

Z4 GSM Controller

V1.2 2008



Universal GSM Controller. Universal GSM Applications.

GSM Intercom +

Up to 5 call buttons
4 programmable outputs
Mute or Ringing panel sound
Multiple call button numbers
Administrator Programming
Battery back up option
SMS & USB programming
Intelligent info LED display

Access Control +

Add Users by PC & SMS
20 or 180 Users Caller ID access
Unauthorised access alerts
10 Special Users in CLIP access
N/O or N/C pulse & latch outputs
12V 300ma transistor outputs

GSM Alarm

4 programmable inputs
SMS & Voice call alerts
DTMF control
Remote listen in feature
Configurable IP&OP status
Record voice mess. alerts
Mains fail & battery alert
System Tamper & Log

The GSM Controller can be used with a combination of all features to suit the application
(5 inputs are used as 5 call buttons or 4 alarm inputs + 1 ON/OFF input or a combination of both)

TABLE OF CONTENTS.....page

1. **FOR YOUR SAFETY**.....5

2. **MAIN FEATURES**.....5

3. **PRODUCT DESCRIPTION**.....6

4. **DEVICE PURPOSE & APPLICATIONS**.....6

5. **CONNECTION DIAGRAMS**7

6. **ALARM VOICE CALL ALERT MESSAGES - RECORDING & PLAYBACK**.....8

a) Recording voice call alert messages

b) Playing back voice call alert messages

7. **GSM CONTROLLER PROGRAMMING INTRODUCTION**9

a) Programming by PC

b) Programming by SMS

7. **GSM CONTROLLER PROGRAMMING MODE (alarm features)**.....10

GSM Alarm Features

Note: The GSM Controller has many features. The GSM Alarm features are available even if the unit is used as a GSM Intercom. Inputs not used as intercom call buttons can be set as alarm inputs using WMOD (see section 8) and all alarm features as follows will be relevant to those inputs.

7. **GSM CONTROLLER PROGRAMMING MODE (alarm features)**.....10

7.1 PROGRAMMING AUTHORISED USER TELEPHONE NUMBERS **TN**.....10

7.2 PROGRAMMING INPUT TRIGGERING STATUS **IN**12

7.3 DELAY BEFORE DIALING **DD**14

7.4 INPUT DELAY FILTER PARAMETER **ID**15

7.5 PROGRAMMING OUTPUT SWITCHING STATUS **OS**16

7.6 DIRECT ALARM OUTPUT LINKED TO INPUTS & EVENTS **OD**17

7.7 LINKING INPUTS TO AUTHORISED TELEPHONE NUMBERS **LN**19

7.8 MAIN POWER FAIL ALERT **LN5**20

7.9 LOW BATTERY ALERT **LN6**21

7.10 MAIN POWER FAIL TIME DELAY FILTER **MAIN**21

7.11 CALLER ID FREE CALL TO TRIGGER SPECIAL FUNCTION **TC**22

7.12 INPUT ACTIVE TIME WINDOW **IT**24

7.13 INPUT TRIGGER COUNTER DURING ALARM BEFORE BLOCKING INPUT **AR**25

7.14 SECURITY LEVEL TO LIMIT AUTHORISED SYSTEM USERS **SL**26

7.15 PRE-PAY CARD CREDIT & SIM CARD VALIDITY INFO **CC**27

7.16 OTHER SYSTEM PARAMETERS **PA**29

7.17 SMS ALERT MESSAGE EDITOR29

GSM Intercom Features

The device inputs IN1-IN4 + OFF are factory set as GSM Intercom call buttons. To change IN1-IN4 to alarm inputs or revert the OFF input back to an enable/disable input use the feature WMOD.

8. GSM INTERCOM SET-UP & PROGRAMMING30

8.1 SETTING UP THE VIDEX GSM INTERCOM PANEL INTERFACE (VX)30

8.2 SETTING THE KOCOM GSM INTERCOM (KC).....34

8.3 SETTING THE UNIVERSAL BOXED GSM INTERCOM PANEL INTERFACE (BX).....36

8.4 GSM INTERCOM PROGRAMMING & SETTINGS (For all versions)40

8.4.1 Set inputs not used as call buttons to operate as alarm inputs ;WMOD;40

8.4.2 Receive current call button parameters ;PDEA; ;PDEB; ;PDEC; ;PDED; ;PDEE;..... 40

8.4.3 Receive current MIC & Speaker levels and adjust ;PPA;.....41

8.4.4 Set silent or ringing panel sound ;MUT;.....41

8.5 GSM Access Control Feature.....42

The device enables free call access for 20 or `180 Authorised Users. The complete User list can be enabled or disabled as required or individual Users can be added or deleted. One dedicated output is allowed for this feature.

NOTE: With the GSM intercom firmware loaded 20 Users max. Without GSM intercom 180 Users max.

