

VANDAL RESISTANT ONE BUTTON DOOR ENTRY KIT

VRDK1 (25H)



TECHNICAL MANUAL
EDITION 1.0

VINDEX
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. The kit does not include the electric lock release. A 12V AC release should be used with this kit. If this kit is to be used with a gate or other type of lock release then a 506N (Non timed) or 506T (Timed) relay will be required along with the appropriate PSU for the lock release.

SYSTEM COMPONENTS

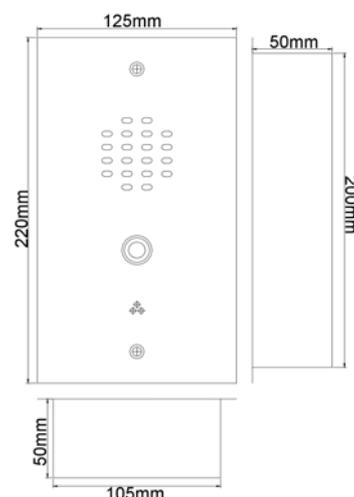
This kit comprises of a flush vandal resistant door panel, audio telephone and PSU. The door panel can be converted to surface by ordering the VR/SR1N surface back box. Up to a maximum of three telephones can be used on the system to call in parallel.

DOOR PANEL

The vandal resistant door panel will consist of an amplifier module, 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)



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

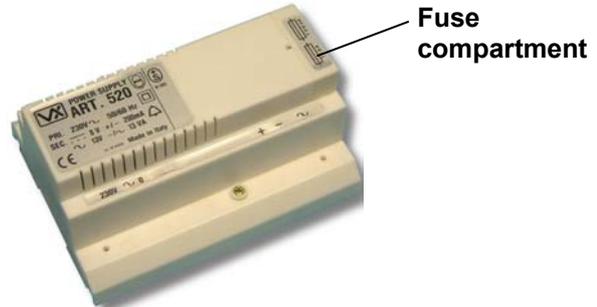
POWER SUPPLY

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)



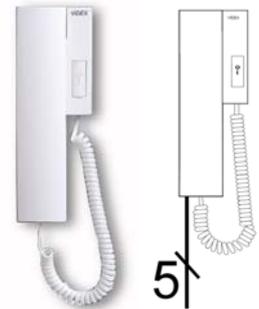
TELEPHONE

Art.3021

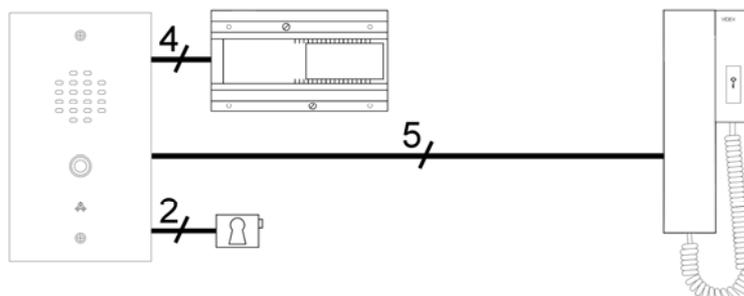
The Smart line Art.3021 is a wall mountable AC buzzer telephone and includes a lock release push button.

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



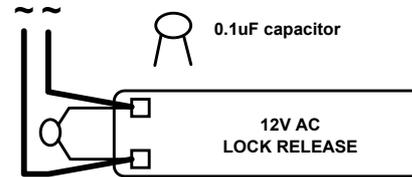
INSTALLATION

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 back EMF protection : A capacitor should be fitted across the terminals on an AC lock release as shown in the diagram 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	0.25mm ²	0.35mm ²	0.5mm ²	0.75mm ²	1.0mm ²
2	0.25mm ²	0.35mm ²	0.5mm ²	0.75mm ²	1.0mm ²
3	0.5mm ²	0.75mm ²	1.5mm ²	2.0mm ²	2.5mm ²
5	0.5mm ²	0.75mm ²	1.5mm ²	2.0mm ²	2.5mm ²
6	0.25mm ²	0.35mm ²	0.5mm ²	0.75mm ²	1.0mm ²

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 1, 2 & 6 = 10Ω and for terminals 3 & 5 = 3Ω

