

MANUAL DE USU/

### **VDS DECODER**

ENGLISH

**INSTALLATION MANUAL** 

VDS Decoder



#### **MDS-VDS DECODER**

Code 97651lb V01\_12

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### TABLE OF CONTENTS

VDS DECODER ref. 2409 - Introduction - Description and Technical Features	4
OPERATION AS A RANGE DECODER - MDS-VDS SYSTEM	
- Remember that before programming, the decoder should be in RANGE Decoder Mode	9
- Programming the VDS Decoder (as range) from the MDS DIGITAL panel.	10
* Appendix I: Interior Block Programming under Option "C" via the MDS DIGITAL Panel	11
- Programming the VDS Decoder (as range) from the MDS DIGITAL panel.	
* Appendix I: Programming the MDS DIRECT panel as a General Entrance / more than one GE	13
- Programming VDS residential terminals via the interior blocks' VDS panel, monitors and telephones	15
- Programming VDS residential terminals via the general entrance's MDS DIGITAL panel.	
- Programming VDS residential terminals via the general entrance's MDS DIRECT panel.	17
OPERATION AS AN 8 OUTPUT AUDIO DECODER	19
- Overview	
- Remember that before programming, the decoder should be in RANGE Decoder Mode	
- Programming can be done in different ways	19
1. Programming the VDS DECODER	
2. Programming residential terminals and the VDS DECODER	
3. DEFERRED Programming of residential terminals and the VDS DECODER	
4. Reprogramming	
Development:	
1. Programming the VDS DECODER	
* Programming the VDS DECODER (as an 8 way decoder) via the MDS DIGITAL panel	
- Individual Programming	
- Sequential Programming	
* Programming the VDS DECODER (as an 8 way decoder) via the MDS DIRECT panel	21
- Individual Programming	21
- Sequential Programming	21
2. Programming residential terminals and the VDS DECODER (as an 8 way decoder) via the GE MDS Digital par	nel 22
2. Programming residential terminals and the VDS DECODER (as an 8 way decoder) via the GE MDS Direct pa	inel 23
3. DEFERRED programming of residential terminals and the VDS DECODER (as an 8 way decoder) via the	
GE MDS Digital / MDS Direct panels	
4. Reprogramming	
	-
Substituting the Decoder with version V1.x or V2.x	27



### VDS DECODER Ref. 2409

#### Introduction

The VDS DECODER allows the user to combine the MDS infrastructure on General Entrances (MDS DIGITAL NCity entry panels) and on Interior Blocks, VDS equipment, panels and residential terminals.

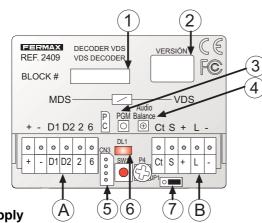
This provides a wide range of possibilities, taking the best from each system: the multiple MDS functions (various access points, guard unit/s, access control, various interior blocks, greater distances .....etc) and the simplicity of a VDS system: 3+COAX or 5 wires or UTP CAT5 (based on the distances in question).

The VDS decoder on version V10.26 or above, can work in 2 different ways:

- 1. It responds to **a range of telephones** which should be programmed using a starting value and an ending value (same as previous versions).
- 2. On an MDS system it acts as a 8 output audio decoder.

See the programming section for different options. The decoder comes configured by default as a range decoder.

#### **Description / Technical Features**



### Power Supply

12 Vdc ± 10% (CN1). 18 Vdc ± 10% (CN2).

#### Consumption

12 Vdc:	13 mA in standby mode. 16 mA in active mode.
18 Vdc:	25 mA in standby mode. 162 mA in active mode.

#### **Operating Temperature**

-5 ÷ +40 °C with 90% RH without condensation.

#### Installation

Indoor built-in box or within a building.

#### **Connection Terminals**

CN1: MDS System.

+,-: 12 Vdc power supply.
D1,D2:Decoder Bus Data. RS-485.
2.6: MDS Audio Panels.
2: Entry Panel Audio Direction

6: residence direction.

#### CN2: VDS System.

+,-: 18 Vdc power supply.
L: VDS bus data and audio.
Ct: Video activation. standby: 0v active: 12Vdc. Max. 100 mA
S: Video switcher activation. Active open collector with active decoder. Max 100mA.

- 1. Identification Label
- 2. Version
- 3. PGM Programming Button (SW1)
- 4. Audio Balance Adjustment (P4)
- 5. PC Programming Connector
- 6. Activity Led (DL1)
- JP1 Bridge selection version

  previous decoder V1.x or V2.x: left
  new decoder V10.26 or greater: right (\*See Resistor connecting negatives).
- A. MDS Bus Connector
- B. VDS Bus Connector

CN3:PC-Decoder interface connector for PC programming.



#### LED Signals (activity).

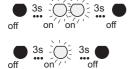
\* NOT Powered Up / NOT Programmed.



- Off, with the power supply connected: Indicates that the decoder has not been programmed yet.

- Off: indicates that the power supply is not connected.

\* DAY/NIGHT Mode on Guard Unit.



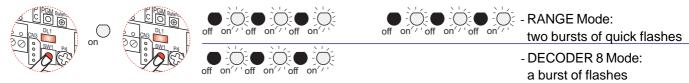
🛐 😳 💭 🔄 🛪 🌑 - DAY Mode: 2 flashes every 3 seconds: Indicates that the decoder is programmed and is in day mode (on an active guard unit).

> - NIGHT Mode: 1 flash every 3 seconds: Indicates that the decoder is programmed and is in night mode (on an active guard unit).

\* "In Programming" Mode".

- On: indicates that the decoder is in programming mode. ( )

\* Mode Check: range / 8 way decoder: Press the programming button and the led will remain on, once re-pressed to exit programming mode. Note: This operation can be carried out at any point without altering the decoder's functioning.



(when the decoder is programmed)

\* "Deferred Programming" Mode: Hold the programming button down for a number of seconds (approx. 5 seconds), until the led starts to flash continuously. Then the button can be released. While in this mode and as the terminals are being programmed, the led will flash guickly on a continuous basis until we exit this mode, for a period (approx. 2 minutes) or by pressing PGM. Note: This programming option is only available on the 8 way decoder.



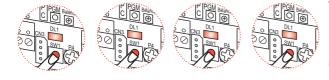
approx. 5 secs

### PGM Programming Button (mode changing/selection).

There are 3 different options for pressing the button.



SHORT press: To enter programming mode, use a short press, (as used on previous decoder versions).



- 4 SHORT consecutive presses:

To change from range / 8 way decoder mode, press the programming button four times QUICKLY and CONSECUTIVELY.

\* Note: every time we switch from range/8 way decoder mode, the led lets us know our current status. Important: a change in status means the addresses will be deleted.