8.5.1 Receive all current Caller ID access parameter ;PCLP;.....42

8.5.1 Add or delete new Access Control Users ;CLP;.....42

8.5.2 Set an output to trigger when an unauthorised access attempt is made ;OD9;.....42

9. DTMF REMOTE COMMANDS TABLE.....44

10. PRINTOUT OF CURRENT SYSTEM PARAMETERS44

10.1 Receive all current system parameters (alarm) ;PALL;.....45

10.2 Receive current authorised User telephone numbers ;PTN;..... 45

10.3 Receive which phone numbers are linked to each input ;PLN;..... 45

10.4 Receive input activation status parameters ;PIN;..... 45

10.5 Receive input activation delay filter value ;PID;..... 45

10.6 Receive delay before dial value ;PDD;..... 45

10.7 Receive Caller ID Special User functions ;PTC;..... 45

10.8 Receive Security Level - numbers with programming & alert capability ;PSL;..... 46

10.9 Receive output switching status parameters ;POS;..... 46

10.10 Receive direct alarm outputs linked to inputs or events ;POD;..... 46

10.11 Receive all programmed SMS alert messages ;P#;.....46

10.12 Receive the power levels on the unit ;PPWR;..... 46

10.13 Receive set up parameters value ;PPA;..... 46

10.14 Current credit of the pre-paid SIM card ;PCC;..... 46

10.15	Current state of all outputs ;PORC;	47
10.16	Receive current intercom call button parameters ;PDEA; ;PDEB; ;PDEC; ;PDED; ;PDEE;	47
10.17	Caller ID Access Control Settings ;PCLP;	47
11.	CHECKING AND CHANGING THE SYSTEM STATUS (ON/OFF)	47
11.1	CHECKING SYSTEM STATUS BY SMS COMMAND ;SYS;	47
11.2	CHECKING SYSTEM STATUS BY DTMF COMMAND	47
11.3	CHANGING SYSTEM STATUS OFF TO ON ;SYS=ON;	48
12.	CHECKING THE INPUT STATUS	48
11.1	CHECKING THE INPUT STATUS BY DTMF	48
11.2	CHECKING THE INPUT STATUS BY SMS ;INS;	48
GSM Remote Output Control Features		
The device has 4 programmable outputs. All outputs can be set as N/O or N/C latching contacts to turn devices such as heating on & off or N/O timed pulse contacts. The pulse time is unlimited so pulse contacts can be used as extended off delay switch or timed hold open contacts. The outputs can be activated by SMS, DTMF & Caller ID free call by Authorised Users only.		
13.	OUTPUTS REMOTE CONTROL	49
13.1	OUTPUTS REMOTE CONTROL BY SMS COMMAND ;ORC;	49
13.2	OUTPUTS REMOTE CONTROL BY DTMF COMMAND	49
14.	CLEAR ALL PROGRAMMED DATA FROM SIM ;SDCLR;	50
15.	SYSTEM START UP	50
16.	INTELLIGENT LED DISPLAY FUNCTIONS	51
17.	TROUBLESHOOTING	51
18.	TECHNICAL SPECIFICATIONS	53
19.	TECHNICAL SUPPORT & SALES CONTACTS	53

1 FOR YOUR SAFETY

Please read these safety guidelines. Not following them may be dangerous or in some cases, illegal. Read the entire Manual for complete product information.

This GSM Control Panel is a GSM mobile phone product and bound by GSM product usage regulations.

SWITCH ON SAFELY

Do not switch the unit on when wireless phone use is prohibited or when it may cause interference or danger.

INTERFERENCE

All wireless phones and units may be susceptible to interference, which could affect device performance.

SWITCH OFF IN HOSPITALS

Follow any restrictions. Switch the unit off near medical equipment.

SWITCH OFF IN AIRCRAFT

Follow any restrictions. Wireless devices can cause interference in aircrafts.

SWITCH OFF WHEN REFUELING

Do not use the unit at a refueling point. Do not use near fuel or chemicals.

SWITCH OFF NEAR BLASTING

Follow any restrictions. Do not use the unit where blasting is in progress.

USE SENSIBLY

Use product only as explained in the product documentation. Do not touch the antenna connection on the GSM/GPRS module unnecessarily.

2 MAIN FEATURES

- ⇒ GSM Controller Interfaces with various popular door panels
- ⇒ Ringing or muted panel sound during intercom calling
- ⇒ Combination of 4 Alarm contacts and GSM intercom call button inputs (5 buttons max)
- ⇒ Each button can call up to 9 phone numbers & has 1 authorised administrator number
- ⇒ 4 programmable outputs (12DVC 300ma max direct output)
- ⇒ 2 dry relay contacts N/O & N/C
- ⇒ Caller ID access control for 20 or 180 authorised Users assigned to one dedicated output
- ⇒ Programmable delay time & number sequence dialing for intercom call buttons
- ⇒ Multiple authorised telephone numbers use for call buttons and authorised programming or remote control by DTMF or SMS
- ⇒ Sends Voice & SMS alerts to selected authorised telephone numbers on alarm input trigger
- ⇒ Voice recorder input jack for 4 voice call alarm messages – 1 for each alarm input
- ⇒ SMS alert message – 1 for each alarm input
- ⇒ Listen-in function when voice call alarm received (2 way audio & DTMF control also possible in this mode)
- ⇒ Intelligent LED panel display enables constant system status monitoring
- ⇒ Tamper switch on the panel to trigger alarm
- ⇒ Dial in to request input & output status by DTMF and get audible beep confirmations
- ⇒ Control outputs by remote control by SMS, Caller ID (free call) & DTMF command
- ⇒ Full print out of programming parameters by SMS or PC

- ⇒ Pre-paid SIM card credit & value checking
- ⇒ Security level for incoming programming or access request SMS or calls
- ⇒ Unauthorised Caller ID access attempt alarm
- ⇒ Parameter programming by SMS, PC or mobile phone
- ⇒ Event log with time stamp (near completion)

3 DESCRIPTION

The **SimEntry** GSM Controller is a multi function GSM Control Panel with intercom, access control, remote output control & alarm / alert system in one.

The system parameters can be stored on the SIM card by various methods and the GSM controller extracts the parameters from the SIM when it is powered up enabling rapid set up and changeover.

* The GSM Intercom uses all 4 inputs + OFF input to provide up to 5 call buttons. It can call up to 9 programmed land-line or mobile numbers per call button. Each call button can be programmed individually with a simple SMS command. An authorised Administrator can be set per button to restrict programming to one preset number. A time delay between calling numbers can be set as can microphone & speaker levels.

* Inputs not used as call buttons can be used as GSM alarm inputs. Voice call & SMS alerts on alarm input activation can be set to be received by an authorised User telephone number list. SMS & DTMF remote control is also restricted to the same authorised User list. The alarm inputs can be programmed as normally open contacts (N.O.) and are then triggered by applying a negative pulse (GND) (default); or as normally closed contacts & triggered by removing the applied +12V or GND. Each alarm input can be assigned a custom voice message, SMS message or both.

* The Controller has a dedicated enable / disable input which arms & disarms when shorted to GND.

* The GSM Controller has four programmable outputs which can be a combination of volt free (separate relay PCB) & 12V 300ma (max) outputs.

* Remote control of the outputs and other features is possible by DTMF, SMS or Caller ID (CLIP) command by authorised Users only.

4 DEVICE PURPOSE & APPLICATIONS

The **SimEntry** GSM Controller can be used specifically as a GSM intercom however the GSM capability and flexible features enable many applications.

