VANDAL RESISTANT ONE BUTTON + CODED ACCESS DOOR ENTRY KIT

VRDK1/CL (25H/CL)

TECHNICAL MANUAL
EDITION 1.0

VIDEX
The Power to Secure

MANUAL INTRODUCTION

The information in this manual is intended as an installation and commissioning guide for the vandal resistant one button audio intercom kit. 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.

SYSTEM INTRODUCTION

This kit will enable a caller at an entrance point to signal an occupant in the dwelling by pressing a call button which will buzz an audio telephone inside. A two way conversation can take place once the telephone is answered and then if required, the occupant can release an electric lock release by pressing a button on the telephone. Additionally users can gain access using an access code. The kit does not include the electric lock release. A 12V AC release should be used with this kit.

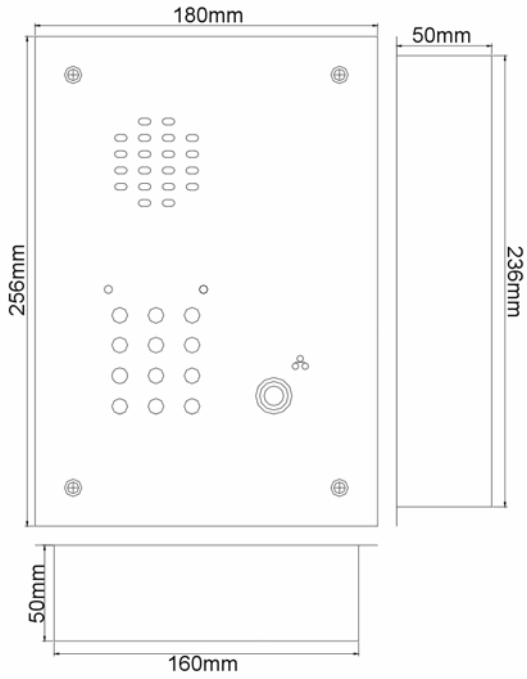
SYSTEM COMPONENTS

This kit comprises of a flush vandal resistant door panel with coded access, audio telephone and PSU. The door panel can be converted to surface by ordering the VR/S2 surface back box. Up to a maximum of three telephones can be used on the system to call in parallel.

DOOR PANEL

The vandal resistant door panel will consist of an amplifier module, codelock module, button, vandal resistant plate and back box.

Amplifier module (Art.437 or Art.537)	
Connection	**Function**
1	Receive speech from apartment
2	Transmit speech to apartment
3	+8Vdc to +12Vdc input
4	0V (Ground)
Codelock module connections (VX800N)	
1	12V power input from PSU
2	Ground 0V from PSU
3	Common connection on relay 1
4	Normally open connection on relay 1
5	Normally closed connection on relay 1
6	Common connection on relay 2
7	Normally open connection on relay 2
8	Normally closed connection on relay 2
9	Push to exit input triggering relay 2
10	Push to exit input triggering relay 1



Speech volume adjustments are carried out at the door panel using a small trimmer driver.

Adjustment for speech volume level at the door station

Adjustment for speech volume at the apartment

POWER SUPPLY

Art.520M

The power supply is the Art.520M. Outputs of 12Vdc (200mA), 8Vdc (300mA) and 13Vac (1A) are available. The dc outputs are designed to power the amplifier modules only and can not be used to power other devices such as lock releases etc. These items must be connected to the AC output of this power supply.

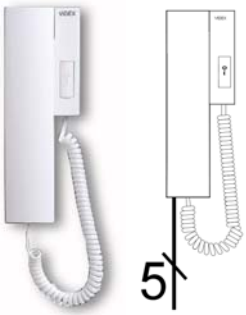
CONNECTIONS

Terminal		Function
+12		12Vdc output (200mA Max.)
+8		8Vdc output (300mA Max.)
-		0V (Ground)
~		13Vac (1A Max.)
230		Mains in (Live connection)
0		Mains in (Neutral connection)