LONG Press: to enter deferred programming mode, hold the button down for 5 seconds until the led starts to flash. (Only available on the 8 way decoder).

approx. 5 secs

## VDS Decoder

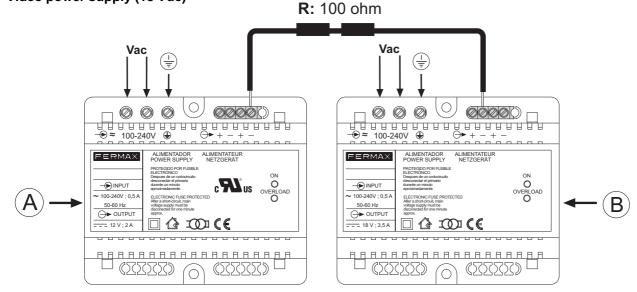


#### Resistor connecting the negatives between power supplies in the MDS General Entrance

En In VIDEO installations with a Decoder version V10.26 or greater, a bridge should be made between the power supply negatives of the MDS General Entrance via the 100 Ohm resistor.

#### A. Audio power supply (12 Vdc)

#### B. Video power supply (18 Vdc)





#### **Operation as a range decoder - MDS-VDS System**

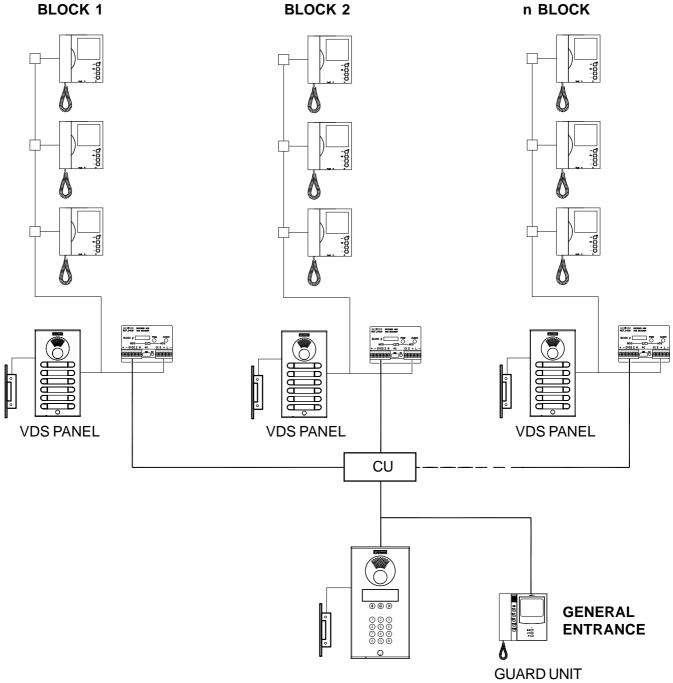
This device is typically used to enclose various VDS blocks with one or various general entrances and a general guard unit. . The system within the block is entirely VDS, and uses typical VDS components, while MDS elements are used for General Entrances.

This device is typically used to enclose various ADS blocks with one or various general entrances and a general guard unit. The system within the block is entirely VDS, and uses typical VDS components, while MDS elements such as panels are used for General Entrances.

#### MDS DIGITAL + MDS DIRECT

MDS DIRECT panels can be used on general entrances (up to a maximum of 5) and configured as general entrance panels and/or MDS DIRECT guard units.

An MDS Digital central unit can be used on General Entrances and digital panels with an electronic directory and/or central guard unit connected to it. In this case we can connect up to 10 central guard units and up to 32 panels. You can also make use of all the additional functions an MDS Digital central unit offers: electronic directory, alarm sensors, building automation, access control, lift control, etc....



MDS DIGITAL

## VDS Decoder

#### Overview

This device has been designed to combine General Entrances MDS and VDS Interior Blocks.

Conversations within each block are independent, they can be held simultaneously with the entry panel or the general entrance (either of these), this is because the VDS Decoder also acts as an audio changer, which when in standby mode isolates audio within the block from the general entrance allowing the interior panels (VDS) to hold independent conversations between their various residences. In this way it is possible to maintain simultaneous conversations in different blocks, each one with their own interior panel. When a call is made from the general entrance to one of the block's residences the decoder connects the audio to the general entrance. If the call from the general entrance is directed to another block the decoder disconnects the changer in such a way that the block's audio is isolated once again.

The VDS decoder should be installed preferably where the interior block power source is installed, together with the video switcher where applicable. It is very important to use a power source for every interior block to avoid interference between the signals generated from one block (calls, call confirmation tones, calls to guard unit etc).

A VDS decoder can manage between 1 and 199 residences (maximum allowed by VDS) depending on how it is configured.

There can be various construction types, even within the same building.

- Type A: Individual Chalets. This is the simplest case. A VDS decoder is used which responds to a unique chalet address. The decoder output is set up in parallel with the chalet's VDS kit panel and the residential terminal.

- Types B, C or D. Residential Buildings There are various options depending on each building's capacity. The logical thing is to choose certain digits to identify the block and others for the residences within the block.

Each residence has an assigned 4 digit call code for calls made from the general entrance panel. These digits can be assigned in the following manner:

	Call Digits	No of Blocks	No of residences/per block	Total
residences	-			
Туре А <b>(*)</b>	VVVV		9999 (00019999)	9999
Туре В (*)	BVVV	10 (09)	199 (001199)	1990
Type C:	BBVV	100 (00 99)	99 (01 99)	9900
Type D <b>(*)</b>	BBBV	1000 (000999)	9 (1 9)	9000

B: Block Digits.

V: Residence Digits

Type A -> Individual Residences Maximum per development: 999 chalets/residences.

- Type B -> Large Blocks (more than 100 residences). Maximum per development: 10 blocks with 199 residences per block, (allows you take advantage of the VDS system's maximum capacity, 199 residences in each block).
- Type C -> Medium Sized Blocks. Maximum per development: 100 blocks with 99 residences per block. The most common type.

Type D - > Small Blocks. Maximum per development: 1000 blocks with 9 residences per block.

(\*) Note: these options can only be used if MDS Digital Interior Blocks are used in the system (1 Decoder per central unit). See advanced diagram in the MDS-VDS Technical Manual code. 97002b.

The conversation time between the panel and the residence is limited:

- by the "maximum conversation time" parameter on MDS panels (which can range from 10 seconds to 4 minutes).
- by the VDS terminals' own time settings (which limit the maximum conversation time to 90 seconds).

The time set will be the lower of these two.

If a call is made from an interior panel and then you try to call the same block from the MDS Digital general entrance, the MDS Digital general entrance panel will indicate that the audio line is busy, to faciliate internal communication. This time is set as the minimum conversation time established on the MDS Digital system.