- ⇒ GSM Intercom
- ⇒ Security alarm systems
- ⇒ Heating or appliance remote control by phone
- ⇒ Lift emergency call stations

- ⇒ Remote location information call point
- ⇒ Remote operation / status reporting of electrical devices
- ⇒ Home care or emergency alarm
- ⇒ Car, boat, caravan or holiday home alarm / event alert system

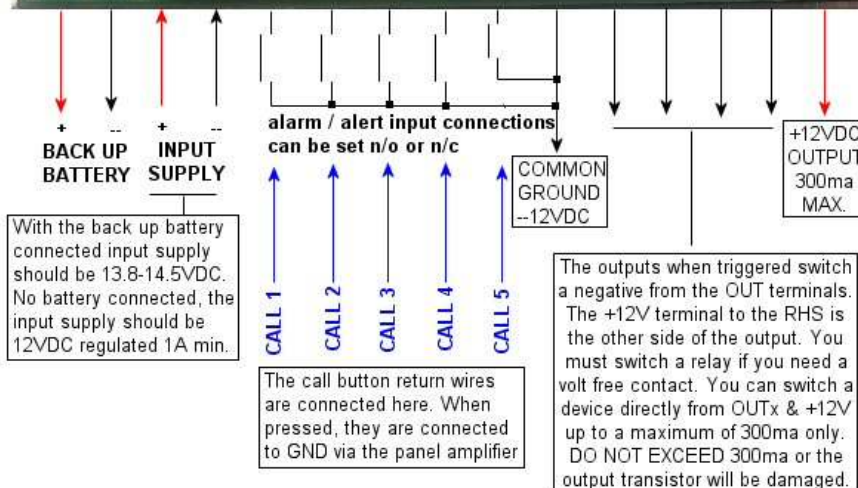
5 CONNECTION DIAGRAMS & PCB LAYOUT

a) GSM Alarm Inputs / Outputs

See Section 8 on GSM INTERCOM Wiring Diagrams

- b) VX 4000 GSM Intercom (Videx 4000 Interface PCB)
- c) KC GSM Intercom (Kocom Panel)
- d) BX GSM Intercom (Universal Boxed Interface PCB)

a) GSM Alarm Wiring

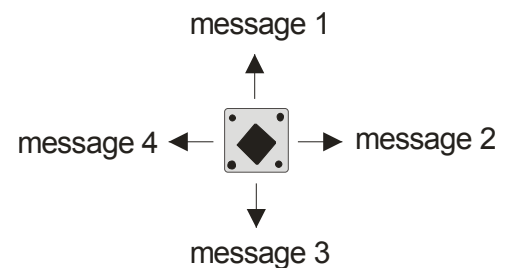


6 VOICE MESSAGES – RECORD & PLAY

The memory of each alarm input enables you to record your own voice message for a total length of 10 seconds each message. The device is equipped with a miniature audio jack connector. For recording & playback review a plug in earpiece is required. The headset used is a mobile phone hands free headset with mini audio jack.

6A) RECORDING MODE

For recording and playing back alarm messages the GSM Controller has a small joystick switch (see PCB layout diagram above) which you can use in 4 different directions:



- Voice call Alert Message 1 – UP (input 1)
- Voice Call Alert Message 2 – RIGHT (input 2)
- Voice Call Alert Message 3 – DOWN (input 3)
- Voice Call Alert Message 4 – LEFT (input 4)

To start recording, push the Play/REC joystick in one direction depending on message you'd like to record and hold the joystick in this position. After one beep you can start recording and stop when you here two short beeps.

The REC/Play procedure is indicated by the REC/Play LED as well. The REC/Play LED will flash during a recording or playback procedure.

Follow the same procedure to set all four Voice alarm messages. When the input is triggered, the unit will call Users linked to receive that alert and play the message to the User. Ensure the message clearly describes the input fault or description. The voice alert recipient has the ability to cancel the alarm for their phone, all phones or continue with DTMF control / status report of the entire system.

6B) PLAYBACK

Press the PLAY/REC joystick into one direction for about 1 second and you will here the recorded message for that position.

To stop playback mode press the Play/REC joystick again for a second and play mode will stop. Follow the same procedure to hear all four recorded messages.

7 GSM CONTROLLER PROGRAMMING

PLEASE READ THIS MANUAL CAREFULLY BEFORE INSTALLING OR PROGRAMMING

NOTE: All User data, programming values & telephone numbers are stored in the phone book of the SIM card. It is possible to program the SIM card 4 different ways:

- ⇒ Remotely by SMS command
- ⇒ Locally by PC and mini USB cable (USB2.0 A – right angled mini USB) or retractable mini USB
- ⇒ Directly onto SIM card using any USB SIM Card Reader & provided software
- ⇒ Directly onto SIM card by using mobile phone to enter parameters as Names & Numbers

TIP: The most convenient way to send SMS programming is via an online SMS application such as Skype. Its cheap, easy and gives a history of sent commands. SMS programming by mobile phone is also simple. Add the main commands as templates in your SMS editor so you don't have to write them out each time or remember them.

SMS PROGRAMMING NOTE:

- Every SMS command sent must start and end with ; and parameter & value separated by =
- To receive a confirmation of the SMS command sent you must put a + after the very first ;
- Ie: ;+ATN1=07796178987;ATN2=02074156786;RTNA=20;

NOTE: To program the parameters & values directly onto the SIM card, you can put it in a mobile phone and save the parameter & value as name & number in the SIM card contacts.

TIP: Another way to program the GSM Controller is by PC using the on board mini USB port. The connection to the device is through the Windows based program (Hyper Terminal – Start – All programs – Accessories – Communications – Hyper Terminal) or similar terminal connection type application. You can save the programming session as a back up file with the entire session including the original settings and all changes made. It serves as a log of changes made to the installation.

PC PROGRAMMING USING WINDOWS HYPER TERMINAL & ON BOARD MINI USB PORT

1. You will need to plug the unit into your PC using a USB to mini USB cable (available on Ebay)
2. You must install the Driver for the GSM Controller USB port (contact your supplier)
3. Check the COM port your GSM Controller is connected to in your PC Control Panel (Start – Control Panel – Performance & Maintenance – System – Hardware – Device Manager – Ports)
4. Go to Hyper Terminal and start a new connection using this COM port.
5. Hyper Terminal will connect to the GSM Controller and you can program the device using all SMS commands as detailed in this manual.
6. Enter SMS command then enter ie. ;PDEA; [enter]
7. The device will return the current parameters on screen. Make your changes by entering new parameters and pressing enter. The device will be re-programmed instantly.