TELEPHONE

Art.3021

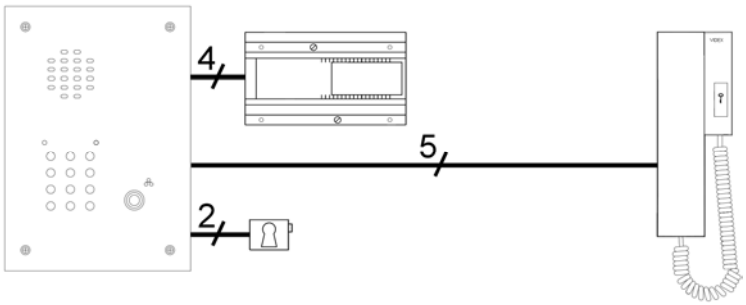
The Smart line Art.3021 is a wall mountable AC buzzer phone and includes a lock release push button.



CONNECTIONS:-

	Function
1	Transmit speech to the door panel
2	Receive speech from the door panel
3	0V
4	Not used (Electronic call tone input)
5	Lock trigger (Switched 0V)
6	Call line (13Vac input to trigger buzzer)

BLOCK DIAGRAM

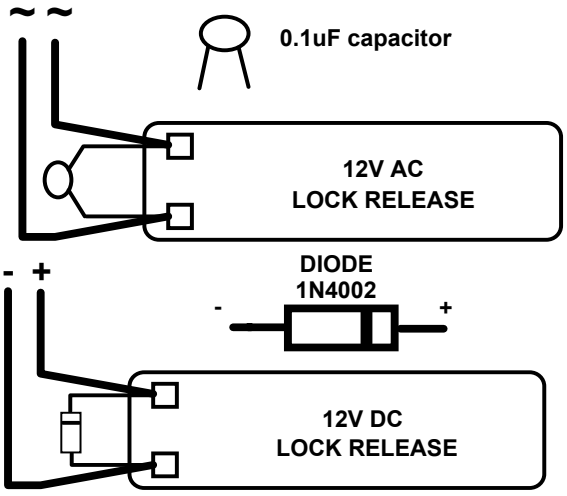


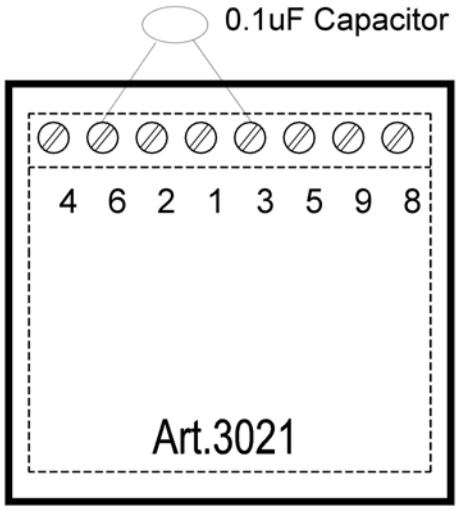
INSTALLATION

The wiring diagram towards the back of this manual should be followed carefully. Heavy duty conductors on wiring diagrams are shown heavily outlined, These wires should be doubled up.

- Check that all components are free from damage before installing (Do not proceed with installation in the event of damage).
- Keep all packaging away from children.
- Do not obstruct the ventilation openings or slots on any of the devices.
- All connections to mains voltages must be made to the current national standards (IEE Wiring regulations)
- Install an appropriate fused spur or isolation switch to isolate the mains.
- Isolate the mains before carrying out any maintenance work on the system.
- All intercom and access control cables must be routed separately from the mains.

Lock release and AC buzzer back EMF protection : A capacitor must be fitted across the terminals on an AC lock release and the AC buzzer inside the telephone. When using a DC lock release with a separate DC PSU a diode must be fitted across the terminals of the lock release as shown in the diagrams below to suppress back EMF voltages.





Safety Note : An earth connection should also be fitted to the door panel stainless steel facia using one of the studs provided.

CABLE SIZE GUIDE

AUDIO SYSTEM

Connections from door panel to telephone.