#### **VERY IMPORTANT**

Calls from VDS interior panels can NEVER bypass the general entrance guard unit, nor can calls be made from these interior panels to the guard units.

The limitations inherent to the VDS system within each block must be kept in mind (distance, section, power supply).

Communication cannot be established within two residences even where an MDS guard unit is used, because the VDS system does not facilitate it.

The VDS Decoder can act as a **main**panel, (it allows the user programme residential terminals from the general entrance panel/guard unit) or **alternatively as a secondary panel**, (allows the user to programme residential terminals from the Interior Block's VDS panel). See programming section.

When calling residential terminals from the block programmed as 0, you don't need to key in the initial zeros.

The VDS decoder in **version V10.26** or above, responds to a **range of telephone systems** which should be programmed with an initial and final value (the same as previous versions).

1 MDS Repeater will be needed Ref. 2339 where the MDS BUS includes more than 128 VDS Decoders, (1 Repeater will be connected every 128 decoders).

#### Audio Balance Adjustment:

Only adjust this control if there is whistling or screeching during the conversation, when making calls from the General Entrance (3).

To facilitate this, use a VDS telephone connected between the "+", "L" and "-" terminals on the corresponding VDS Decoder (B).

Audio levels in the "entry panel - residence" and "residence - entry panel" direction can only be adjusted using the potentiometers located on the corresponding entry panel's amplifier.

#### Remember that before programming, the decoder should be in RANGE Decoder MODE

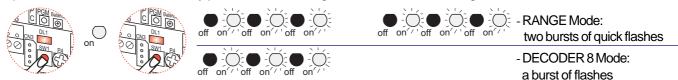
The VDS decoder in version V10.26 or above, can work in 2 different ways:

- 1. It responds to **a range of telephones** which should be programmed using a starting value and an ending value. (the same as previous versions).
- 2. On an MDS system it acts as a 8 output audio decoder. (New function!!!!!!!!)

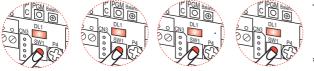
The decoder comes configured by default as a range decoder.

#### Mode Check: range / 8 way decoder

Press the programming button and the led will remain on, once re-pressed to exit programming mode. Note: This operation can be carried out at any point without altering the decoder's functioning.



#### Mode Changing / Selection. PGM Programming Button

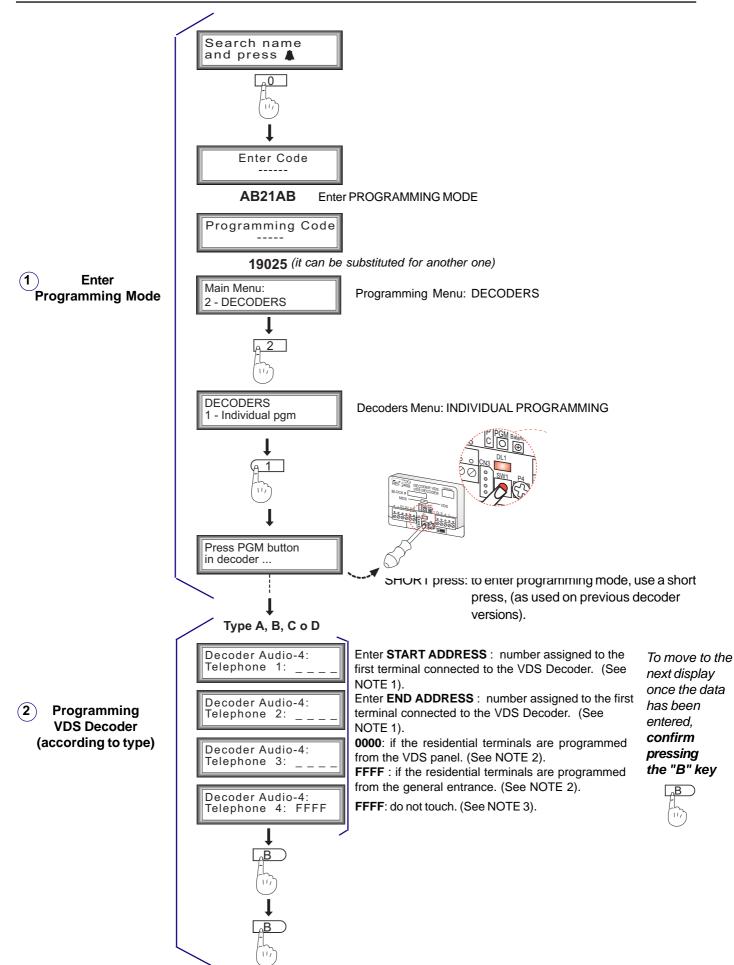


- 4 SHORT consecutive presses:
- To change from range / 8 way decoder mode, press the programming button four times QUICKLY and CONSECUTIVELY.
- \* Note: every time we switch from range/8 way decoder mode, the led lets us know our current status. **Important: a change in status means the addresses will be deleted.**



### **MDS-VDS SYSTEM PROGRAMMING**

Programming the VDS DECODER (as range) from the MDS DIGITAL panel (Cityline / Classic Cityline)

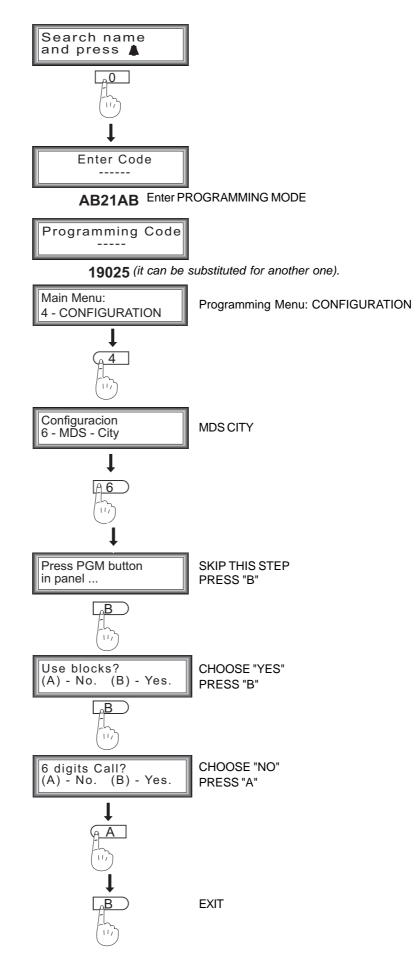


See NOTES



#### Appendix I: Interior Block Programming under Option "C" via the MDS Digital Panel

As described above there can be different types of set-up. If you choose option C, the Interior Block option should be selected via the MDS DIGITAL Panel, as detailed below.

