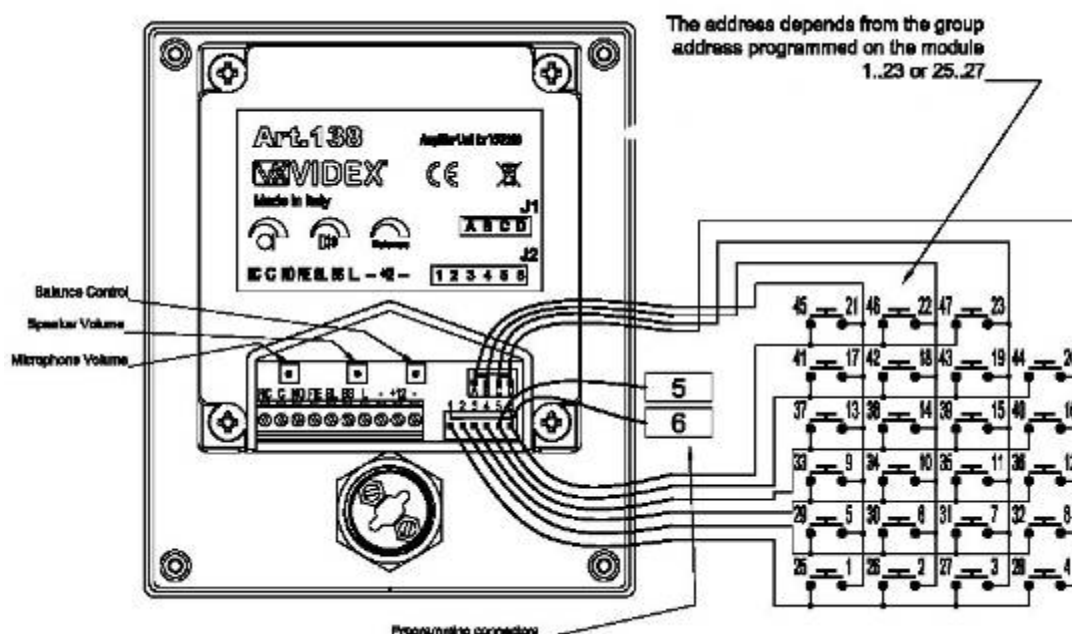
#### 4000 Series LED indicators:

Symbol	LED meaning
	The first LED (red), if switched ON, indicates that it is not possible to make a call because a call or a conversation is in progress (from the outdoor station from which you are calling or from another outdoor station on systems with multiple entrances).
	The second LED (red), if switched ON, indicates that a call is in progress. The LED will be switched OFF when the call is answered.
	The third LED (yellow), if switched ON, indicates that it is possible to speak. The LED will be switched OFF at the end of the conversation.
	The fourth LED (green), if switched ON, means that the door lock has been released. It will be switched OFF at the end of the "door opening" time.

#### Technical specifications

Memory capacity	: up to 64 users
Working voltage	: 13 Vdc +/- 10%
Max. absorption	: about 350 mA
Working temperature	: -10 +50 C°
Relay contacts	: 3A@30Vdc, 3A@120Vac

## VANDAL RESISTANT FUNCTIONAL DOOR PANELS



### Description:

This module is used in the VX2200 2 wire audio, 6 wire video functional vandal resistant door panels and includes all features required for audio & video installations. A 13.8Vdc PSU is required to power this system. Up to 23 buttons can be connected to this module. (This module cannot be used with 316x phones).

### Connections:-

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

### Speech volume adjust:

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



Door panel Microphone  
volume adjustment



Door panel speaker  
adjustment



Balance

Find a balance between speaker and  
microphone volume adjustment

### Factory reset

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

### Programming

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



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

#### DEFAULTS ARE SHOWN IN ( )

#### MASTER or SLAVE

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

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

<b>1 BEEP</b>	<b>2 BEEPS</b>
(Master)	Slave

#### BANK of BUTTONS

Set the bank of buttons relevant to the button matrix (For most systems this will be buttons 1-23 but for larger systems it may be necessary to have the buttons start at 25 through to 47, i.e. Button 1A would call address 25 as oppose to 1).

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

<b>1 BEEP</b>	<b>2 BEEPS</b>
(Button addresses 1 – 23)	Button addresses 25-47

#### MAXIMUM CALLING TIME BEFORE ANSWER

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

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

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

#### CONVERSATION TIME

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

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

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

#### RELAY TIME

Door open relay time

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

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

#### DEVICE NUMBER

It is very important on video systems and systems with a concierge that each door panel amplifier has a unique device number.

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

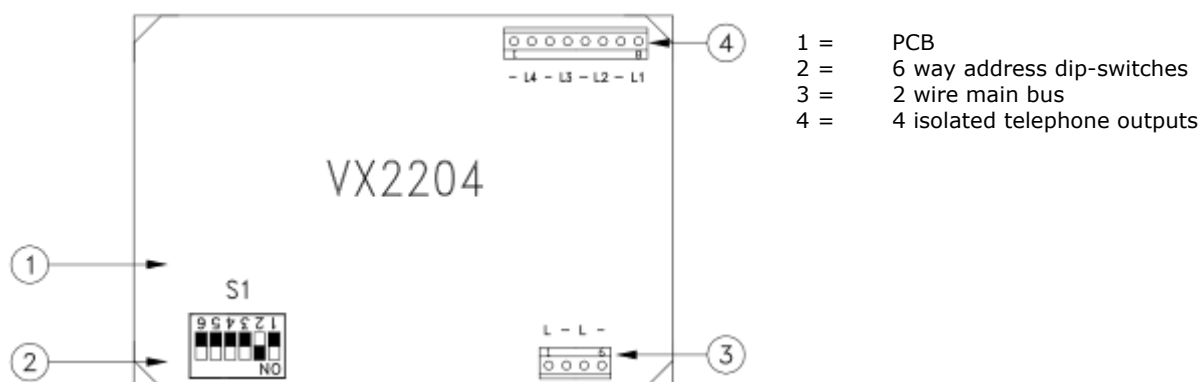
<b>1 BEEP</b>	<b>2 BEEPS</b>	<b>3 BEEPS</b>	<b>4 BEEPS</b>	<b>5 BEEPS</b>
(Device 1)	Device 2	Device 3	Device 4	Device 5
<b>6 BEEP</b>	<b>7 BEEPS</b>	<b>8 BEEPS</b>	<b>9 BEEPS</b>	<b>10 BEEPS</b>
Device 6	Device 7	Device 8	Device 9	Device 10

## CONTROL EQUIPEMENT

### 4 WAY ISOLATION PCB (2204)

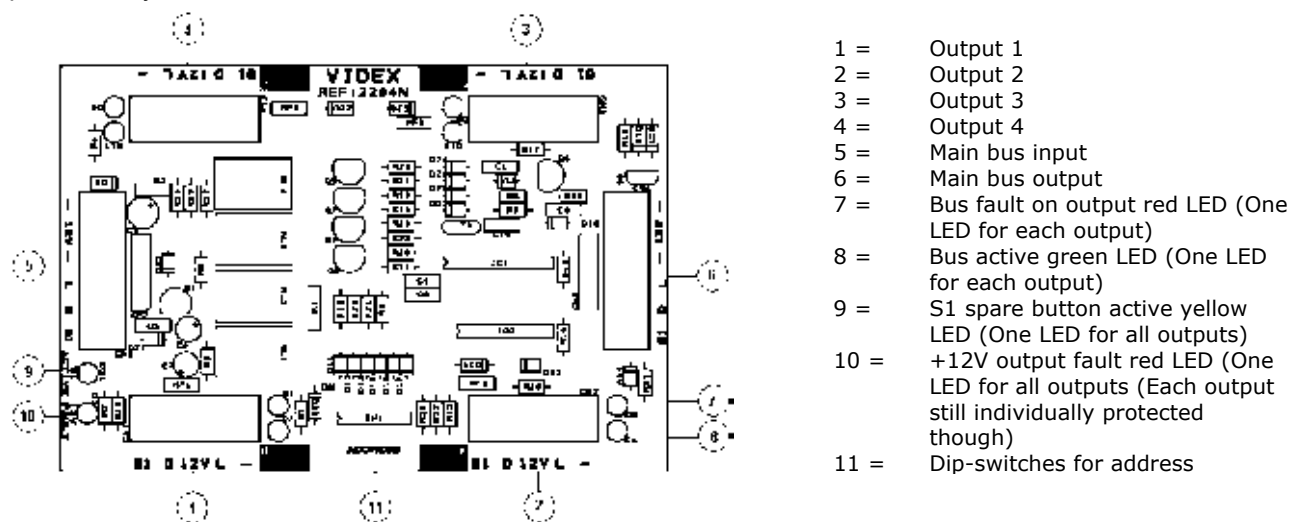
The 4 way isolation board is designed to fully isolate the “2 wire” BUS system against possible malfunction or damage of an individual flat. Each isolation PCB will accommodate up to 4 devices and is addressed by means of a 6 way Dip-switch.

Use 2204 version with 900 series and 2204-1 with 3000 series.



### 4 WAY ISOLATION PCB (2204N)

The 2204N has all the features of the 2204 and will protect against shorts or faults on any connection to an apartment. Also includes plug in connections for easy maintenance, additional isolated terminals for +12V, door open LED and S1 button. The 2204N can also be connected as a bus in a prewired cabinet and is addressed using a 6 way dip-switch bank. For video systems there is an additional video isolation card (316I for non-coax or 894I for coax) which piggy backs this one and includes all the additional connections for video. There are 10 LED's on each card which can be used to identify when a channel is in use (Green channel LED on) and to indicate a variety of faulty such as short on +12V out, short on bus and S1 permanently active.



Connection	Function
-	0V
L	Bus connection
12V	+12Vdc
D	Door open LED
S1	Spare service button on telephone (Switched 0V)

LED	Function
D1	Bus fault output 1
D8	Bus fault output 2
D14	Bus fault output 3
D19	Bus fault output 1
D7	Output 1 active
D6	Output 2 active
D5	Output 3 active
D4	Output 4 active
D21	S1 service switch active
D3	12V out fault on one of the outputs

### Operation

#### In stand-by mode:

The phones connected to the 2204/2204N are physically disconnected from the BUS line.

#### During the call:

- In case of a call to a phone linked to the 2204/2204N, the BUS line will be activated for the selected phone only (A green active LED will illuminate next to the active apartment on the 2204N PCB).
- If there are problems with the 2204/2204N BUS outputs (connected peripheral outputs broken or in short), all the calls addressed towards those outputs from the outdoor station or from the concierge will be signalled by visual and acoustic error messages.

**NOTE:** When using 2204 it is not possible to connect other phones, accessories or push buttons to activate the local bell facility. (They can be connected to the 2204N)

### Programming

The 2204/2204N programming consists of the configuration of the internal 6 way Dip-switch, used to specify the ID. address of the 4 phones linked to its outputs (See the following table). Dip-Switches must be set before power up and must match the table below (i.e. The phone with ID 7 must be connected to output 3 of the 2204/2204N addressed as 1).

Addresses of:						Addresses of:						Addresses of:					
2204 no.	DIP-SW Settings <div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div>	Connected Intercoms				2204 No.	DIP-SW Settings	Connected Intercoms				2204 No.	DIP-SW Settings <div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div>	Connected Intercoms			
		L1	L2	L3	L4			L1	L2	L3	L4			L1	L2	L3	L4
0	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	1	2	3	4	16	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	65	66	67	68	32	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	129	130	131	132
1	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	5	6	7	8	17	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	69	70	71	72	33	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	133	134	135	136
2	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	9	10	11	12	18	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	73	74	75	76	34	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	137	138	139	140
3	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	13	14	15	16	19	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	77	78	79	80	35	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	141	142	143	144
4	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	17	18	19	20	20	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	81	82	83	84	36	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	145	146	147	148
5	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	21	22	23	24	21	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	85	86	87	88	37	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	149	150	151	152
6	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	25	26	27	28	22	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	89	90	91	92	38	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	153	154	155	156
7	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	29	30	31	32	23	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	93	94	95	96	39	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	157	158	159	160
8	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	33	34	35	36	24	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	97	98	99	100	40	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	161	162	163	164
9	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	37	38	39	40	25	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	101	102	103	104	41	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	165	166	167	168
10	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	41	42	43	44	26	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	105	106	107	108	42	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	169	170	171	172
11	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	45	46	47	48	27	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	109	110	111	112	43	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	173	174	175	176
12	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	49	50	51	52	28	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	113	114	115	116	44	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	177	178	179	180
13	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	53	54	55	56	29	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	117	118	119	120						
14	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	57	58	59	60	30	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	121	122	123	124						
15	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	61	62	63	64	31	<div>ON <input type="checkbox"/> OFF <input type="checkbox"/></div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	125	126	127	128						

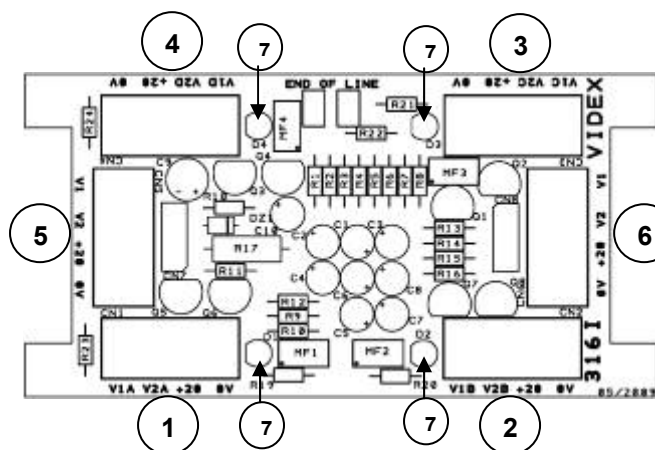
### Technical specifications

Number of outputs : 4  
Addressing range : from 0 to 44  
Working temperature : -10 +50 C°  
12V output current max. : 200mA

## 4 WAY VIDEO ISOLATION PCBS (316I & 894I)

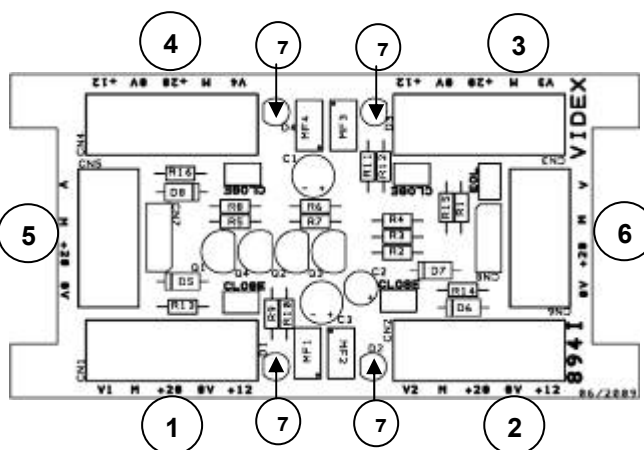
The 316I (For balanced video systems) and the 894I (For coax video systems) are designed to piggyback the 2204N isolation PCB but can also be used standalone. The PCB's can each feed up to four apartments with video signal and videophone/monitor power. Each output is isolated to protect against short circuits. A fault LED (RED) next to each output will illuminate when the 20Vdc supply to an apartment is in short or an over current situation. The PCB's can mounted either in a control cabinet in a bus configuration or dispersed throughout a building as landing units. All connections are plug type for easy maintenance.

### 316I (Balanced video)



- |     |   |     |                 |
|-----|---|-----|-----------------|
| 1 = | Output 1                                      | 2 = | Output 2        |
| 3 = | Output 3                                      | 4 = | Output 4        |
| 5 = | Main bus input                                | 6 = | Main bus output |
| 7 = | 20Vdc to apartment, fault on output LED (Red) |     |                 |

### 894I (Composite video)



316I	
Connection	Function
V1 (A,B,C,D)	Balanced video - sync
V2	Balanced video + sync
+20	+20Vdc
0V	0V

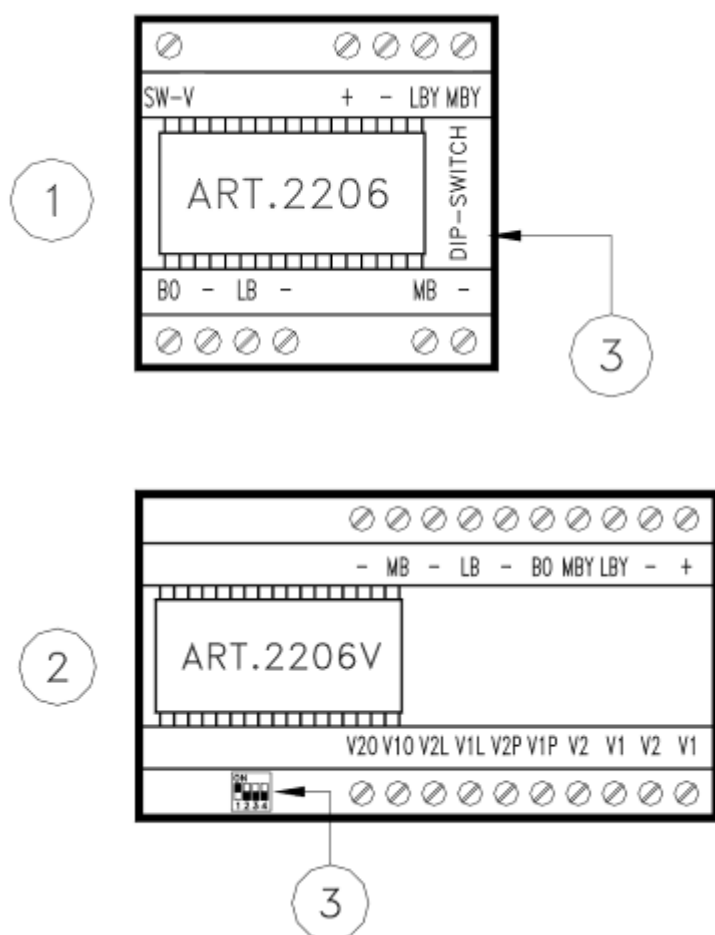
894I	
Connection	Function
V (1,2,3,4)	Video signal
M	Coax screen
+20	+20Vdc
0V	0V
+12V	12Vdc from videomonitor to power 894I

#### Technical specifications

Number of outputs	: 4
Working temperature	: -10 +50 C°
+20 output current max.	: 500mA

## BUS EXCHANGE DEVICES (2206A, 2206V)

The VX2206-VX2206/V is an electronic BUS exchanger controlled by the “Busy” signal of the door panels or the Concierge panel. By using this device (1 required for each block), it is possible to have “main entrances” and “block entrances” on the same “**2 wire BUS**” (in this way the system can have one or more semi-independent lines or multiple speech paths). This device switches the “Main BUS” (from the main entrances) and the “Local BUS” (from the block entrances) to the “BUS out” which is connected to the flats. For video intercom applications, use the 2206/V (4 wires no-coax for video intercom systems locally supplied or 6 wire for centrally supplied). The circuit is built into a 5 modules DIN (or 9 for VX2206/V) and incorporates a 4 way Dip-switch to be configured according to the number of phones connected to the output.



Connection	Function
+	+12Vdc input
-	0V
LB	Local Busy input
MB	Main busy input
BO	Bus out to apartments
-	Bus in from local doors
LB	Bus in from Main doors
MB	Bus in from Main doors
-	Bus in from Main doors
V2O	Video out to apartments
V1O	Video in from local doors
V2L	Video in from local doors
V1L	Video in from local doors
V2P	Powered video out to next bus device
V1P	Powered video out to next bus device
V2	Video in from main Doors
V1	Video in from main Doors
V2	Video loop to next Bus device
V1	Video loop to next Bus device
SW-V	Switch 0V for relay

- 1 5 modules "A" type DIN box (87.5 mm)
- 2 9 modules "A" type DIN box (157.5mm)
- 3 4 ways Dip-Switch to program the users of the local entrance

### Operation

#### In stand-by mode:

The signal from the main entrance terminals “MB” and “-” are linked to the “BO” and “-” terminals (the “BUS out”), while the video signal of the “V1” and “V2” coming from the main bus are sent to the video output terminals (only for 2206V) “V1O” and “V2O”.