Connections	50m	100m	200m	300m	400m
1	0.25mm²	0.35mm²	0.5mm²	0.75mm²	1.0mm²
2	0.25mm²	0.35mm²	0.5mm²	0.75mm²	1.0mm²
3	0.25mm²	0.35mm²	0.5mm²	0.75mm²	1.0mm²
5	0.25mm²	0.35mm²	0.5mm²	0.75mm²	1.0mm²
6	0.25mm²	0.35mm²	0.5mm²	0.75mm²	1.0mm²

When ever possible connection 1(Tx) should be twisted with connection 3(Gnd) and connection 2(Rx) should be twisted with connection 3(Gnd) as pairs.
Maximum acceptable resistance for terminals = 10Ω

Connections for power supply output to door panel and lock release connections. These connections are shown heavily outlined on the wiring diagram.

	50m	100m
Connections	0.5mm²	0.75mm²

The power supply should be located as close to the door panel as possible for best performance.
Maximum acceptable resistance for above cables = 3Ω

TESTING THE INSTALLATION

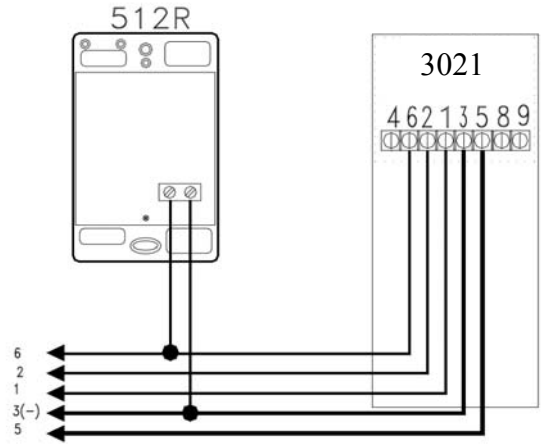
- Check all the connections have been made correctly and then power up the system.
- Call the apartment. Check for call to the apartment, speech in both directions and lock release.
- If the volume of speech needs to be adjusted, this can be done by adjusting the presets on the rear of the amplifier at the door panel.

PANEL CARE

The door panels are manufactured from either 12 Gauge 304 grade stainless steel or mirror finished brass. It is important that the facia is cleaned on regular occasions to prevent dirt build up and tarnishing of the metal. A general household metal polish can be used but care should be taken to follow the grain of the metal when polishing and also avoid any polish build up around the call button which may prevent the button from operating correctly.

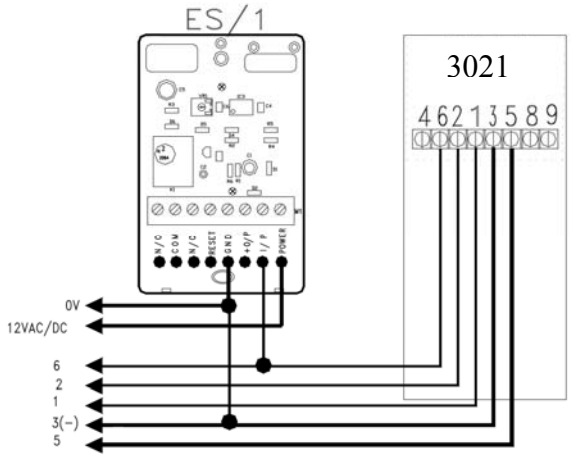
ACCESSORIES CONNECTION GUIDE

CONNECTING THE 512R EXTENSION SOUNDER



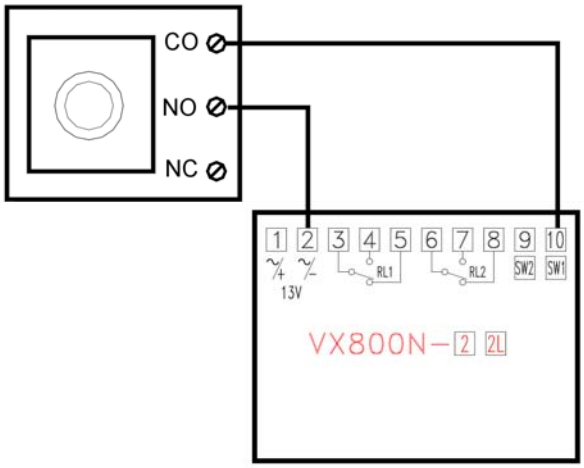
DURING A CALL THE EXTENSION SOUNDER WILL BUZZ