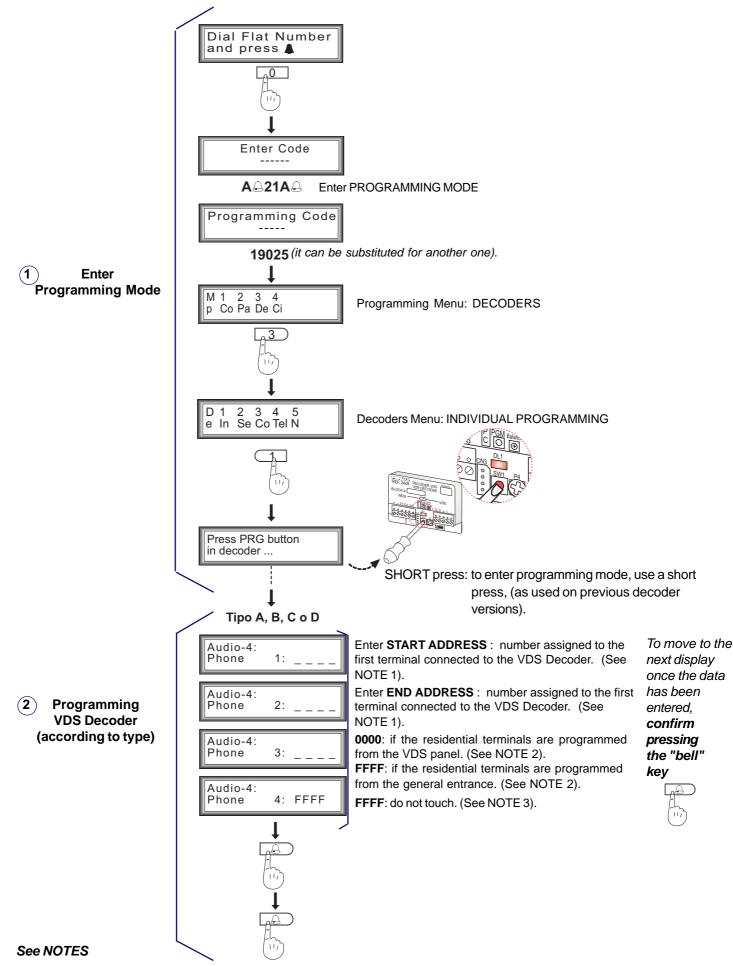


## VDS Decoder

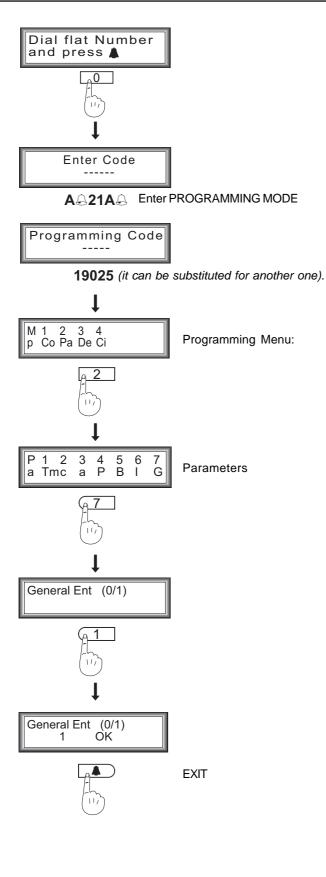


#### Programming the VDS DECODER (as range) from the MDS DIRECT panel (Cityline / Classic Cityline)

The MDS DIRECT Panel should be programmed as a General Entrance. See programming on the next page.



### Appendix I: Programming using the MDS DIRECT panel as a General Entrance

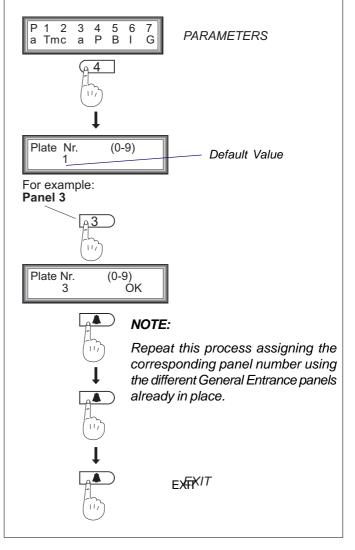


### VERY IMPORTANT

If there is an MDS DIRECT General Entrance and an MDS DIRECT Guard Unit, the General Entrance panel(s) should be programmed from 1 upwards. They should NEVER be programmed with a 0 value.

#### NOTE:

If you have more than one General Entrance (MDS DIRECT), the number corresponding to each of the panels should be programmed by following the steps below:



# VDS Decoder



		TYPE A		TYPE B	TYPE C	TYPE D
Featu	ıres	Individual Chalet or Residence	-	Residences per block	Medium Sized Blocks - 99 Residences per block - 99 Blocks	Small Blocks - 9 Residences per block - 999 Blocks
<b>Start</b> Addre		<i>i i i i</i>		Biii	ВВіі	ВВВі
<b>Final</b> Addre		ffff		Bfff	BBff	BBBf
		iiii=ffff	<b>B</b> =	= Block no.	<b>B B</b> = Block no.	<b>B B B</b> = Block no.
		Audio-4: Telefono 1: _			- 1 - f - m - 0	<b>nal</b> Idress
Obser	vatio	ns:				
•	You c		es of set-	ups within the san	ne development but alway	s respecting the following
a.)	- Up	to 9 -	Гуре В Blo	ocks, (max. 1	99 Residences per block).	
	- Up	to 99 <sup>-</sup>	Type C Blo	ocks, (max.	99 Residences per block).	
	- Up	to 999 -	Гуре D Blo	ocks, (max.	9 Residences per block).	
	- Up	to 9999	Гуре A Re	sidences, (max. 99	999 Individual Chalets or Re	sidences).
	The s are us		d not be re	epeated on 2 differe	ent decoders, even where c	lifferent TYPES of set-ups
	Exam	ple: Cannot co-exi	st			
	BLC	DCK 1	and	BLOCK 11	as both have the add	ress 1115.
	RES	SIDENCE 115		RESIDENCE 15	5	
					<u> </u>	
NOTE	2->	The value is assign	ed			
		-				
					monitors are going to be pro the residential terminals fro	
	Gene				tems/monitors are going to ction on programming the r	

NOTE 3 -> Leave UNPROGRAMMED (FFFF).

If this value has been changed accidentally, it can be re-assigned the F F F F value:

- via the MDS DIGITAL panel, using the bell key.

- via the MDS DIRECT entry panel, press the "A" button on the keypad module.

Audio-4: Telefono 4: FFFF

To programme the VDS DECODER you must have the following software:

\* MDS DIRECT entry panel version 2.5 or above.

\* MDS DIRECT guard unit version 2.5 or above.