Note: All SMS commands as detailed throughout this manual can be used as detailed above. Initial programming can be done prior to site visit by PC or quickly with a couple of SMS commands while on site. Ongoing programming off site is by SMS text messages.

7. GSM INTERCOM PROGRAMMING MODE (alarm features)

7.1 PROGRAMMING TELEPHONE NUMBERS - TN

The Authorised User Telephone number list (TN) are the User numbers which are assigned certain functions for example SMS programming, system alerts or DTMF system control. If you want to use a phone number for DTMF control, make sure it's in the TN list and NOT one of the Caller ID access control User numbers. If so the Caller ID Access output will activate and hang up. Also see 'SL' Security Level (7.14) for details on restricting system use to some or all Users.

Eg. Just as you would save a contact Name & phone number on the SIM card, you can enter the parameter code (Name) and associated setting (Number) directly onto the SIM by putting it in a mobile phone. Otherwise see below for adding by SMS.

le:	Contact Name	Contact Number
	John Smith	07796178654

le:	Contact Name	Contact Number
	TN1	07796178654
	(parameter code)	(User number)

Example:

The above example shows TN1 (Telephone Number 1) is an authorised number. The system will accept programming from 07796178654 and send alerts as set in the inputs linked to numbers feature (LN). Linked input: LN1 (input 1) = 1 (TN1) means Input 1 will alert Telephone Number 1 (TN1)

Authorised Telephone Numbers (TN) List

The list can be customised by security level to allow these features to some or all of the Users. See SL 7.14 'Security Level' for how to restrict system use to certain Users.

Defining the function of a (TN) telephone number

System Input & Fault Alerts

Eg. TN5 = Voice call alerts & SMS alerts will be sent to this number

TN5V = only Voice alerts will be sent to this number

TN5M = only SMS alerts will be sent to this number

Example

Authorised Phone Numbers (TN) in the following list as examples throughout the manual. Refer back to it for confirmation of the set examples.

GSM CONTROLLER PROGRAMMING TABLE		
SIM CARD PHONE BOOK		
Name	Phone (Number)	Function Description
TN1V	07798765140	1 st authorised number - add. numbers set up at 7.7 (LN)
TN2		2 nd authorised number - add. numbers set up at 7.7 (LN)
TN3		3 rd authorised number - add. numbers set up at 7.7 (LN)
TN4		4 th authorised number - add. numbers set up at 7.7 (LN)
TN5	07798765142	5 th authorised number - add. numbers set up at 7.7 (LN)
TN6V	02077681456	6 th authorised number - add. numbers set up at 7.7 (LN)
TN7M	07756878123	7 th authorised number - add. numbers set up at 7.7 (LN)
TN8	07796176431	8 th authorised number - add. numbers set up at 7.7 (LN)
TN9	07796176476	9 th authorised number - add. numbers set up at 7.7 (LN)
TN0	07796176466	10 th authorised number - add. numbers set up at 7.7 (LN)

The above table sets out the 10 authorised phone numbers which can be allocated programming and SMS / Voice call alerts. This list of authorised Users also have one of 3 special functions available when calling & phsically hanging up after 1-3 rings. See section 7.11 (TC - CLIP Feature).

Voice Call Alerts

When you receive a voice alert, you can answer it and control various functions such as outputs by DTMF. You can also check the current status of any input or output.

By answering the call and pressing * you will switch off the redial alert call for that number only. Redial alerts can be set to keep trying until you get the alert. If you cancel the alert to your number '*' other recipient numbers will still be called as normal.

By answering the call and pressing the # you will switch off all remaining alert calls to all recipients.

When you want:

- An alarm voice message & an alarm SMS message to telephone number 5
- Only an alarm voice message to telephone number 6
- Only an SMS message to telephone number 7

GSM CONTROLLER PROGRAMMING TABLE		
SIM CARD PHONE BOOK		
Name	Number	Description
TN5	07796178964	1st telephone number (alarm voice & SMS message)
TN6V	07796178967	2nd telephone number (alarm voice only)
TN7M	07796178968	3rd telephone number (SMS message only)

7.1.1 TN remote programming by SMS (see colour coded explanation in Tips box)

1. For example above send the following SMS from an **authorised phone** (see SL at 7.14)
- * 2. **;**TN5=07796178964;TN6V=07796178967;TN7M=07796178968;
3. If you want a confirmation SMS put a "+" at the start as follows
- * 4. **;**+TN5=07796178964;TN6V=07796178967;TN7M=07796178968;

Tips on SMS Programming (* see example above)

1. Every individual command must start and end with semi colon **;**
2. The menu page of this manual has the SMS commands highlighted in **RED**
3. Separate any SMS function name ie **TN5** & function values ie **07796178964** with **=**
4. To get an SMS confirmation of your SMS command, put a **+** after the very first **;**
5. To send multiple commands, start & end each command with a **;** as shown
6. Don't exceed 160 characters total.
7. You can use SMS commands for PC programming by USB using Hyper Terminal (PC) Terminal (Macs)

7.2 PROGRAMMING INPUT TRIGGERING STATUS - IN

Alarm & reset inputs can be triggered in 4 different ways. The status of the input can either be normal closed (N.C) or normal open (N.O.) with positive (+ 12V) or negative (GND) voltage. When you need input reset feed back it is possible to get an SMS alert when the input returns from alarm to normal position. (See section 5.8 - SMS Messages organiser). **Note:** If you want an 'input reset' SMS to be sent, you must use either IN=4,5 or 6. This is useful to be alerted when the fault condition has been cleared in the case of alarms.

INPUT STATUS MODES (GSM INTERCOM CALL BUTTONS ARE ALWAYS INx=0)

See diagrams below

General Alarm / Call Button Trigger Inputs (x=1-4)

- ⇒ INx = 0 means input is Normally Open – triggered by applying a negative voltage (GND) to the input (short GND & IN1-4) This is the default setting.
- ⇒ INx = 1 means input is Normally Closed – breaking negative or positive voltage to the input triggers it.
- ⇒ INx = 2 means input is Normally Open – triggered with positive voltage (+ 12VDC)
- ⇒ INx = 3 means input is Input disabled

Special Input Trigger Status (4-6)

These are to set inputs as above but with the added feature of 'input reset' alerts.

