GSM DOOR INTERCOM SYSTEM
(Up to 50 call buttons)

TECHNICAL MANUAL
EDITION 2.0.5

VIDEX
The Power to Secure

CONTENTS

MANUAL INTRODUCTION

The information in this manual is intended as an installation and commissioning guide for the GSM door intercom 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 have not installed this system before. Technical help is also available on 0191 224 3174 during office hours or via e-mail tech@videx-security.com.

SYSTEM INTRODUCTION

The system is designed to work on the same technology as mobile phones. It enables a call to be made from an entry point (Door, gate etc), to any telephone number (mobile or land line). Up to 50 call buttons can be connected to the door panel, each able to call two telephone numbers (If the first is busy or not answered, the call can be diverted to the second) or with the additional divert facility enabled it is possible to have up to 10 call buttons each with 1 primary number and 5 divert numbers. Features of the system include a dry contact relay output, an open collector auxiliary output, push to exit input and switched 0V auxiliary input. Programming of the telephone numbers and additional features can be carried out via text messaging or PC using a specially designed Windows program. An additional access control feature for up to 250 telephone numbers is also available on the system allowing a number of callers to open the gate/door simply by dialling the telephone number of the intercom panel (The intercom panel will not answer these calls but will activate the relay output).

A SIM card is required for this product but not supplied. It is recommended to choose the SIM card which has the best coverage for the area in which the intercom panel will be installed. Both contract and 'Pay as you go' SIM cards can be used but if using a 'Pay as you go' we would recommend setting up an automatic top up to avoid running short on credit and loosing the use of the intercom panel. Alternatively if you already have a contract mobile phone it should be possible to get a second SIM card and telephone number on the existing account. For more information contact the SIM card provider or visit their web sites.

Network provider selection: It is imperative for the reliably operation of the system that the best network provider for the area is selected. Problems such as network disconnection can occur if the provider has signal or interference problems for that area. We would recommend using a GSM signal strength meter to survey the intended antenna location. Contact Videx for more information on where to purchase a tester. As an initial check, also go to www.sitefinder.ofcom.org.uk and enter the postcode of the intended installation. This will show all transmitters in the area. It is advised to choose the closest one or if there are many then choose a transmitter working on 900MHz as this frequency works best through obstacles such as walls, buildings etc. The antenna should always be mounted vertically at the highest point possible. Metal structures and sources of interference such as power cables, control panels etc can affect signals and so the antenna should be mounted away from these.

When registering a new SIM you may be asked for the IMEI number. This is the unique serial number of the GSM intercom and can be found on the rear of the module just below the SIM holder on a white label. It's the long number below the barcode.

PRECAUTIONARY ADVICE

- When mounting the GSM antenna, choose a location which is away from human interaction and away from the intercom panel. Route the GSM antenna cable from the intercom panel so that it is separate from the power supply cables and microphone wire.
- Always ensure the power is off to the intercom panel before inserting or removing the SIM card.
- New SIM cards will need registering before they can be used. Full details of how this is done can normally be found in the SIM card pack. It will normally require that the SIM card is inserted into a mobile phone, a number dialled and instructions followed. While the SIM is in the mobile phone it would be a good time to disable any PIN codes, call diverts, ring back and disable features such as voicemail and text alerts. Details of how to do this can be found on the SIM card provider's web site or by calling their customer services. Please use one of the following SIM card providers (Vodafone, TMobile, O2 or Orange). We do not recommend using 3 at this present time.
- To be able to receive text messages from the intercom panel, the SIM card will require an SMS service centre number. This is normally preinstalled on new SIM cards but if you are having trouble receiving SMS messages you will need to confirm this by inserting the SIM card into a telephone and using the telephones menu options to check it. If a number is not programmed then it should be programmed while in the telephone (The number can be obtained from the service provider).
- Voicemail and text alerts must be switched off on the SIM card when using the dial in to release the door/gate feature. For Vodafone and O2 this can be done while the SIM card is in the intercom panel. For Orange and T-Mobile the SIM card must be remove and put into a mobile phone.
- When storing the intercom panel's telephone number in your own mobile phone avoid using an obvious name such as 'Front Door, or 'My Gate' as this would make it easy to decipher if your phone was lost or stolen.
- The PIN request feature must be disabled on the SIM card before using it in the Intercom panel. It is likely on a new SIM card that it will not be enabled but if it is, it will prevent the system from working at all.
- This product may not be suitable for installation in hospitals, health care facilities or in the presence of flammable gases or liquids. Seek advice and authorisation before installing this product in these locations.

IMPORTANT NOTE ABOUT SIM CARD

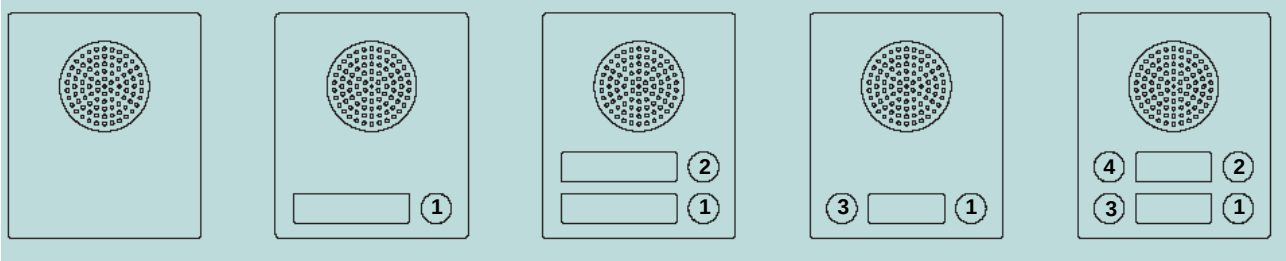
When using a pay monthly SIM card you must ask the service provider to put a spend limit on the account (Vodafone call this service 'spend checker'). This is to safeguard against possible problems which could result in a large phone bill at the end of the month. All providers offer this service. You will need to either ring them or e-mail them to set this up. Automatic top ups should also have a monthly limit.

SYSTEM COMPONENTS

A system comprises of an intercom panel, power supply, SIM card and antenna. The intercom panel is of modular design allowing it to be customised to the installation requirements by including proximity access control, coded access or bioaccess and also including the correct number of call buttons.

INTERCOM MODULE

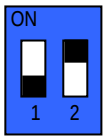
The intercom panel can include any of the modules from the 4000 Series range and uses the standard 4000 series surface and flush mounting frames. The GSM amplifier module is however essential and includes all the GSM communication electronics, SIM card (Supplied seperately) and connections. The intercom module is available in a 0 button, 1 button, 2 button, & 4 button configuration as shown below along with their part numbers.



Art.4810N-0 Art.4810N-1 Art.4810N-2 Art.4810N-1D Art.4810N-2D

DIP SWITCH SETTINGS

There are 2 dip-switches located on the back of the module. They can be used to alter the volume from the Door Intercom speaker. Additionally, the volume can also be adjusted during a call via the telephone keypad.

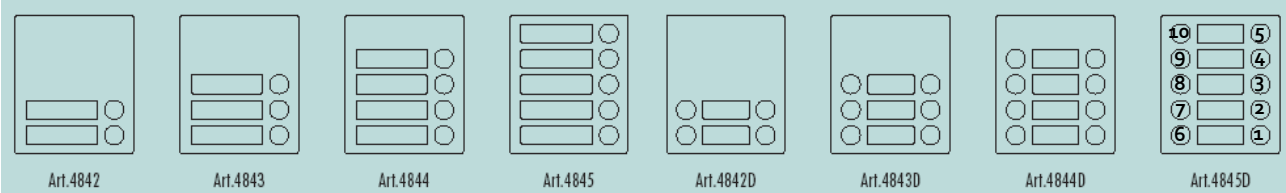


1	2	GAIN (dB)
ON	ON	6
ON	OFF	12
OFF	ON	18
OFF	OFF	23.5

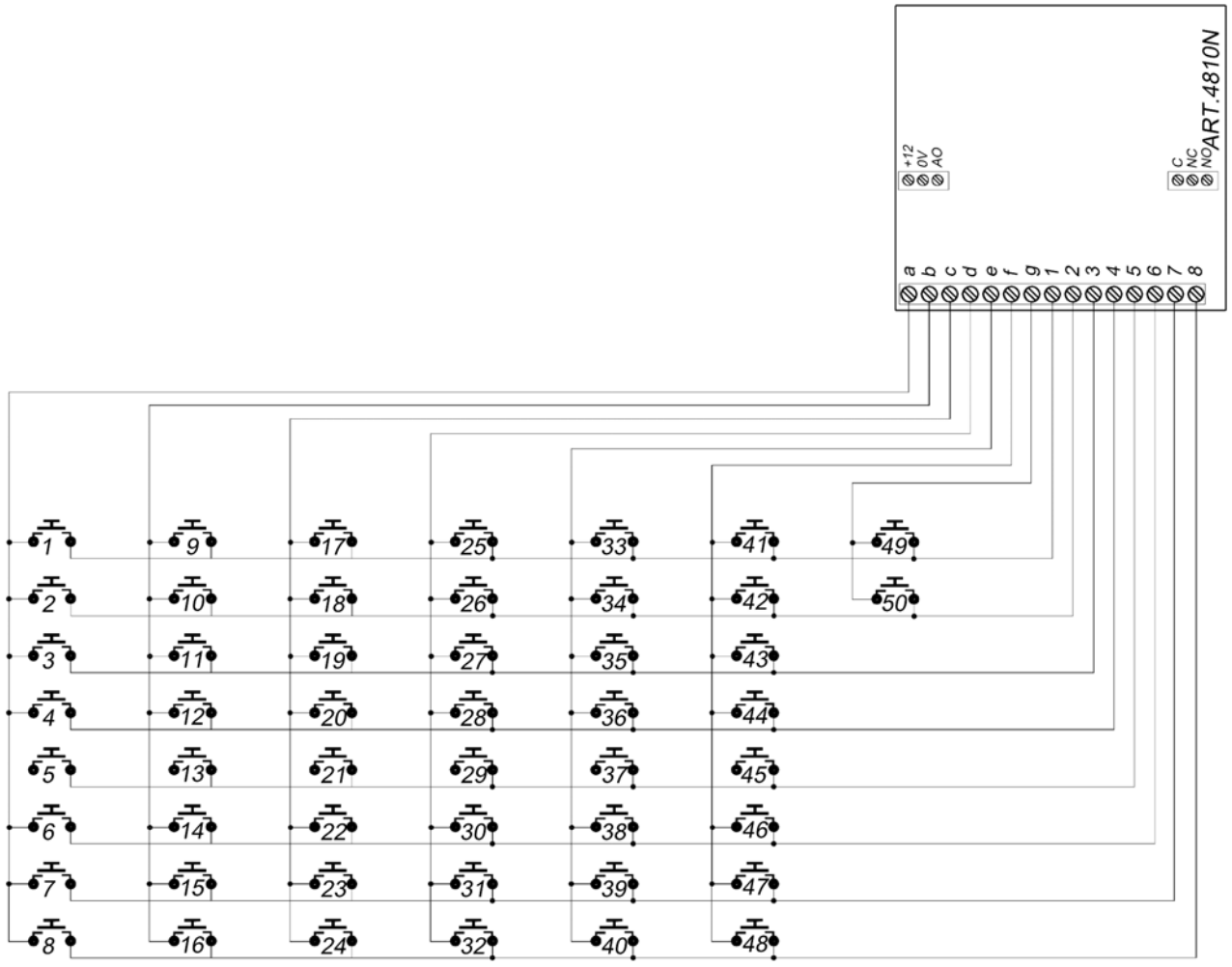
CONNECTION		DESCRIPTION	
+12V		12Vdc – 14Vdc input	
0V		Ground connection	
AO		0V auxiliary output (Open collector) Max. 150mA	
C		Common connection of dry contact relay	Relay contacts: 3A@24Vdc 3A@120Vac
NO		Normally open connection of dry contact relay	
NC		Normally closed connection of dry contact relay	
a		Button matrix for connecting up to 50 call buttons, PTE, and auxiliary inputs. See following pages for connections The PTE (push to exit button) connects across g-6 Auxiliary 1 input connects across g-5 Auxiliary 2 input connects across g-4	
b			
c			
d			
e			
f			
g			
1			
2			
3			
4			
5			
6			
7			
8			

EXTENSION BUTTON MODULES

The GSM intercom module will accept up to 50 call buttons. Any of the standard 4000 series button modules can be used as shown below (Button 1 is in the bottom right corner counting up).