### **VDS DECODER Programming via PC**

a) Connect the decoder-PC interface to the CN3 connector. The decoder should use a +12V power supply on CN1. (+, -). CN2 does not need to be powered up (+18V).

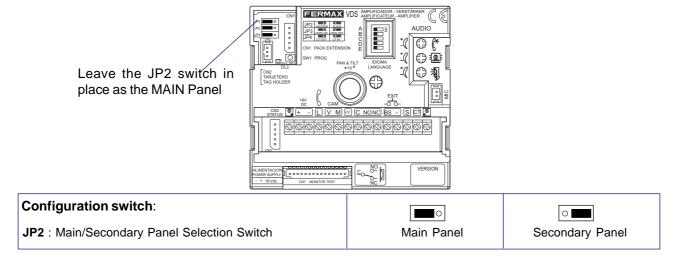
b) Start up the "Decowin" programme and select the "Decoders" "Programming" "Individual" option.

c) Follow the programme instructions. Request our DecoWin Programming Manual.

Page 14



#### Programming VDS residential terminals via the interior blocks' VDS panel, monitors and telephones.

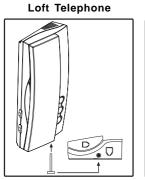


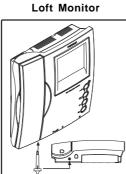
The programming procedure for VDS terminals is the same for monitors and telephones.

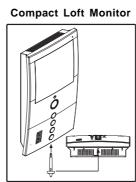
#### The residential terminals will not function if they have not been programmed

Terminal programming is carried out in 2 steps:

1.- Terminal Programming Setup:

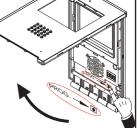








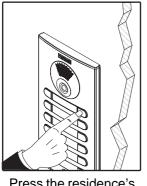
iLoft Monitor



Press the monitor programming setup button.

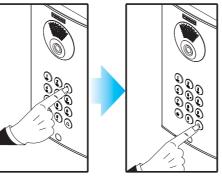
2.- Allocation of Call Codes

### **Button Panels**



Press the residence's call button

#### **Keypad Panels**



()A time period of 2 minutes exists within which to carry out step 2 after terminal programming setup.

Once this time has passed, the terminal will exit programming mode.

Using the keypad, enter the call code and press the bell

The Loft Compact and iLoft monitors have an additional function which enables monitor programming from the same monitor, without having to carry out any operation from the outdoor entry panel.

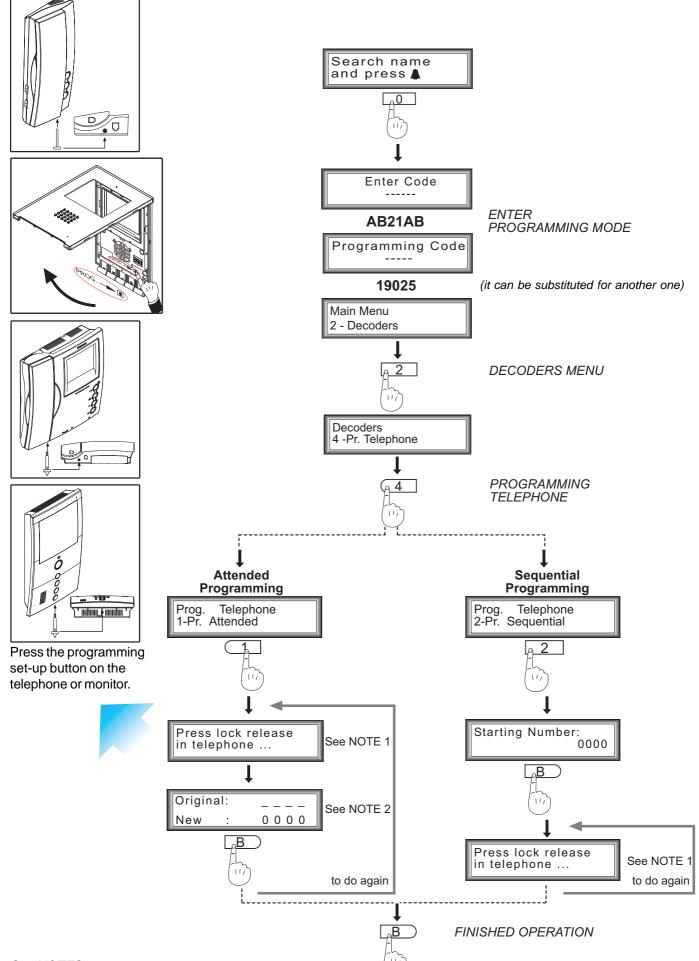
It is recommended that each of the Interior Block's residences are programmed from 1 upwards.

A detailed description of the features and functions corresponding to each terminal is given in the technical documentation:

Manuals available on the Fermax website: www.fermax.com.

VDS Decoder

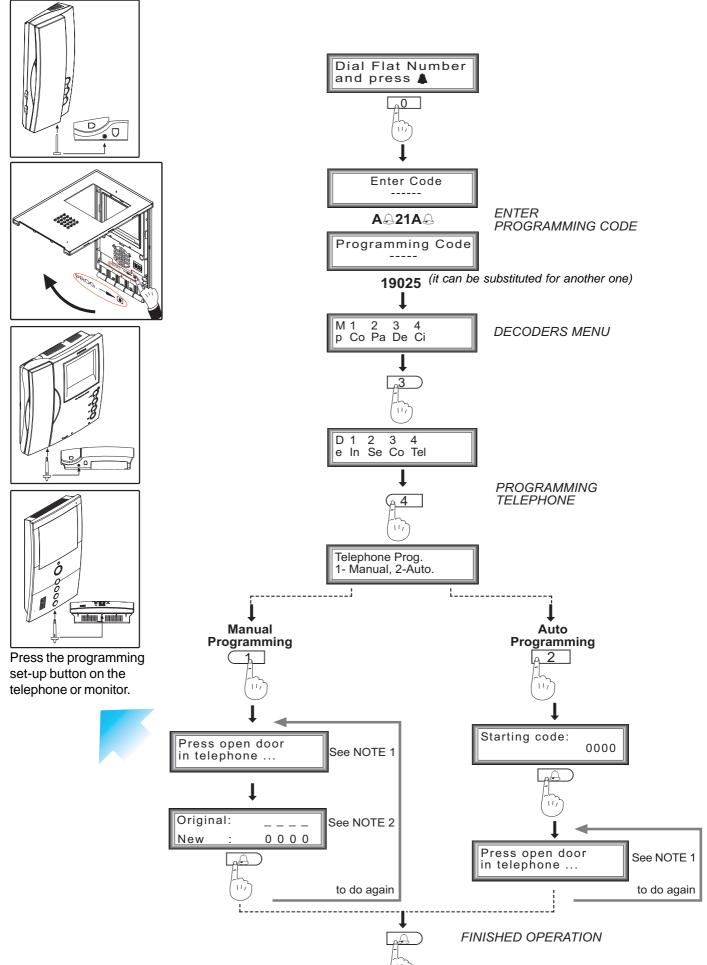
### VDS residential terminal programming via the General Entrance MDS DIGITAL Panel



See NOTES Page 16



#### Residential terminal programming via the General Entrance MDS DIRECT Panel





### NOTES:

Remember that if you want to start the programming process from an MDS panel (including guard units) the VDS decoder must have been pre-programmed as detailed under the "VDS DECODER Programming" section, (Telephone 3: FFFF).