#### During the call:

- If the call is from a block entrance, the system connects the “BUS Out ” (terminals “BO” and “- ”) with the “ Local BUS” (entrance terminals “LB” and “-”) and connects the video outputs (only 2206V)

“V10” and “V20” to the terminals “V1L” and “V2L” (connected to the local camera), connecting the block entrance with the user required (during the conversation all other users in that block will be busy for the length of the “local call”).








- If the call arrives from a main entrance, the system leaves the “BUS” connections and the video outputs (only 2206V) in stand-by mode and, for the length of the call, the users’ line of the main entrance will be busy.









#### Programming

The programming of the 2206A-2206/V consists in the configuration of the internal 4 way Dip-switch to indicate the number of intercoms connected to the output (Eg. A block with 37 intercoms connected: Dip-switch 1/2/4=OFF, 3=ON). This programming is used to adjust the impedance of the system according to the phones connected; a wrong configuration could cause feedback (“Larsen” effect). See the following table for the correct programming.

#### Operation Notes

On long runs if the video signal deteriorates we recommend use the **V2P** and **V1P** outputs to the following block which supplies a reconditioned video signal to the rest of the system.

No. Of Intercoms	DIP-SWITCH				
	1	2	3	4	
up to 10	ON	OFF	OFF	OFF	
up to 20	OFF	ON	OFF	OFF	
up to 30	ON	ON	OFF	OFF	
up to 40	OFF	OFF	ON	OFF	
up to 50	ON	OFF	ON	OFF	
up to 60	OFF	OFF	OFF	ON	

No. Of Intercoms	DIP-SWITCH				
	1	2	3	4	
up to 70	ON	OFF	OFF	ON	
up to 80	OFF	ON	OFF	ON	
up to 90	ON	ON	OFF	ON	
up to 100	OFF	OFF	ON	ON	
up to 110	ON	OFF	ON	ON	
up to 120	OFF	ON	ON	ON	
up to 150	ON	ON	ON	ON	

#### Technical specifications

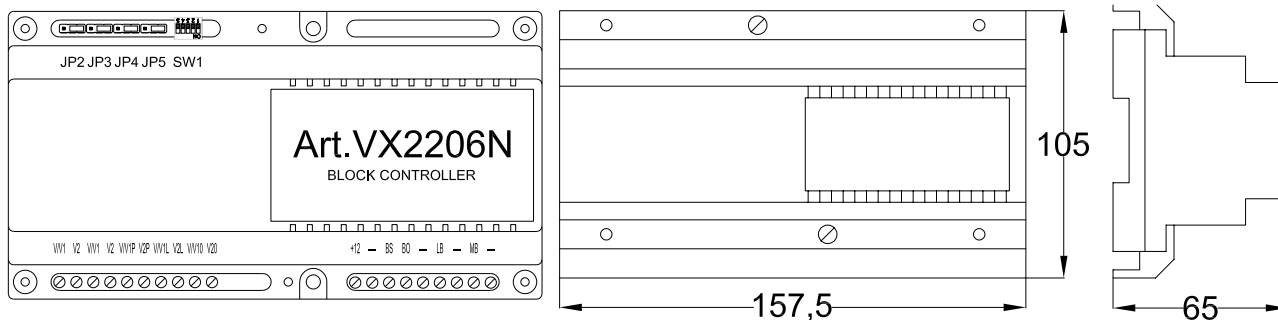
Working voltage	: 13 Vdc +/- 10%
Max. absorption (audio)	: about 100 mA
Max. absorption (audio+video)	: about 350 mA
Working Temperature	: -10 +50 C°

## BUS EXCHANGE DEVICES (2206N)

The 2206N is a powerful device which allows the system to be expanded up to 998 apartments. There are two applications in which this unit can be used.

The first application is a system with both main entrances and sub entrances/blocks (Main entrances which call all apartments on a system and sub/block entrances which only call the apartments in their own block). In this application, a 2206N would be required for each block.

The second application is a single level system with up to 10 entrances whereby all entrances need to call all apartments. In this application, a 2206N would be required for every 180 apartments and could be used to expand the system up to 998 apartments (i.e. 500 apartments would require a minimum of 3x2206N).



### Operation

#### In stand-by mode:

The signal from the local entrance terminals “LB” and “-” are linked to the “BO” and “-” terminals (the “BUS out”), while the video signal of the “V1/V-L” and “V2-L” coming from the local entrances are sent to the video output terminals “V1/V-O” and “V2-O”.

#### During the call:

- When a call is from a main entrance, it sends serial data to communicate with a 2206N (Based on the 2206N's address). If BS (Local busy) is high (12Vdc = Not busy)) on the 2206N, the call will be put through to the block, the system connects the “BUS Out ” (terminals “BO” and “- ”) with the “ Main BUS” (entrance terminals “MB” and “-”) and connects the video outputs “V1/V-O” and “V2-O” to the terminals “V1/V” and “V2”, connecting the main entrance with the user required. If the BS is low (0V), the local panel(s) already have a call in progress, then the main panel will receive a busy message and must wait until the local call ends.
- If a local call is made while a main entrance call is already in progress to that block, the local panel will get a busy message and must wait for that call to end.

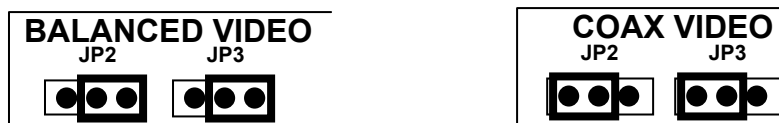
### 2206N CONNECTIONS

Connection	Function
+12	12Vdc supply input
-	0V from supply
BS	Busy connection to local entrances
BO	Bus output to apartments
-	0V to apartments
LB	Bus from local entrances
-	0V from local entrances
MB	Bus from main entrances
-	0V from main entrances
V/V1	V1 of balanced video or centre core of coax video from main entrances
V2	V2 of balanced video from main entrances (Not used in coax mode)
V/V1	V1 of balanced video or centre core of coax video loop through to next 2206N
V2	V2 of balanced video loop through to next 2206N (Not used in coax mode)
V/V1-P	V1 of balanced video or centre core of coax video powered loop through to next 2206N
V2-P	V2 of balanced video powered loop through to next 2206N (Not used in coax mode)
V/V1-L	V1 of balanced video or centre core of coax video from local entrances
V2-L	V2 of balanced video from local entrances (Not used in coax mode)
V/V1-O	V1 of balanced video or centre core of coax to apartments
V2-O	V2 of balanced video to apartments (Not used in coax mode)

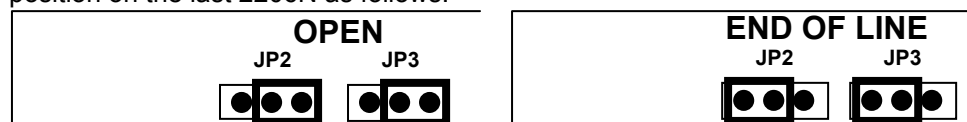
NOTE: When using coax for the video, the screens should all be terminated together (and soldered) in a connection block.

## 2206N SETTINGS

Jumpers JP2 and JP3 are used to set the video signal type to either balanced (Twisted pair) or coax as follows:-

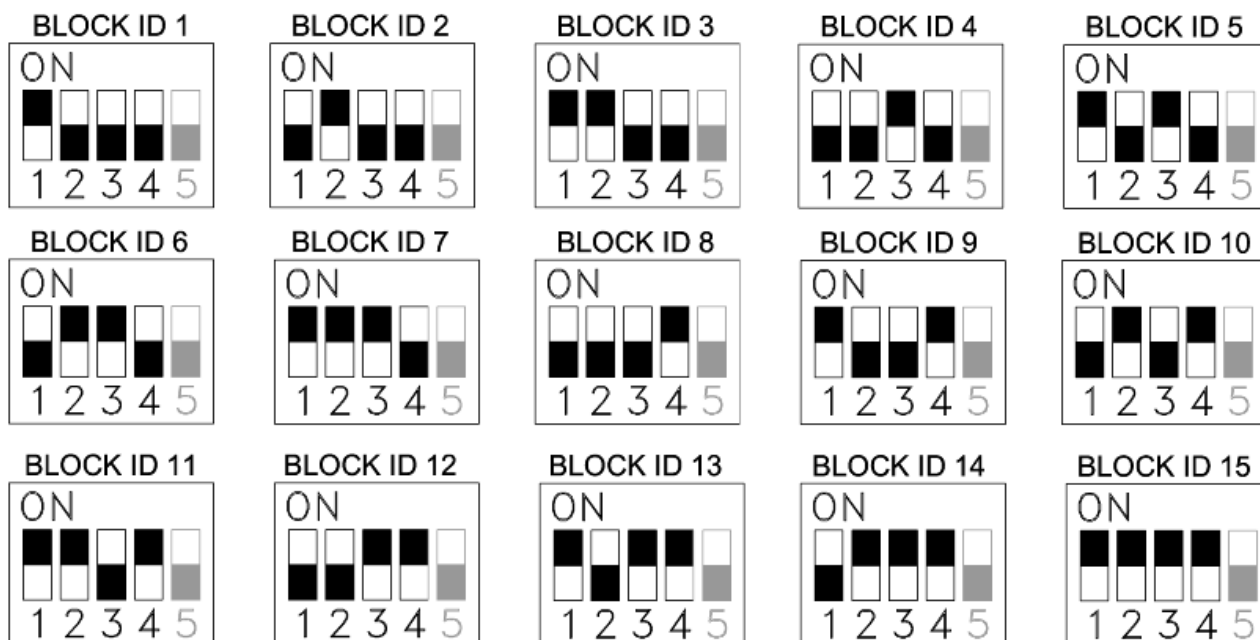


Jumpers JP4 and JP5 are used to terminate the video end of line. They should only be in the end of line position on the last 2206N as follows.



Dip-switches 1 – 4 are used to address the 2206N. Each 2206N must have a unique address. The address will be used when programming the main entrance panels on a system. Dip-switch 5 should be set to ON if there are no local entrances connected to the 2206N and set to OFF if there are local entrances connected to it.

### SWITCHES 1 - 4

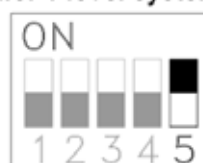


### SWITCH 5

ENTRANCE PANEL  
CONNECTED TO LB & -  
(i.e. 2 level system)



NO ENTRANCE PANEL  
CONNECTED TO LB & -  
(i.e. 1 level system)




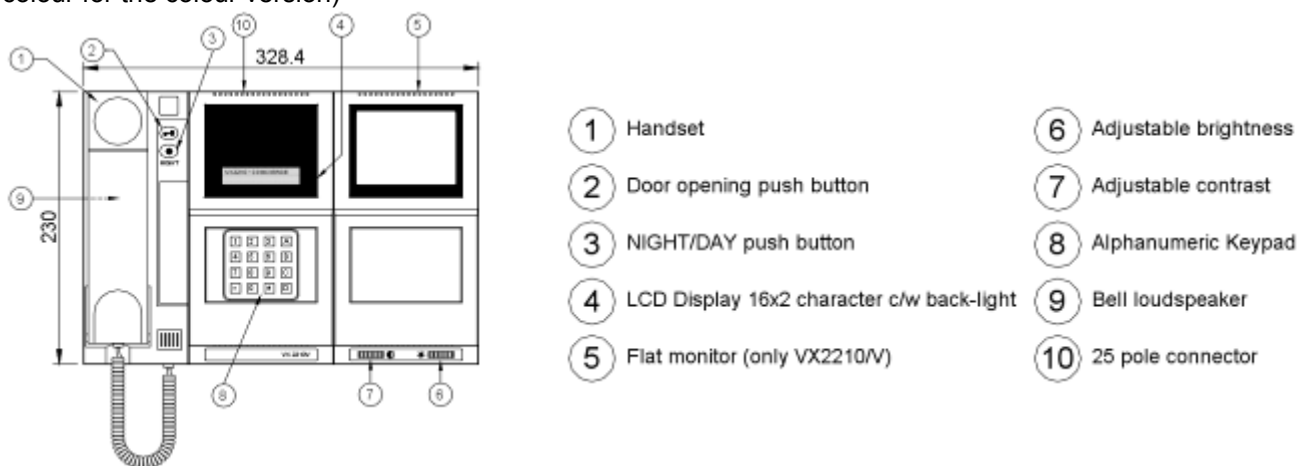
### Technical specifications

Working voltage : 13 Vdc +/- 10%  
Working Temperature : -10 +50 C°



## CONCIERGE UNIT (2210A, 2210V)

The 2210-1 Digital Concierge (V for video version) is based on the 2 wire BUS intercom system (6 wires non-coax for the video systems) and has an alphanumeric keypad with 16 push buttons (from "0" up to "9", "\*", "#", and from "A" up to "H" by means of four buttons with double letter function), a mode (night, day, off) button marked as "●" and a door opening button marked as . It has a 2 line 16 character LCD display with back light showing all visual messages. It also has acoustic messages. This device allows the intercommunication between concierge and user, or between two users, the booking of up to 48 user calls and the storing of up to 48 alarms sent by intercoms and video intercoms on the system. The video version is equipped with a colour or monochrome flat monitor with brightness and contrast controls (brightness and colour for the colour version)



### Operation

The mode button "●" allows the concierge to switch between operating modes. There are 3 operating modes (off/night/day) available. To switch from one to another, press the button until a beep is heard and the message relevant to the current mode is shown on the display.

### Off mode:

The display shows the "**OFF MODE**" message and all functions of the unit are deactivated. The external calls will go directly to the user. The concierge cannot answer internal or external calls and cannot receive alarm signals.

### Day position:

The display shows the "**DAY MODE**" message. All calls pass through the concierge and the operator can use all functions of the unit. The concierge can make and receive calls to and from the apartments and can receive and store all incoming alarms.

### Night position:

The display shows the "**NIGHT MODE**" message. Same operation as "DAY MODE" but the external calls go directly to the apartment with the exception of calls addressed to the concierge (calls made to apartment number with phone ID. "1").

### Calls from outdoor stations:

- In case of a call from the outdoor station the VX2210 concierge generates an acoustic signal, the monitor switches on (for the VX2210/V version) and the displays shows "**D.X – APP:YYYYYY**" where X indicates the door from which the call is coming and YYYYYY indicates the flat number of the called user.
- The operator can divert the call directly to the called user by pressing the "\*" button for 2 seconds without picking up the handset (the display will show the message "**CONNECT**") or can start the conversation by picking up the handset and speaking to the visitor; the display shows "**SPEAK**" and then it shows again the number of the called user. Now the operator can take any of the following steps:
  1. talk and open the door by pressing the door opening button, display shows "**DOOR OPEN**", an acoustic signal will be heard during the opening of the door, the conversation will end and the operator can replace the handset;
  2. call the requested user by pressing "\*" button, the display shows "**CALLING**", the video signal is forwarded to the called apartment (only for video installations), the outdoor station is put on hold and the operator can talk to the user who can then decide to take the call or not.
    - a) If the user accepts the call, the operator must press the "\*" button again, the display shows "**CONNECTED**", the user can talk to the visitor and the operator can replace the handset.

- b) In case the user does not answer (user absent), the operator must press (for about 1 sec) the “#” button to talk to the visitor and close the conversation. In case the user answers and replaces the handset (refusing to talk to the visitor), the operator will be automatically re-connected to the outdoor station.
- In case the number called by the visitor is not the correct one he wants to talk to, or in case the visitor wants to call another user, the operator can pass the call on to another flat by entering the requested number on the keypad and then press the “\*” button. The conversation will start as per above-mentioned point 2.
- If the operator is absent or can't answer, on the display will remain the message “P.X→FLAT:YYYYYY” relevant to the last call received; to delete the message, the operator has to pick up the handset and press the “#” button.

The operator can stop the conversation between the visitor and the user at any time by picking up the handset and pressing the “#” button.

#### Call from an apartment:

The calls from the apartments are logged on the concierge and answered at the discretion of the operator but always in the order of arrival. When an internal call is received, the display shows the generic message “**CALL FROM FLAT**”, the concierge emits an acoustic signal (with different tone) and the operator can take the following steps:

1. Pick up the handset to start answering the booked calls;
2. The display shows the message “**FLAT:XXXXXX→CONC**” where “XXXXXX” is the flat code of the user who has booked the call;
3. The operator can delete the call by pressing the “#” button or answer it by pressing the “\*” button:
  - a) If the operator chooses to delete the call, the concierge restarts from step (2) showing the next booked call (if there are other booked calls), otherwise it goes back to the stand-by condition (the display shows the message relevant to selected operation mode);
  - b) If the operator choose to answer the call, the concierge calls the user;
4. The display shows the message “**CALLING**”; if the apartment doesn't answer, the operator can replace the handset and restart from step (1). If the apartment answers, the display will show the message “**SPEAK**”; operator and user are connected and the apartment can choose to close the conversation or to ask the operator to be connected with another apartment (intercommunication):
  - a) If the apartment replaces the handset, the conversation ends; if there are other calls to answer (the concierge rings) the operator can restart from step (1) otherwise the concierge will return to the stand-by condition;
  - b) If the apartment requests intercommunication with another apartment, the operator must enter the apartment number requested on the keypad and then press the “\*” button;
5. When two users are connected, the display shows the message “**INTERCOM.**” and the operator can replace the handset. As soon as the conversation ends, the concierge goes back to the stand-by condition. The intercommunication can be interrupted at any time by the operator by picking up the handset and pressing the “#” button.
6. If there are other booked calls (the concierge rings) the operator can restart from step (1) otherwise the concierge will go back to the stand-by condition.

Any conversation in progress can be interrupted at any time by an external call (External calls take priority).

#### Call from the Digital Concierge to the apartment

The operator can contact any apartment from the concierge by entering the relevant number followed by pressing the “\*” button;

1. the display shows “**CALLING**”;
2. if the user answers, the display will show “**SPEAK**” and as soon as one of them (operator or user) replaces the handset, the display will return to stand-by. If the user doesn't answer, the operator can delete the call by replacing the handset.

The communication can be interrupted at any time by an external call (External calls take priority).

#### Receiving alarm from an apartment

The concierge can receive and store up to 48 alarms from the apartments.

1. the concierge starts to emit an acoustic signal on every alarm received and at the same time the display shows the message “ALARM” until the operator examines all alarms;
2. to examine the received alarms, the operator must press for 1sec the “A” button without picking up the handset; then the display will show the message “**ALARM:XXXXXX**” on the first row and the message “**N:YY**” on the second row where “XXXXXX” is the code of the flat where the alarm has been triggered from and “YY” is the number of alarms to examine including the one shown. If the concierge has other alarms to examine (“YY” higher than 1) restart from the beginning of this point to examine all.

When “YY” = 1 (last alarm), the concierge stops emitting the acoustic signal; press the “A” button again and

the concierge will return to stand-by mode.

#### Operation notes

- To use the letters from "E" to "H" press twice the relevant button: "A" becomes "E", "B" becomes "F", "C" becomes "G" and "D" becomes "H";

#### Opening the speech from the concierge to a door station without being called first

With the concierge in DAY or NIGHT mode, pick up the handset, select a number from 1 – 9 (For doors addressed from 1 – 9) and then press the "●" button. The display will show 'SPEAK' once the speech path has been established.

#### Opening a door from the concierge without being called first

With the concierge in DAY or NIGHT mode, pick up the handset, select a number from 1 – 9 (For doors addressed from 1 – 9) and then press the "→" button. The display will show 'DOOR OPEN'.

#### Programming via the concierge keypad and display

The "VX2210 PROGRAMMING" flow chart shows how to proceed with the programming of the unit.

During the data input, the "\*" button confirms the programmed data while if an error occurs, the "#" button will delete the programmed data

- Remove the supply from the concierge (disconnect the Concierge cable from the wall connection or power down the whole system);
- Press "\*" button and reconnect the supply to the unit (connect the Concierge cable or power up the whole system), then release the button;
- The display will show "MEM LOCATION:", enter on the keypad the number (from 1 to 254) of the memory location to store/modify and confirm by pressing "\*" button. Pressing the "\*" button twice at this step without inserting any data, causes the exit from programming mode and the concierge is switched back to "night" mode.
- The display will show "FLAT:", enter the flat code on the keypad (an alphanumeric string of 6 char max) or leave unchanged (if one is present) and then confirm with "\*" button;

The display will show "ID PHONE:", type the phone ID (already programmed by means of the Dip-switch inside the VX2200 telephones, it is a number from 1 to 180) or leave unchanged then press "\*" button.