Button connections to the GSM module are shown below. (Note: For clarity power and other connections are not shown below). Also take care when using additional button modules with intercom modules which also have buttons. For example, an intercom module with one button means the extension button modules must begin from button 2, an intercom module with 2 buttons means the extension module must begin from button 3.



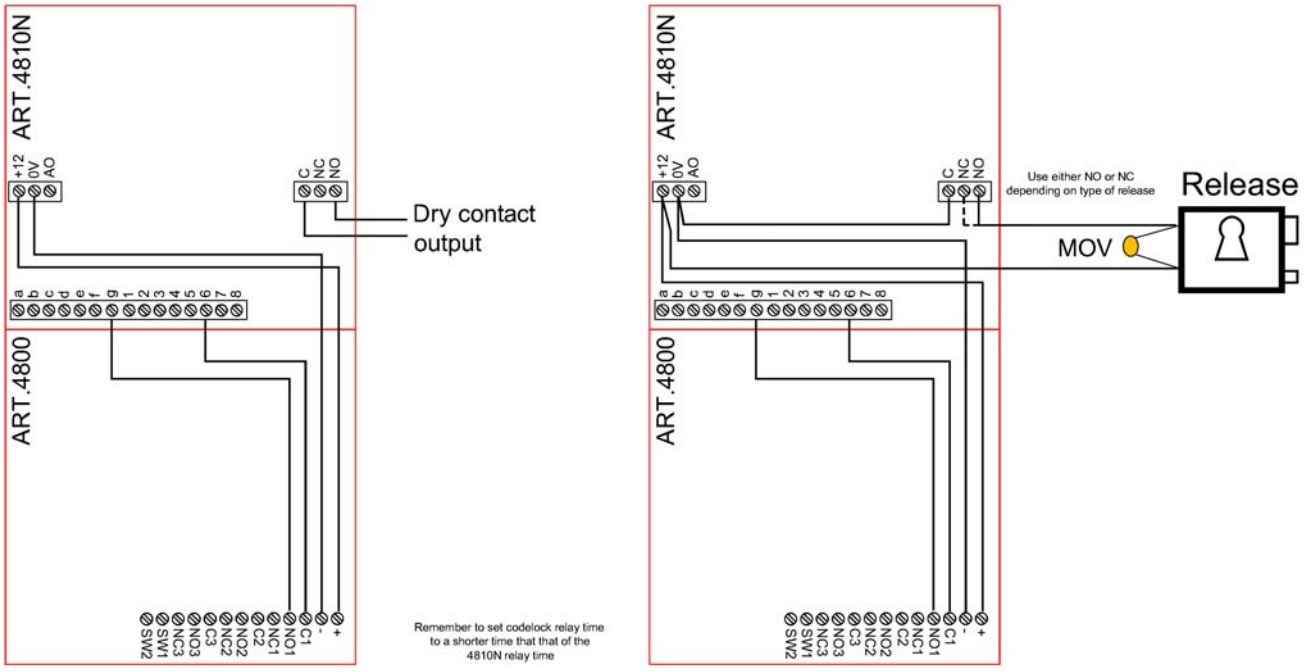
Button module notes:

- If the GSM module has 1 button, the additional button module buttons should be addressed beginning with 2 (i.e. The first button of the button module should be connected between a & 2, the next between a & 3 etc)
- If the GSM module has 2 buttons, the additional button module buttons should be addressed beginning with 3 (i.e. The first button of the button module should be connected between a & 3, the next between a & 4 etc)
- If the GSM module has 4 buttons, the additional button module buttons should be addressed beginning with 5 (i.e. The first button of the button module should be connected between a & 5, the next between a & 6 etc)

CODELOCK MODULE (4800)

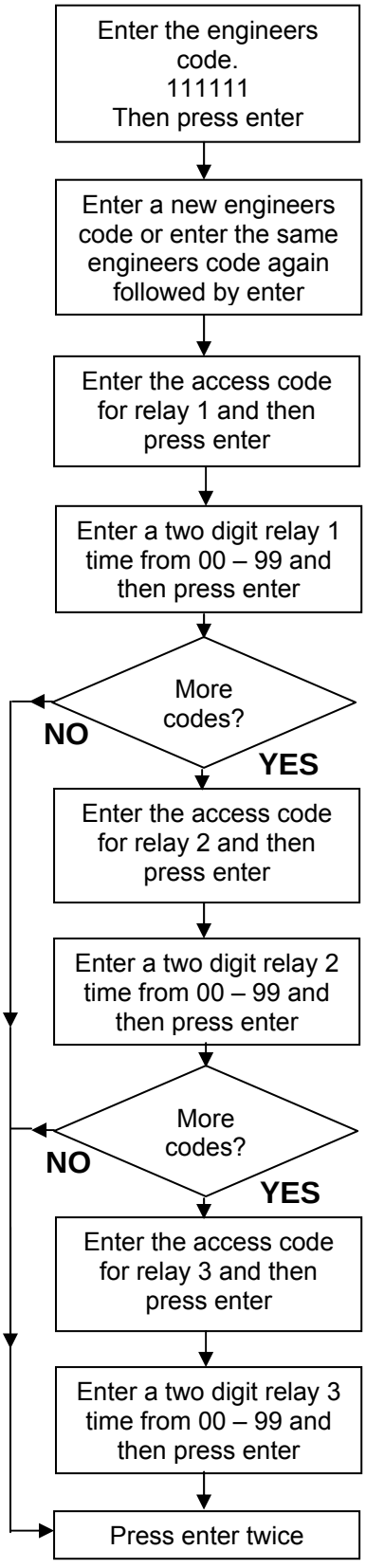
The 4800 codelock includes three relay outputs, two push to exit button inputs and operates from a 12-24V ac/dc power supply. Up to 2 unique codes can be programmed, each in the range of 4-8 digits. Relay time can be programmed from 01 – 99 seconds or set to latching mode with a relay time of 00 (To latch, type in the code followed by Enter, to unlatch, type in the code followed by clear).

Art.4800 Connections	
Connection	**Function**
+	12-24V ac/dc power input
-	0V power input
C1	Common connection of relay 1 (Dry contact)
NO1	Normally open connection of relay 1 (Dry contact)
NC1	Normally closed connection of relay 1 (Dry contact)
C2	Common connection of relay 2 (Dry contact)
NO2	Normally open connection of relay 2 (Dry contact)
NC2	Normally closed connection of relay 2 (Dry contact)
C3	Common connection of relay 3 (Dry contact)
NO3	Normally open connection of relay 3 (Dry contact)
NC3	Normally closed connection of relay 3 (Dry contact)
SW1	Push to exit input for relay 1 (Triggered by 0V)
SW2	Push to exit input for relay 2 (Triggered by 0V)



ART.4800 CODELOCK 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 eight 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.

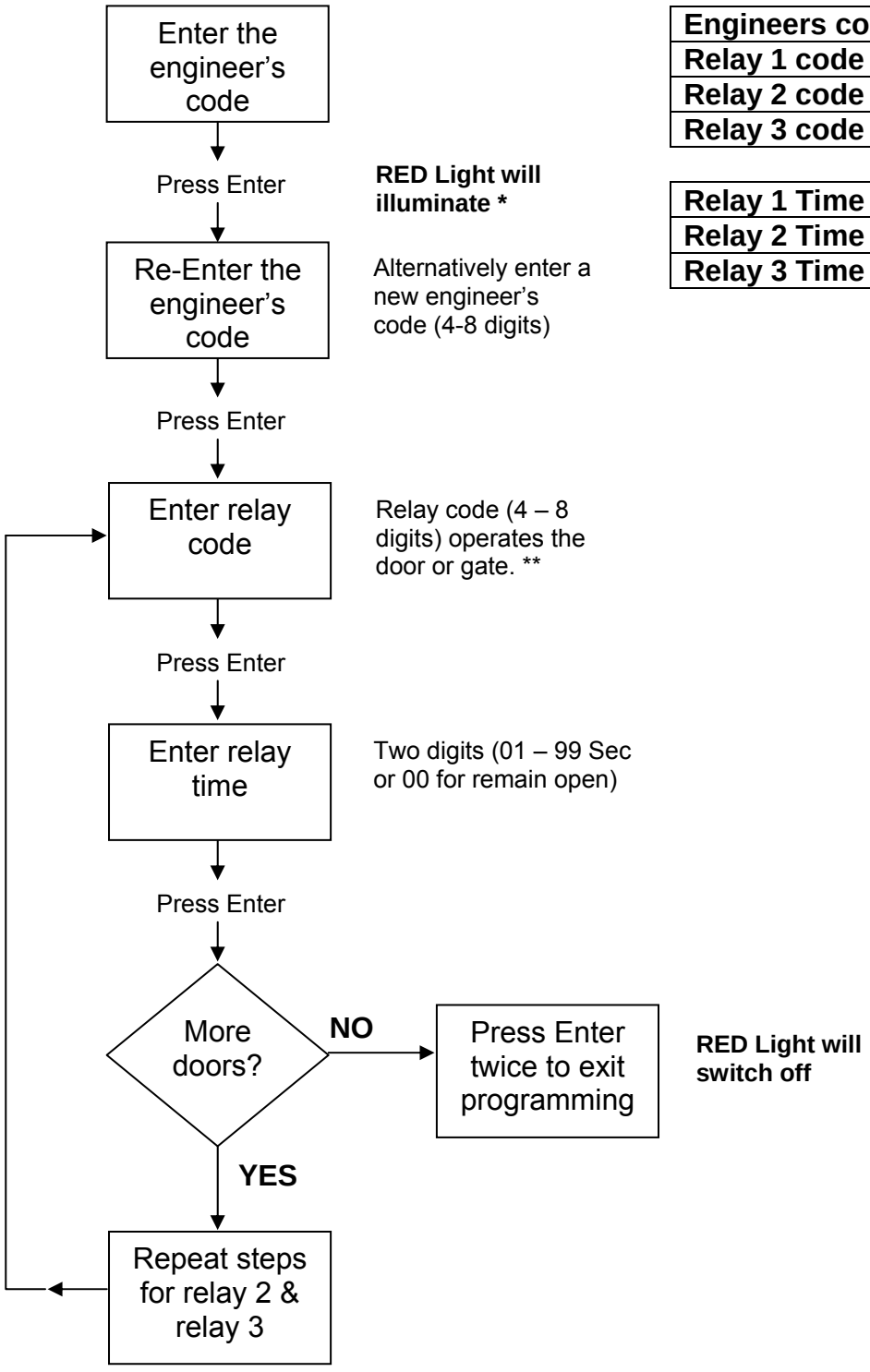
This is the time the relay 2 will energise for. 00 will latch the relay when the code is entered and require the code followed by clear to unlatch.