Audio-4: Telefono 3: FFFF
------------------------------

First make a call from the entry panel to any address in this block to activate the audio channel.

Telephone systems programmed with the sub-option "ANSWERED" will need one person on the entry panel and another person to go from residence to residence. A conversation can be held between the person on the entry panel and the residence to indicate what residence the other person is in.

Telephone systems programmed with the sub-option "SEQUENTIAL" should use consecutive numbers and just need one person to go from residence to residence.

NOTE 1-> A message reading "press lock-release button on telephone system" will appear, but actually you will need to press the programming button on the monitor or telephone.

NOTE 2-> The telephone's current number will appear on the panel, or alternatively will be set to 0000 if it hasn't yet been programmed.

#### Operation as a 8 way audio decoder - Overview

The VDS Decoder can also function from an MDS point of view as an 8 way audio decoder. It can store up to 8 MDS addresses which are associated with the VDS addresses (from 1 to 8 exclusively).

It connects to the MDS and VDS buses to translate the MDS commands to VDS and adapt one system's audio to the other's. Allows the use of non-consecutive residential codes and is limited to 8 residences per decoder. Free spaces can be kept in the memory.

#### Programming can be done in different ways:

#### 1. Decoder Programming.

The decoder can be programmed in isolation by using individual or sequential programming.

#### 2. Programming residential terminals.

Residential terminals can be programmed directly from the MDS general entrance panel. Both the terminals and the decoder will be programmed during this process.

#### **VERY IMPORTANT**

- In this case VDS addresses are associated with MDS addresses in chronological order: the first terminal programmed is set up under VDS address 1, the second under address 2 .... etc.

- If an MDS address is repeated during the programming process, a new VDS address will not be assigned, instead the same previously assigned VDS address will be used, that is it will be considered a second terminal within the same residence.

#### 3. Deferred Programming.

The decoder can also be programmed as the number 1 point, outside the system, then can be connected to the system and the addresses programmed on the decoder can be "downloaded" to the residential terminals.

Once set up on the system, press and hold the button (to enter deferred programming mode, hold the button down for 5 seconds until the led starts to flash), from this point on, every time you press the programming button on a terminal, the first programmed address will be assigned. Press the next terminal and the second address will be assigned and repeat up to a maximum of 8.

#### 4. Reprogramming.

This is an option if you want to reprogramme the decoder once the decoder telephones have been programmed, either as a result of extending the system or a change in the residential codes.

If the telephone to be programmed is new, this can be done as detailed in point 2 or 3.

If the telephone has already been programmed with both an MDS address and a VDS equivalent on the decoder, the decoder recognises that the terminal has already been programmed and while it will change the MDS address it will store the VDS one.

If we want to number the VDS and MDS addresses, without considering what was previously saved, we must use deferred programming (point 3). The decoder will be programmed first with the addresses and when this information is downloaded to the terminals all previous addresses will be deleted.

#### Remember that before programming, the decoder should be in 8 WAY Audio DECODER MODE

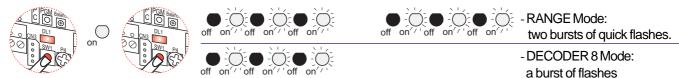
The VDS decoder on version V2.5 or above, can work in 2 different ways:

- 1. It responds to **a range of telephones** which should be programmed using a starting value and an ending value (same as previous versions).
- 2. On an MDS system it acts as a 8 output audio decoder. (New function!!!!!!!!)

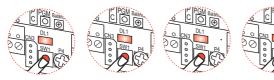
#### The decoder comes configured by default as a range decoder .

#### Mode Check: range / 8 way decoder

Press the programming button and the led will remain on, once re-pressed to exit programming mode. *Note: This operation can be carried out at any point without altering the decoder's functioning.* 



#### Mode Changing / Selection. PGM Programming Button



- 4 SHORT consecutive presses:

To change from range / 8 way decoder mode, press the programming button four times QUICKLY and CONSECUTIVELY.

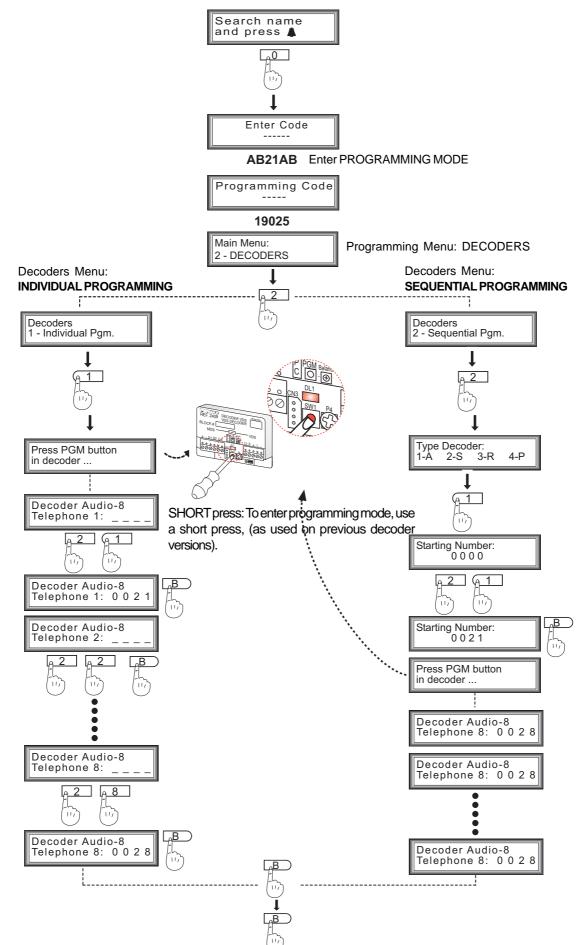
\* Note: every time we switch from range/8 way decoder mode, the led lets us know our current status. **Important: a change in status means the addresses will be deleted.** 