EXTENSION STROBE

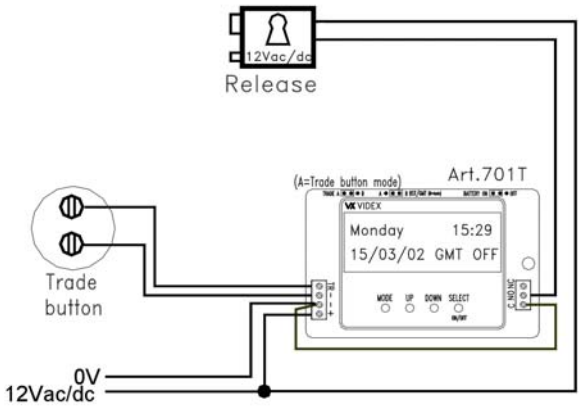


DURING A CALL THE STROBE LIGHT WILL FLASH

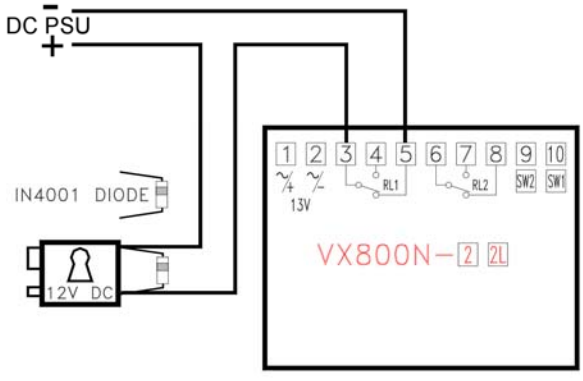
PUSH TO EXIT (PUSH TO MAKE)