This code will be used to open the door/gate (Relay 3). The code can be from 4 – 8 digits long and must be different from the engineer's code.

This is the time the relay 3 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.

ART.4800 CODELOCK REPROGRAMMING GUIDE



Engineers code	
Relay 1 code	
Relay 2 code	
Relay 3 code	

Relay 1 Time	
Relay 2 Time	
Relay 3 Time	

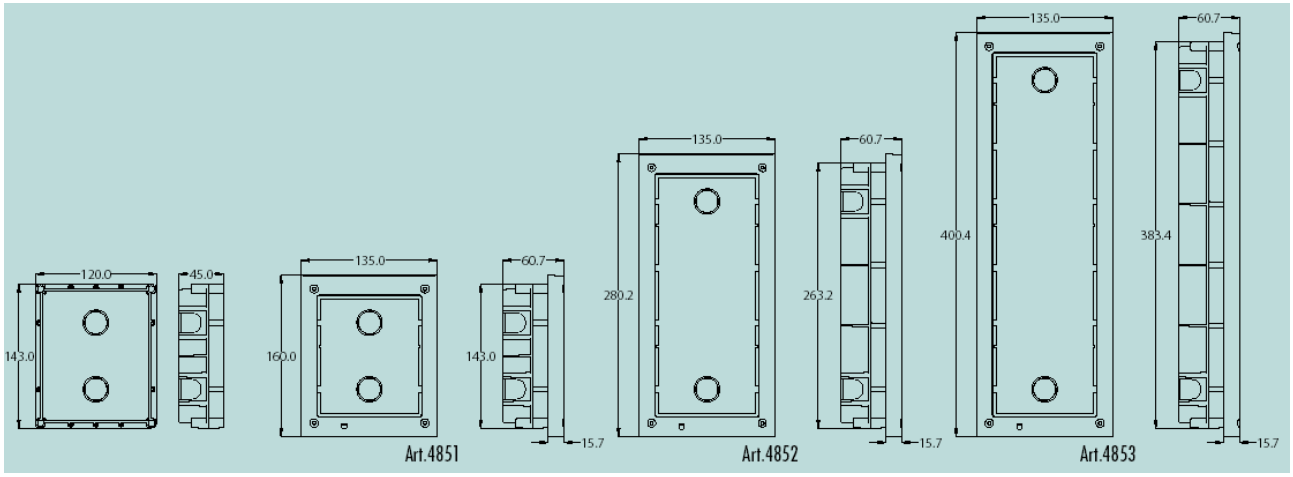
Notes:
* If the red light does not illuminate, the engineers code is incorrect. Follow the factory default procedure below.
** On the first loop of the flow chart its relay 1, second loop is relay 2.

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)

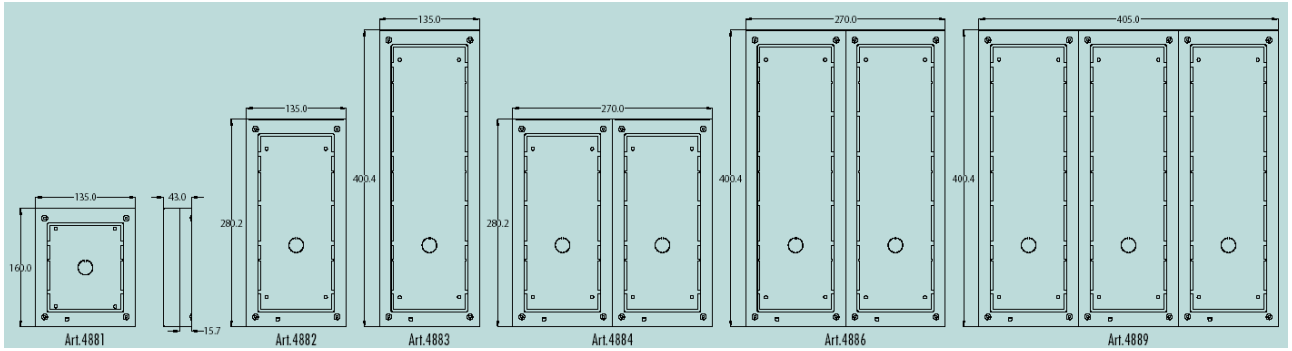
DOOR PANEL MOUNTING FRAMES

Both surface and flush mounting frames are available. The size of the frame will depend on the number of modules that make up the door panel. The last digit of the frame code indicates the number of modules it will take. Frames are available in gun metal gray finish, chrome finish (Suffix \C to the frame code) or gold finish (Suffix \G to the frame code).

Flush frames:



Surface frames:



POWER SUPPLY

The GSM intercom panel is designed to work with power supplies in the range or 12-14Vdc. The power supply should be capable of supplying a constant current of no less than 1 amp (If the system is to work with failsafe lock releases or magnetic locks we would recommend a minimum of 2 amps). The following Videx power supplies can be used:-

AMR2-12	12-14Vdc 2A switched mode PSU
Art.521B	13.5Vdc 1A DIN box PSU
SP29	13.8Vdc 2A boxed PSU with battery back up facility
SP28	13.8Vdc 3A boxed PSU with battery back up facility

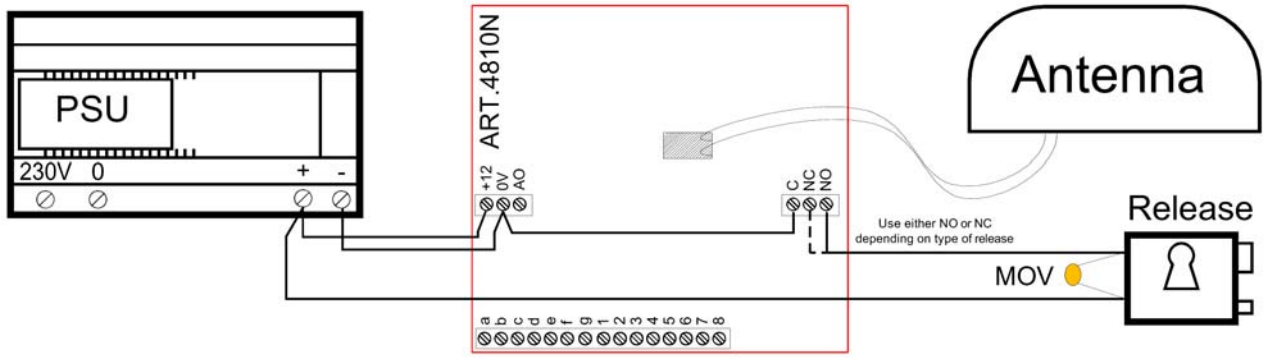
ANTENNA

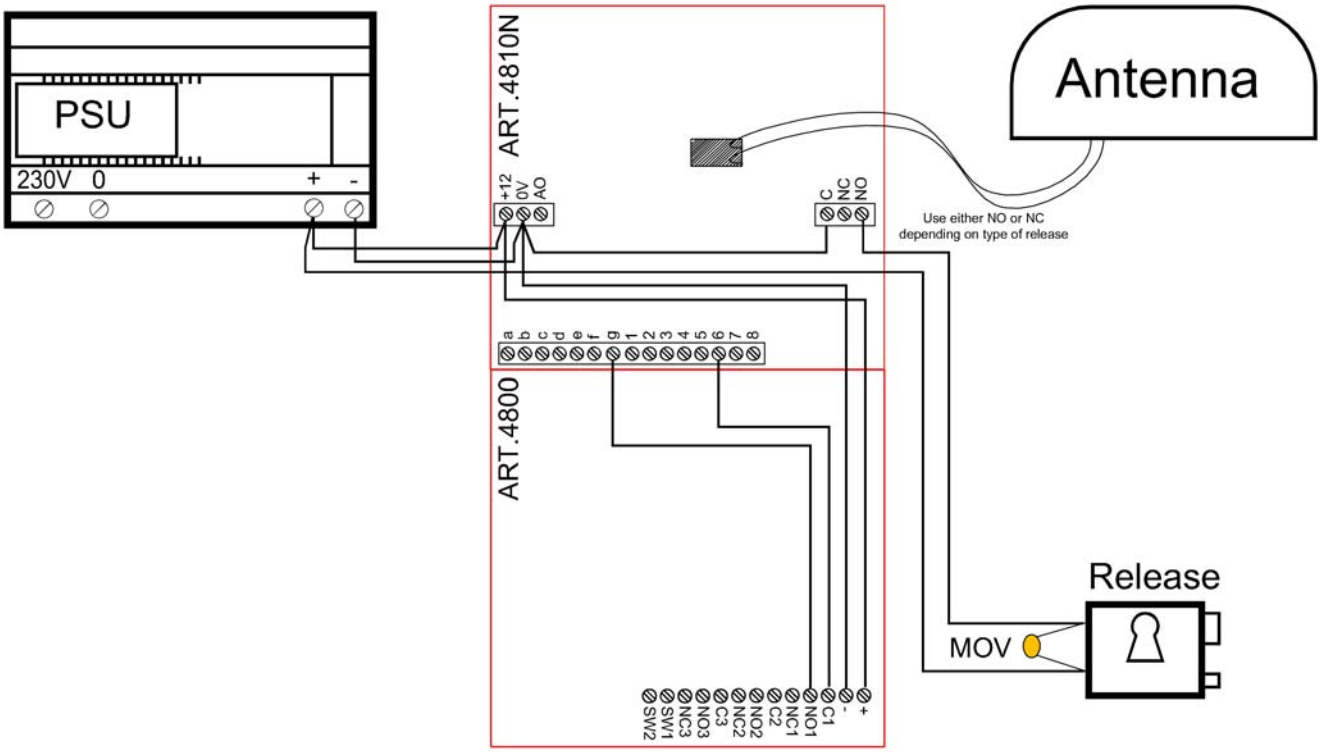
The GSM antenna connects to the SMA female bulkhead on the rear of the module. A GSM antenna with a SMA male connector should be used.

Note: An antenna must always be connected.

Note: Always route the GSM cable away from the microphone wires and the power supply wires to avoid interference on the speech channels.