#### Programming via the concierge RS232 connection

The RS232 connection can be found on the top edge of the concierge (Jack socket). Connect the lead supplied with the programming software kit between the jack socket and the serial port of the PC. The concierge must be switched into OFF mode when programming. To do this, press the "●" button on the concierge telephone repeatedly until the display shows 'OFF'. To program via the PC follow the instructions supplied with the PC software (Note. Follow the same procedure to program the Concierge as would be used to program a digital door panel).

In addition to the programming carried out through the keypad, the concierge has an internal 4 way dip-switch that adjusts the following settings:

Switch	Status	Operation
1	OFF	
	ON	Divert a call to the addressed 180 after 20secs without an answer.
2	OFF	
	ON	Enable parallel connection of 2 concierges. This switch must be set "ON" for Both concierges.
3	OFF	
	ON	Enable the use of Art.2204 isolation PCB's.
4	OFF	
	ON	Disable alarm reception. Alarms can instead be processed by one or more Art.512DR if installed in the system and addressed as 255.

Two adjustment POT's are also located within the concierge. The one to the right of the PCB adjusts the speech balance towards the apartments and the one to the left adjusts the speech balance towards the doors.

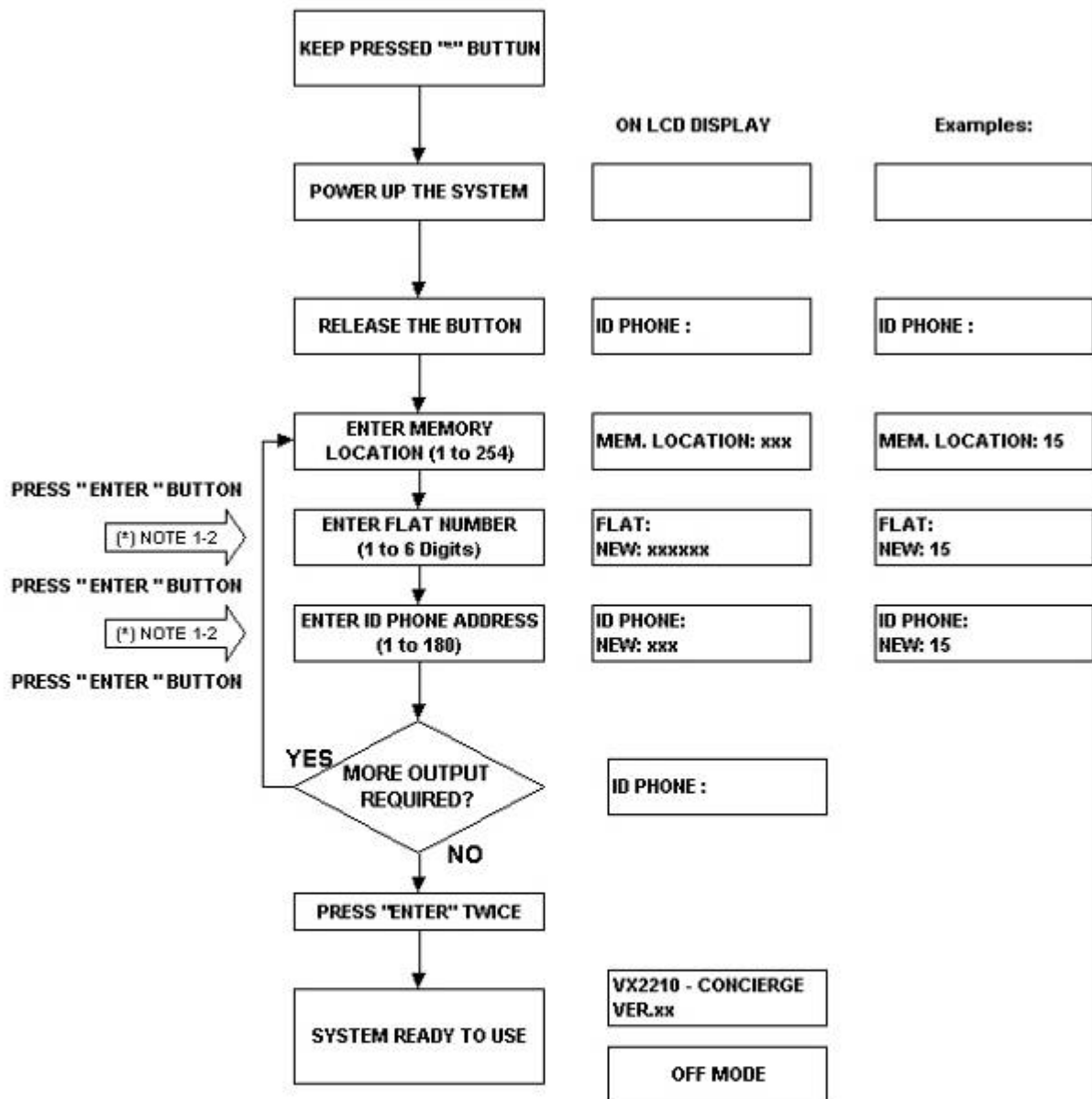
#### Programming Notes

- The programming (combining the phone ID address and the apartment number) must be the same as "2202" door units or must correspond to the call button on the unit "2203" in order to have the correct flat number on the concierge display.
- During the programming, the system is off line and no calls will go through;
- The insertion of incorrect values is indicated by error messages. The unit will wait for a correct input before moving on.

#### Technical specifications

Memory capacity : 254 memory locations  
Working voltage : 13 Vdc +/- 10%  
Max. absorption : about 350 mA  
Working temperature : -10 +50 C°

## VX2210-1 PROGRAMMING



### (\*) NOTE 1

PRESS "CLEAR" BUTTON TO  
CANCEL THE LOCATION.

### (\*) NOTE 2

DURING THE PROGRAMMING  
TO CONFIRM THE STORED  
VALUE, PRESS "ENTER"  
TWICE.

## 2280 Bus Interface device

### Description

The Art.2280 enables the connection of either the Videx Telephone Interface (Art.380) or the Videx apartment station (Art.500MM) to the VX2200 system.

Using this device (built into a 5 modules DIN box) it is possible to carry out all the functions available on the VX2200. For example, answer a call from the door panel (and if necessary open the door), call the concierge (if present on the system) and intercommunicate with another user (via concierge).

The system draws power directly from the "2 wire" Bus (consumption < of 0.8mA) and from either the 380 or the apartment station power supply (12Vdc). It includes an 8 way Dip-switch for programming the device with the phone ID address and a trimmer control for the audio volume towards the door panel.

It is possible to connect up to 180 devices on the same "2 wire" Bus, with the possibility to use the same address for a maximum of 3 devices (for those applications that require more than one unit in the same apartment).

Use VX2280 version with 900 series and VX2280-1 with 3000 series.

### Operation

In Stand-by mode:

The unit is ready to receive a call.

To answer a call:

**Art.380** → Pick the handset up and speak with the visitor or concierge; press the relevant button to open the door (see 380 manual) and/or replace the handset to end the conversation.

**Art.500MM** → Press the "TALK" button to speak with the visitor or concierge, release the button to listen, press the "OPEN" button to open the door and then wait for the time-out to end the conversation.

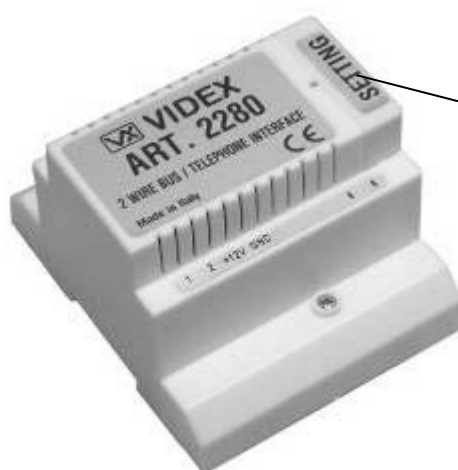
To call the concierge (if present):

**Art.380** → Pick the handset up, press the relevant button to open the door (see 380 manual) and wait for an answer.

**Art.500MM** → Press the "TALK" button, press the "OPEN" button and wait for an answer.

### Programming

Remove the "Settings" cover from the device, set the 8 way Dip-switch with the required address. In case of mismatched audio level (towards the outdoor station), adjust the trimmer next to the Dip-switch.



Dip-switches and microphone volume POT can be found under this side cover.

### Technical Specifications:


Addressing range	: from 1 to 180
Working voltage	: Bus line voltage and 12V
Stand by absorption/maximum on the BUS	: <0.8mA and about 10mA
Stand by absorption/maximum on the 12V	: Approx. 5mA
Working temperature	: -10 +50 °C

## Audio Telephones (3171, 3172 & 3176)

### Description

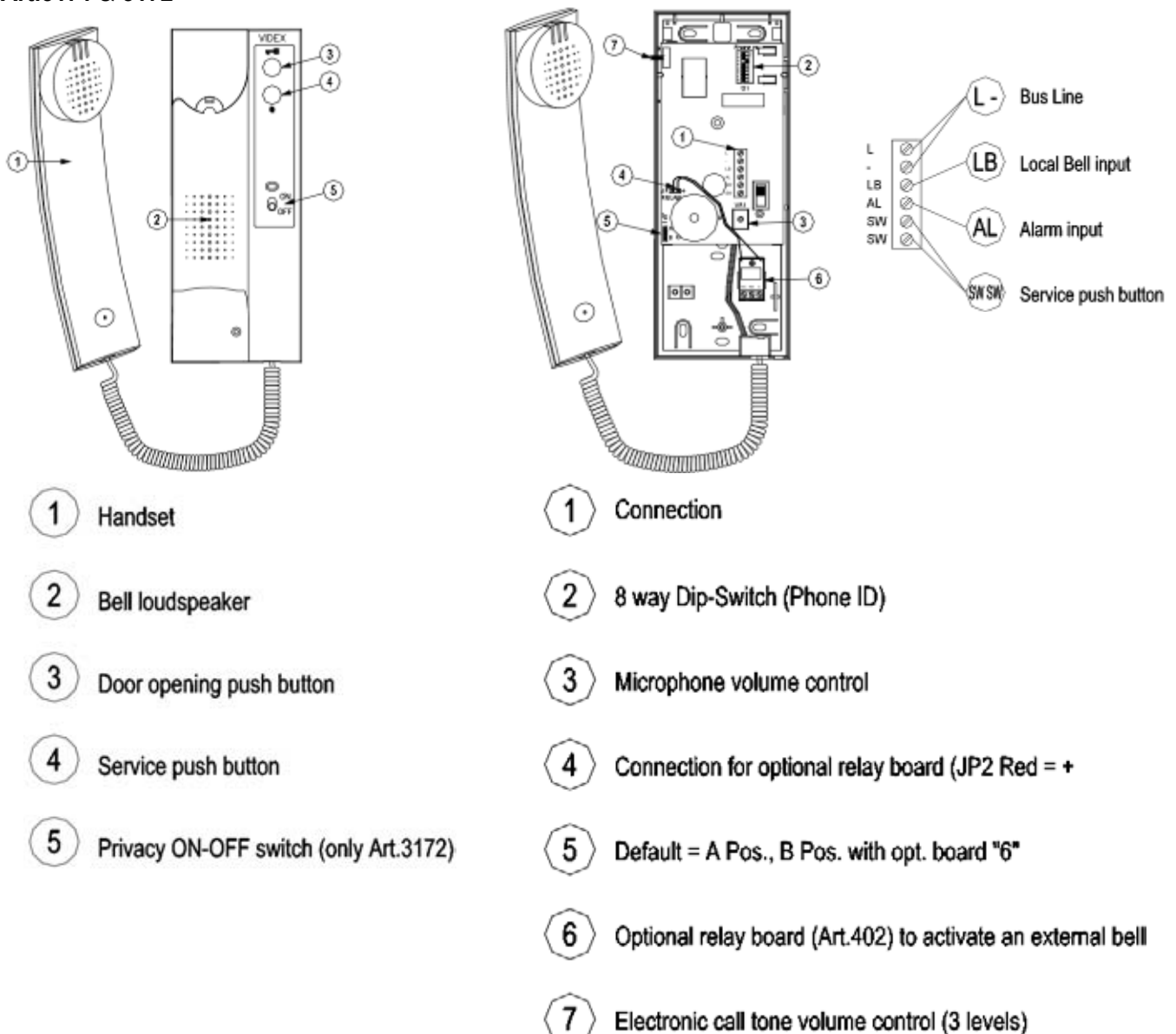
The Art.3171 is a digital intercom based on the “**2 Wire BUS**”, it includes a door-open button and a service button plus an electronic call tone with a 3 level volume control which can be adjusted by the user. Internally, the intercom, has an 8 way dip-switch to set the PHONE ID, a terminal board with 6 terminals for connection to the bus and other connections and a trimmer (VR1) to adjust the microphone volume. With the 3000 series it is possible to connect up to 180 intercoms on the same system. If required it is possible to give the same address for a max. of 3 intercoms (for applications that require more units in the same apartment). The door-open push button on the Art.3171 is also the “call to concierge” (if present), while the “●” push button shorts terminals “**SW SW**” (Max 30Vac/dc 200mA) when pressed.

The Art.3172 is the same as the Art.3171 with the addition of a privacy switch which activates the “**privacy mode**” (the user can’t receive incoming calls).

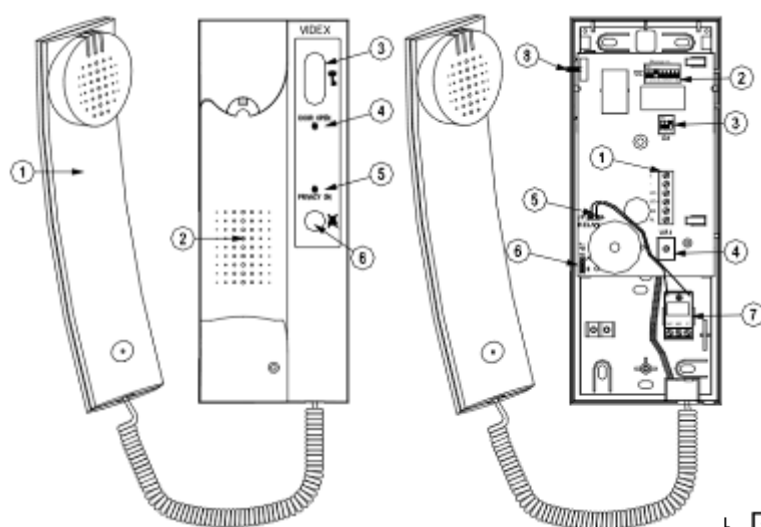
The Art.3176 is similar to the Art.3172 but the “**privacy mode**” is activated by pressing the  push button. It is signalled by the red led “privacy on” and its duration (except when the same push button is pressed again) depends on the 3 way dip-switch (housed inside the intercom). The Art.3176 doesn’t have the service push button but it has a green “door open” led to give the user a visual indication of whether the door is open or closed: to use this service, an additional wire is required from a door contact to the intercom.

All 3 models of intercoms allow the connection of an optional relay board Art.402, for the activation of an external sounder instead of the internal one: the board is housed inside the intercom, connected to the JP2 (red wire on “+” side) and the JP1 jumper (normally on A position) must be moved to the “B” position.

### Art.3171 & 3172



## Art.3176



- 1 Handset
- 2 Bell loudspeaker
- 3 Door opening push button
- 4 DOOR OPEN signalling LED
- 5 PRIVACY ON signalling LED
- 6 Privacy ON-OFF push button

- L - Bus Line
- LD+ DOOR OPEN LED power supply
- LD- Local Bell input
- LB Alarm input
- AL
- 1 Connection
- 2 8 way Dip-Switch (Phone ID)
- 3 3 way Dip-Switch (Length of privacy time)
- 4 Microphone volume control
- 5 Connection for optional relay board
- 6 Default = A Pos., B Pos. with opt. board "7"
- 7 Optional relay board (Art.402) to activate an external bell
- 8 Electronic call tone volume control (3 levels)

### Operation

#### In stand-by mode:

The unit is ready to accept all incoming calls;

#### To answer a call and open the door:

Pick the handset up and speak with the visitor (or concierge); press the **"Key"** button (if it is an external call) to open the door (an acoustic signal will be emitted and the door will be opened for the time programmed) or replace the handset to end the conversation; if the call is local (local bell), the call tone will have a different tonality from the main one.

#### To call the Concierge Unit (if present and only VX2210-1 version):

With the handset replaced, press the **"Key"** button and wait: the call is booked on the concierge and will be answered at the discretion of the operator;

#### To activate the service relevant to the ● push button (except the Art.3176):

Press the push button and the connected service will operate. Making some simple connections. It is possible to use this push button as an "alarm" push button: make a short between one of the **"SW"** terminal and the **"-"** terminal and then connect the free **"SW"** terminal to the **"AL"** terminal. The signal generated will be received by the concierge and/or by the Art.512DR to activate an additional service.


To select the desired melody (3171 & 3172 only):

1. Keep the “**key**” button pressed until (after about 10 seconds) the intercom plays the active melody; at the end of melody play, the intercom will emit a beep (end of play);
2. Listen to the available melodies (by pressing and releasing the “**key**” button).
3. After the end of play beep if you don't press the “**key**” button within 3 seconds, the last melody heard is selected.

The selected melody will play the number of times (3 or 6) programmed

To switch on the privacy mode:

- For the Art.3172 put the switch into the ON position. The small window over the switch will be RED;

For the Art.3176 press the push button marked as ; the red LED “privacy on” will illuminate.

## Programming

Programming is carried out by setting the internal 8 way dip-switch to the positions shown on the decimal/binary conversion table of this manual.

For the Art.3176 it is necessary to additionally set the internal 3 way dip-switch, to set the duration of the privacy time, shown on the table below.

DIP SWITCH S1			Time	DIP SWITCH S1			Time
1	2	3		1	2	3	
off	off	off	unlimited	off	off	on	2 hours
on	off	off	15min	on	off	on	4 hours
off	on	off	30min	off	on	on	8 hours
on	on	off	1hour	on	on	on	16 hours

Set the number of rings

The standard setting is 6 rings.

Change the rings setting as follows:

- Switch off the intercom disconnecting the “**L**” wire;
- Short-circuit terminals “-” and “**LB**”;
- Switch on the intercom by connecting again “**L**” wire;
- Remove the short-circuit as soon as the intercom emit the confirmation beeps:
  - if two beeps are emitted, rings are set to 6
  - if one beep is emitted, rings are set to 3

Repeat again the operation if the number of rings set is not the required one.