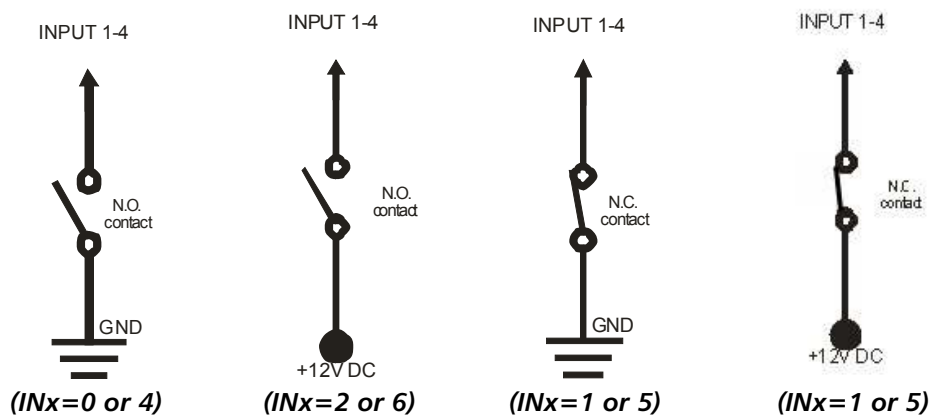
- ⇒ INx = 4 means input is as above (IN = 0) + input reset SMS will be sent
- ⇒ INx = 5 means input is as above (IN = 1) + input reset SMS will be sent
- ⇒ INx = 6 means input is as above (IN = 2) + input reset SMS will be sent

System ON/OFF Dedicated Input (ION) (terminal label: OFF)

This is to enable/disable the inputs of the controller by shorting the OFF input to GND or +12V.

- ⇒ ION = 0 means ON/OFF input is active when shorted to a negative voltage (GND)
- ⇒ ION = 2 means ON/OFF input is active when shorted to a positive voltage (+ 12VDC)

TYPICAL INPUT CONNECTIONS



PROGRAMMING TABLE FOR INPUT STATUS

GSM CONTROLLER PROGRAMMING TABLE		
SIM CARD PHONE BOOK		
Name	Default	Description
ION	0	Input status for system ON/OFF
IN1	0	Input status for alarm input 1
IN2	0	Input status for alarm input 2
IN3	0	Input status for alarm input 3
IN4	0	Input status for alarm input 4

Example: IN4 shows that an SMS reset alert will be sent to number TN4

GSM CONTROLLER PROGRAMMING TABLE		
SIM CARD PHONE BOOK		
Name	Number	Description
ION	0	Inputs disabled by shorting to GND (enable remove)
IN1	0	Input activated by shorting to GND
IN2	1	Input activated by removing short GND or +12V
IN3	2	Input activated by shorting to +12V
IN4	4	Input active by shorting to GND + Reset SMS sent

7.2.1 IN parameter remote programming by SMS

For example above send the following SMS from an authorised phone (see Security Level (SL) at 7.14)
 ;ION=0;IN1=0;IN2=1;IN3=2;IN4=4;

If you want to get the confirmation SMS back put "+" before the SMS command
 ;+ION=0;IN1=0;IN2=1;IN3=2;IN4=4;

Note: Input 4, when triggered, will send alerts to the authorised number (TN5) 07798765142 which is set to receive both Voice and SMS alerts. (TN5=07798765142)

To compare: If this telephone number was set as TN5M=07798765142, only SMS Message alerts would be sent.

7.3 TIME DELAY BEFORE DIAL – DD

To add a time delay before the alarm input dialing sequence starts use DD – delay before dialing parameter. Default is 0 which = 0.5 second delay. Do not change this for intercom call button inputs. 0 is the required setting to ensure the call button initiates the call 0.5 after it is pressed.

GSM CONTROLLER PROGRAMMING TABLE		
SIM CARD PHONE BOOK		
Name	Number	Description
DDN		ON/OFF input delay
DD1		Delay before dialing for Input 1
DD2		Delay before dialing for Input 2
DD3		Delay before dialing for Input 3
DD4		Delay before dialing for Input 4

Example:

GSM CONTROLLER PROGRAMMING TABLE		
SIM CARD PHONE BOOK		
Name	Number	Description
DDN	15	15 seconds delay for ON/OFF input
DD1	0	Default delay (0.5secs) before dialing for Input 1
DD2	5	5 seconds delay before dialing for Input 2
DD3	0	Default delay (0.5secs) before dialing for Input 3
DD4	10	10 seconds delay before dialing for Input 4

7.3.1 DD remote programming by SMS

For the above example send the following SMS from an authorised phone
;*DDN=15;DD1=0;DD2=5;DD3=0;DD4=10;*

If you want to get the confirmation SMS back then write "+" before SMS command:
;*+DDN=15;DD1=0;DD2=5;DD3=0;DD4=10;*

7.4 INPUT DELAY FILTER PARAMETER – ID

The ID parameter determines the time period of the pulse length to trigger the Input. The pulse time can be from 0.5 seconds up to 999 seconds. The default time is 0.5 seconds when the parameter value is 0. Adjust this delay only if the input is used for a device such as a door contact used to alert when an entrance has been left open for a certain amount of time. You would set the delay for this time. Do not change this setting for intercom call buttons inputs.