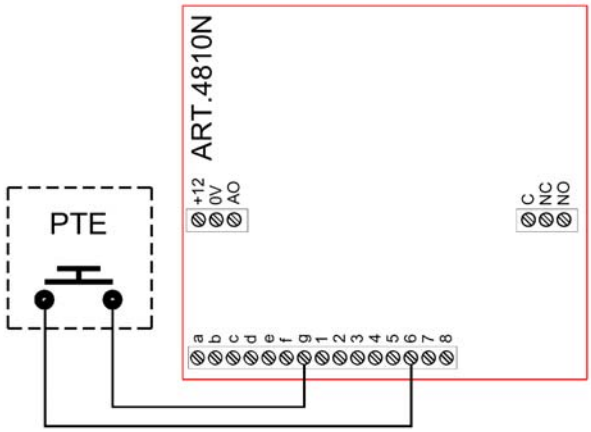
WIRING DIAGRAMS



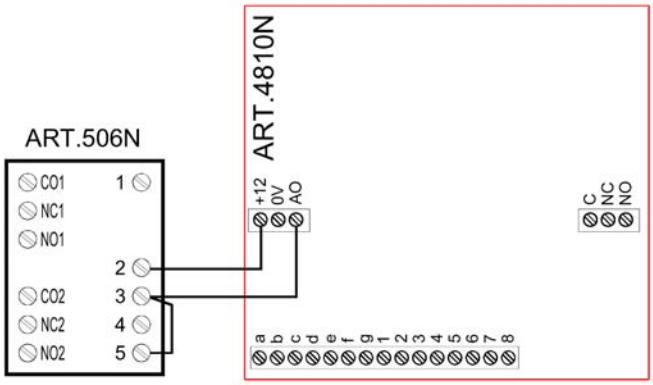


PUSH TO EXIT BUTTON AND AUXILIARY INPUTS/OUTPUTS

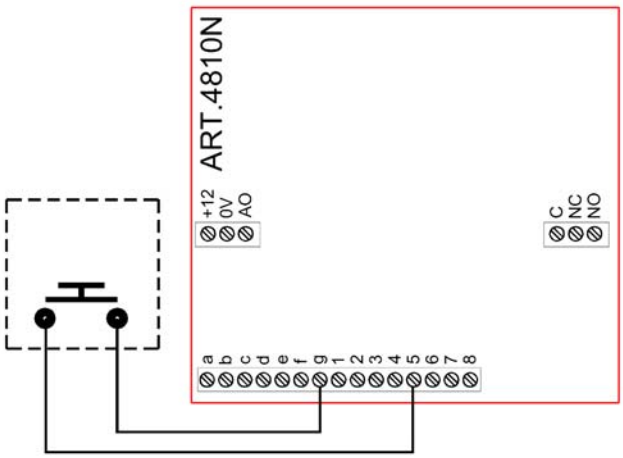
PUSH TO EXIT BUTTON, TRIGGERS RELAY FOR PROGRAMMED TIME



AUXILIARY OUTPUT (OPEN COLLECTOR), TRIGGERS WHEN g & 5 ARE SHORTED

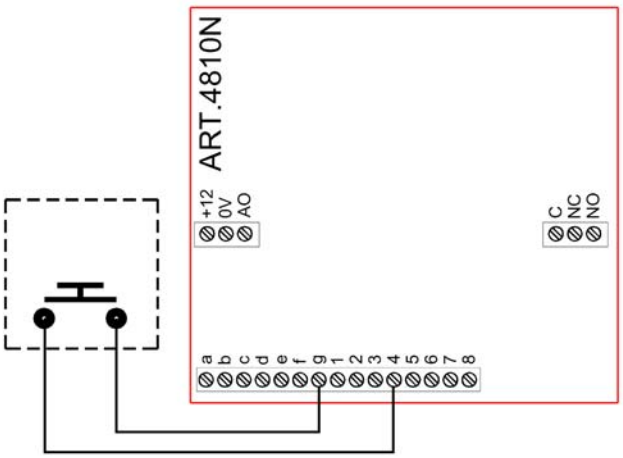


AUXILIARY 1 INPUT, TRIGGERS AUXILIARY OUTPUT (AO)



AUXILIARY 2 INPUT, SENDS A SMS MESSAGE TO THE MASTER TELEPHONE NUMBER

(NOTE: Once triggered, it can't be triggered again for 4 minutes. This avoids multiple SMS messages being sent for the same alarm)



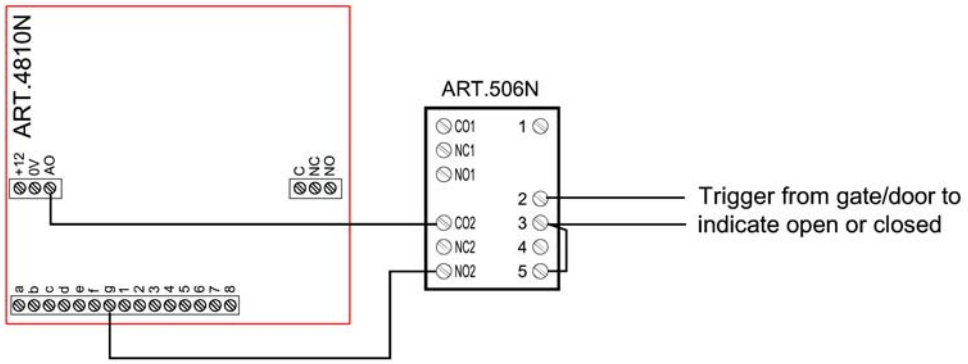
STATUS INDICATION INPUT

Using the following hardware and software configuration it is possible to interrogate an input to see if it is open or closed. This feature can be useful to find out it a gate or door is open when it is not in line of site. The input status can be interrogated in two ways:-

During a call: Press 9 on the telephone keypad and listen to the number of beeps heard in the ear piece. One beep indicates closed and 2 beeps indicates open.

At anytime: Send a SMS message 1111CHK? to the intercom panel. An SMS message will be returned with I/P=OP for open or I/P=CL for closed.

To use this feature, auxiliary output mode must be set to 2 (Used for status indicator) and the input must be wired as shown below:-

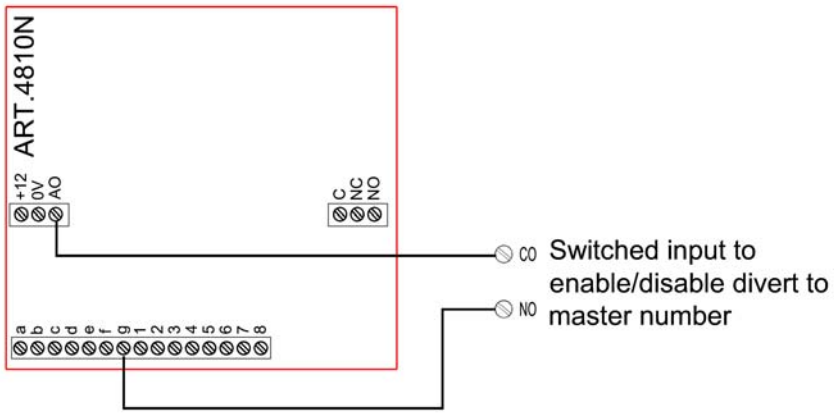


NOTE: WHEN USING THE AO OUTPUT FOR STATUS INDICATION IT CAN NOT BE USED AS AN OUTPUT FOR ANYTHING ELSE.

ALL CALLS DIVERT FACILITY AND CALL BUTTONS DISABLED FACILITY

It is possible to have all call buttons diverted to the master number outside certain hours or when an input is active. If there is no master number stored, the intercom will beep to indicate no call is taking place. To setup the time band follow the procedure in either the SMS programming section or the PC programming section of this manual.

To use a switch to enable or disable call divert to master number first the auxiliary output mode setting must be set to 3 (Used to divert calls to master number) and the input must be wired as follows:-



NOTE: WHEN USING THE AO OUTPUT FOR DIVERT TRIGGER IT CAN NOT BE USED AS AN OUTPUT FOR ANYTHING ELSE.

CABLE SIZE GUIDE

Connections for power supply output to intercom panel and lock release connections.

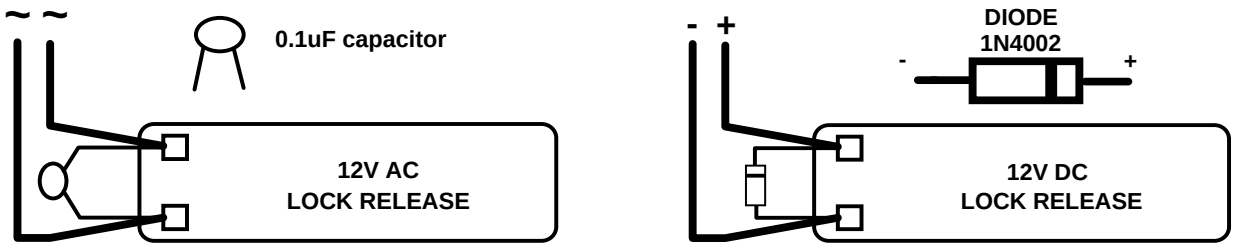
	20m	50m	100m
Connections	0.5mm²	1.0mm²	1.5mm²

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

INSTALLATION

- 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.
- Avoid water ingress into the rear of the module, always seal the module frame after installation using a suitable silicon based sealant.
- All intercom and access control cables must be routed separately from the mains.

Lock release back EMF protection : A capacitor must be fitted across the terminals on an AC lock release and a diode must be fitted across the terminals on a DC lock release as shown in the diagrams below to suppress back EMF voltages.



PANEL CARE

The door panel's facia is either mirror finish stainless steel or matt finish aluminium. 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 buttons which may prevent the buttons from operating correctly.

TESTING, POWER UP AND RESET

After connecting the power supply, antenna, lock output and auxiliary devices as shown in this manual and before powering up a SIM card must be installed. The SIM holder can be found on the back of the module under the label 'SIM'. A SIM card from any supplier can be used. Simply push the SIM card in (It will only fit one way). **IMPORTANT: Replace the label over the SIM hole.**

- Check all the connections have been made correctly and then power up the system.
- The GSM intercom requires approximately 30 seconds too initialise properly. We recommend not sending SMS messages or pressing buttons during this time.
- From power up; two short beeps will be heard and then following a short delay of approximately 15 seconds, a further short beep will be heard. After approximately another 15 seconds another short beep will be heard. The module is now fully initialised (Note: If you here a different combination of beeps in place of the last short single beep then you can find the meaning of these beeps towards the back of this manual. Once initialised, you can begin programming.

Power up initialisation sequence

- ✓ 2 short beeps
- ✓ Approx. 15 seconds delay
- ✓ 1 short beep
- ✓ Approx. 15 seconds delay
- ✓ One short beep
- ✓ System is ready

RESET TO FACTORY DEFAULTS

There are two reset modes available. The first will reset the master code only and the second will reset everything and clear all stored telephone numbers.

RESET THE MASTER CODE TO 1111

1. Power down the intercom panel
2. Put a short across terminals g & 7
3. Power up, 2 beeps will be heard followed by a delay and then a further beep.
4. Remove the short after the 3rd beep.
5. The master code is now reset to 1111

FULL RESET

1. Power down the intercom panel
2. Put a short across terminals g & 8
3. Power up, 2 beeps will be heard followed by a delay and then a further 2 beeps.
4. Remove the short after the 4th beep.
5. All settings are returned to factory defaults

PROGRAMMING

Programming can be carried out either by text message or by PC.