## VDS Decoder

#### 1. Programming the VDS DECODER (as an 8 way decoder) from the MDS DIGITAL panel (Cityline / Classic Cityline)

#### 1. Decoder Programming.

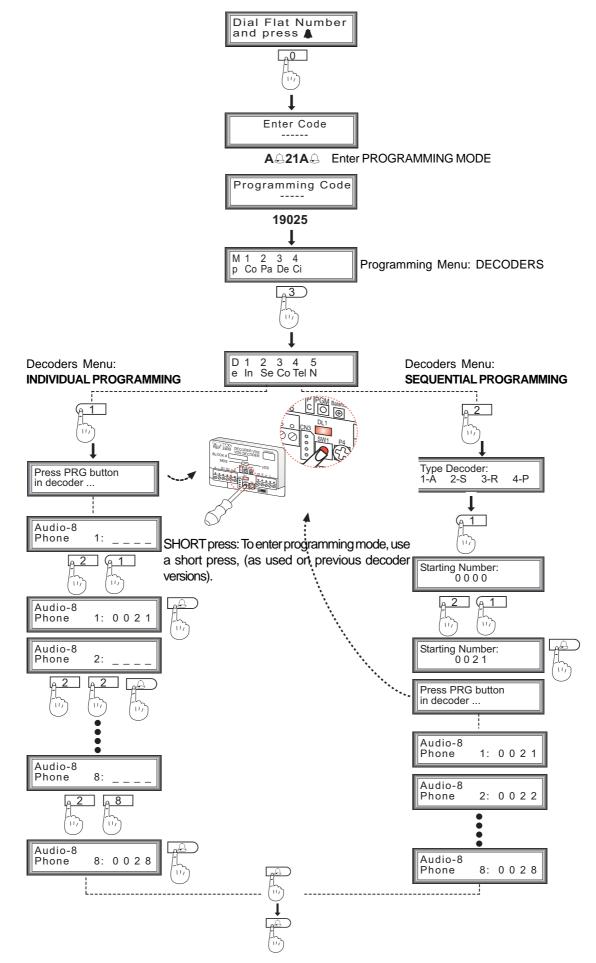
The decoder can be programmed in isolation by using individual or sequential programming.



#### 1. Programming the VDS DECODER (as an 8 way decoder) from the MDS DIRECT panel (Cityline / Classic Cityline)

#### 1. Decoder Programming.

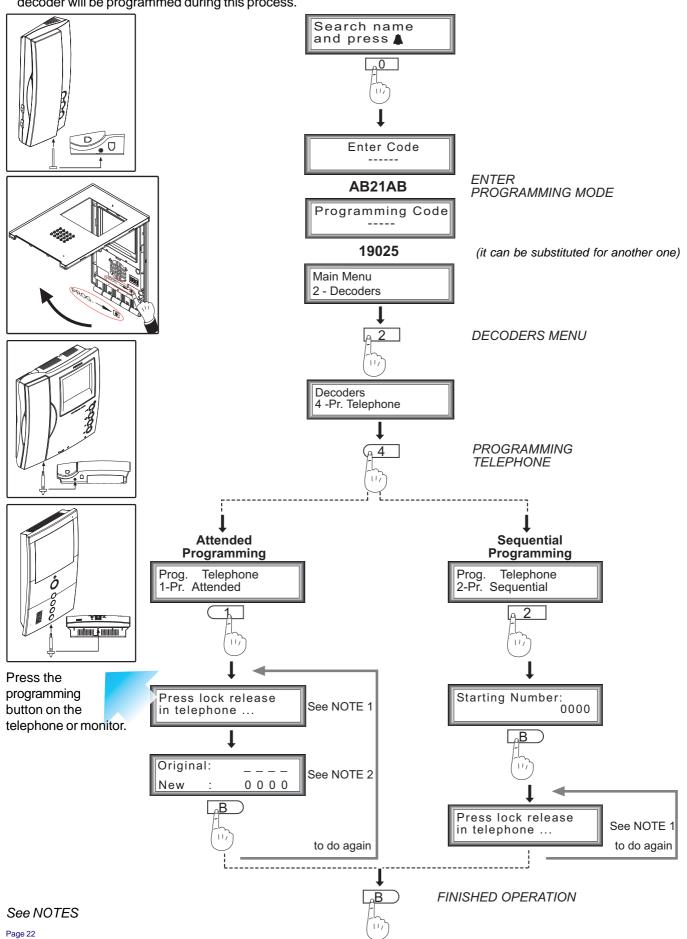
The decoder can be programmed in isolation by using individual or sequential programming.



## 2. Programming RESIDENTIAL TERMINALS and the VDS DECODER (as an 8 way decoder) from the MDS DIGITAL General Entrance Panel (Cityline / Classic Cityline)

#### 2. Programming residential terminals.

Residential terminals can be programmed directly from the MDS general entrance panel. Both the terminals and the decoder will be programmed during this process.

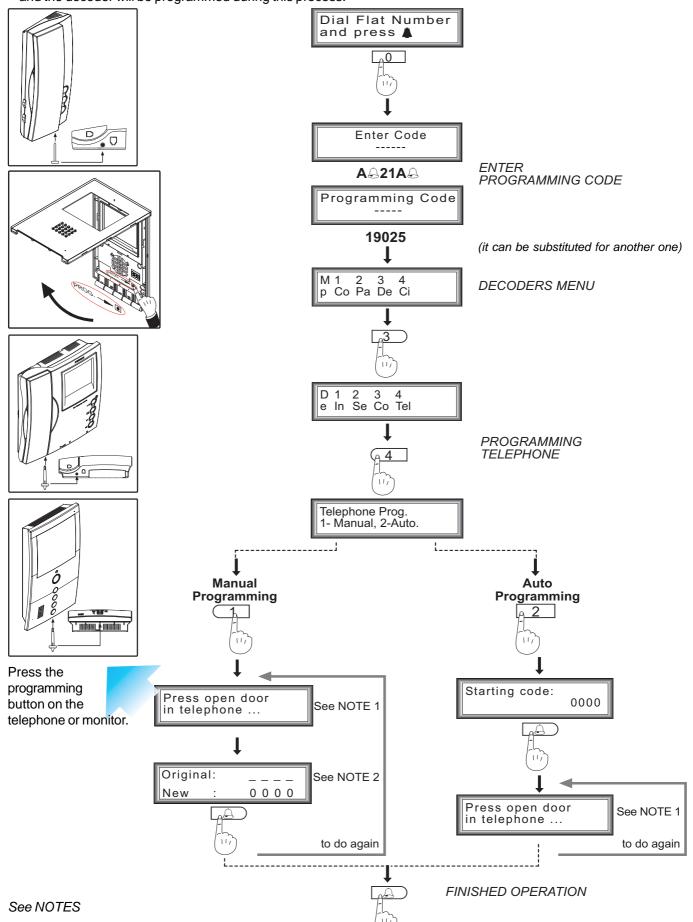


## 2. Programming RESIDENTIAL TERMINALS and the VDS DECODER (as an 8 way decoder) from the MDS DIRECT General Entrance Panel (Classic Cityline)

#### 2. Programming residential terminals.

s Decod

Residential terminals can be programmed directly from the MDS DIGITAL general entrance panel. Both the terminals and the decoder will be programmed during this process.