7.4.1 Programming table to define the value of the input delay filter

GSM CONTROLLER PROGRAMMING TABLE		
SIM CARD PHONE BOOK		
Name	Number (default)	Description
DON	0	Default ID filter is 0,5 second – ON/OFF input
ID1	0	Default ID filter is 0,5 second – input 1
ID2	0	Default ID filter is 0,5 second – input 2
ID3	0	Default ID filter is 0,5 second – input 3
ID4	0	Default ID filter is 0,5 second – input 4

Example:

GSM CONTROLLER GSM PROGRAMMING TABLE		
SIM CARD PHONE BOOK		
Name	Number (default)	Description
DON	0	Default ID filter is 0,5 second – ON/OFF input
ID1	5	Input must be active for 5 seconds to send alerts
ID2	30	Input must be active for 30 seconds to send alerts
ID3	2	Input must be active for 2 seconds to send alerts
ID4	0	ID filter is default 0,5 second for input 4

7.4.2 ID parameter remote programming by SMS

For the above example send the following SMS from an authorised phone
;*ID1=5;ID2=30;ID3=2;ID4=0;*

If you want to get a confirmation SMS back put "+" before SMS command
;*+ID1=5;ID2=30;ID3=2;ID4=0;*

7.5 PROGRAMMING OUTPUT STATUS - OS

The GSM Controller device has four open collector outputs (12VDC 300ma out). Each output can be set as bi-stable (latch) or mono-stable (pulse) output by programming:

1 = (Latch ON)

0 = (OFF)

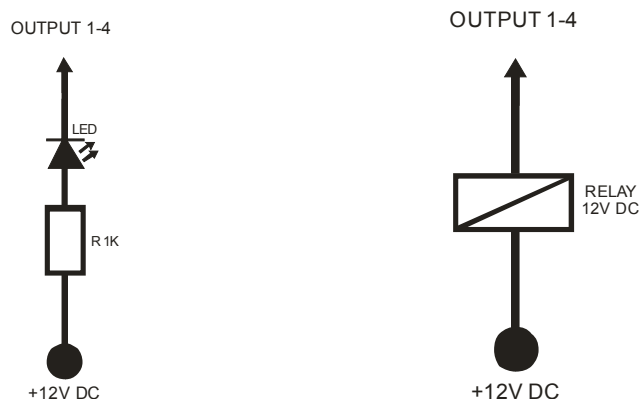
Any other number = (N/O pulse time in seconds)

Activating any output will reverse the current switch state as programmed.

If you want a latching contact but the contact should be open when the device is powered up, set 0 (OFF). This will ensure the contact is OFF at the start and latches closed when activated.

Typical connections for the outputs (OUT1-OUT4 & +12V)

OUT1 – OUT4 are switched negative 12V outputs



+12V is a permanent 12VDC output

EG: When an output is active, you get a 12VDC (300ma) output between terminals +12V & OUT1-4.

Note: This 12VDC output is used to trigger a separate relay for voltage free output contacts.

- 1. AUTOMATIC GATE ACTIVATION:** When using the output to a switch an automatic gate control input, the 12VDC output is used to activate a separate relay for a N/O dry contact.



IMPORTANT: DO NOT USE THE OUT (1,2,3 or 4) TERMINALS OF THE GSM CONTROLLER TO DIRECTLY SWITCH A GATE CONTROLLER INPUT. IT WILL DAMAGE THE CONTROLLER.

2. **ELECTRIC STRIKE ACTIVATION:** When using the output to a switch an electric strike, the 12VDC output is used to activate the separate relay PCB and the N/O dry contact from this PCB is used to switch power to the lock.



NOTE: If the lock draws less than 300ma, you can switch the 12VDC output directly to the strike. **DO NOT SWITCH DEVICES RATED AT MORE THAN 300ma. IT WILL BLOW THE OUTPUT TRANSISTOR.**

NOTE: USE A DIODE ACROSS THE COIL OF A 12VDC LOCK OR A **0.1uF** CAPACITOR ACROSS THE COIL OF A 12VAC LOCK. THIS SUPPRESSES BACK VOLTAGE WHEN THE LOCK COIL VOLTAGE COLLAPSES & PROTECTS THE CONTROLLER.

3. **MAGNETIC LOCK ACTIVATION:** When using the output to a switch a magnetic lock, the 12VDC output is used to activate the separate relay PCB and the N/C dry contact from this PCB is used to drop the separate power supply being supplied to the magnetic lock.



4. **RELAY ACTIVATION:** When using the output to a switch a relay for lights or other devices, switch the output directly to the relay coil as shown in the 2 examples above from terminals 12+ & OUT (1,2,3,4).

7.5.1 Programming table for output status

<i>GSM CONTROLLER GSM PROGRAMMING TABLE</i>		
<i>SIM CARD PHONE BOOK</i>		
<i>Name</i>	<i>Number (default)</i>	<i>Description</i>
OS1	1	Status for the 1 st output – enabled
OS2	1	Status for the 2 nd output – enabled
OS3	1	Status for the 3 rd output – enabled
OS4	1	Status for the 4 th output – enabled

Example:

<i>GSM CONTROLLER GSM PROGRAMMING TABLE</i>		
<i>SIM CARD PHONE BOOK</i>		
<i>Name</i>	<i>Number</i>	<i>Description</i>
OS1	1	Output active
OS2	0	Output off
OS3	3600	3600 seconds (1 hour) pulse output (use as timed OFF delay)
OS4	3	5 second pulse output

7.5.2 OS remote programming by SMS

For the above example send the following SMS from an authorised phone number
;**OS1=1;OS2=0;OS3=3600;OS4=3;**

If you want to receive a confirmation SMS put "+" before SMS command
;**+OS1=1;OS2=0;OS3=3600;OS4=3;**

7.6 DIRECT ALARM OUTPUT – OD

The outputs can be associated directly with input activation. To activate a camera for example, you can program any one of the 4 outputs to switch when one of the alarm inputs is active. OD5 to OD9 are links between fictive inputs like telephone line or GSM signal failure to a dedicated output. Enter the output number as the parameter in OD 5 – 9 for direction connection to the associated fault. OD9 is specifically associated with unauthorised Caller ID access attempt. On incoming unauthorised calls, the output associated with OD9 will switch.

The type of Output (ON/OFF or pulse time) is set with previous parameter **OS** in 7.5. You can also control the outputs remotely by SMS, CLIP or DTMF commands (section 12).