## Connections:

L	“BUS” bus connection.
-	
LB	Local bell input (trigger to ground).
AL	Alarm input (trigger to ground).
	The alarm generated by this input will be sent to the concierge (if present) and will be intercepted by the Art.512DR if present and correctly configured.
SW (only 3171, 3172)	Service push button terminals
SW (only 3171, 3172)	
LD- (only 3176)	Terminals for “Door Open” led supply
LD+ (only 3176)	

## Technical Specifications

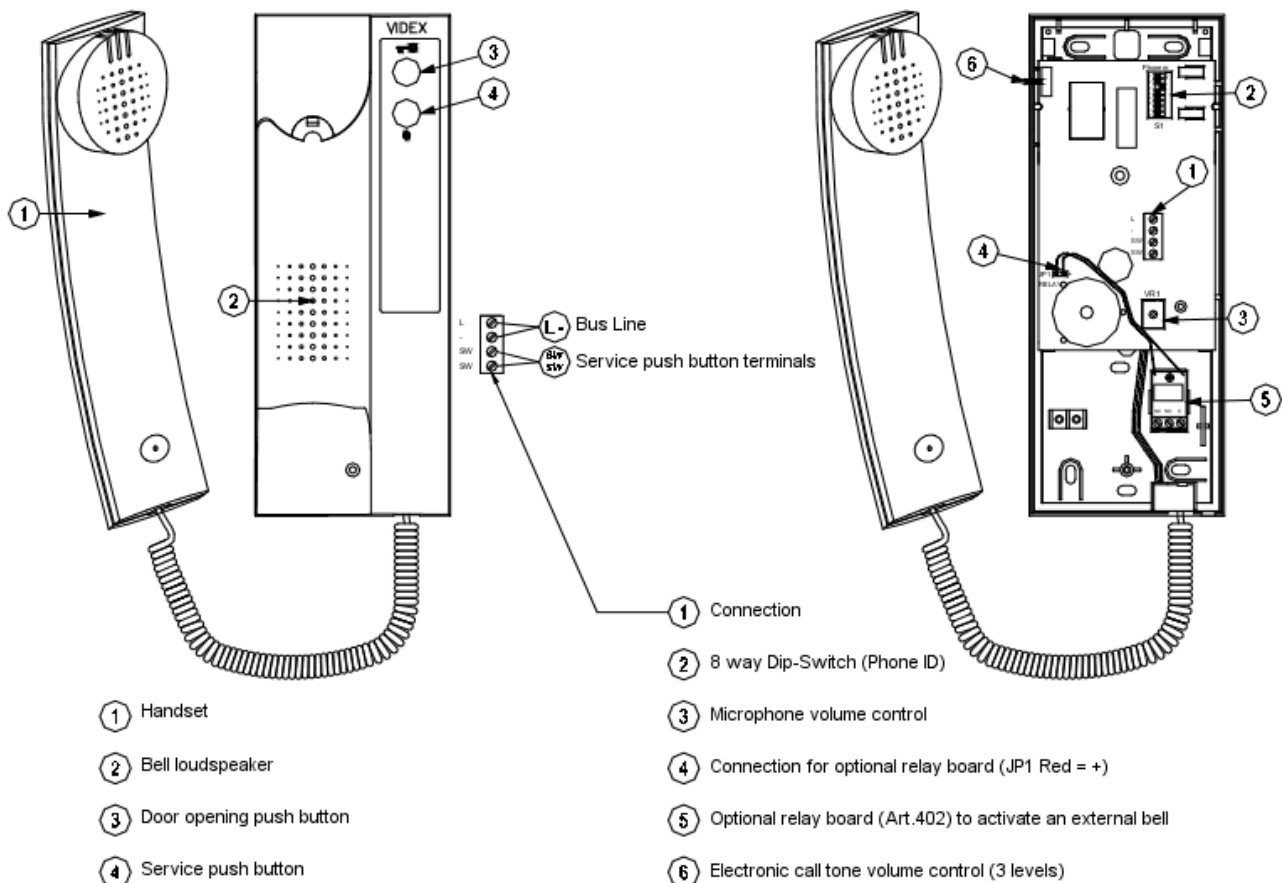
Addressing range	: from 1 to 180 (BIN code)
Working voltage	: BUS line Voltage
Stand-by absorption	: about 0.6 mA
Phone max. absorption	: about 80mA
Working temperature	: -10 +50 C°



## Low cost Audio Telephones (3161, 3162)

### Description

These telephones have a reduced number of connection terminals: the local bell terminal and the alarm input terminal are not available. The "●" push button works on the terminals "SW SW" (Max 30Vac/dc 0,2A). The intercom allows the connection of an optional relay board Art.402, for the activation of an external sounder : the board is housed inside the intercom and connected to the JP1 (red wire on "+" side). It is possible to connect up to 255 of these intercoms on the same system. If required it is possible to give the same address for a max. of 3 intercoms (for applications that require more units in the same apartment). The Art.3161 can be used only on audio systems without digital concierge and these phones can not be mixed with other phones such as 3171, 3172 or 3176.



### Programming

Programming is made by setting the internal 8 way dip-switch to the positions shown on decimal/binary conversion table in this manual.

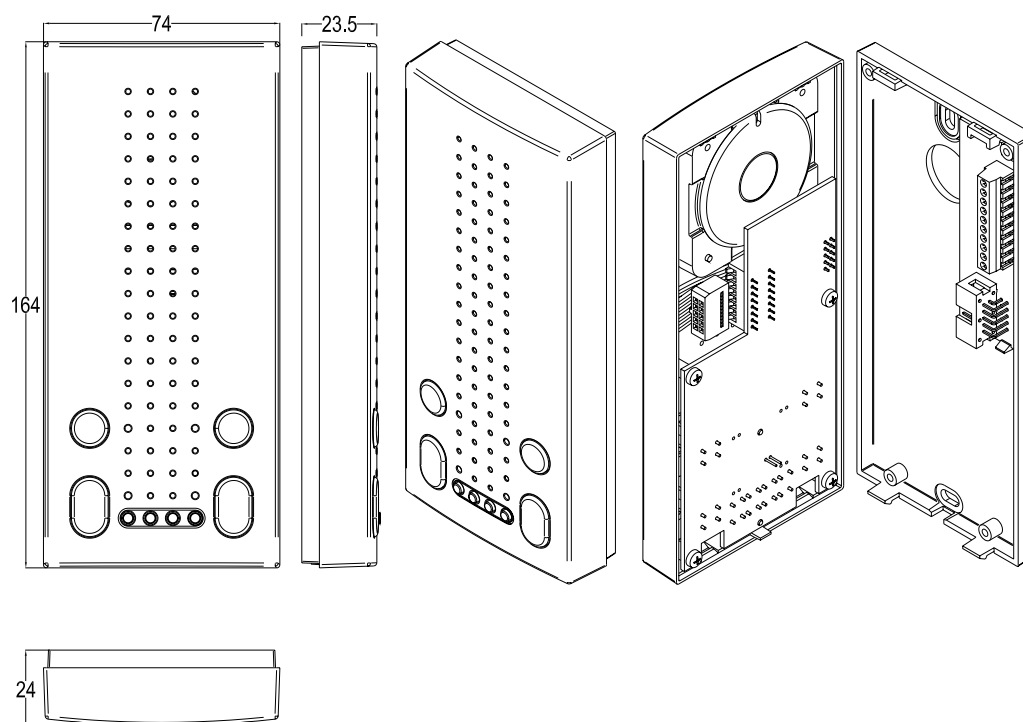
### Operation

The intercom works as the Art.3171 with the exception of concierge, local bell and alarm functions.

### Technical Specifications

Addressing range	: from 1 to 255 (BIN code)
Working voltage	: BUS line Voltage
Stand-by absorption	: about 0.6mA
Phone max. absorption	: about 80mA
Working temperature	: -10 +50 C°

## Audio apartment station (5178)



### Description

The 5178 is an audio apartment station available in white, silver or carbon fibre ABS plastic and is a surface mount unit which connects to the VX2200 bus via a 4 wire bus. The apartment station has half duplex speech (Handsfree speech) and the facility to switch into simplex speech mode by holding the talk/answer button down. The apartment station includes the following buttons.

PUSH BUTTONS, LED'S AND CONTROLS	
●	Service push button - When pressed, shorts terminal "S1" to terminal "GND" (ground).
🔊	Answer button - On an incoming call, operation of this button allows the user to answer and converse with the visitor. The LED next to the button will illuminate.
	Switch off button - With the system switched on (Call in progress), momentary operation of the button will switch the apartment station off. The apartment station will also automatically switch off after a time delay if the button is not pressed. The LED next to the button will go off.
	Simplex button - Pressing and holding the button for more than 3 seconds will switch the apartment station into SIMPLEX speech mode. Press and hold the button to speak to the caller (The LED next to the button will flash rapidly), release the button to listen (The LED will flash slowly). If the button is not pressed for 10 seconds the apartment station will switch off. The apartment station will revert to duplex speech when another call is made.
🔒	Privacy on-off button - Press enable/disable the service. The LED next to the button will illuminate when the privacy service is enabled..
🔑	Concierge call button - While in standby, press this button to call the concierge (If service is available).
	Door open button - During a call, operation of this button will activate the "door open" relay (NO1, NC1, COM1).
🔊	Calltone volume controls - 3 levels available. Press the left key to decrease volume and the right to increase volume.
🔔	Choose calling melody - 9 melodies available. See programming section for operation of these buttons.

### Connections


Description	Signal	Terminal
One side of the ● service button	SB	1
Door open & AUX LED ground	-LD	2
+12V dc input to power the apartment station	+12V	3
0V supply input and bus ground	GND	4
Bus line (Data/speech)	L	5
Local door bell input (Triggered by 0V)	LB	6
Alarm button input (Triggered by 0V)	AL	7
Other side of the ● service button	SA	8
AUX LED +12V input	AUL	9
Door open LED +12V input	DOL	10

## Programming



Programming is carried out by setting the internal 8 way dip-switch to the positions shown on the decimal/binary conversion table of this manual.

### Additional programming options include:




#### Programming the Melodies (factory preset melody 1)

- Press and hold the two melody buttons “” (for approx 10 seconds) until the unit plays the current stored melody and emits a beep.
- Press the melody button again (left or right) to listen to the available melodies (maximum 9).
- When the chosen melody has been reached, do not press any buttons wait 3 seconds for the exit beep.
- The new melody is now stored.



#### Programming the Number of Rings (factory preset = 6 rings)

- Press and hold the “” button (for approx 10 seconds) until the unit emits a beep.
- Press the “” button as many times as the number of rings required (i.e. 6 presses = 6 rings with a maximum of 9 rings)
- Once the number of rings required has been reached, wait 3 seconds for the exit beep.
- The new value is now stored.

#### Programming the Privacy duration (factory preset = without time out)

- Press and hold the “” button (for approx 10 seconds) until the unit emits a beep.
- Press the “” button again to set the privacy duration. Each time the button is pressed, it will increase the privacy duration by 15 minutes (starting from 0 up to a maximum of 20 hours i.e. pressing the button 8 times = 2 hours up to a maximum of 80 presses for 20 hours). Once the required privacy duration has been reached, wait 3 seconds for the exit beep. To set the privacy with no time out Press and hold the “” button (for approx 10 seconds) until the unit emits a beep do not press any other button wait 3 seconds for the exit beep.
- The new value is now stored.

#### Restore to factory defaults

- Power up the intercom keeping pressed the “” button;
- The intercom will emit a beep to confirm the operation;
- Release the “” button.

## Technical Specifications

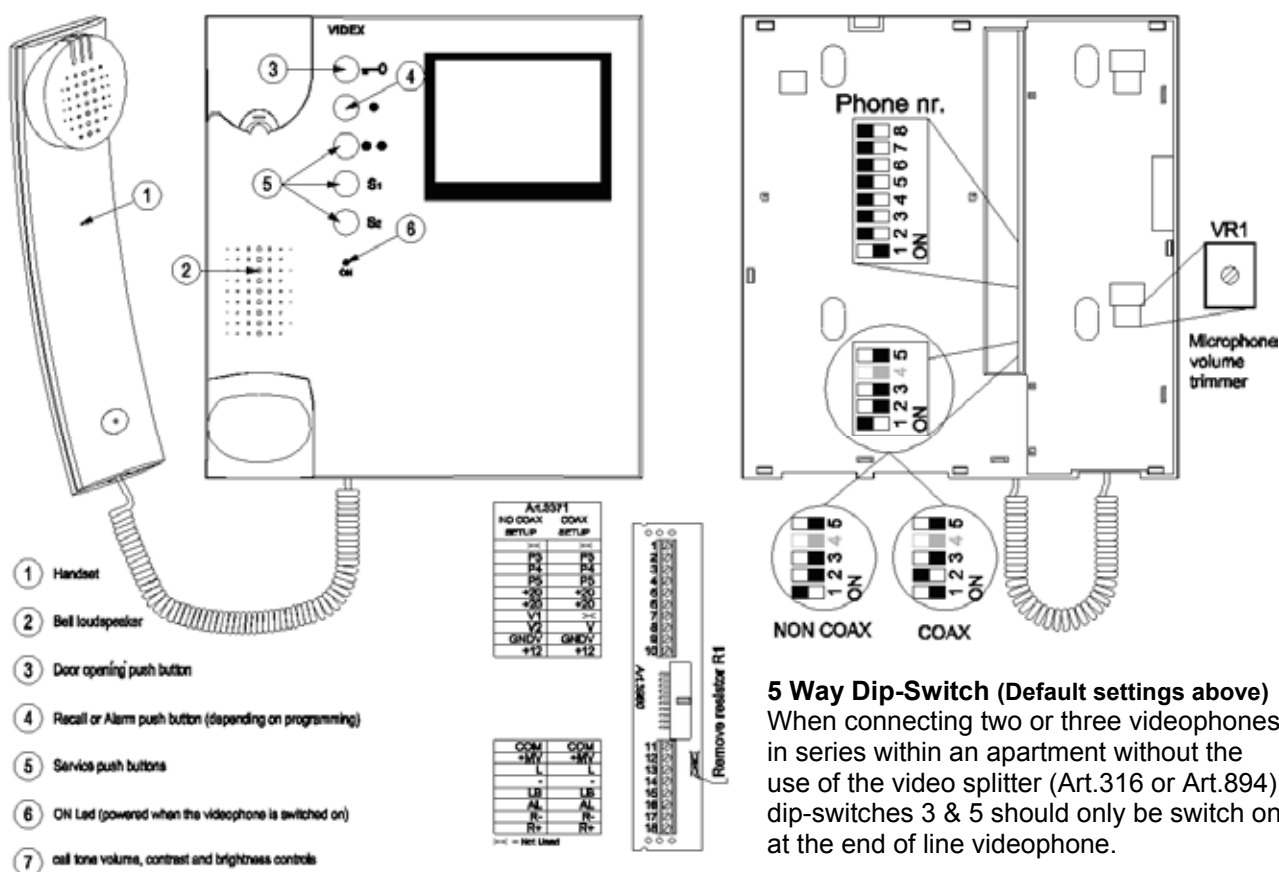
Addressing range	: from 1 to 180 (BIN code)
Working voltage	: 12Vdc
Stand-by absorption	: about 6mA
Phone max. absorption	: about 50mA
Working temperature	: -10 +50 C°

## Videophones (3371, 3471, 3376 & 3476)

### Description

The Art.3371 is a digital videophone based on a “6 Wire BUS”, it includes 5 push buttons; a door-open button, an alarm or camera recall (depending on the settings) button and three general purpose service push buttons. The call is an electronic tone with a 3 level volume control which can be adjusted by the user. The local door bell input has a different tonality from the main call. To connect the videophone to the “BUS”, use the PCB connector provided with the mounting plate Art.3980. The videophone has an 8 way dip-switch to set the PHONE ID, a 4 way dip-switch to set the video system (coax or non coax) and a trimmer (VR1) to adjust the microphone volume; all accessible from the rear side of the videophone. With the 3000 series it is possible to connect 180 videophones to the same system and if necessary it is possible to give the same address to a max. of 3 (for those applications that require more units for the same apartment, it is also necessary in this case to power locally one videophone). The door-open push button on the Art.3371 is also the “call to concierge” (if there is one installed on the system), the “●” push button can operate as a camera recall button (default setting) or as an alarm button (for use with the concierge or with an Art.512DR configured as a generic service relay board) and the three service push buttons close to a common contact (terminal 11 of the PC connection - “COM”)

### Art.3371, 3471 VIDEOPHONE

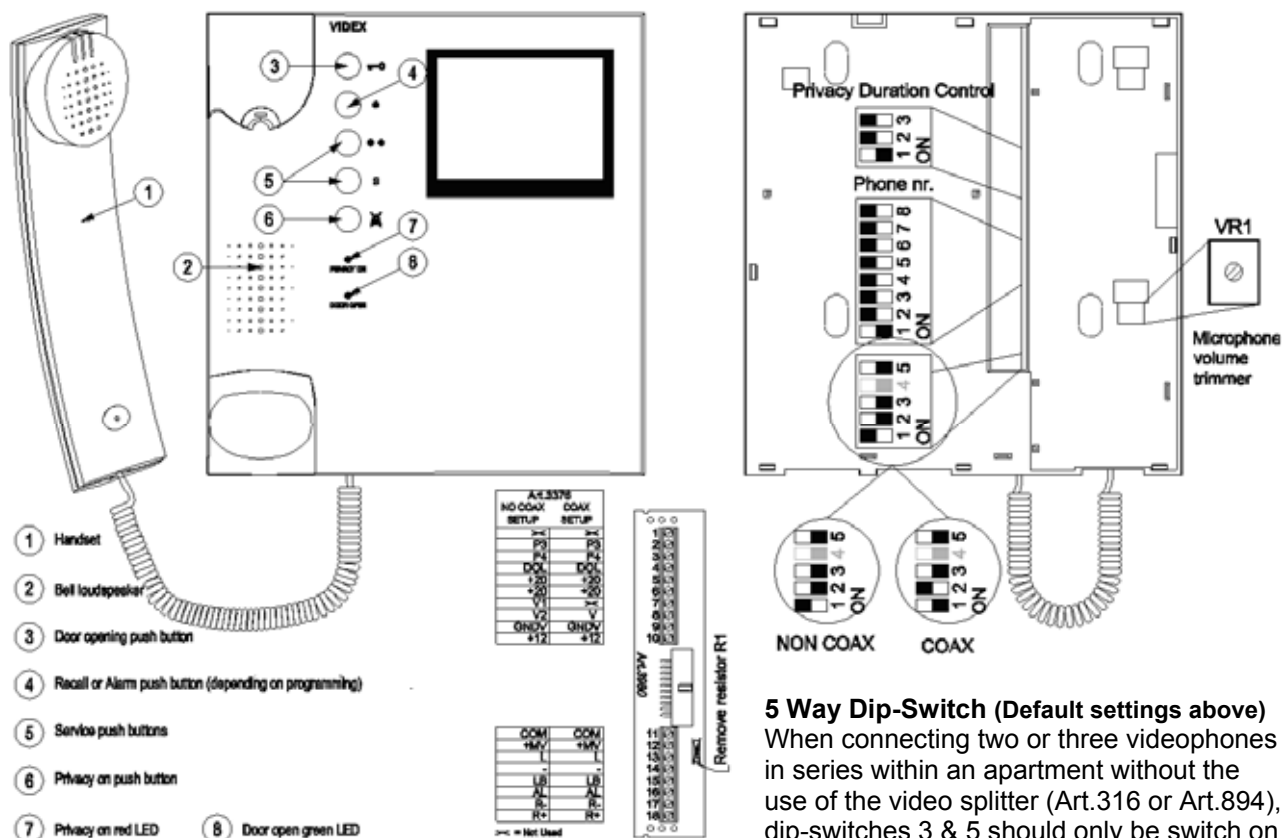


The Art.3376 has one service button less than the Art.3371 but has some additional functions:

- the “**privacy mode**” which is activated by pressing the push button, it is signalled by the red “privacy on” LED and its duration (except when the push button is pressed again) depends on the 3 way dip-switch (accessible from the rear side of the videophone).
- the visual indication of whether the door is open or closed given by the green “**door open**” LED: to use this service, an additional wire is required from a door contact to the intercom.

Both models of videophones allow the connection of an optional relay board Art.402, for the activation of an external sounder instead of the internal one.

## Art.3376, 3476 VIDEOPHONE



### Operation

#### In stand-by mode:

The unit is ready to accept all incoming calls;

#### To answer a call and open the door:

Pick the handset up and speak with the visitor (or concierge); press the “**Key**” button (if it is an external call) to open the door (an acoustic signal will be emitted and the door will open for the time programmed) or replace the handset to end the conversation; if the call is local (local bell), the call tone will have a different tonality from the main one.

#### To call the Concierge Unit (if present and only VX2210-1 version):

With the handset replaced, press the “**Key**” button and wait: the call is booked on the concierge and will be answered at the discretion of the operator;

#### To activate the services relevant to ●●, S<sub>1</sub> & S<sub>2</sub> push buttons:

Press the “●●”, “S<sub>1</sub>” or “S<sub>2</sub>” push button depending on the service you need to be activated (for the use of these services it is necessary to make the appropriate connections).


#### To operate the recall:

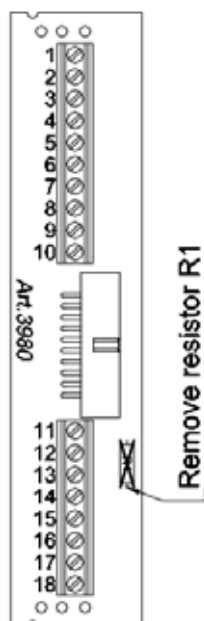
Pick up the handset then quickly press the “●” push button as many times as the ID value (1..10) of the outdoor station to switch on (for example if the ID=3 press the button 3 times). After about 1s the videophone will be connected to the selected outdoor station. An acoustic tone confirms each time the “●” button is pressed. This function can be used only if the push button is configured as a recall button; the concierge, if present, must be in OFF mode. In case of multilevel systems, the recall facility will work with the outdoor station of the main level (Speech will also be opened).