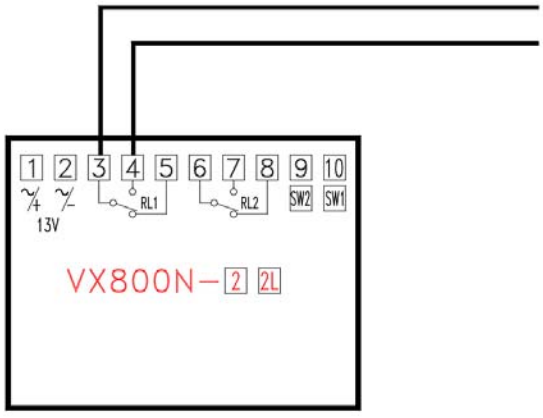
TRADE BUTTON



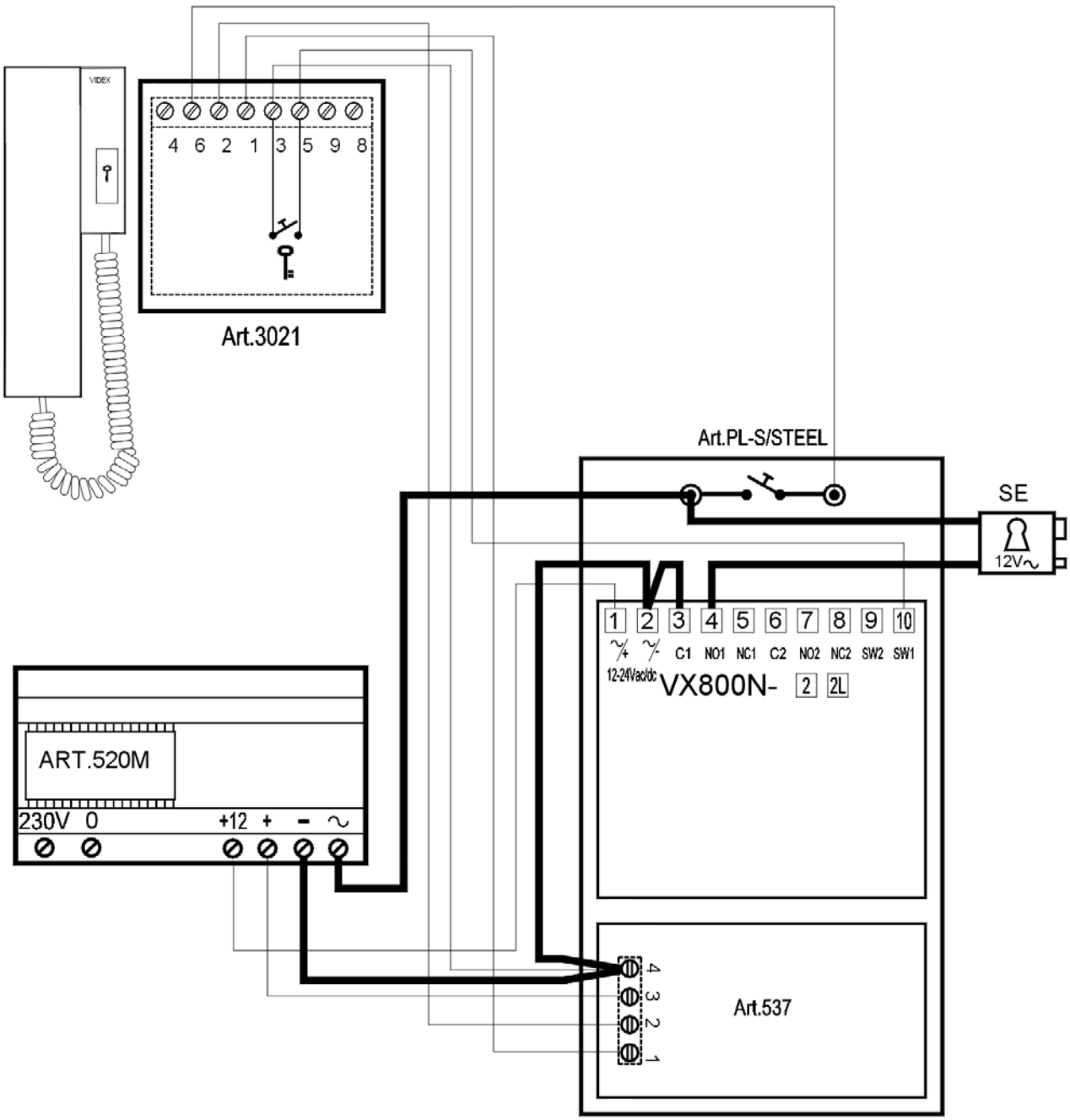
FAIL SAFE LOCK RELEASE



DRY CONTACT LOCK OUTPUT



WIRING DIAGRAM

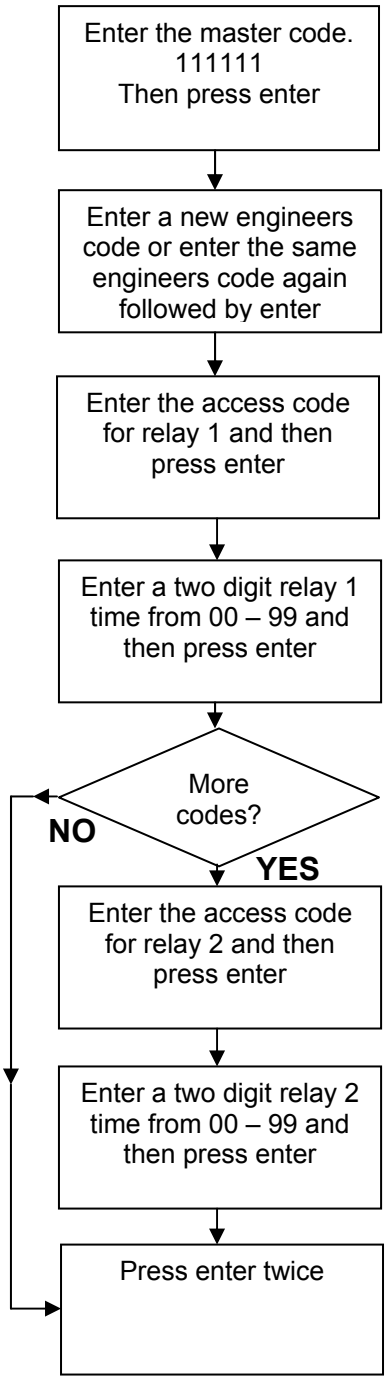


VX800N CODELOCK

The VX800N includes two relays (5A contacts), two push to exit inputs (Switched negative) and can have up to two 4 to 8 digit access codes programmed (One per relay). The relay times can be programmed from 01 second up to 99 seconds or by setting the relay time to 00, latch the relay(To latch, enter the code followed by enter and to unlatch enter the code followed by clear).