IMPORTANT NOTE: When you are required to use " in a text message it is very important to use the correct symbol and not for example ' (Or two ' single apostrophes side by side which you will see look the same but will be interoperated differently by the SMS intercom panel).

PROGRAMMING BY TEXT MESSAGE

Programming by text message is a simple way to customise the settings of the intercom panel and add or delete telephone numbers. If you have a large number of buttons or telephone numbers to enter you may find programming easier with the PC software. Simply send texts in the format below to the telephone number of the SIM within the intercom panel:-

<4 DIGIT CODE><3 DIGIT FUNCTION CODE><OPTIONAL DATA><OPTIONAL ?>

4 DIGIT CODE: The code prevents unauthorised access to the programmable features of the system. The code must be four digits long but can be any combination using digits 0 – 9. The default code is 1111 and will be used for all examples in this manual.

3 DIGIT FUNCTION CODE: The 3 digit function code identifies the programmable feature to be changed. The code must be in capital letters. The table below lists the available codes.

DESCRIPTION	CODE	EXAMPLE	SETTINGS	DEFAULT	PAGE
Store a primary telephone no.	STN	1111STNnnn"01912243174"	nnn = 001-050	N/A	18
Store a divert telephone no.	STD	1111STDnnn"01912241559"	nnn = 001-050	N/A	18-19
Store a dial to open no.	STR	1111STRnnn"07771234567"	nnn = 001-250	N/A	18
Set call time	SPT	1111SPTnn	nn = 01 - 12	02 (40s)	19
Set relay time	RLT	1111RLTnn	nn = 00 - 99	05 (5s)	19
Set auxiliary out time	AOT	1111AOTnn	nn = 00 - 99	05 (5s)	20
Set auxiliary out mode	AOM	1111AOMnn	nn = 00 or 01	01	20
Keep connection facility	NOD	1111NODnn	nn = 01 - 99	30 (30days)	20-21
Divert to second no. time	DIT	1111DITnn	nn = 01 - 99	15 (15s)	21
Check GSM signal strength	SIG	1111SIG?	N/A	N/A	29-30
Check software version	VER	1111VER?	N/A	N/A	29
Dial a number	DLE	1111DLE"123"	N/A	N/A	21
Store SMS message for g-4	SMS	1111SMS"HouseAlarm"	N/A	AUX TRIG	21
Change 4 digit code	CDE	1111CDE1234	Any 4 digits	1111	20
Initiate a special command	PRG	1111PRG(command)	AT commands	N/A	22
Trigger the relay	RLY	1111RLY	N/A	N/A	29
Trigger the auxiliary output	AUX	1111AUX	N/A	N/A	29
Store balance check dial string	SDL	1111SDL"*#1345#"	N/A	N/A	22
Check credit balance	BAL	1111BAL?	N/A	N/A	29-30
Latch the relay	RLA	1111RLA	N/A	N/A	29
Unlatch the relay	RUL	1111RUL	N/A	N/A	29
Latch the auxiliary output	ALA	1111ALA	N/A	N/A	29
Unlatch the auxiliary output	AUL	1111AUL	N/A	N/A	29
Store the master telephone no.	STM	1111STM"07771234567"	N/A	N/A	22
Store time band	TBA	1111TBA"06002300"	HHMMHHMM	00002359	22-23
Check intercoms time & date	CLK	1111CLK?	N/A	N/A	29
Input status check	CHK	1111CHK?	N/A	N/A	14
Silent dialling mode	AUE	1111AUEnn	nn = 00 or 01	01	23
Enable additional diverts	EXD	1111EXDnn	nn = 00 or 01	01	23

OPTIONAL DATA: The optional data will vary depending on the command used. It may be a telephone number, a time setting or may not be used at all. For more information see the command settings below.

OPTIONAL ?: Most of the commands support the ? feature. When this is added to the end of the text message, a confirmation text message will be sent back to the sender indicating the new data has been received and stored.

When sending text messages there may be a delay from when you send the message to when it is received by the intercom panel depending on how congested the network is. If you are at the door panel when sending the message you will here a single beep from the intercom panel to indicate it has receive the message.

STORING THE CALL BUTTON TELEPHONE NUMBERS (STN) (STD)

Telephone numbers can be stored for the 50 available call buttons. Each call button can call up to two telephone numbers (If the first is busy or not answered in a certain time it can call the second number if the divert facility is setup). The STN code stores the first number called when the button is pressed and the STD code stores the diverted telephone number if the first is busy or not answered. The messages to store/check numbers are as follows (Replace STN with STD when storing/checking divert numbers).

1111STNnnn"yyyyyyyyyyy"	Store the primary telephone number yyyyyyyyyyy in position nnn
1111STNnnn"yyyyyyyyyyy"?	Store the telephone number yyyyyyyyyyy in position nnn and send a confirmation text message to confirm storage of new number.
1111STNnnn?	Query the telephone number stored in location nnn. A text message will be sent to the sender with the stored number for that location.
1111STNnnn""	Delete the telephone number stored in location nnn.
1111STNnnn""?	Delete the telephone number stored in location nnn. A text message will be sent to the sender with the delete confirmation for that location.

nnn is a button number between 001 & 050. The telephone number **y** can be a maximum of 30 digits.

Example: To store the number 01912243174 for button 5 and a divert number if that one is not answered or busy of 01912241558 would be the following two SMS messages:-

1111STN005"01912243174"
1111STD005"01912241558"

STORING A TELEPHONE NUMBER FOR DIAL IN DOOR RELEASE (STR)

Dial in door release allows users of telephones with their number stored to release the door/gate simply by dialling the telephone number of the SIM in the intercom panel. The intercom panel will check the callers ID when it receives a call and if it matches the list of stored numbers, it will clear the call down (Avoiding the caller being charged for the call) and will activate the relay for the programmed time. Up to 250 numbers can be stored. The messages to check, store or delete numbers are as follows.

1111STRnnn"yyyyyyyyyy"	Store the telephone number yyyyyyyyyy in position nnn where nnn = 001 - 250
1111STRnnn"yyyyyyyyyy"?	Store the telephone number yyyyyyyyyy in position nnn where nnn = 001 - 250and send a confirmation text message to confirm storage of new number.
1111STRnnn?	Query the telephone number stored in location nnn where nnn = 001 - 250. A text message will be sent to the sender with the stored number for that location.
1111STRnnn""	Delete the telephone number stored in location nnn where nnn = 001 - 250.
1111STRnnn""?	Delete and confirm deletion of a telephone number in location nnn where nnn = 001 - 250.

Note: It is important to switch off voicemail and automatic SMS features on the SIM card when using this feature. See the 'Forced Dial' section for more details. Also note that it will not be possible to use the dial in to speak facility from a number stored to release the door/gate when dialling in (Door release takes priority).

SET CALL TIME (SPT)

The call time is the maximum time in seconds that a call can last before the intercom panel automatically clears the call down. The time can be from 20 seconds up to 240 seconds (4 minutes) and begins from when the call button is pressed. The default time is 40 seconds. The following messages are used to set/check the maximum call time.

1111SPTnn	Store the time nn x 20 seconds (e.g. nn = 03, time = 60 seconds.
1111SPTnn?	Store the time nn x 20 seconds (e.g. nn = 02, time = 40 seconds. Also send a confirmation text back to the sender.
1111SPT?	Query the current stored time. A text message will be sent to the sender showing the stored time. (Remember to multiple the number in the received text by 20 seconds)

SET RELAY TIME (RLT)

The relay time can be from 01 – 99 seconds or latching (Set the relay time to 00 for latched mode. In latch mode, the relay will stay energised until the command is send again).

1111RLTnn	Store the time nn = time in seconds.
1111RLTnn?	Store the time nn = time in seconds. Also send a confirmation text back to the sender.
1111RLT?	Query the current stored time. A text message will be sent to the sender showing the stored time.

SET AO (AUXILIARY OUTPUT) TIME (FOR AOM = 01 ONLY) (AOT)

The AO time can be from 01 – 99 seconds or latching (Set the AO time to 00 for latched mode). This option is only relevant for aux mode 01.

1111AOTnn	Store the time nn = time in seconds.
1111AOTnn?	Store the time nn = time in seconds. Also send a confirmation text back to the sender.
1111AOT?	Query the current stored time. A text message will be sent to the sender showing the stored time.

SET AO (AUXILIARY OUTPUT) MODE (AOM)

There are four modes of operation for the AO terminal:-

User activated: nn = 01
To activate the AO terminal either short g to 5 (Auxiliary 1 input) or press 6 on the telephone during a call.

Call activated: nn = 00
AO will activate when a call begins and deactivate when the call ends.

Used for status indication: nn = 02
When in this mode, the AO terminal is used exclusively for monitoring the status of an input. For example, checking if a gate/door is open of closed.

Divert calls to master number: nn = 03
When in this mode, the AO terminal is used exclusively for monitoring the status of a switch to decide if calls should be divert to the master number or not.

1111AOMnn	Store the mode nn = 00 - 03.
1111AOMnn?	Store the mode nn = 00 - 03. Also send a confirmation text back to the sender.
1111AOM?	Query the current stored mode. A text message will be sent to the sender showing the stored mode.

CHANGING THE FOUR DIGIT CODE (CDE)

The four digit code can be any combination of numbers 0-9 but must be 4 digits long. The code allows access to the programming menu in dial in mode and must be used when sending text messages to the intercom panel. The following message changes the code:-

1111CDEnnnn	nnnn = new 4 digit code

SET DAYS TO WAIT BEFORE MAKING A CALL (NOD)

In the event the intercom panel is not used for long periods of time it could be possible that the network disconnects it. To prevent this from happening it is possible to program a time period (From 01 – 99 days) to wait before the intercom panel makes a short call to refresh the connection. This time period is reset after each call made on the system and will only happen if the full time period elapses without any incoming or outgoing calls.

1111NODnn	Store the time nn = time in days.
1111NODnn?	Store the time nn = time in days. Also send a confirmation text back to the sender.
1111NOD?	Query the current stored time. A text message will be sent to the sender showing the stored time.

DIVERT TIME (DIT)

The divert time is the number of seconds to wait for a call to be answered before diverting to the second number (The divert facility must be set for this to work). The default time is 15 seconds (The count down begins from when the call button is pressed, but is refreshed when the telephone begins to ring) and can be set to 01 – 99 seconds).

1111DITnn	Store the time nn = time in seconds.
1111DITnn?	Store the time nn = time in seconds. Also send a confirmation text back to the sender.
1111DIT?	Query the current stored time. A text message will be sent to the sender showing the stored time.

FORCED DIAL (DLE)

A useful feature of the Intercom panel is its ability to call a number sent to it in a text message. This feature can be used when setting up the SIM card. For example, disabling the voicemail facility or disabling automatic SMS messages or missed calls. Any number up to 15 digits can be called and the call will last for a maximum of 40 seconds. The example below would switch off voicemail on a Vodafone SIM card. Substitute the Vodafone number for other service providers **(See important note on page 19)**.