#### NOTES:

Telephone systems programmed with the sub-option "ANSWERED" will need one person on the entry panel and another person to go from residence to residence. A conversation can be held between the person on the entry panel and the residence to indicate what residence the other person is in. The MDS address is linked to the relevant VDS telephone via this menu. Any of the free memory space at the beginning, middle or end can be kept, but the decoder will never allow you to link the same MDS address to two different VDS terminals.

Telephone systems programmed with the sub-option "SEQUENTIAL" should use consecutive numbers and just need one person to go from residence to residence.

NOTE 1-> A message reading "press lock-release button on telephone system" will appear, but actually you will need to press the programming button on the monitor or telephone.

NOTE 2-> The telephone's current number will appear on the panel, or alternatively will be set to 0000 if it hasn't yet been programmed.

## 3. DEFERRED Programming of RESIDENTIAL TERMINALS and the VDS DECODER (as an 8 way decoder) from the MDS DIGITAL/MDS DIRECT General Entrance Panel

#### 3. Deferred Programming.

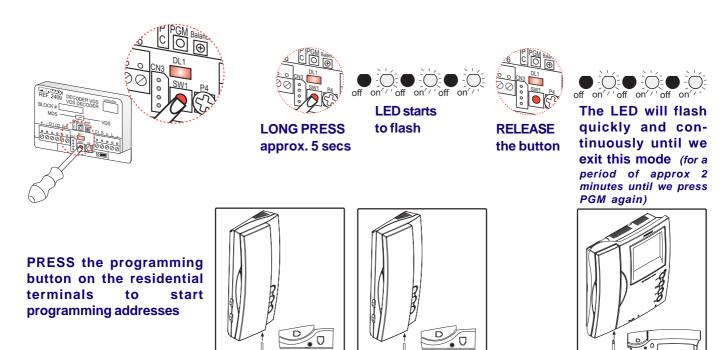
The decoder can also be programmed as the **number 1 point**, outside the system, then can be connected to the system and the addresses programmed on the decoder can be "downloaded" to the residential terminals.

1. Programming the VDS DECODER (as an 8 way decoder) via the MDS DIGITAL panel.

#### 1. Programming the VDS DECODER (as an 8 way decoder) via the MDS DIRECT panel

Once the DECODER has been set up on the system, press and hold the button (to enter deferred programming mode, hold the button down for 5 seconds until the led starts to flash), from this point on, every time you press the programming button on a terminal, the first programmed address will be assigned. Press the next terminal and the second address will be assigned and repeat up to a maximum of 8.

"**Deferred**" **Programming**" **Mode**: Hold the programming button down for a number of seconds (approx. 5 seconds), until the led starts to flash continuously. Then the button can be released. While in this mode and as the terminals are being programmed, the led will flash quickly on a continuous basis until we exit this mode.



Terminal 1

Repeat these steps on the next Decoder.

Terminal 2

**Terminal 8** 

Page 25



#### 4. Reprogramming

If the telephone to be programmed is new, this can be done as detailed in **point 2** or **3**.

2. Programming RESIDENTIAL TERMINALS and the VDS DECODER (as an 8 way decoder) from the MDS DIGITAL General Entrance Panel

2. Programming RESIDENTIAL TERMINALS and the VDS DECODER (as an 8 way decoder) from the MDS DIRECT General Entrance Panel

3. DEFERRED Programming of RESIDENTIAL TERMINALS and the VDS DECODER (as an 8 way decoder) from the MDS DIGITAL/MDS DIRECT General Entrance Panel

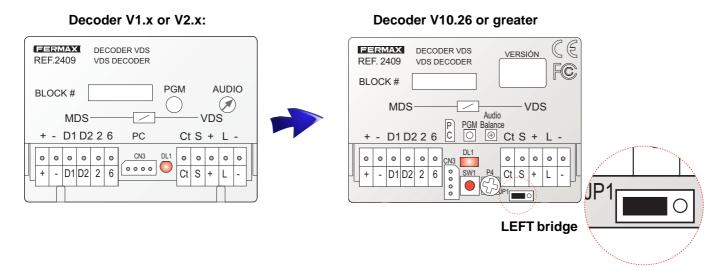
If the telephone has already been programmed with both an MDS address and a VDS equivalent on the decoder, the decoder recognises that the terminal has already been programmed and while it will change the MDS address it will store the VDS one.

If we want to number the VDS and MDS addresses, without considering what was previously saved, we must use deferred programming (point 3). The decoder will be programmed first with the addresses and when this information is downloaded to the terminals all previous addresses will be deleted.

### 3. DEFERRED Programming of RESIDENTIAL TERMINALS and the VDS DECODER (as an 8 way decoder) from the MDS DIGITAL/MDS DIRECT General Entrance Panel

### Substituting the Decoder with version V1.x or V2.x

DECODER version V10.26 (or greater), must has the version selection bridge to the LEFT if substituted for version V1.x or V2.x.



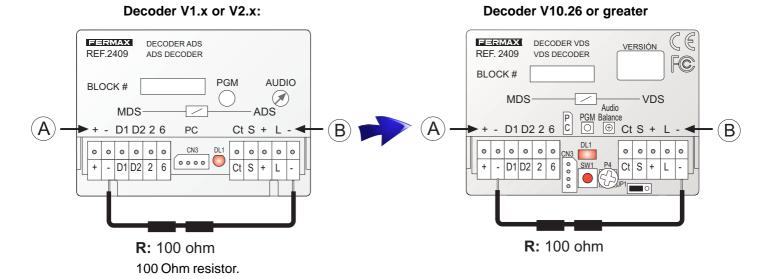
If a 100 Ohms resistor was connected on that previous decoder, due to the installation's requirements, it should remain connected as is.

**APPENDIX: Installation Recommendations** 

MDS-ADS Decoder Resistor ref. 2409 in versionV1.x or V2.x

In order to avoid operational problems with your system, a 100 ohm resistor should be installed between the decoder's "-" MDS and "-" ADS terminals by following the stops below:

- 1. VIDEO installations: The resistor must be installed in the decoder furthest from the General Entrance.
- 2. AUDIO installations: The resistor must be installed in all decoders within the system.
- 3. MIXED installations: The resistor must be installed in the same way as on the VIDEO systems.



#### A. MDS Bus Connector

**B. VDS Bus Connector** 

#### Page 27