#### To send the alarm signal to the concierge:

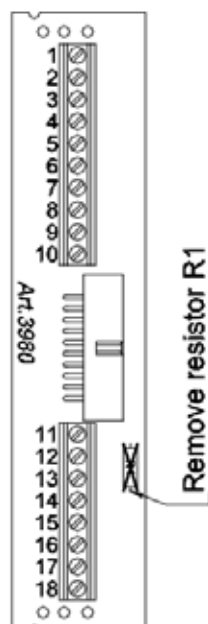
Press the “●” push button. This function can be used only if this push button isn’t configured as a recall button.

#### To activate the privacy mode (Art.3376 only)

Press the push button marked as : the red “privacy on” LED will switch on. To disable the privacy mode before the configured time expires, press the same push button again.



Art.3371 – Description of the signals on the Art.3980 back plate		
	Set as non-coax	Set as coax
1	Not used	
2	<b>P3</b> – Push button ●● shorts to <b>COM</b> when pressed	
3	<b>P4</b> – Push button <b>S<sub>1</sub></b> shorts to <b>COM</b> when pressed	
4	<b>P5</b> – Push button <b>S<sub>2</sub></b> shorts to <b>COM</b> when pressed	
5	<b>+20</b> - +20Vdc monitor power supply	
6	<b>+20</b> - +20Vdc monitor power supply	
7	<b>V1</b> (balanced video signal sync-)	Not used
8	<b>V2</b> (balanced video signal sync+)	<b>V</b> – Coax centre core
9	<b>GNDV</b> Ground reference for video signal	Screen of coax
10	<b>+12</b> - 12Vdc output for coax video distributor Art.894 power supply <sup>1</sup>	
11	<b>COM</b> - Common terminal for P3, P4 and P5	
12	<b>+MV</b> - Ingresso +12Vdc oer alimentazione memoria video <sup>2</sup>	
13	<b>L</b> (Bus Data line)	
14	<b>-</b> (Bus date line GND)	
15	<b>LB</b> - Local bell input (Switch 0V input)	
16	<b>AL</b> - Alarm signal input (Switched 0V input)	
17	<b>R-,R+</b> - Connection terminal for the additional relay board Art.402 (black wire to terminal R-, red wire to terminal R+)	
18		



Art.3376 – Description of the signals on the Art.3980 back plate		
	Set as non-coax	Set as coax
1	Not used	
2	<b>P3</b> – Push button ●● shorts to <b>COM</b> when pressed	
3	<b>P4</b> – Push button <b>S<sub>1</sub></b> shorts to <b>COM</b> when pressed	
4	<b>DOL</b> - Door open LED signal (+12Vdc 5mA signal)	
5	<b>+20</b> - +20Vdc monitor power supply	
6	<b>+20</b> - +20Vdc monitor power supply	
7	<b>V1</b> (balanced video signal sync-)	Not used
8	<b>V2</b> (balanced video signal sync+)	<b>V</b> – Coax centre core
9	<b>GNDV</b> Ground reference for video signal	Screen of coax
10	<b>+12</b> - 12Vdc output for coax video distributor Art.894 power supply <sup>1</sup>	
11	<b>COM</b> - Common terminal for P3 and P4	
12	<b>+MV</b> - Ingresso +12Vdc oer alimentazione memoria video <sup>2</sup>	
13	<b>L</b> (Bus Data line)	
14	<b>-</b> (Bus date line GND)	
15	<b>LB</b> - Local bell input (Switch 0V input)	
16	<b>AL</b> - Alarm signal input (Switched 0V input)	
17	<b>R-,R+</b> - Connection terminal for the additional relay board Art.402 (black wire to terminal R-, red wire to terminal R+)	
18		

#### Notes

<sup>1</sup> The voltage is available when the monitor is switched on and is normally only used on coax video systems.

<sup>2</sup> Only for monitors with memory board Art.35xx.

The programming of this videophone consists of different phases:

- Setting of the PHONE ID made by setting the internal 8 way dip-switch shown on decimal/binary conversion table in this manual;
- Setting of the video system: coax or balanced (non-coax). Refer to the 4 way dip-switch settings shown on the picture on the precious page.
- Setting of the number of rings; the default setting is 3 to set 6 rings operate as follows:
  - a. switch off the videophone by unplugging the flat cable from the PCB connection;
  - b. make a short between terminals 14 and 15 (signals “-” and “LB”) of the PCB connection;
  - c. plug the flat cable onto the PCB connection and wait for a double beep before removing the short between terminals 14 and 15;
  - d. to go back to 3 rings, do the same but wait for only one beep before removing the short between terminals 14 and 15.
- Setting of the “●” push button function; the default function setting for this push button is the camera recall, to set the push button as an alarm call, operate as follows:
  - a. switch off the videophone by unplugging the flat cable from the PCB connection;
  - b. while pressing the “●” push button, plug the flat cable onto the PCB connection and wait for a double beep before release the push button;
  - c. to go back to recall function, do the same but wait for only one beep before release the push button.

When you use the Art.402 for both Art.3371 and 3376, the fourth switch on the 4 way dip-switch should be moved to OFF.

The wires of the Art.402 must be connected as black to terminal 17 (R- signal) and the red to terminal 18 (R+ signal) of the PCB connection.

For the Art.3376 it is necessary to set the duration of the privacy mode by setting the **3 way dip-switch** (accessible from the rear side of the videophone) as shown on the table below.

Dip-Switch			Time
1	2	3	
off	off	off	unlimited
on	off	off	15min
off	on	off	30min
on	on	off	1hour
off	off	on	2 hours
on	off	on	4 hours
off	on	on	8 hours
on	on	on	16 hours

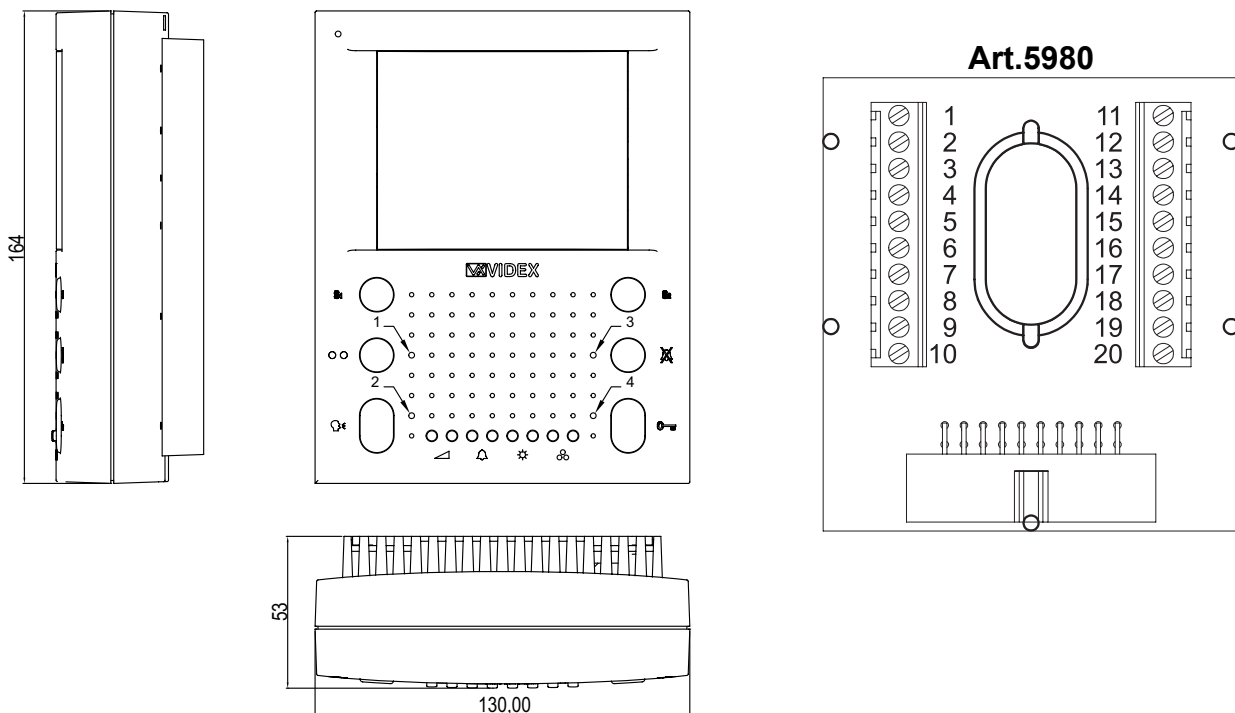
#### Notes

When you have videophones set for coax connected in parallel (Dip-Switches 1=ON, 2=OFF, 3=ON) (max. 3 videophones), for each one except the last (normally the furthest connected) set switch 3 to OFF.

#### Technical Specifications

Addressing range : from 1 to 180 (BIN code)  
 Stand-by absorption : about 0,6 mA  
 Videophone max. absorption : about 400mA (20 Volt)  
 Working temperature : -10 +50 C°

## Video monitor (5478, 5476)










### Description

An intelligent Hands-free (surface or flush mounting) video monitor employing a colour 3.5" active matrix LCD display. The 5478 is available in white, silver and carbon fibre finishes and can be fitted with the optional flush kit or handset kit.

The 5478 includes push buttons for "door open/concierge call", "answer/camera recall", "privacy on/off", "Latching relay activation" and 2 service buttons plus 4 LED's associated with 4 main buttons. In addition to the above the unit has controls for loudspeaker volume, call tone volume, brightness and hue with programmable number of rings, privacy duration and melody.

The buttons and LED's have the following functions:-

PUSH BUTTONS, LED'S AND CONTROLS (FIG.1)	
<b>S<sub>1</sub></b>	Service push button - When pressed, shorts terminal v 12 "S1" to terminal "GND" (ground). (Max 24Vdc 50mA)
● ●	Latching output – Each time this button is pressed it will toggle terminal 14 between ground and open collector. The LED next to the button will illuminate when the output is ground
	Answer button - On an incoming call, operation of this button allows the user to answer and converse with the visitor. The LED next to the button will illuminate.
	Camera recall button - Press as many times as the DEVICE N. of the door station to switch on.
	Switch off button - With the system switched on (monitor on), momentary operation of the button will switch the video monitor off. The videomonitor will also automatically switch off after a time delay if the button is not pressed. LED 2 will switch off.
	Simplex button - Pressing and holding the button for more than 3 seconds will switch the videomonitor into SIMPLEX speech mode. Press and hold the button to speak to the caller (The LED will flash rapidly), release the button to listen (The LED will flash slowly). If the button is not pressed for 10 seconds the videomonitor will switch off. The videomonitor will revert to duplex speech when another call is made.
<b>S<sub>2</sub></b>	When pressed, shorts terminal 13 "S2" to Terminal "GND" (ground). (Max 24Vdc 50mA)
	Privacy on-off button - Press to enable/disable the service. The LED next to the button will illuminate when the privacy service is enabled.
	Concierge call button – While in standby, press this button to call the concierge (If service is available).
	Door open button - During a call, operation of this button will activate the "door open" relay (NO1, NC1, COM1).
<b>1</b>	Auxiliary LED
<b>2</b>	LED to indicate the operation of the answer/switch off/camera recall/simplex button
<b>3</b>	LED to indicate the operation of the privacy button
<b>4</b>	LED to indicate the operation of the door open button
	Loudspeaker volume control
	Call tone volume control
	Brightness control
	Colour intensity control



## Connections

Terminal	Signal	Description
1	+20V	Video power supply input 17-20Vdc
2	+20V	Video power supply input 17-20Vdc
3	GND	Video power ground connection
4	GND	Video power ground connection
5	V2/V	Balanced video V2 input or coax centre core (Set by 4 way dip-switches)
6	V1	Balanced video V1 input
7	L	Data/speech bus input
8	GND	Bus ground
9	LB	Local door bell input (Switched to ground to trigger)
10	AL	Alarm button input (Switch to ground to trigger)
11	GND	Ground
12	S1	S1 push button (Shorts to Ground when pressed)
13	S2	S2 push button (Shorts to Ground when pressed)
14	●●	●● push button (Latching toggle action)
15	+VD	+12Vdc output to power video distribution unit (Art. 894)
16	GND	Ground
17	12VO	Regulated 12Vdc output
18	12VI	+12Vdc power supply input
19	LD	Auxiliary LED +12V input
20	GND	Ground

## 5478 PROGRAMMING



Setup is carried out using the push buttons on the front of the unit and the dip-switches located on the rear of the unit. An eight way dip-switch bank is used to set the address of the apartment as shown in the decimal/binary conversion chart in this manual. Additionally there is a 4 bank dip switch which is used to select the video type (either coaxial or balanced video twisted pair).

4 WAY DIPSWITCH				Video Mode
1	2	3	4	
ON	ON	OFF	ON	Coaxial video (V2 = V)
ON	ON	ON	OFF	Balance video

Switches 1 and 2 adjust the video signal impedance. When using more than one videomonitor (in parallel without a video splitter) put both switches in the OFF position on all but the last videomonitor (end of line).

### Additional programming options include:-

#### Number of rings (Factory default = 6 rings)

- Press and hold (for approx 10 seconds) the “” button until the LED next to the button illuminates and the unit emits a beep.
- Press again the “” button as many times as the number of rings needed (i.e. 6 times = 6 rings, maximum 9 times).
- Once the value of rings has been reached, wait 5 seconds for a beep and the LED turning OFF.
- The new value is stored.

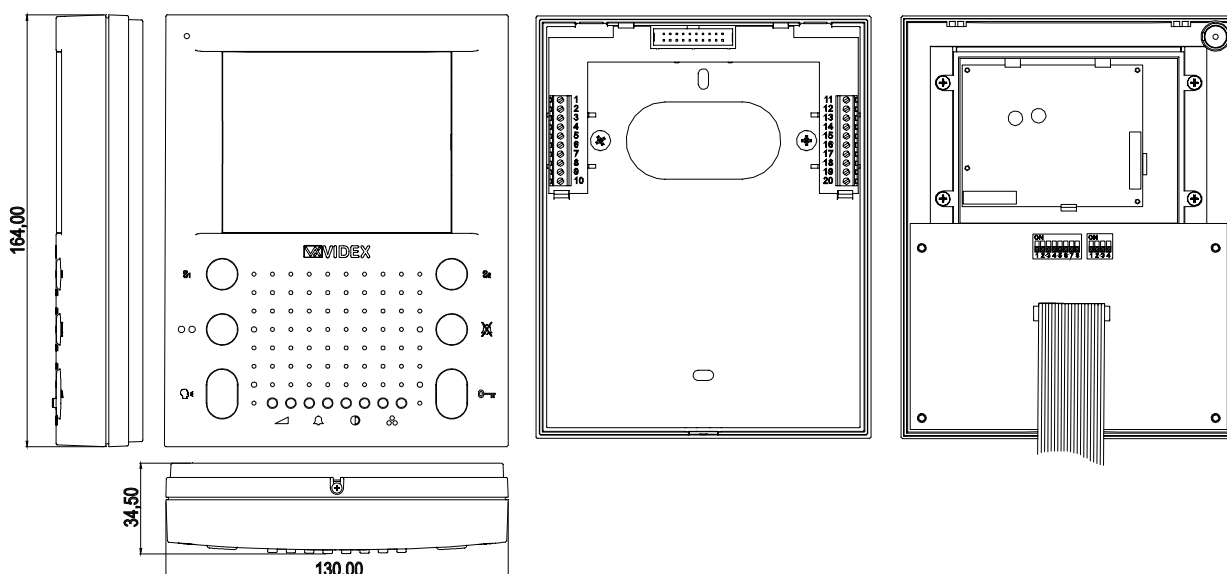
### Privacy duration time (Factory default = No time out)

- Press and hold (for approx 10 seconds) the “X” button until the LED next to the button illuminates and the unit beeps.
- Each time the “X” button is pressed, it will increase (starting from 0) the privacy duration by 15 minutes.
- Press until the required duration has been reached, when reached, wait 5 seconds for a beep and the LED turning OFF.
- The new time will be stored.
- To set the privacy with no time out (privacy enabled or disabled by pressing the “X” button), don't press any buttons once in privacy programming mode and wait 5 seconds for the beep and LED to go off.

### Call tone melody (Factory default = melody 1)

- Press and hold “●●” (or “0-” on the SL5478) for approx 10 seconds until the LED next to the button illuminates and the unit plays the current programmed melody.
- Press again the “●●” button (or the “0-” on the SL5478) to listen to the available melodies (maximum 9). Once the chosen melody has been reached, wait 5 seconds for a beep and the LED turning OFF.
- The new melody will be stored

## Video monitor (SL5478)

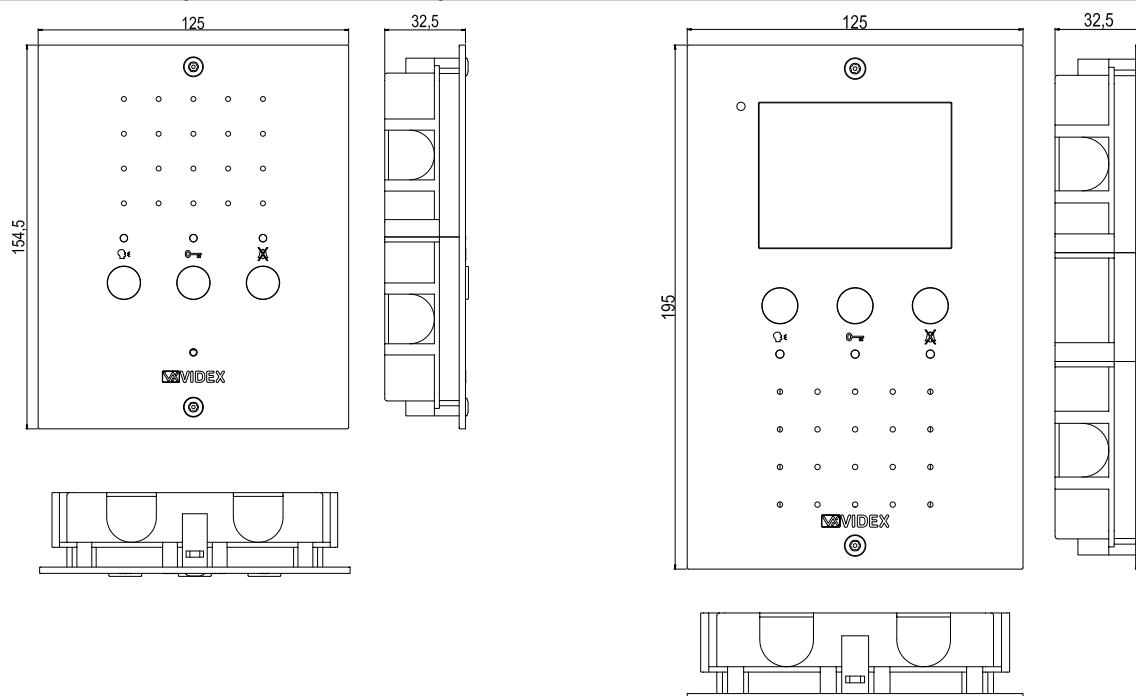


The SL5478 is a slimline version of the 5478. This model is surface mount only and unlike the 5478 does not require a separate mounting plate. Connections, programming, dip-switch settings and functions are the same as the 5478 with the exception of the “●●” button which is non-latching on the SL5478. The “0-” button is also used instead of the “●●” button when programming the call tone melody.

### Technical Specifications




Addressing range	: from 1 to 180 (BIN code)
Stand-by absorption	: approx 12mA standby on 12V input
Call absorption	: approx 70mA max on 12Vdc input (During a call)
	: approx 250mA max on 20Vdc input (During a call)
Working temperature	: -10 +50 C°

## Video monitor (VR5178, VR5478)




### Description

The 5178 is an audio apartment station available in white, silver or carbon fibre ABS plastic and is a surface mount unit which connects to the VX2200 bus via a 4 wire bus. The apartment station has half duplex speech (Handsfree speech) and the facility to switch into simplex speech mode by holding the talk/answer button down. The apartment station includes the following buttons.

PUSH BUTTONS, LED'S AND CONTROLS	
	Answer button - On an incoming call, operation of this button allows the user to answer and converse with the visitor. The LED next to the button will illuminate.
	Switch off button - With the system switched on (Call in progress), momentary operation of the button will switch the apartment station off. The apartment station will also automatically switch off after a time delay if the button is not pressed. The LED next to the button will go off.
	Simplex button - Pressing and holding the button for more than 3 seconds will switch the apartment station into SIMPLEX speech mode. Press and hold the button to speak to the caller (The LED next to the button will flash rapidly), release the button to listen (The LED will flash slowly). If the button is not pressed for 10 seconds the apartment station will switch off. The apartment station will revert to duplex speech when another call is made.
	Privacy on-off button - Press enable/disable the service. The LED next to the button will illuminate when the privacy service is enabled..
	During a call, this button acts as a menu button to enter programming mode.
	Concierge call button – While in standby, press this button to call the concierge (If service is available).
	Door open button - During a call, operation of this button will activate the “door open” relay (NO1, NC1, COM1).