INITIAL PROGRAMMING

All programming is carried out using the codelock keypad. The programming menu is protected by an engineer's code. The factory default engineers code is 111111 (6x1). This code can be changed to any four to six digit code during the program but must be different to the codes used to gain entry. Follow the flow chart to setup the system:-



The red LED will illuminate to acknowledge programming mode. If the red LED does not illuminate check the master code is correct. If the master code may have been changed from the factory default and you do not know what it is then follow the factory default procedure on the following page.

This code can be from 4 – 8 digits and will not activate a relay. It can only be used to enter programming mode.
Note this new code in the box provided on the next page. It will be needed to re-program the codes in the future.

This code will be used to open the door/gate (Relay 1). The code can be from 4 – 8 digits long and must be different from the engineer's code.

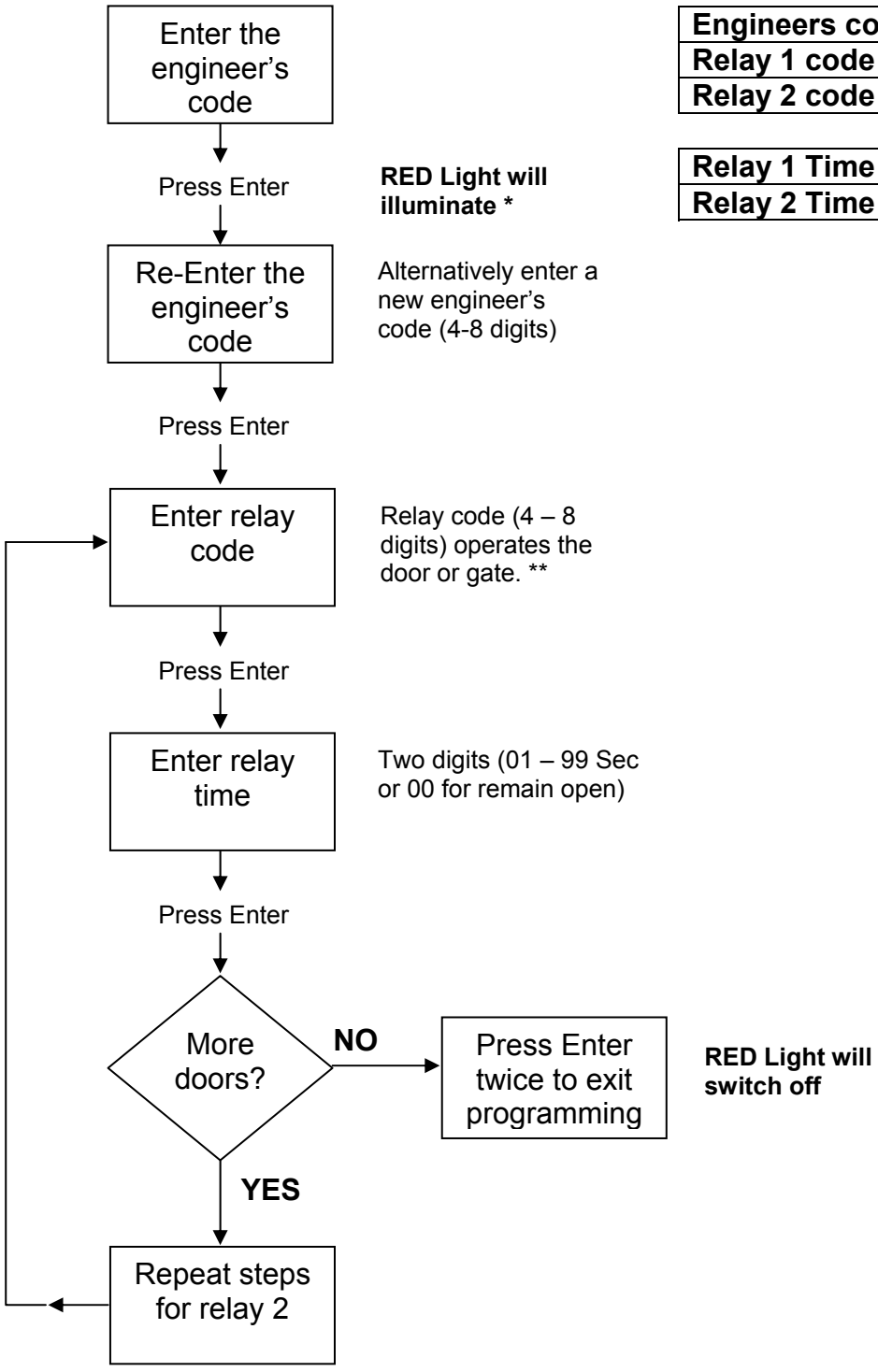
This is the time the relay 1 will energise for. 00 will latch the relay when the code is entered and require the code followed by clear to unlatch.