1111DLE”1210“	Dial 1210 for the intercom panel

Other useful numbers which can be used with this feature are as follows. Please also check the service provider’s web sits for other useful codes.

	Vodafone	O2
Disable voicemail	1210	1760
Disable text alerts	#148#	1760

NOTE: Disabling voicemail and text alerts is very important as there is no way to retrieve either of these services from an intercom panel. Disabling these features will also prevent the intercom panel switching to voicemail or sending a text when dialling in from another phone.

STORE SMS AUXILIARY MESSAGE (SMS)

When g & 4 (Auxiliary 2 input) are shorted on the intercom panel, a text message will be sent to the master telephone number. The text message can be customised using the following message:-

1111SMS”HouseAlarm”	Change message to HouseAlarm

Note: The message can be a maximum of 32 characters long and can not include spaces or **“**.

PROGRAM BY 'AT' COMMANDS (PRG)

This is an advanced feature of the system which can allow an AT format command to be sent to the OEM GSM module.

1111PRG(command**)** Send an AT command to the OEM module

STORE CREDIT BALANCE CHECK STRING (SDL)

Several network providers offer the facility to check available balance on their pay as you go tariffs. For example, on Vodafone the string is *#1345# and on O^2 the string is *#10#. Other networks may also have this feature. Because the intercom will not know the details of the network provider's SIM card which you have inserted it will be necessary to store the correct string in order to use the credit balance check features.

1111SDL"*#1345#" Store the balance check string for a Vodafone pay as you go.
1111SDL"*#10#" Store the balance check string for an O^2 pay as you go.

STORE THE MASTER TELEPHONE NUMBER (STM)

The master telephone number is the number which will receive automatic balance updates when the balance gets low (If this feature is setup) and will receive the SMS message if the auxiliary 2 input is triggered. To store this number

1111STM"yyyyyyyyyyy" Store the telephone number yyyyyyyyyyy

1111STM"yyyyyyyyyyy"? Store the telephone number yyyyyyyyyyy and send a confirmation text message to confirm storage of new number.

1111STM? Query the telephone number stored A text message will be sent to the sender with the stored number for that location.

1111STM"" Delete the telephone number stored .
1111STM""? Delete and confirm deletion of a telephone number.

The master telephone number is the number which will receive automatic balance updates when the balance gets low (If this feature is setup) and will receive the SMS message if the auxiliary 2 input is triggered. To store this number

STORE THE TIME BAND (TBA)

The time band feature allows the call buttons to be disabled or diverted to the master number outside a certain time window. For example, if the tenant only wants to receive calls between the hours of 6:00 in the morning until 23:30 at night. Remember to always use the 24hr clock and also ensure the start time is earlier than the stop time.

1111TBA"HHMMHHMM" Store the time using this format. The first HHMM is the start time to receive calls (i.e. 0600 for 6am) and the second HHMM is the time to stop receiving calls (i.e. 2330 for 11:30 at night).

1111TBA"HHMMHHMM"? As above but also reply with a SMS text back to the sender with the stored setting.

1111TBA? Query setting, A text message will be sent to the sender with the stored time window.

1111TBA"" Delete the time band and allow calls to be received at any time.

1111TBA""? Delete and confirm deletion of the time band.

ENABLING/DISABLING SILENT DIALLING

When the intercom is calling the telephone number there is a choice of either hearing the ringing noise from the intercom or just hearing beeps to indicate calling.

Ringing heard during calling: nn = 01
Beeps heard during calling: nn = 00

1111AUEnn Store the mode nn = 00 or 01.

1111AUEnn? Store the mode nn = 00 or 01. Also send a confirmation text back to the sender.

1111AUE? Query the current stored mode. A text message will be sent to the sender showing the stored mode.

ENABLING/DISABLING ADDITIONAL DIVERTS

The default for diverts is that each of the 50 call buttons can have one divert number. If the additional diverts facility is activated it will be possible to have up to 5 divert numbers but the system will then be limited to 10 call buttons.

Standard divert to only one number: nn = 01
Extended divert to up to 5 numbers: nn = 00

1111EXDnn Store the mode nn = 00 or 01.

1111EXDnn? Store the mode nn = 00 or 01. Also send a confirmation text back to the sender.

1111EXD? Query the current stored mode. A text message will be sent to the sender showing the stored mode.

When using extended divert mode, use the following memory locations to store the numbers:-

Button	Primary	1st Divert	2nd Divert	3rd Divert	4th Divert	5th Divert
1	STN001	STD001	STD011	STD021	STD031	STD041
2	STN002	STD002	STD012	STD022	STD032	STD042
3	STN003	STD003	STD013	STD023	STD033	STD043
4	STN004	STD004	STD014	STD024	STD034	STD044
5	STN005	STD005	STD015	STD025	STD035	STD045
6	STN006	STD006	STD016	STD026	STD036	STD046
7	STN007	STD007	STD017	STD027	STD037	STD047
8	STN008	STD008	STD018	STD028	STD038	STD048
9	STN009	STD009	STD019	STD029	STD039	STD049
10	STN010	STD010	STD020	STD030	STD040	STD050

PROGRAMMING BY PC

NOTE: PC software kit sold separately (Part No. GSMPRO).

USB DRIVER

IMPORTANT: Before connecting the GSM unit to the PC and before installing the GSM PC program, first install the driver for the USB adapter which can be found on the supplied CD in the following folder:-

D:\FT232Driver\CDM20814.exe

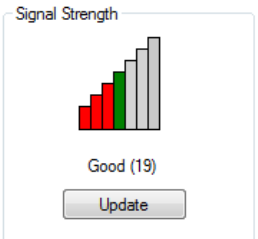
Where D is the letter of your CD drive.

SOFTWARE SETUP

Run the setup program (setup.exe) from the CD. Follow the on screen instructions to complete the setup. Please note, the PC must be Window XP PRO or later and have the .NET 4 framework installed. (The .NET 4 framework can be found on the CD or will be downloaded from the internet during install).

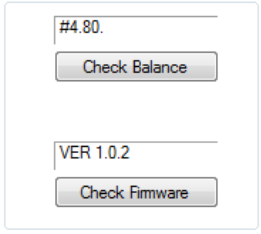
After completing the setup, the program will be available from your start menu as Videx GSM. Before running the program, connect the supplied USB cable between a USB port on your PC and the GSM unit. Run the program and the following screen should appear:-

When the program loads, it checks all available ports for the GSM unit. If found, the GSM unit goes online with the PC. From the main screen it is possible to:-



Check signal strength:

Click on update to retrieve the signal strength from the unit. The signal strength will be between 1 & 31 whereby 31 is excellent and 1 is poor. A signal strength of at least 10 is required for the system to work satisfactorily.

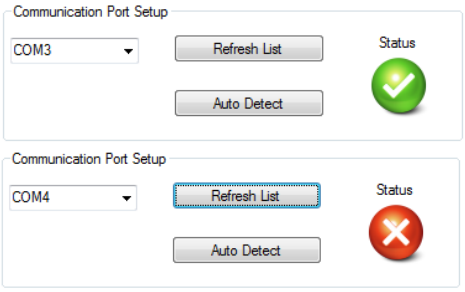


Check balance on pay as you go SIM's:

For this to work you must first store the check string required by the service provider on the settings page. For example, the string *#1345# is used by Vodafone to retrieve your current balance. Once this has been stored and uploaded to the unit, clicking the Check Balance button will retrieve it.

Check firmware version:

Click the Check Firmware button to retrieve the firmware version of the GSM unit. This will be useful to technical support should you need to call and can also give you an indication of functions available as identified in the back of this manual.



Communication port setup:

Although the communication should setup automatically when the program is started it is also possible to manual setup the communication port.

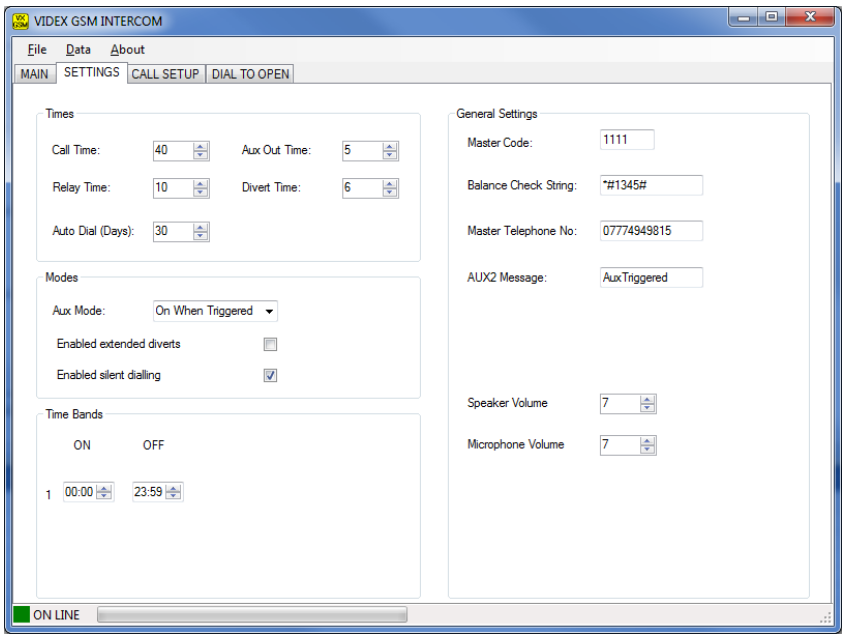
To setup manually, first press the Refresh List button which will find all available communication ports, Then either select from the drop down list, the port which is connected to the GSM unit and press the Auto Detect button to check for the device or just simply click on the Auto Detect button to check all available ports. If the device is found, the status will change to online.

Mobile phone:

The mobile phone can be used like a normal mobile phone to make calls. This can be useful when setting up the GSM unit's SIM card with functions such as switching off voice mail and text alert or listening to the SIM cards balance through the intercom's speaker. Simply type the number to call on the keypad and click the send button  . Ti end the call press the  button and to clear the display press the C button.

Please note: After making any changes to the settings and stored telephone numbers on the PC, they must then be uploaded to the unit before they will take affect.