### Connections

Description	Signal
NOT USED	T
+12V output to power 894 video splitter	+VD
+15-20dc input to power video monitor	+20
Balanced video signal 1	V1
Balanced video signal 2	V2
Video ground	-
+12V output (Max 100mA)	+Vo
NOT USED	2
NOT USED	4
+12V input	+VI
Bus 0V	-
Bus line	L1
Local door bell input (Active low)	LB
Alarm input (Active low)	AL5
Service button output (Open collector) Triggered by holding  for more than 3 seconds	SB
Door monitoring LED input (+12Vdc to trigger)	DL

## Programming

Address programming is carried out by setting the internal 8 way dip-switch to the positions shown on the decimal/binary conversion table of this manual.

### Additional programming options:

Programming and adjustment action allows to set the number of rings, the melody and the melody volume, the privacy duration and the speech volume. Additionally on the VR5478 it is also possible to adjust the picture brightness, contrast and hue.

All programming is carried out using the three buttons on the front of the unit. On the VR5417 programming is assisted with acoustic and visual signals (LED's). On the VR5478 programming is shown on the LCD screen.

## VR5178 Programming

When in programming mode, after 3 seconds of idle time, the unit will return to normal operation storing the parameter related to the function that was in progress.

### VR5178 – Setting the number of rings

- When the system is in stand-by, press and hold the “🔊” button until the related LED starts flashing and the intercoms emit a beep.
- Press the “🔊” button as many times (each press is confirmed by a beep) as the number of rings (max 9) required.
- Once the number of rings required is reached (i.e. press 5 times for 5 rings), wait (approx 3 seconds) until the LED switches off.
- The new number of rings is stored.

### VR5178 – Setting the melody and melody volume

- When the system is in stand-by, press and hold (for approx 10 seconds) the “🔊” button until the intercom plays the current melody and the “talk” and “privacy” LED's illuminate. At the end of the current melody the intercom emits a beep and the “talk” and “privacy” LED's start to flash.
  - To adjust the volume of the melody, press (several times or hold) the “🔊” button to decrease the volume or the “🔊” button to increase the volume (the volume of emitted beeps vary according to the button pressed).
  - Each time the “🔊” button is pressed, a new melody (9 are available) is selected: the “talk” and “privacy” LED's stop flashing during play, at the end a beep is emitted and the two LED's restart to flash.
- Repeat the step above to select a new melody otherwise wait approx 3 seconds of idle time (the LEDs switch OFF) without pressing any button to accept the melody played and set the volume as adjusted.

### VR5178 - Privacy duration programming

- Press and hold the “🔊” button (for approx 10 seconds) until the unit emits a beep and the related LED starts flashing.
- Each time the “🔊” button is pressed, it will increase the privacy duration by 30 minutes (starting from 0 up to a maximum of 20 hours i.e. pressing the button 6 times = 3 hours up to a maximum of 40 presses for 20 hours). To set the privacy with no time out do not press the button.
- Once the required privacy duration has been reached, wait 3 seconds for the exit beep.
- The new value is now stored.

### VR5178 – Speech volume adjustments

- When a conversation is in progress (“speak” LED illuminated), press the “🔊” button: the “privacy” LED starts flashing and the “talk” LED turns OFF.
- Press (several times or hold pressed) the “🔊” button to increase the speech volume or the “🔊” button to decrease the volume.
- Once the required volume level is reached, wait approx 3 seconds or press again the “🔊” button.
- The “privacy” LED switches OFF while the “talk” LED switches back ON.

## VR5478 Programming

The videomonitor has two menus for programming and adjustment functions:

1. One menu operates when the system is in stand-by and allows the following settings:
  - The privacy duration;
  - The melody volume;
  - The melody type;
  - The number of rings;
2. The second menu operates when the system is turned ON (during a conversation or a camera recall)
  - Speech volume;
  - Brightness;
  - Contrast;
  - Hue;

### Menu 1

- When the system is in stand-by (monitor turned OFF) press and hold (for approx 9 seconds) the “X” button to enter the programming menu;
- The menu appears on the display: the top of the screen shows “menu” followed by the available function icons, the bottom of the screen shows the currently selected function value on the left, the currently selected function icon in the middle and the next function icon on the right side.
- The first function available is the privacy duration time (max 20 hours): press (several times or hold) the “0-” button to increase or the “+” button to decrease the duration in multiples of 30 minutes for each press (signalled by a beep).
- Press the “X” button to store the new value and to move onto the next programming option.
- The next programming option is the melody volume: press (several times or hold) the “0-” button to increase or the “+” button to decrease the melody volume (signalled by a beep).
- Press the “X” button to store the new value and to move onto the next programming option.
- The next programming option is the melody type: press the “0-” button to hear and select the previous melody or the “+” button to hear and select the following melody (9 available).
- Press the “X” button to store the new value and to move onto the next programming option.
- The next and final programming option is the number of rings (max 9): (press several times or hold) the “0-” button to increase or the “+” button to decrease the number of rings.
- Press the “X” button to store the new value and exit the programming menu, the monitor turns OFF.

### Menu 2

- When the system is turned ON (conversation or camera recall) press the “X” button to enter the programming menu.
- The menu appears on the display: the top of the screen shows “menu” followed by the allowed function icons, the bottom of the screen shows the currently selected function value on the left, the currently selected function icon in the middle and the next function icon on the right.
- The first function is the speech volume: press (Several times or hold) the “0-” button to increase or the “+” button to decrease the speech volume level (signalled by a beep).
- Press the “X” button to store the new value and to move onto the next programming option.
- The next programming option is the picture brightness: press (Several times or hold) the “0-” button to increase or the “+” button to decrease the brightness level (signalled by a beep).
- Press the “X” button to store the new value and to move onto the next programming option.
- The next programming option is the picture contrast: press (Several times or hold) the “0-” button to increase or the “+” button to decrease the contrast level (signalled by a beep).
- Press the “X” button to store the new value and to move onto the next programming option.
- The next and last function is the picture hue: press (Several times or hold) the “0-” button to increase or the “+” button to decrease the hue level (signalled by a beep).
- Press the “X” button to store the new value and exit the programming menu the monitor goes back to shown standard messages for call progress.

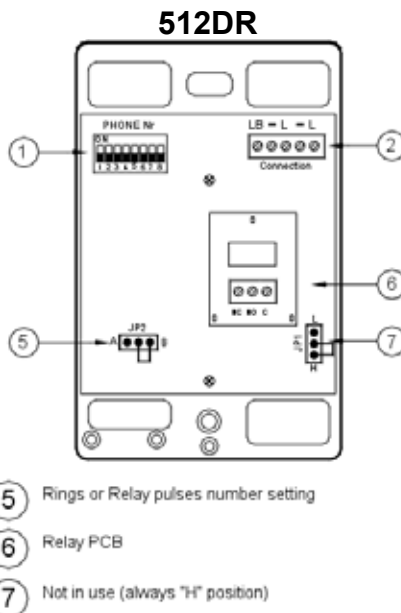
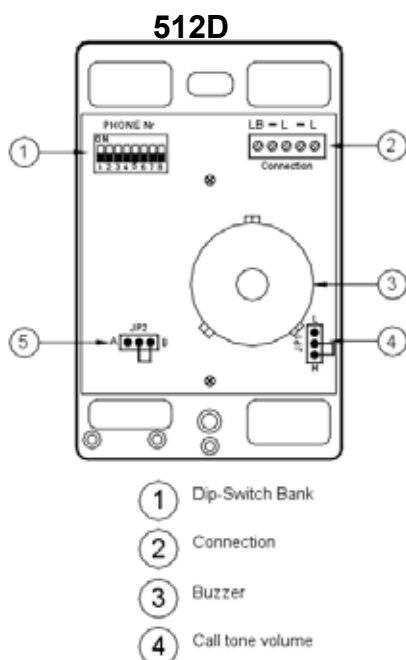
### Technical Specifications

	Audio	Video
Addressing range	: from 1 to 180 (BIN code)	: from 1 to 180 (BIN code)
Working voltage	: 12Vdc	
Stand-by absorption	: about 6mA	: approx 12mA standby on 12V input
Phone max. absorption	: about 50mA	: approx 70mA max on 12Vdc input : approx 250mA max on 20Vdc input
Working temperature	: -10 +50 C°	: -10 +50 C°

## Extension Sounder/Relay (512D/512DR)

### Description

Compatible with the “2 wire” **BUS** and has an 8 way Dip-switch to program the address number of the device. Up to 3 units can be addressed with the same number (Ex.: 1 intercom and 2 extension sounders to be operated with the same apartment number). The call tone is different according to the origin of the call (Main entrance call or local door bell). A two level volume control is available using jumper **JP1** (only for 512D, while for 512DR the JP1 is not used and stays in position “H”). Through the jumper **JP2** it is possible to set the number of rings (512D) or the number of relay pulses (512DR) from 1 to 6. The current consumption on the BUS line is lower than 1mA in stand-by mode. The Art.512DR can also be used as a “service relay” for the entire BUS, activated by the alarm signal coming from an apartment. To use this function it is necessary to give the unit the address 255.



### Technical specifications

Addressing range  
from 1 to 180

Stand-by absorption  
less than about 0.9mA

Call absorption  
Approx. 15mA

Relay contacts  
(Art.512DR)1A 125Vac max

Working temperature  
-10 +50 C°

- The 512D unit will ring according to the programming (1 or 6 times), or until the intercom handset is picked up.
- The 512DR unit will operate the relay for 1 or 6 x 2 secs on, 2 secs off ,according to the programming, except if the intercom handset is picked up.

### Local call:

- The 512D unit will ring the number of times the local bell is pressed.
- The 512DR unit will activate the relay each time the local bell is pressed and will remain active as long as the local bell remains pressed.

### In case of an Alarm (only for 512DR addr.255)

The unit 512DR will activate the relay for 1 second (apart from JP2 jumper settings) to start the relevant service.

### Programming

The address of the unit must be programmed by means of the internal 8 way Dip-switch (see conversion table decimal/binary) and must be the same as the phone or videophone connected in the same apartment. To use as a service relay activated by the alarm signals sent on the bus, set the address to 255.

The jumper **JP1** is used to set the volume of the call tone: position “H” = **high**, position “L” = **low** (only for 512D, in the 512DR unit the **JP1** must stay in position “H”).

The jumper **JP2** enables the configuration of the number of rings or relay pulses: position “A” = **1 ring/pulse**, position “B” = **6 rings/pulses**.

*In order to synchronize the local apartment call with the phone, connect the “LB” terminal with the “LB” phone terminal.*

## INSTALLATION DIRECTIONS

**For video door entry systems that use colour monitors, we recommend to use a coax cable.**

All the operations of installation and maintenance must be carried out by specialized engineers only. Do not install the components of the system in humid environments or near heat sources. Make sure that the power supplies present in the system are not connected to the mains, during the mounting operations of the devices. Before powering the system, check that the cabling is correct and that the voltage levels are compatible with other power suppliers on the system. The wiring diagrams must always be followed (in case of different applications contact Videx technical) and always use cables with sections as per the following table. If the sections proposed are not respected the system may not work correctly. It is advisable to separate the Mains lines (lift, electricity, electricity lock, etc.) from the BUS lines (A distance of at least 10 cm) to avoid electrostatic discharge and magnetic influence that could cause control problems to the CPUs present on the system.

Cable sizes				
Distance up to	(-) (L) (V1)* (V2)* Signals	Max. Resistance	(-)* (+20)* Signals	Max. Resistance
100m	0.3mmsq AWG22	7.5 Ohms	0.6mmsq AWG19	5 Ohms
200m	0.6mmsq AWG19		1.0mmsq AWG17	
350m	1.0mmsq AWG17		1.5mmsq AWG15	
500m	1.5mmsq AWG15			

**Supply cables ( power supply → outdoor station):** they must have a minimum size of 1.0mmsq (AWG17) or more (it depends on the distance between the supply/s and the outdoor station) with maximum resistance of **1.5 Ohm** for each wire.

### Features of the system

For intercom systems the upright column consists of the “2 wire” BUS, while for video intercom systems it is necessary to install a minimum of the “6 wire” BUS (2 wires + 2 wire bus for the balanced video signal + 2 wires for videophone power supply).

- Before switch on the system, check the cabling and set all dip-switches
- In video intercom systems it is important to connect to the output of the last video distributor Art.316 2 resistances of  $75\Omega \frac{1}{4} W$  between “—” and the terminals “V1” and “V2” of the distributor or of the last video intercom, in case of small system where Art. 316 are not used.
- All phones, videophones and accessories are identified by an address programmed through the 8 way Dip-switch and each device must have a different address; see decimal/binary conversion table to program the addresses. **Note that each peripheral (phone, videophone or accessory) reads its address from the dip-switch at power up (when the system is powered): to change the address of a peripheral and to arrange that it is read again, it is necessary that the peripheral is disconnected from the system (disconnect the BUS wires for a phone or an accessory, disconnect BUS wires and power wires for a 900 series videophone or, for 3000 series videophones, unplug the connector from the connection board), update the address by adjusting the dip-switch then reconnect the peripheral to the system.**
- In case someone needs to activate more than one device by a single call (for example 2 intercoms in the same apartment or 1 intercom and 1 additional sounder or 2 videophones, etc.), all devices must have the same address up to 3 devices max. If the 3 units are videophones, to switch on at the same time another power supply must be added, because the power supply Art.893N1 can supply a maximum 2 videophones at the same time.
- It is necessary to check that master and slave programming of call panels are correct (VX2202, VX2203); for the VX2203 this can be checked before powering the system (dip-switch 1 ON = Master, OFF = Slave) while for the VX2202 the check can be done only after powering the system (the factory setup for the VX2202 series is “MASTER”).
- The system can be on a single level (for ex. a building with 3 main entrances) or on more levels, one of which is the main and the other are the secondary blocks. In both cases, only one of the call keypads (VX2202 or VX2203) connected on the same level must be “master” (the master supplies the system) and all the others must be configured as “slave”. Secondary levels are those branches of the system that are separated from the main level by a Art.2206 or 2206V for video door entry systems.

Once the system is supplied, the programming of the VX2202 digital front panels (see the flow-chart) and of the VX2210 concierge, if present, can be performed, paying attention that the programming of the flat numbers (combining between the phone ID address and the call code) is the same for all the units that are on the same level. In case of systems on more levels, the keypads of the main level and also the concierge, if present, must contain the programming of all the phones installed in the system, while the keypads of the



second level will contain only the programming concerning the intercoms of their block (for ex. in a housing complex composed of a main entrance and three buildings with 10 apartments each, the keypad/s and the eventual concierge at the main entrance –main level- must contain the programming of the 30 intercoms, while the keypad/s of each building –secondary levels- must contain only the programming of the 10 intercoms of the building).

### Speech adjustment
























It is necessary to adjust the speech volume to have the best performance without “Larsen” effect (Feed back). It is advisable to carry out the following procedure:
























1. Be sure that microphone volume and speaker volume trimmers of the VX2202 or VX2203 are in the middle position (access holes to the trimmers at the back of the keypads);
2. Make a call from the keypad (VX2202 or VX2203) towards the nearest phone on the BUS (the handset must be picked up) and speak near the microphone of the outdoor station adjusting the balance trimmer (access hole at the back of the outdoor station) in order to have the lowest feed back from the speaker of the outdoor station;
3. Make another call towards the farthest phone in the BUS line (the handset must be picked up), then check the speech again at the nearest phone;

To adjust the handset microphone level of phones or videophones, turn left or right the VR1 trimmer (inside the unit) to reduce or to increase.

































## DIP-SWITCH SETTINGS

































The following tables can be used when setting dip-switches on telephones, videophones and functional door panels. **Please note: All dip-switches must be set before power up.**






Dip-sw 2 =off Dip-sw 3 =off		DIP-SWITCH setting								
Dec. Nr.	Art.2203 Input Matrix		1	2	3	4	5	6	7	8
1	1a		ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2	1b		OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
3	1c		ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
4	1d		OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
5	1e		ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
6	1f		OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
7	1g		ON	ON	ON	OFF	OFF	OFF	OFF	OFF
8	1h		OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
9	2a		ON	OFF	OFF	ON	OFF	OFF	OFF	OFF
10	2b		OFF	ON	OFF	ON	OFF	OFF	OFF	OFF
11	2c		ON	ON	OFF	ON	OFF	OFF	OFF	OFF
12	2d		OFF	OFF	ON	ON	OFF	OFF	OFF	OFF
13	2e		ON	OFF	ON	ON	OFF	OFF	OFF	OFF
14	2f		OFF	ON	ON	ON	OFF	OFF	OFF	OFF
15	2g		ON	ON	ON	ON	OFF	OFF	OFF	OFF
16	2h		OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF
17	3a		ON	OFF	OFF	OFF	ON	OFF	OFF	OFF
18	3b		OFF	ON	OFF	OFF	ON	OFF	OFF	OFF
19	3c		ON	ON	OFF	OFF	ON	OFF	OFF	OFF
20	3d		OFF	OFF	ON	OFF	ON	OFF	OFF	OFF
21	3e		ON	OFF	ON	OFF	ON	OFF	OFF	OFF
22	3f		OFF	ON	ON	OFF	ON	OFF	OFF	OFF






Dip-sw 2 =on Dip-sw 3 =off		DIP-SWITCH setting								
Dec. Nr.	Art.2203 Input Matrix		1	2	3	4	5	6	7	8
65	1a		ON	OFF	OFF	OFF	OFF	OFF	ON	OFF
66	1b		OFF	ON	OFF	OFF	OFF	OFF	ON	OFF
67	1c		ON	ON	OFF	OFF	OFF	OFF	ON	OFF
68	1d		OFF	OFF	ON	OFF	OFF	OFF	ON	OFF
69	1e		ON	OFF	ON	OFF	OFF	OFF	ON	OFF
70	1f		OFF	ON	ON	OFF	OFF	OFF	ON	OFF
71	1g		ON	ON	ON	OFF	OFF	OFF	ON	OFF
72	1h		OFF	OFF	OFF	ON	OFF	OFF	ON	OFF
73	2a		ON	OFF	OFF	ON	OFF	OFF	ON	OFF
74	2b		OFF	ON	OFF	ON	OFF	OFF	ON	OFF
75	2c		ON	ON	OFF	ON	OFF	OFF	ON	OFF
76	2d		OFF	OFF	ON	ON	OFF	OFF	ON	OFF
77	2e		ON	OFF	ON	ON	OFF	OFF	ON	OFF
78	2f		OFF	ON	ON	ON	OFF	OFF	ON	OFF
79	2g		ON	ON	ON	ON	OFF	OFF	ON	OFF
80	2h		OFF	OFF	OFF	OFF	ON	OFF	ON	OFF
81	3a		ON	OFF	OFF	OFF	ON	OFF	ON	OFF
82	3b		OFF	ON	OFF	OFF	ON	OFF	ON	OFF
83	3c		ON	ON	OFF	OFF	ON	OFF	ON	OFF
84	3d		OFF	OFF	ON	OFF	ON	OFF	ON	OFF
85	3e		ON	OFF	ON	OFF	ON	OFF	ON	OFF
86	3f		OFF	ON	ON	OFF	ON	OFF	ON	OFF

















