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	0.5mm ²	0.75mm ²

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

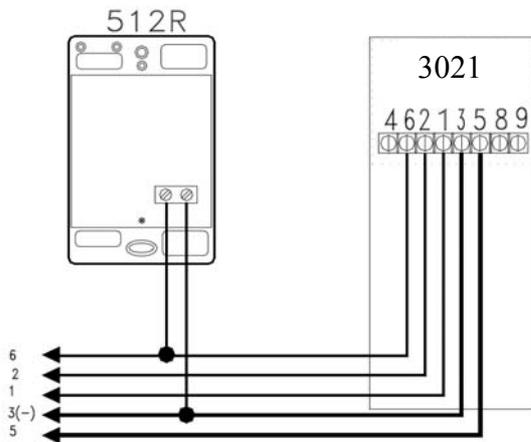
- Check all the connections have been made correctly and then power up the system.
- Call all the apartments in turn. Check for call to the apartment, speech in both directions and lock release.
- If the volume of speech needs to be adjusted, this can be done by adjusting the presets on the rear of the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

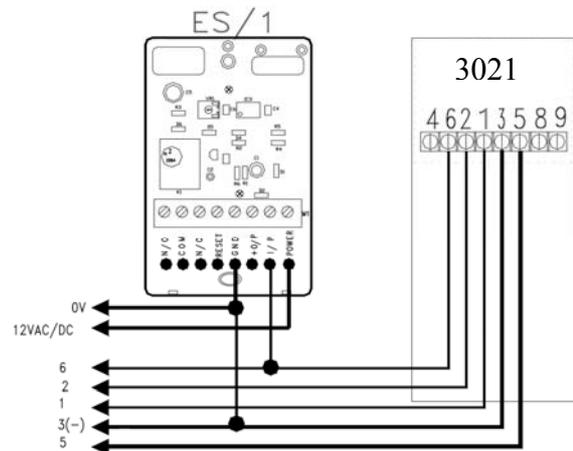
ACCESSORIES CONNECTION GUIDE

CONNECTING THE 512R EXTENSION SOUNDER



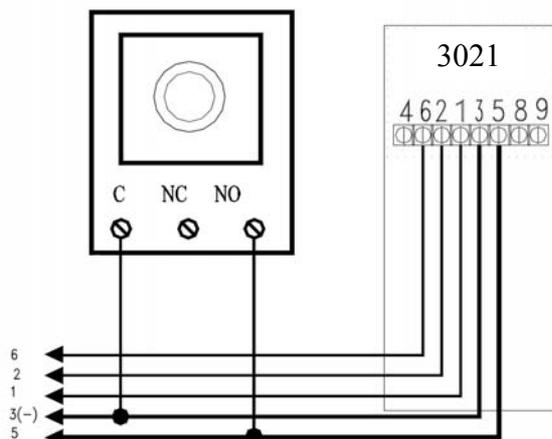
DURING A CALL THE EXTENSION SOUNDER WILL BUZZ

EXTENSION STROBE

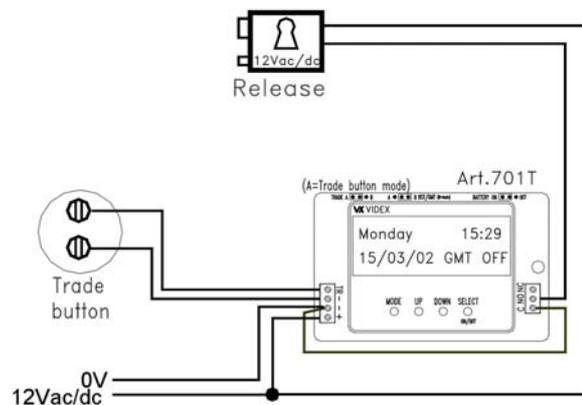


DURING A CALL THE STROBE LIGHT WILL FLASH

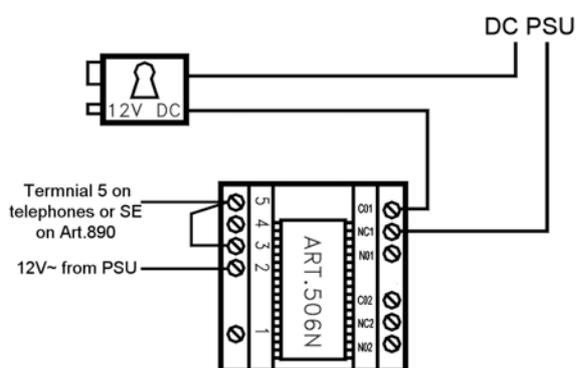
PUSH TO EXIT (PUSH TO MAKE)