Possible programming parameters:

GSM CONTROLLER PROGRAMMING TABLE		
SIM CARD PHONE BOOK		
Name	Number (Output)	Description
OD1		No direct connection between input and output
OD2		No direct connection between input and output
OD3		No direct connection between input and output
OD4		No direct connection between input and output
OD5	n/a	Telephone line failure (optional PSTN version)
OD6		GSM network failure
OD7		System tamper
OD8		System ON/OFF (choose any output)
OD9		Unauthorised Caller ID access (CLP) attempt

7.6.1 Programming table for OD – direct alarm output

Example:

It is possible to choose different combinations between outputs and inputs

GSM CONTROLLER PROGRAMMING TABLE		
SIM CARD PHONE BOOK		
Name	Number (Output)	Description
OD1	1	Alarm condition on Input 1 triggers output 1
OD2	0	No direct connection between input and output
OD3	0	No direct connection between input and output
OD4	0	No direct connection between input and output
OD5	n/a	Telephone line failure (opt. PSTN version)
OD6	2	GSM network failure triggers output 2
OD7	4	System tamper triggers output 4
OD8	3	System ON/OFF triggers output 3
OD9	1	Unauthorised Callers will trigger output 1

7.6.2 OD remote programming by SMS

For the above example send the following SMS from an authorised phone number

;OD1=1;OD6=2;OD7=4;OD8=3;OD9=1;

If you want a confirmation SMS back put "+" before SMS command:

;++OD1=1;OD6=2;OD7=4;OD8=3;OD9=1;

7.7 ALARM INPUTS & LINKING ALARMS TO (TN) TELEPHONE NUMBERS (LN)

You must link alarm inputs to an authorised number or any combination of authorised numbers for the alerts to work correctly. Linking the inputs to authorised phone numbers (TN) enables alarm calls and / or SMS alerts to be sent to certain Users.

Linking Inputs as Alerts to Authorised Numbers on Alarm Activation

Linking inputs to authorised phone numbers on alarm activation is used when one or all of the 4 programmable inputs are used as alarm inputs. (see work mode function WMOD in Section 8.5)

Eg: If input 4 is set as an alarm input, you may have a 'gate left open' switch connected to INPUT 4. When the switch connected to input 4 is triggered, (and left open for a preset time: 'ID' Input Delay Filter Section 7.4.1), the associated alert recipient will be notified by SMS and / or Voice call depending on the setting for that number (TN).

7.7.1 Programming table for linking the inputs & telephone numbers – LN

GSM CONTROLLER PROGRAMMING TABLE		
SIM CARD PHONE BOOK		
Name	Number (default)	Description
		4 Programmable INPUTS
LN1		Links input 1 with (TN1 – TN0)
LN2		Input & telephone No. linking for 2 nd alarm input (TN1 – TN0)
LN3		Input & telephone No. linking for 3 rd alarm input (TN1 – TN0)
LN4		Input & telephone No. linking for 4 th alarm input (TN1 – TN0)
		5 Preset functions which can be linked to outputs or alerts
		Additional parameter settings available for LN5, LN6 & LN8
LN5		Mains fail alert & telephone No. linking (TN1 – TN0)
LN6		Low Battery alert & telephone No. linking (TN1 – TN0)
LN7		Periodic test SMS & telephone No. linking (TN1 – TN0)
LN8		PP SIM low credit alert & telephone No. linking (TN1 – TN0)
LN9		Tamper switch & telephone No. linking (TN1 – TN0)
LN10		Unauthorised Caller ID trying to activate outputs

Example:

GSM CONTROLLER PROGRAMMING TABLE		
SIM CARD PHONE BOOK		
Name	Number	Description
LN1	15	Input 2 will send alerts as set for numbers 1 & 5
LN2	157	Input 2 will send alerts as set for numbers 1,5 & 7
LN3	1567	Input 3 will send alerts as set for numbers 1,5,6 & 7
LN4	17	Input 4 will send alerts as set for numbers 1 & 7
LN7	7	Periodic Test SMS will be sent to TN7M
LN8	7	PP SIM low credit alert – SMS will be sent to TN7M
LN10	7	Unauthorised Caller alert – SMS will be sent to TN7M

7.7.2 LN remote programming by SMS

For the above example send the following SMS from an authorised phone number
;LN1=15;LN2=157;LN3=1567;LN4=17;LN7=7;LN8=7;

If you want a reply confirmation SMS put "+" before the SMS command
;++LN1=15;LN2=157;LN3=1567;LN4=17;LN7=7;LN8=7;

7.8 MAINS POWER FAIL ALERT & LINKING TO USER TELEPHONE NUMBER – LN5

The GSM Controller will send an SMS message if the mains power fails. In the event of power failure, the device will send an SMS to an authorised phone/s. The default SMS is "Main Power Lost". You can also program how long the unit must be without mains power before sending this message. The default time is 5 second (parameter 7.10 MAIN)

7.8.1 Programming table for linking MAINS POWER fail to a TN

GSM CONTROLLER PROGRAMMING TABLE		
SIM CARD PHONE BOOK		
Name	Number	Description
LN5		Telephone number from TN1 to TN0

Example:

GSM CONTROLLER PROGRAMMING TABLE		
SIM CARD PHONE BOOK		
Name	Number	Description
LN5	67	Mains Power Lost SMS will be sent to TN 6 & 7

7.8.2 LN remote programming by SMS

For the above example send the following SMS from an authorised phone number
;LN5=67;

If you want a reply confirmation SMS put "+" before the SMS command
;++LN5=67;

7.9 LOW BATTERY ALERT & LINKING TO USER TELEPHONE NUMBER – LN6

The GSM Controller monitors the back up battery level and will send 3 separate SMS alerts when the following voltage levels are reached: 11,5V, 10,5V and 9V. The device will send the SMS worded "Low Battery" with the battery level in volts.

The battery level will be monitored as soon as the device unit runs without main power supply. The moment the battery voltage level exceeds 11.5V the GSM Controller will send the SMS message: "Low Battery restored" to the chosen authorised phone/s.

NOTE:

The battery levels will be monitored when the GSM Controller operates only with back-up battery and it is not connected to the main power supply.

7.9.1 Programming table for LOW BATTERY & telephone numbers linking

GSM CONTROLLER PROGRAMMING TABLE		
SIM CARD PHONE BOOK		
Name	Number (Default)	Description
LN6		Telephone number from TN1 to TN0

Example:

GSM CONTROLLER PROGRAMMING TABLE		
SIM CARD PHONE BOOK		
Name	Number (Default)	Description
LN6	58	Low Battery SMS will be send to TN5 & TN8

7.9.2 LN6 remote programming by SMS

For the above example send the following SMS from an authorised phone number
;LN6=58;

If you want a reply confirmation SMS put "+" before the SMS command
;+LN6=58;

7.10 MAINS FAIL ALERT TIME DELAY FILTER PARAMETER - MAIN

This parameter defines the length of time the GSM Controller must be without mains power before the SMS alert is sent. The time delay can be from 1 second - 9999 seconds. The default value is 5 seconds.