GENERAL SETTINGS:

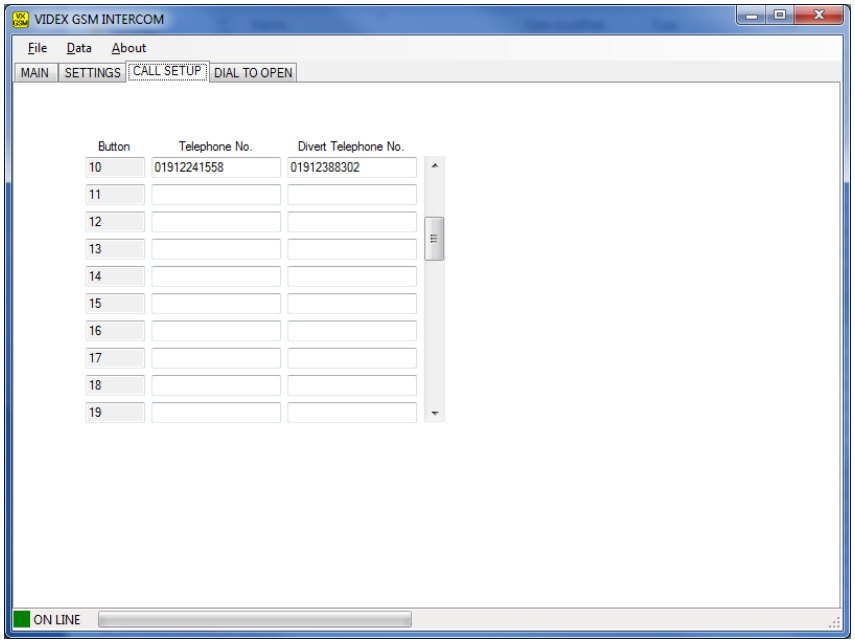


The general settings page has the following programmable options:

Call Time:	Maximum length of a call before it automatically clear down (20-240 Seconds)
Relay Time:	Relay activation time (0 – 99 Seconds, 0 = latching)
Aux Out Time:	Auxiliary output AO terminal, switched 0V time (0 – 99 Seconds, 0 = latching). Only relevant for Aux mode 'On when triggered'.
Divert Time:	The time a phone is allowed to ring before the unit cancels the call and diverts to the second number, of programmed. (15 – 99 seconds)
Auto Dial (Days):	Number of days the unit will wait with out a call being made before it makes a short call to keep the system live and on the network (1-99 days).
Aux Mode:	The AO terminal is a switch 0V output. It can be programmed to trigger by the end user pressing 6 on their telephone during a call or can be setup to switch on when a call is made and stay on for the length of the call. Additionally this output can be set for use with a status indicator or as a switch to transfer calls to the master number. The four options are available in the drop down box.
Enable extended divert:	With this enabled it is possible to divert to up to 5 divert numbers. See EXD SMS message settings for more information.
Enable silent dialling	When checked, dialling will not be heard from the intercom speaker, instead beeps will be heard every few seconds.
Master Code:	The master code must be 4 digits (Factory default 1111) and is required when using the SMS facilities on the GSM unit and also when dialling in to the unit from a number which is not stored.
AUX2 Message:	The Aux2 message is a message which will be sent to the master telephone number when the Auxillary 2 input is triggered. The message can be up to 32 characters but can't include spaces.
Balance Check String:	The balance check string allows the balance on certain pay as you go SIM cards to be checked. This must be stored to allow the balance to be checked.
Master Telephone No:	The master telephone number is the telephone number which will receive the SMS messages for low balance and Aux 2 triggered.
Speaker volume:	The speaker volume can be any number from 1-12 (12 = highest volume)
Mic volume:	The mic volume can be anything from 1-24 (24 = highest volume)
Time band:	The time band sets when the call button will call their relevant telephone numbers and when the call buttons will be diverted to the master number (If no master number stored then the call will not take place and will be signalled by beeps from

	the panel). The ON time must be lower than the OFF time. If this option is not required, leave set as 00:00 23:59.

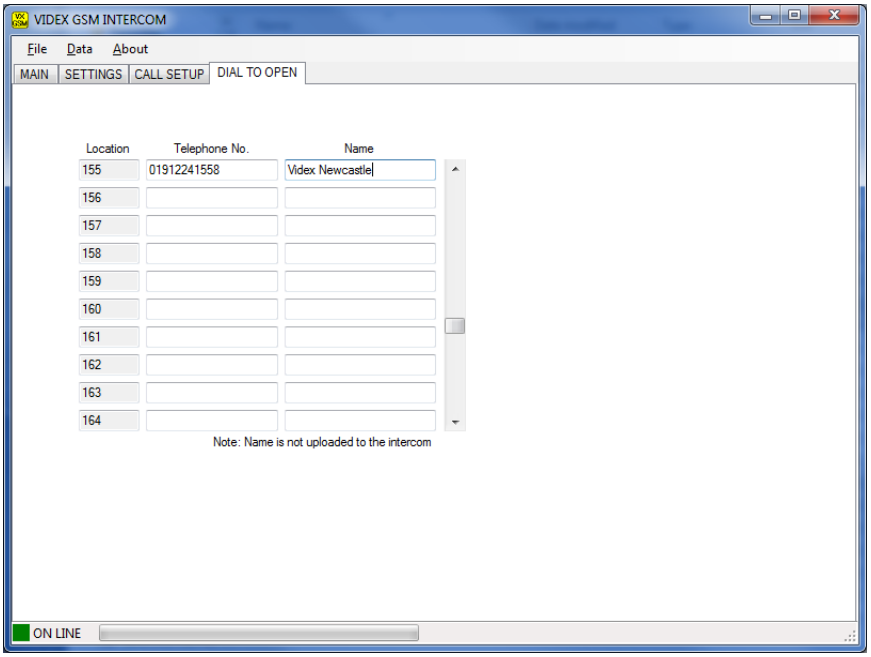
CALL SETUP:

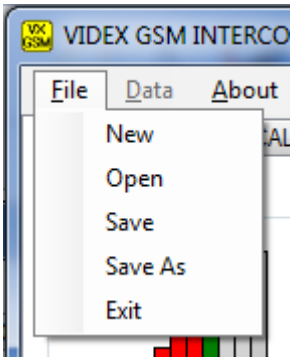


From the call setup page it is possible to assign up to 2 telephone numbers to each of the 50 available call buttons. The divert telephone number will be used if the call is busy or not answered and will divert to this number after the divert time has elapsed. If no divert number is stored, the first number will continue to ring until the call times out.

DIAL TO OPEN:

It is possible to store up to 250 telephone numbers which will activate the relay when they call the GSM. The GSM unit will drop the call so there will be no charge for these calls. In the table it is possible to assign a telephone number and a name to each of the 250 possible locations. Please note: the name is only for convenience and is not uploaded to the GSM unit.

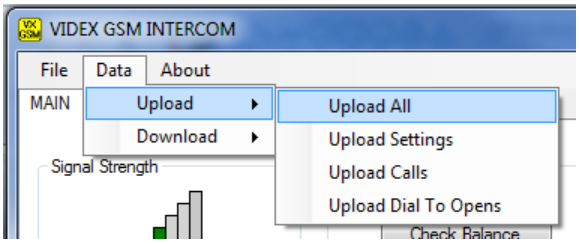


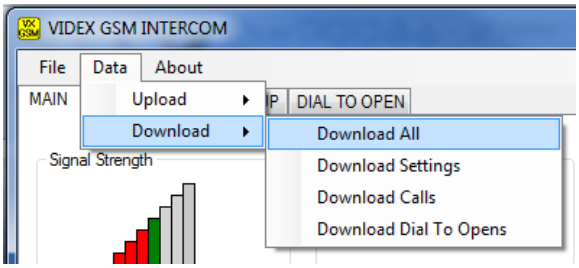


FILE MENU:

From the file menu it is possible to create a new data file, open an existing data file and save the current data file. These options are available online or offline allowing the data file to be created on or off site for convenience.

The exit option will close the program.





Data MENU:

The data menu is only available when online. From here it is possible to upload the information from the PC to the GSM unit and download information from the GSM unit to the PC. Both upload and download have several options which include the facility to upload/download all data or upload/download only a section of data which is required and has been changed.

PC Requirements:-

Windows XP Service Pack 3 or Later
.Net framework 4 or later
CD Drive
USB port

SYSTEM OPERATION

TO MAKE A CALL FROM THE INTERCOM PANEL

Press the required call button. Two beeps will be heard to indicate the call has been placed. If a mistake is made, press any other button to clear the call (A long beep followed by a short beep will be heard to confirm the call has been cleared. (Note: If the same button is pressed after five seconds of placing the call this will also clear the call down. Pressing the same button before five seconds will do nothing).

DOOR/GATE RELEASE

This is signalled by 1 second interval beeps from the intercom panel. Pressing 3 releases the door/gate for the programmed time. Pressing 1 followed by 0 will latch the door/gate in the open position (Note: To unlatch press 3, the door/gate will unlatch after the programmed time.

RELEASING THE GATE/DOOR BY DIALLING THE INTERCOM PANEL NUMBER

This feature is only possible if the caller's number has been stored correctly for this feature. Simply dial the number of the intercom panel. The intercom panel will drop the call and then open the gate/door for the programmed time.

USER COMMANDS

The following commands can be carried out during a call: (Note: Successful commands are signalled by two beeps from the telephone, errors are signalled by four beeps).

FUNCTION		1st KEY TO PRESS	2nd KEY TO PRESS
LATCH RELAY (UNLATCH BY PRESSING 3)		1	0
RELEASE THE DOOR OR GATE		3	N/A
ACTIVATE THE AUXILIARY OUTPUT		6	N/A
END A CALL		8	N/A
ADJUST DOOR SPEECH VOLUME		4	0-9 (0=Lowest, 9 = Highest)
ADJUST PHONE SPEECH VOLUME		7	0-9 (0-Lowest, 9 = Highest)

The following text messages can be sent while in standby (Examples show code as 1111):

FUNCTION		MESSAGE TO SEND
CHECK THE SIGNAL STRENGTH		1111SIG?
CHECK THE AVAILABLE BALANCE*		1111BAL?
CHECK THE SOFTWARE VERSION		1111VER?
RELEASE THE DOOR/GATE		1111RLY? (? Optional, send if a confirmation is required)
ACTIVATE THE AUXILIARY OUTPUT		1111AUX? (? Optional, send if a confirmation is required)
LATCH THE RELAY		1111RLA? (? Optional, send if a confirmation is required)
UNLATCH THE RELAY		1111RUL? (? Optional, send if a confirmation is required)
LATCH THE AUXILIARY OUTPUT		1111ALA? (? Optional, send if a confirmation is required)
UNLATCH THE AUXILIARY OUTPUT		1111AUL? (? Optional, send if a confirmation is required)
CHECK INTERCOM TIME & DATE		1111CLK?
CHECK TIME BAND SETTING		1111TBA?
CHECK INPUT STATUS		1111CHK?

CHECKING THE BALANCE (BAL)

*Note: The balance can only be checked if the correct balance check string has previously been stored using the SDL code explained earlier in the manual.

The intercom also has the facility to monitor the available credit and then text you to inform you when it has fell below £5.00, €5.00 or $5.00. It will then remind you with another text after every 5 calls until the credit is either increased or it runs out. To use this feature, the following settings must first be made:-

- You must be using a Pay AS You GO SIM card from a provider that offers this service (Vodafone, O^2)
- The correct balance check string must be stored using the SDL code.
- A mobile phone number in which to receive the balance low text must be stored in the master telephone number location using the STM code.

UNDERSTANDING THE SIGNAL STRENGTH (SIG)

When a request for signal strength message is sent to the intercom panel it will reply with a two digit signal strength code. The code will be between 0 – 31 or 99. Ideally the signal strength should be as close to 31 as possible. The lower the number, the weaker the signal. Signal strengths lower than 10 may cause operational problems such as loss of speech quality (and possibly missing DTMF tones) and network loss. A signal strength of 99 indicates it could not be detected.