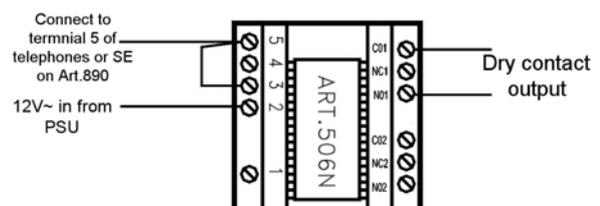
TRADE BUTTON



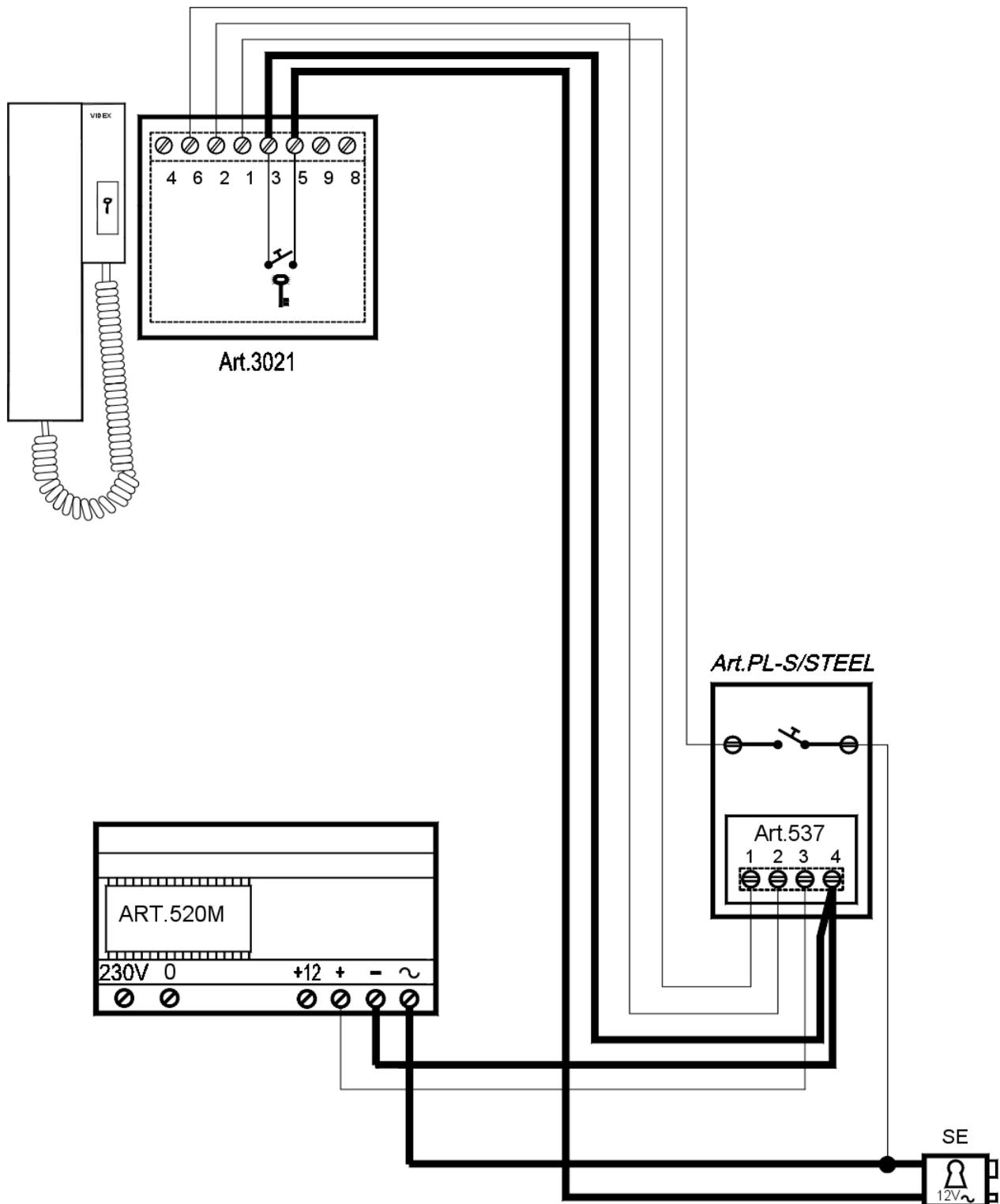
FAIL SAFE LOCK RELEASE



DRY CONTACT LOCK OUTPUT



WIRING DIAGRAM



TROUBLE SHOOTING

AUDIO SYSTEMS

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).
Nothing happens when any call button is pressed	Check the common of the button 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.



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>