Dip-sw 2 =off Dip-sw 3 =off		DIP-SWITCH setting								
Dec. Nr.	Art.2203 Input Matrix		1	2	3	4	5	6	7	8
23	3g		ON	ON	ON	OFF	ON	OFF	OFF	OFF
24	3h		OFF	OFF	OFF	ON	ON	OFF	OFF	OFF
25	4a		ON	OFF	OFF	ON	ON	OFF	OFF	OFF
26	4b		OFF	ON	OFF	ON	ON	OFF	OFF	OFF
27	4c		ON	ON	OFF	ON	ON	OFF	OFF	OFF
28	4d		OFF	OFF	ON	ON	ON	OFF	OFF	OFF
29	4e		ON	OFF	ON	ON	ON	OFF	OFF	OFF
30	4f		OFF	ON	ON	ON	ON	OFF	OFF	OFF
31	4g		ON	ON	ON	ON	ON	OFF	OFF	OFF
32	4h		OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF
33	5a		ON	OFF	OFF	OFF	OFF	ON	OFF	OFF
34	5b		OFF	ON	OFF	OFF	OFF	ON	OFF	OFF
35	5c		ON	ON	OFF	OFF	OFF	ON	OFF	OFF
36	5d		OFF	OFF	ON	OFF	OFF	ON	OFF	OFF
37	5e		ON	OFF	ON	OFF	OFF	ON	OFF	OFF
38	5f		OFF	ON	ON	OFF	OFF	ON	OFF	OFF
39	5g		ON	ON	ON	OFF	OFF	ON	OFF	OFF
40	5h		OFF	OFF	OFF	ON	OFF	ON	OFF	OFF
41	6a		ON	OFF	OFF	ON	OFF	ON	OFF	OFF
42	6b		OFF	ON	OFF	ON	OFF	ON	OFF	OFF
43	6c		ON	ON	OFF	ON	OFF	ON	OFF	OFF
44	6d		OFF	OFF	ON	ON	OFF	ON	OFF	OFF
45	6e		ON	OFF	ON	ON	OFF	ON	OFF	OFF
46	6f		OFF	ON	ON	ON	OFF	ON	OFF	OFF
47	6g		ON	ON	ON	ON	OFF	ON	OFF	OFF
48	6h		OFF	OFF	OFF	OFF	ON	ON	OFF	OFF
49	7a		ON	OFF	OFF	OFF	ON	ON	OFF	OFF
50	7b		OFF	ON	OFF	OFF	ON	ON	OFF	OFF
51	7c		ON	ON	OFF	OFF	ON	ON	OFF	OFF
52	7d		OFF	OFF	ON	OFF	ON	ON	OFF	OFF
53	7e		ON	OFF	ON	OFF	ON	ON	OFF	OFF
54	7f		OFF	ON	ON	OFF	ON	ON	OFF	OFF
55	7g		ON	ON	ON	OFF	ON	ON	OFF	OFF
56	7h		OFF	OFF	OFF	ON	ON	ON	OFF	OFF
57	8a		ON	OFF	OFF	ON	ON	ON	OFF	OFF
58	8b		OFF	ON	OFF	ON	ON	ON	OFF	OFF
59	8c		ON	ON	OFF	ON	ON	ON	OFF	OFF
60	8d		OFF	OFF	ON	ON	ON	ON	OFF	OFF

Dip-sw 2 =on Dip-sw 3 =off		DIP-SWITCH setting								
Dec. Nr.	Art.2203 Input Matrix		1	2	3	4	5	6	7	8
87	3g		ON	ON	ON	OFF	ON	OFF	ON	OFF
88	3h		OFF	OFF	OFF	ON	ON	OFF	ON	OFF
89	4a		ON	OFF	OFF	ON	ON	OFF	ON	OFF
90	4b		OFF	ON	OFF	ON	ON	OFF	ON	OFF
91	4c		ON	ON	OFF	ON	ON	OFF	ON	OFF
92	4d		OFF	OFF	ON	ON	ON	OFF	ON	OFF
93	4e		ON	OFF	ON	ON	ON	OFF	ON	OFF
94	4f		OFF	ON	ON	ON	ON	OFF	ON	OFF
95	4g		ON	ON	ON	ON	ON	OFF	ON	OFF
96	4h		OFF	OFF	OFF	OFF	OFF	ON	ON	OFF
97	5a		ON	OFF	OFF	OFF	OFF	ON	ON	OFF
98	5b		OFF	ON	OFF	OFF	OFF	ON	ON	OFF
99	5c		ON	ON	OFF	OFF	OFF	ON	ON	OFF
100	5d		OFF	OFF	ON	OFF	OFF	ON	ON	OFF
101	5e		ON	OFF	ON	OFF	OFF	ON	ON	OFF
102	5f		OFF	ON	ON	OFF	OFF	ON	ON	OFF
103	5g		ON	ON	ON	OFF	OFF	ON	ON	OFF
104	5h		OFF	OFF	OFF	ON	OFF	ON	ON	OFF
105	6a		ON	OFF	OFF	ON	OFF	ON	ON	OFF
106	6b		OFF	ON	OFF	ON	OFF	ON	ON	OFF
107	6c		ON	ON	OFF	ON	OFF	ON	ON	OFF
108	6d		OFF	OFF	ON	ON	OFF	ON	ON	OFF
109	6e		ON	OFF	ON	ON	OFF	ON	ON	OFF
110	6f		OFF	ON	ON	ON	OFF	ON	ON	OFF
111	6g		ON	ON	ON	ON	OFF	ON	ON	OFF
112	6h		OFF	OFF	OFF	OFF	ON	ON	ON	OFF
113	7a		ON	OFF	OFF	OFF	ON	ON	ON	OFF
114	7b		OFF	ON	OFF	OFF	ON	ON	ON	OFF
115	7c		ON	ON	OFF	OFF	ON	ON	ON	OFF
116	7d		OFF	OFF	ON	OFF	ON	ON	ON	OFF
117	7e		ON	OFF	ON	OFF	ON	ON	ON	OFF
118	7f		OFF	ON	ON	OFF	ON	ON	ON	OFF
119	7g		ON	ON	ON	OFF	ON	ON	ON	OFF
120	7h		OFF	OFF	OFF	ON	ON	ON	ON	OFF
121	8a		ON	OFF	OFF	ON	ON	ON	ON	OFF
122	8b		OFF	ON	OFF	ON	ON	ON	ON	OFF
123	8c		ON	ON	OFF	ON	ON	ON	ON	OFF
124	8d		OFF	OFF	ON	ON	ON	ON	ON	OFF

Dip-sw 2 =off Dip-sw 3 =off		DIP-SWITCH setting								
Dec. Nr.	Art.2203 Input Matrix		1	2	3	4	5	6	7	8
61	8e		ON	OFF	ON	ON	ON	ON	OFF	OFF
62	8f		OFF	ON	ON	ON	ON	ON	OFF	OFF
63	8g		ON	ON	ON	ON	ON	ON	OFF	OFF
64	8h		OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF

Dip-sw 2 =on Dip-sw 3 =off		DIP-SWITCH setting								
Dec. Nr.	Art.2203 Input Matrix		1	2	3	4	5	6	7	8
125	8e		ON	OFF	ON	ON	ON	ON	ON	OFF
126	8f		OFF	ON	ON	ON	ON	ON	ON	OFF
127	8g		ON	ON	ON	ON	ON	ON	ON	OFF
128	1a		OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON

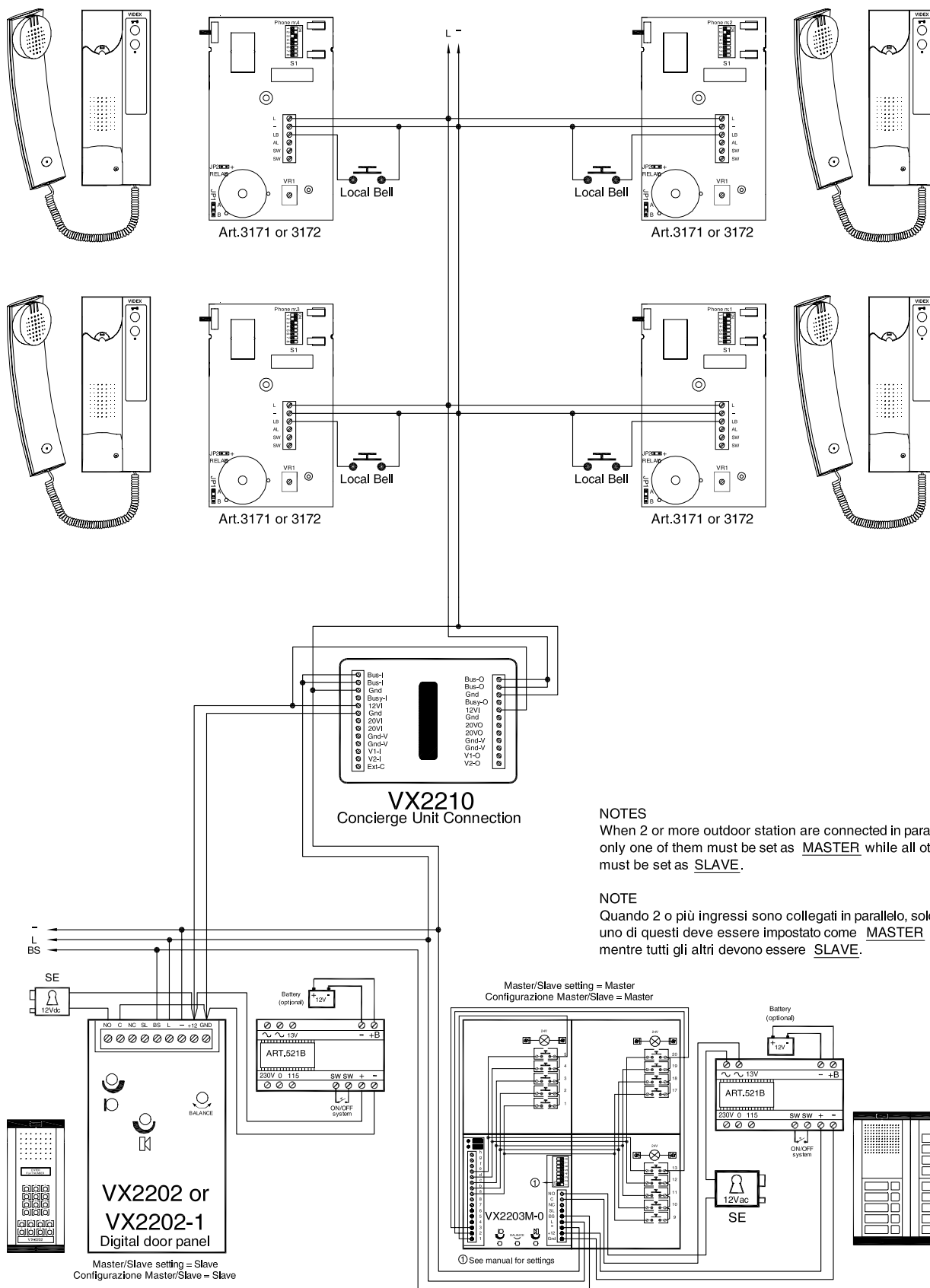
Dip-sw 2 =off Dip-sw 3 =on		DIP-SWITCH setting								
Dec. Nr.	Art.2203-1 Input Matrix		1	2	3	4	5	6	7	8
129	1b		ON	OFF	OFF	OFF	OFF	OFF	OFF	ON
130	1c		OFF	ON	OFF	OFF	OFF	OFF	OFF	ON
131	1d		ON	ON	OFF	OFF	OFF	OFF	OFF	ON
132	1e		OFF	OFF	ON	OFF	OFF	OFF	OFF	ON
133	1f		ON	OFF	ON	OFF	OFF	OFF	OFF	ON
134	1g		OFF	ON	ON	OFF	OFF	OFF	OFF	ON
135	1h		ON	ON	ON	OFF	OFF	OFF	OFF	ON
136	2a		OFF	OFF	OFF	ON	OFF	OFF	OFF	ON
137	2b		ON	OFF	OFF	ON	OFF	OFF	OFF	ON
138	2c		OFF	ON	OFF	ON	OFF	OFF	OFF	ON
139	2d		ON	ON	OFF	ON	OFF	OFF	OFF	ON
140	2e		OFF	OFF	ON	ON	OFF	OFF	OFF	ON
141	2f		ON	OFF	ON	ON	OFF	OFF	OFF	ON
142	2g		OFF	ON	ON	ON	OFF	OFF	OFF	ON
143	2h		ON	ON	ON	ON	OFF	OFF	OFF	ON
144	3a		OFF	OFF	OFF	OFF	ON	OFF	OFF	ON
145	3b		ON	OFF	OFF	OFF	ON	OFF	OFF	ON
146	3c		OFF	ON	OFF	OFF	ON	OFF	OFF	ON
147	3d		ON	ON	OFF	OFF	ON	OFF	OFF	ON
148	3e		OFF	OFF	ON	OFF	ON	OFF	OFF	ON
149	3f		ON	OFF	ON	OFF	ON	OFF	OFF	ON
150	3g		OFF	ON	ON	OFF	ON	OFF	OFF	ON
151	3h		ON	ON	ON	OFF	ON	OFF	OFF	ON
152	4a		OFF	OFF	OFF	ON	ON	OFF	OFF	ON
153	4b		ON	OFF	OFF	ON	ON	OFF	OFF	ON
154	4c		OFF	ON	OFF	ON	ON	OFF	OFF	ON

Dip-sw 2 =off Dip-sw 3 =on		DIP-SWITCH setting								
Dec. Nr.	Art.2203-1 Input Matrix		1	2	3	4	5	6	7	8
155	4d		ON	ON	OFF	ON	ON	OFF	OFF	ON
156	4e		OFF	OFF	ON	ON	ON	OFF	OFF	ON
157	4f		ON	OFF	ON	ON	ON	OFF	OFF	ON
158	4g		OFF	ON	ON	ON	ON	OFF	OFF	ON
159	4h		ON	ON	ON	ON	ON	OFF	OFF	ON
160	5a		OFF	OFF	OFF	OFF	OFF	ON	OFF	ON
161	5b		ON	OFF	OFF	OFF	OFF	ON	OFF	ON
162	5c		OFF	ON	OFF	OFF	OFF	ON	OFF	ON
163	5d		ON	ON	OFF	OFF	OFF	ON	OFF	ON
164	5e		OFF	OFF	ON	OFF	OFF	ON	OFF	ON
165	5f		ON	OFF	ON	OFF	OFF	ON	OFF	ON
166	5g		OFF	ON	ON	OFF	OFF	ON	OFF	ON
167	5h		ON	ON	ON	OFF	OFF	ON	OFF	ON
168	6a		OFF	OFF	OFF	ON	OFF	ON	OFF	ON
169	6b		ON	OFF	OFF	ON	OFF	ON	OFF	ON
170	6c		OFF	ON	OFF	ON	OFF	ON	OFF	ON
171	6d		ON	ON	OFF	ON	OFF	ON	OFF	ON
172	6e		OFF	OFF	ON	ON	OFF	ON	OFF	ON
173	6f		ON	OFF	ON	ON	OFF	ON	OFF	ON
174	6g		OFF	ON	ON	ON	OFF	ON	OFF	ON
175	6h		ON	ON	ON	ON	OFF	ON	OFF	ON
176	7a		OFF	OFF	OFF	OFF	ON	ON	OFF	ON
177	7b		ON	OFF	OFF	OFF	ON	ON	OFF	ON
178	7c		OFF	ON	OFF	OFF	ON	ON	OFF	ON
179	7d		ON	ON	OFF	OFF	ON	ON	OFF	ON
180	7e		OFF	OFF	ON	OFF	ON	ON	OFF	ON