This code will be used to open the door/gate (Relay 2). The code can be from 4 – 8 digits long and must be different from the engineer's code.

This is the time the relay 2 will energise for. 00 will latch the relay when the code is entered and require the code followed by clear to unlatch.

The red LED will go off to confirm the exit from programming mode.

VX800N CODELOCK REPROGRAMMING GUIDE



Engineers code	
Relay 1 code	
Relay 2 code	

Relay 1 Time	
Relay 2 Time	

Notes:
* If the red light does not illuminate, the engineers code is incorrect. Follow the factory default procedure below.
** On the first loop of the flow chart its relay 1, second loop is relay 2.

FACTORY DEFAULT PROCEDURE
Step 1 Remove the power from the keypad
Step 2 Press and hold the enter button while re-powering the keypad
Step 3 Release the enter button. The factory engineer's code is restored to 111111 (6 x 1)

TROUBLE SHOOTING

SYMPTOM	TEST
No speech from the door panel to the telephone.	Check terminal 2 on the amplifier for continuity to terminal 2 on the telephone.
	Before lifting the handset, check the voltage to terminal 2 of the amplifier is 8-12Vdc. Trace this voltage to terminal 2 to the telephone.
	Check the voltage drops to approx. 1Vdc after the handset is lifted. (If not try another telephone)
	If all else fails try another amplifier at the door station
No speech from the telephone to the door panel.	Check terminal 1 on the door panel amplifier for continuity back to terminal 1 on the telephone.
	Before lifting the handset, check the voltage to on terminal 1 of the amplifier is 8-12Vdc. Trace this voltage to terminal 1 to the telephone.
	Check the voltage drops to approx. 4Vdc after the handset is lifted. (If not try another telephone)
	If all else fails try another amplifier at the door station
No speech in either direction	Check the 315mA fuse in the power supply
	Check for 8-12Vdc across terminals 3 & 4 on the door panel amplifier. This should be there all the time and comes directly from the PSU.
Lock will not operate from telephone	Check terminal 5 on the telephone. This terminal shorts to terminal 3 of the telephone when pressed (Becomes 0V).
	Check terminal 5 of the telephone is connected correctly to terminal 10 of the keypad. Try touching a wire across terminal 10 & terminal 2 on the keypad to ensure the codelock is operating the relay.
	If a push to exit is also connected to terminal 10 of the codelock ensure it is not a normally closed switch or in short.
Nothing happens when any call button is pressed	Check the common of the buttons has 13Vac present at all times.
	When a call button is pressed you should be able to read 13Vac on terminals 3 & 6 of the telephone (6 of the telephone comes direct from the call button). If voltage is there then check/change the buzzer.
Hum on the speech lines	Ensure all intercom cables do not run close to higher voltage cables
	Try another amplifier at the door panel.
Codelock not operating	Check power on terminals 1 & 2 on the codelock is 12V. If this voltage is lower it may not operate the relays correctly.
	Check the keys beep when pressed. This will not happen if the codelock is faulty or has the incorrect power connected to terminals 1 & 2
	Try re-programming the codelock

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
TEL 0191 224 3174
FAX 0191 224 4938
http://www.videx-security.com