DIALLING INTO THE INTERCOM FROM ANOTHER TELEPHONE

There are three possible outcomes to dialling into the GSM intercom depending on the telephone number you are dialling in from and the features setup during programming. The three possible outcomes are shown in the table below and are shown in order of priority (For example, if the number is programmed to automatically activate the relay, this will take priority over the following two options and if the telephone number is stored as a telephone number called from one of the push buttons, this will take priority over the last option.

FUNCTION		REQUIREMENT		PRIORITY
Dial in to open the door. After dialling the number, the relay will activate and the call will be dropped.		The telephone number of the telephone dialling in must be stored in memory location STR001 - STR250		1st
Dial in to activate a call (Live speech, activate relay/AUXO) After dialling the number, the call will be answered and two beeps will be heard. The speech will then be live.		The telephone number of the telephone dialling in must be stored in memory location STN001 - STN050 or STD001 – STD050		2nd
Dial in to open the speech from a number not stored in the GSM memory. After dialling the number, the call will be answered and two beeps will be heard. You will then be required to enter the four digit code to open the speech.		If neither of the two requirements above are met.		3rd

RECORD SHEET

INTERCOM PANEL TELEPHONE No.	
IMEI NUMBER	
MASTER CODE	
MASTER TELEPHONE No.	

BUTTON	MEM. LOCATION	USER NAME	TELEPHONE No.
Button 1	STN001		
Button 1 (Divert)	STD001		
Button 2	STN002		
Button 2 (Divert)	STD002		
Button 3	STN003		
Button 3 (Divert)	STD003		
Button 4	STN004		
Button 4 (Divert)	STD004		
Button 5	STN005		
Button 5 (Divert)	STD005		
Button 6	STN006		
Button 6 (Divert)	STD006		
Button 7	STN007		
Button 7 (Divert)	STD007		
Button 8	STN008		
Button 8 (Divert)	STD008		
Button 9	STN009		
Button 9 (Divert)	STD009		
Button 10	STN010		
Button 10 (Divert)	STD010		
Button 11	STN011		
Button 11 (Divert)	STD011		
Button 12	STN012		
Button 12 (Divert)	STD012		
Button 13	STN013		
Button 13 (Divert)	STD013		
Button 14	STN014		
Button 14 (Divert)	STD014		
Button 15	STN015		
Button 15 (Divert)	STD015		
Button 16	STN016		
Button 16 (Divert)	STD016		
Button 17	STN017		
Button 17 (Divert)	STD017		
Button 18	STN018		
Button 18 (Divert)	STD018		
Button 19	STN019		
Button 19 (Divert)	STD019		
Button 20	STN020		
Button 20 (Divert)	STD020		
Button 21	STN021		
Button 21 (Divert)	STD021		
Button 22	STN022		
Button 22 (Divert)	STD022		
Button 23	STN023		
Button 23 (Divert)	STD023		
Button 24	STN024		
Button 24 (Divert)	STD024		

Button 25	STN025		
Button 25 (Divert)	STD025		
Button 26	STN026		
Button 26 (Divert)	STD026		
Button 27	STN027		
Button 27 (Divert)	STD027		
Button 28	STN028		
Button 28 (Divert)	STD028		
Button 29	STN029		
Button 29 (Divert)	STD029		
Button 30	STN030		
Button 30 (Divert)	STD030		
Button 31	STN031		
Button 31 (Divert)	STD031		
Button 32	STN032		
Button 32 (Divert)	STD032		
Button 33	STN033		
Button 33 (Divert)	STD033		
Button 34	STN034		
Button 34 (Divert)	STD034		
Button 35	STN035		
Button 35 (Divert)	STD035		
Button 36	STN036		
Button 36 (Divert)	STD036		
Button 37	STN037		
Button 37 (Divert)	STD037		
Button 38	STN038		
Button 38 (Divert)	STD038		
Button 39	STN039		
Button 39 (Divert)	STD039		
Button 40	STN040		
Button 40 (Divert)	STD040		
Button 41	STN041		
Button 41 (Divert)	STD041		
Button 42	STN042		
Button 42 (Divert)	STD042		
Button 43	STN043		
Button 43 (Divert)	STD043		
Button 44	STN044		
Button 44 (Divert)	STD044		
Button 45	STN045		
Button 45 (Divert)	STD045		
Button 46	STN046		
Button 46 (Divert)	STD046		
Button 47	STN047		
Button 47 (Divert)	STD047		
Button 48	STN048		
Button 48 (Divert)	STD048		
Button 49	STN049		
Button 49 (Divert)	STD049		
Button 50	STN050		
Button 50 (Divert)	STD050		

DIAL IN ACCESS CONTROL MEMORY RECORD SHEET

Mem.	User Name	Telephone No.	Mem.	User Name	Telephone No.
001			051		
002			052		
003			053		
004			054		
005			055		
006			056		
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008			058		
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022			072		
023			073		
024			074		
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026			076		
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028			078		
029			079		
030			080		
031			081		
032			082		
033			083		
034			084		
035			085		
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037			087		
038			088		
039			089		
040			090		
041			091		
042			092		
043			093		
044			094		
045			095		
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047			097		
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049			099		
050			100		

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UNDERSTANDING THE BEEPS

Functions and errors are indicated by beeps from the intercom panel. The following will help you understand the different beeps heard and what, if anything needs to be done in response to the beeps.

BEEP	REASON	SOLUTION
Short beeps at 1 second intervals	Relay or auxiliary output activated.	None, this is normal
Single short beep while the system is in standby and not being used.	A valid text message has been received and processed	None, this is normal
Two short beeps followed by a long beep	Button pressed but no number stored	Program a telephone number for the button pressed.
Long beep followed by short beep while the system is in standby.	Invalid text message received.	If this has happened when sending one of the programming text messages then check the message for errors. These beeps will also be heard if the 4 digit code in the text message is incorrect. If you are unsure of the 4 digit code, try resetting it to 1111.
Long beep followed by short beep while the system is in use.	Manually ending a call by pressing a call button	None, this confirms the call has been cancelled. Another call can be placed if required.
Four long beeps	Not registered with a network provider but still trying	Leave it a short while to see if it manages to find the network. If the beeps repeat every 30 seconds then try moving the antenna to a better location or changing the SIM to another network provider.
Six long beeps	Unknown registering problem	Try moving the antenna to a better location. Try changing the SIM card to another network provider.
Eight long beeps	Registered but roaming for a better network	This could happen if it registers to another network instead of its primary one. This may result in higher call charges. Try another SIM provider for that area.
Single short beep every 10 seconds after power up	Unable to see the SIM card	Check the SIM card is fitted correctly. Try removing the SIm card, cleaning and fitting again. Try a different SIM card.
Short beep, long beep repeated 3 times	Call button pressed and either the call is on divert to master or it is outside the time set in the time band and there is no master number stored.	This may be the required setup but if it's not then either change the time band times, store a master number to divert the calls to or open the switch between AO & G used to switch the calls into divert mode.

TROUBLE SHOOTING

SYMPTOM	TEST
Interference on the speech	Check the signal strength '1111SIG?'. If the signal strength is to low the GSM module which increase it's power to compensate causing interference with the speech circuits. Try relocating the antenna or using a more powerful or directional antenna.
	Ensure the antenna cables are not running close to the power supply cables or the microphone wires inside the intercom panel
	Try a different SIM card from a different service provider as they may have better coverage in that area.
The intercom panel repeatedly beeps twice and the name plate back light of the module (Not additional button modules) does not illuminate.	Check the power supply is of adequate voltage as show earlier in this manual and that the jumper JP1 is in the correct position.
	Try a full reset as shown earlier in the manual (Powering up with C2 & PTE shorted).
	Try a different SIM card.
	Intercom module may have a fault.
A long beep is heard when I press a button.	No telephone number setup for that button. Check the programming.
	Check the SIM card is fitted correctly.
The intercom panel does not respond to SMS messages	Check the SIM card has a SMS service centre number stored. This will require putting the SIM card into a mobile phone to check. Contact the SIM card provider if you are not sure.
	Check the number you are sending the message to is correct (The number of the SIM card in the intercom panel
	After sending a SM to the intercom panel. Listen for a single short beep from the Intercom panel. This will indicate that the message was received and understood. If a long beep is heard it indicates the message was either not understood or the 4 digit code was incorrect.
	Try resetting the 4 digit code to 1111 as shown earlier in this manual (Powering up with C1 & PTE shorted).
The call keeps dropping out	Increase the call time in programming.
	Check the signal strength and if necessary, move or change the antenna or try a different SIM card provider.
Speech echoes and feeds back	Try lowering the speaker volume using jumpers JP2 & JP3
	Try adjusting the volume using the programmable settings during a call
	Check the microphone is fitted correctly in the intercom panel and that the mic hole is not blocked in any way.
ERROR message returned in SMS when programming or no SMS returned at all even though a ? was included at the end of the message sent.	Check over the message sent again and compare it with the examples in the manual. Common errors include:- 1. Using two apostrophe marks side by side instead of ". Note that these look the same in the message. An easy way to see if this is the problem is to move the cursor along in the message and if the cursor can get between the two " then it is not the connect character used. 2. Lower case letters instead of upper case. For example using stn when STN should be used.

Enfora certifies that the Enfora Enabler IIG TM MHz GSM Radio Module FCC ID: MIVMLG0208) complies with the RF hazard requirements applicable to broadband PCS equipment operating under the authority of 47 CFR Part 22 or Part 24, Subpart E of the FCC Rules and Regulations.
This certificate is contingent upon installation, operation and use of the Enabler IIG module and its host product in accordance with all instructions provided to both EOM and end used. When installed and operated in a manner consistent with the instructions provided, the Enfora Enabler IIG module meets maximum permissible exposure (MPE) limits for general population/uncontrolled exposure at defined in section 1.1310 of the FCC Rules and Regulations.

WARNING

To comply with FCC RF exposure requirements, a separation distance of 20cm (7.87”) or more must be maintained between the antenna of this product and all persons

Separate FCC approval for this product is not required as it will be classed as a fixed installation.

THIS PRODUCT IS NOT DESIGNED TO BE USED AS AN EMERGENCY CALL POINT

The product is CE marked demonstrating its conformity and is for distribution within all member states of the EU with no restrictions.
This product follows the provisions of the European Directives 89/336/EEC & 92/31/EEC (EMC), 73/23/EEC (LVD) and 93/68/EEC (CE marking).

Date	Software Version	Revision
16/07/2010	GSM1.0.2	Launch of 4810N
08/10/2010	GSM1.0.3	Altered dial in to open routine to allow numbers as short as 6 digits activate the relay (Previously numbers were required to be 10 digits or more). Now only checks a maximum of the last 8 digits of any number. Improved call end routine, now if a called number is busy, not answered and there is no divert number stored the call will end immediately. Previously the call would still run for the programmed call time.
16/06/2011	GSM1.0.4	Added the following new facilities:- 1. Lost connection recovery routine to dial divert number if no carrier detected on primary number. 2. Time band added to disable/divert call buttons to the master telephone number 3. Time/Date check facility via SMS 4. 2 new modes of operation for the AO terminal to allow the following new functions. 5. Optionally divert calls to the master number 6. Check the status of a door/gate 7. Improved speech volumes 8. Allow silent dialling feature 9. Extended diverts feature.

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