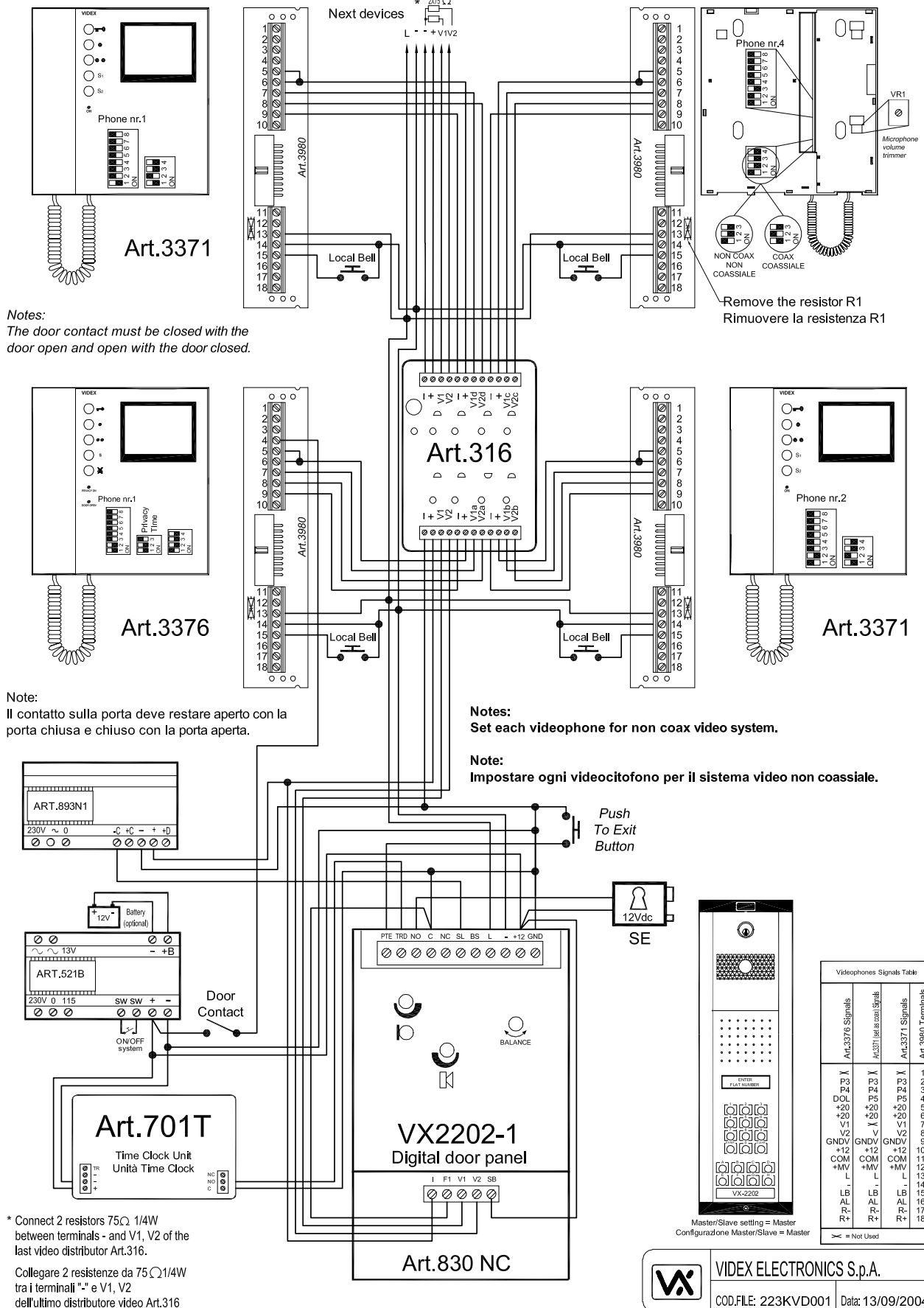
## TROUBLE SHOOTING GUIDE

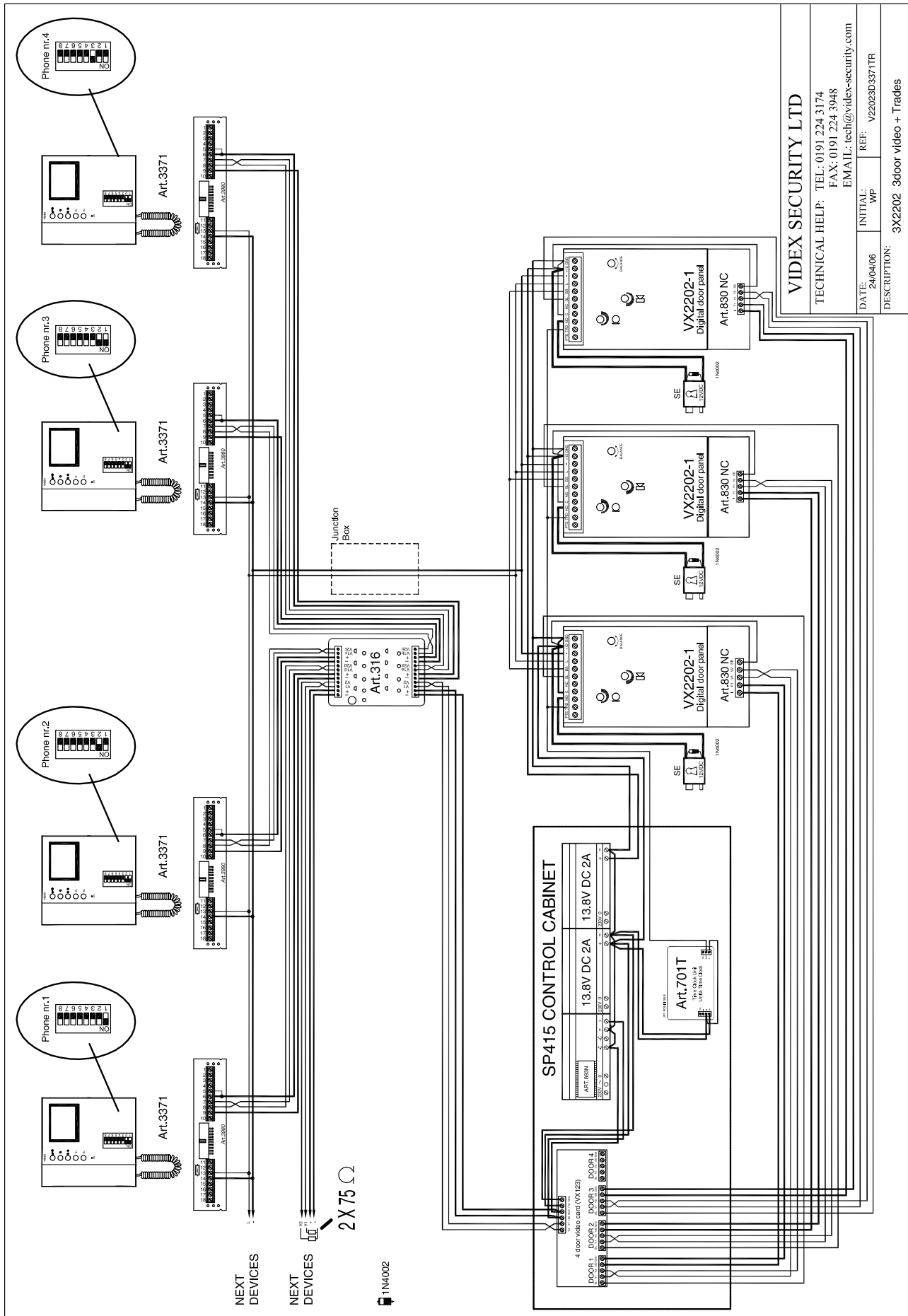
ANOMALY FOUND	POSSIBLE CAUSE	POSSIBLE SOLUTION
The system has power but the VX2202/.. or VX2203/.. front panel does not turn on.	<ol style="list-style-type: none"> <li>1. Interruption or short circuit of the 13Vdc output on PSU to the outdoor station;</li> <li>2. PSU defective or fuse blown.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the GND and +13V connections on PSU and on VX2202/.. / VX2203/.., then check the protection fuse on the output of PSU and change it if necessary;</li> <li>2. Check PSU power supply and in case change it or take the load off and retest.</li> </ol>
The VX2202/.. / VX2203/.. front panel display shows "ERROR" (VX2202/..only) and the unit makes acoustic intermittent signals at intervals of approx. 2 seconds.	<ol style="list-style-type: none"> <li>1. Probable short circuit on the BUS "—" and "L" line;</li> <li>2. Reversion of polarity on the BUS connection of a phone, videophone or accessory;</li> <li>3. VX2202/.. or VX2203/.. programmed as "Slave" when it should be as "Master".</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the BUS connections.</li> <li>2. Check the polarity of the devices connected.</li> <li>3. Configure the device as "Master"</li> </ol>
The system, at the moment of the call, is not able to let the extension ring, the front panel makes acoustic signals of line engaged and the display (VX2202/..only) shows "Engaged" or "Error".	<ol style="list-style-type: none"> <li>1. The phone or videophone called is not correctly connected;</li> <li>2. The wire section (BUS) is too small;</li> <li>3. The address programmed on the dip-switch (of the phone, videophone or accessory) does not correspond to that called;</li> <li>4. The concierge (if present in the system) has been left in programming mode.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the right connection of the BUS</li> <li>2. Increase the wire section or double them with others available;</li> <li>3. Check that the address associated to the call corresponds to that programmed on the dip-switch of the phone (videophone or accessory);</li> <li>4. Remove VX2210 from programming mode.</li> </ol>
The outdoor station makes the call correctly, but when the user answers, the communication is cut off.	The wire section is too small.	Increase the wires section or double them with others available.
During the conversation, when the door is opened, the communication is cut off.	The wire section is too small.	Increase the wires section or double them with others available.
The calls go through, but the conversation is one-way only.	The supplying voltage on the outdoor station is too low (under 10.5V).	Increase the supply wires section (GND e 13V) or double them with others available. Check voltage output on PSU and adjust in necessary.
The audio level of conversation is too low.	The levels of the conversation volumes in both directions are not appropriately adjusted.	Adjust on the outdoor station trimmers for microphone and loudspeaker so as to have the best levels without oscillations (Larsen effect)
The audio level is at its limit or oscillates (Larsen effect).	The "Balance" trimmer (outdoor station) is not appropriately set and/or the conversation volumes are programmed to high.	Adjust on the outdoor station the "balance" trimmer until the problem is solved and/or lower the volumes of the microphone and loudspeaker.
The door opening is not carried out.	<ol style="list-style-type: none"> <li>1. Lock defective;</li> <li>2. Connection wrong or interrupted;</li> <li>3. Wire section too small;</li> <li>4. Supplying transformer 12Vac defective.</li> </ol>	<ol style="list-style-type: none"> <li>1. Change the lock;</li> <li>2. Check connection continuity;</li> <li>3. Increase wires section;</li> <li>4. Check power supply 12Vca;</li> </ol>
The local floor call does not work.	<ol style="list-style-type: none"> <li>1. Call push button defective;</li> <li>2. Connection wrong or interrupted.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check defect;</li> <li>2. Check connection.</li> </ol>
The internal video stations do not turn on.	<ol style="list-style-type: none"> <li>1. Art.893N power supply defective or in protection;</li> <li>2. Art.893N is not operated by the outdoor station during the call (SL terminal);</li> <li>3. Connection wrong or interrupted.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the unit and in case change it or take the supply off for at least 60secs;</li> <li>2. "-C" terminal of art.893N not correctly connected to the "SL" terminal of the outdoor station;</li> <li>3. Check the continuity of the connection between the monitor supplying wires and the videophones interested.</li> </ol>
The internal video stations turn on, but the image does not appear.	<ol style="list-style-type: none"> <li>1. Art.830NC video camera not supplied or defective;</li> <li>2. Connection of the V1-V2 signals interrupted or wrong.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check and/or change art 830NC;</li> <li>2. Check connection continuity.</li> </ol>
The internal video stations turn on but the quality of the image is bad or reflected.	<ol style="list-style-type: none"> <li>1. Signal V1 or V2 not connected or in short circuit;</li> <li>2. V1 &amp; V2 signals inverted;</li> <li>3. Closing resistances are missing at the end of the BUS video.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the continuity of the connection and the isolation to the ground;</li> <li>2. Check and in case invert the connections;</li> <li>3. Check and in case apply the closing resistances on the BUS video.</li> </ol>

**Audio Door Entry System with 2 or more entrances (digital or functional panels) plus digital concierge**  
**Impianto Citofonico a 2 o più ingressi (con posto esterno digitale o tradizionale) più centralino di portineria**



# 1 Entrance (Digital Call Panel) Video Door Entry System + Art.701T Impianto Videocitfonico ad 1 Ingresso (Posto Esterno Digitale) + Art.701T



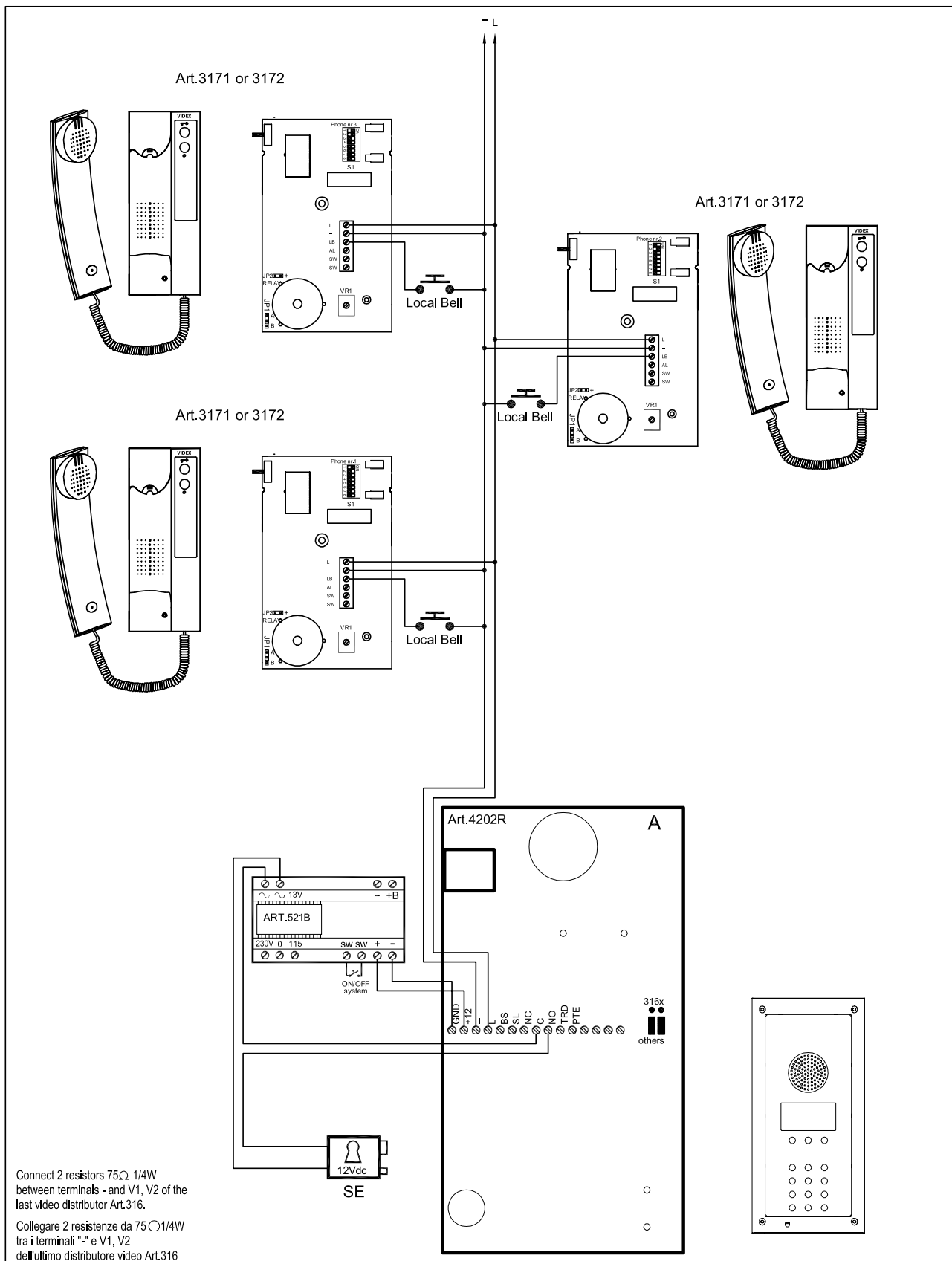


VIDEX SECURITY LTD

TECHNICAL HELP: TEL: 0191 224 3174  
FAX: 0191 224 3948  
EMAIL: tech@videx-security.com

DATE: 24/04/06 INITIAL: WP REF: V2202D3371TR

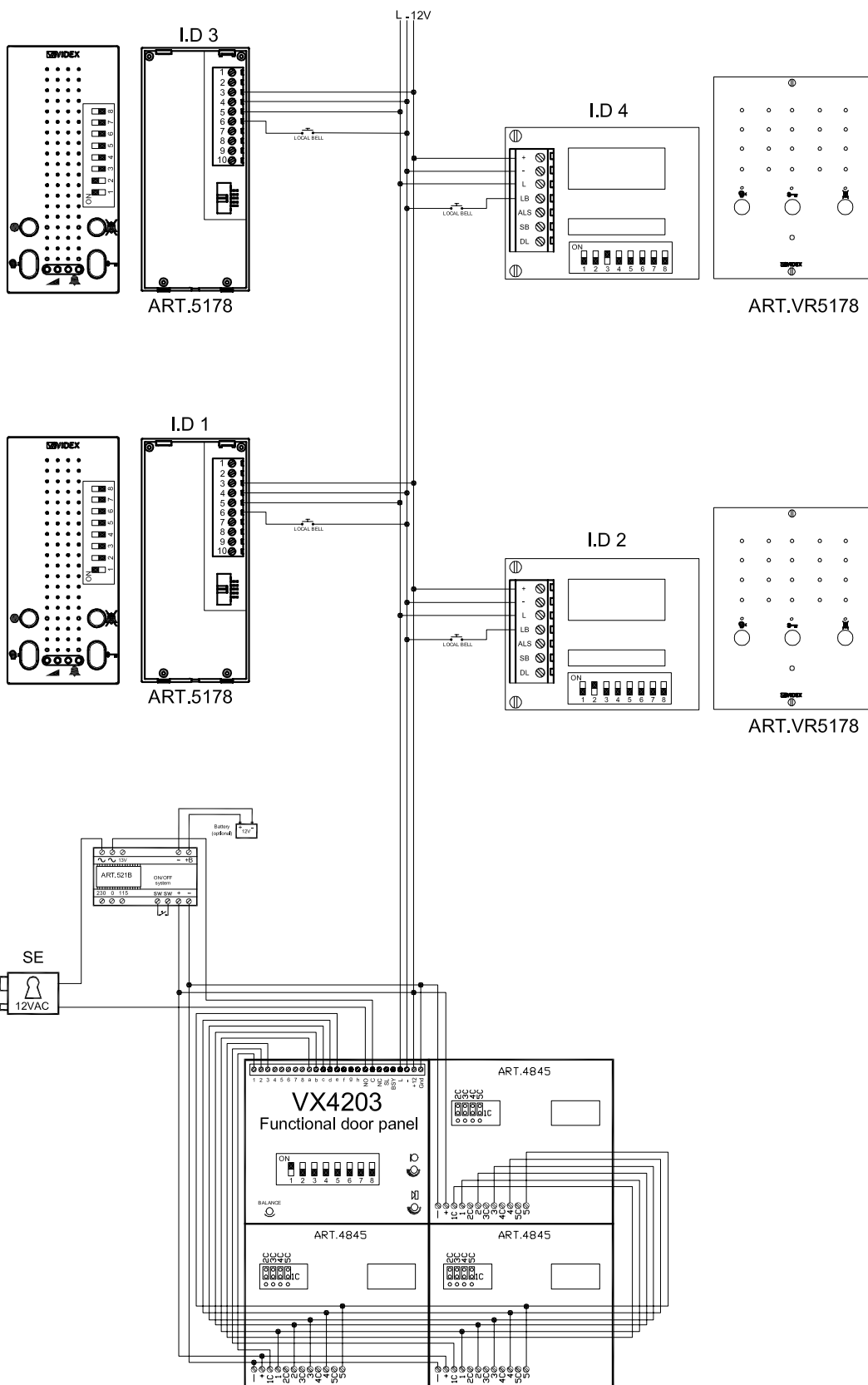
DESCRIPTION: 3X2202 3door video + Trades



Title: 1 Entrance Audio Door Entry System with functional panel		Date created: 27/10/2005	Foglio 1 / 1
Drawn: Impianto citofonico ad 1 ingresso con pannello di chiamata tradizionale		Date modified: 28/10/2005	
Videx Electronics S.p.A.		Author: Marco Rongoni	
Via del Lavoro 1, 63020 Monte Giberto (AP) Phone: +39 0734 631669 - Fax: +39 0734 631669 www.videx.it - info@videx.it		Code File: 224kau002.dwg	





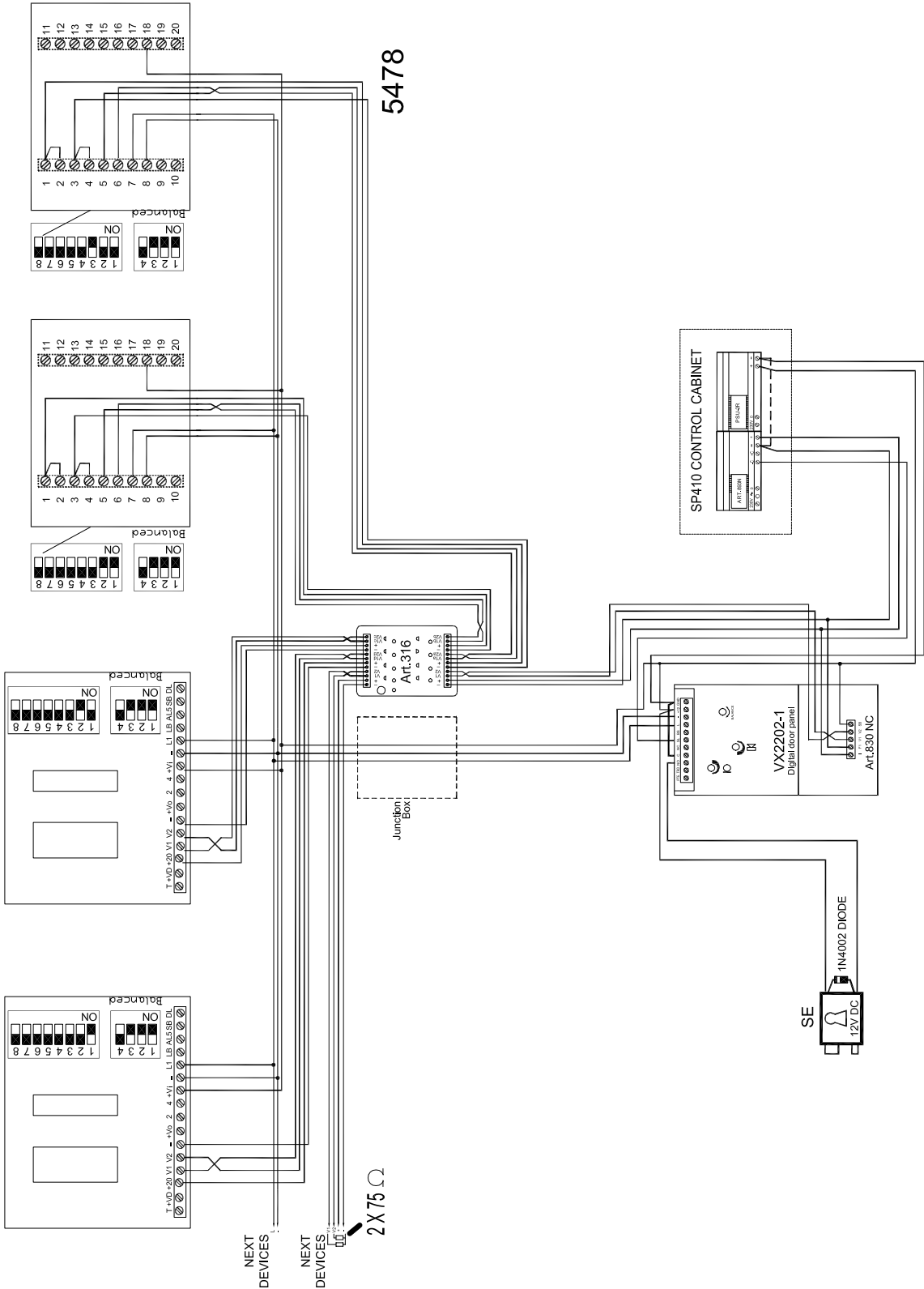


5478 ECLIPSE VIDEOPHONE FOUR

5478 ECLIPSE VIDEOPHONE THREE

VR5478 ECLIPSE VIDEOPHONE TWO

VR5478 ECLIPSE VIDEOPHONE ONE





**Northern Office**

Videx Security Ltd  
Unit 4-7 Chillingham Ind. Est.  
Newcastle Upon Tyne  
NE6 2XX  
TEL 0870 300 1240  
FAX 0191 224 5678

**Southern Office**

1 Osprey  
Trinity Park  
Trinity Way  
London  
E4 8TD  
FAX 0208 523 5825

**TECHNICAL SUPPORT**

[tech@videx-security.com](mailto:tech@videx-security.com)  
TEL 0191 224 3174  
FAX 0191 224 4938  
<http://www.videx-security.com>