Eg: When the GSM Controller is without mains power supply more than 5 seconds (default) the device will send an SMS: "Main Power Lost" to the chosen authorised number/s.

As soon as the mains power is restored, the device will send an SMS "Mains Power restored".

7.10.1 Programming table for "MAINS POWER LOST" filter – MAIN

GSM CONTROLLER PROGRAMMING TABLE		
SIM CARD PHONE BOOK		
Name	Number (Default)	Description
MAIN	5	Main Power Lost filter (5 seconds default)

7.10.2 "MAINS POWER LOST" filter remote programming by SMS

For the above example send the following SMS from an authorised phone number
;MAIN=5;

If you want a reply confirmation SMS back put "+" before SMS command
;+MAIN=5;

7.11 CLIP (CALLER ID) SPECIAL FUNCTION PARAMETER (TC)

The authorised telephone number User list (TN) stored in the device can activate one of 3 special functions using CLIP (Calling Line Identification Presentation) by calling the unit's SIM card and hanging up within 1 -3 rings. Only one CLIP function can be used per number only.

Note: If you are using the Caller ID Access Control Feature (CLP Section 8.4), it will take preference and activate the associated output when called by the authorised number.

This is because the Caller ID Access Control Feature automatically switches the associated output and hangs up. TC requires the User to hang up within 1-3 rings.

You can only use one TC function or CLP function per number not both. Use TC functions from landlines and the CLP Access Control feature from mobiles.

TC CLIP Functions

- ⇒ Trigger one of the GSM Controller's Outputs (parameter 1 – 4)
- ⇒ Enable & Disable the system (parameter 5)
- ⇒ Prompt a callback for DTMF system control with "Call-back" function (parameter 6)

NOTES

You can control only one function per authorised phone number ie. Trigger OUT1. However each (TN) can be assigned one individual function.

IMPORTANT

To activate the CLIP (Caller ID) function you must hang up the call before the device answers or the device will answer and prompt you for DTMF control commands. To set number of 'rings before answering' see section 7.16 (RAN).

7.11.1 Programming table to define the CLIP functions – TC

GSM CONTROLLER PROGRAMMING TABLE		
SIM CARD PHONE BOOK		
Name	Number	Description
TC1	x	First CLIP telephone number = TN1
TC2	x	Second CLIP telephone number = TN2
TC3	x	Third CLIP telephone number = TN3
TC4	x	Forth CLIP telephone number = TN4
TC5	x	Fifth CLIP telephone number = TN5
TC6	x	Sixth CLIP telephone number = TN6
TC7	x	Seventh CLIP telephone number = TN7
TC8	x	Eight telephone number = TN8
TC9	x	Ninth CLIP telephone number = TN9
TC0	x	Tenth CLIP telephone number = TN0

- ⇒ **X=1 - 4** Trigger OUT1 to OUT4
- ⇒ **X=5** System ON/OFF
- ⇒ **X=6** Call back function for full DTMF system control (see section 8)

Example

TC1 (directly relates to authorised phone number TN1) will trigger OUT3, TC2 will switch the system ON/OFF and TC3 will make a call back to the user phone for DTMF control.

GSM CONTROLLER PROGRAMMING TABLE		
SIM CARD PHONE BOOK		
Name	Number (function)	Description
TC1	1	TN1 will activate Output 1
TC2	5	TN2 will switch the system ON & OFF
TC3	6	TN3 will call back the User and if the User answers DTMF system control & status is by pressing relevant codes (Section 9)

7.11.2 TC parameter remote programming by SMS

For the above example send the following SMS from an authorised phone
;TC1=1;TC2=5;TC3=6;

If you want a reply confirmation SMS put "+" before the SMS command
;++TC1=1;TC2=5;TC3=6;

7.12 INPUT ACTIVE TIME FRAME – IT

The IT parameter defines the time frame within which alarm input triggers are counted (programmed by AR parameter – 7.13) before the input blocks. After the IT time the input will be reset and will start counting alarm triggers (AR) again. The IT value can be from 1 - 9999 seconds.

For example

Programming table for the input time window – IT

GSM CONTROLLER PROGRAMMING TABLE		
SIM CARD PHONE BOOK		
Name	Number (Default)	Description
IT1	180	Default value for time window is 180 seconds
IT2	180	Default value for time window is 180 seconds
IT3	180	Default value for time window is 180 seconds
IT4	180	Default value for time window is 180 seconds

Example

GSM CONTROLLER PROGRAMMING TABLE		
SIM CARD PHONE BOOK		
NAME	NUMBER	DESCRIPTION
IT1	20	Time window is set on 20 seconds
IT2	75	Time window is set on 75 seconds
IT3	180	Time window is set on 180 seconds
IT4	900	Time window is set on 900 seconds

7.12.1 The input time window remote programming by SMS

For the above example send the following SMS from an authorised phone number (TN)
;IT1=20;IT2=75;IT3=180;IT4=900;

If you want a reply confirmation SMS put “+” before the SMS command
;+IT1=20;IT2=75;IT3=180;IT4=900;****

7.13 INPUT TRIGGER COUNTER BEFORE BLOCK - AR

With AR parameter you can program the number of alarm input triggers counted within a certain time window as set by the previous parameter (IT). After an alarm input triggers the set amount of times within the preset time IT, the input will automatically block & stop calling or sending further alarm SMS. After the time period has elapsed, the Controller will reset and if the alarm input is still active, alerts and any associated direct outputs will resume.

Programming table for the input trigger counter – AR

GSM CONTROLLER PROGRAMMING TABLE		
SIM CARD PHONE BOOK		
Name	Number (Default)	Description
AR1	5	Default is 5 alarm triggers before input has been blocked
AR2	5	Default is 5 alarm triggers before input has been blocked
AR3	5	Default is 5 alarm triggers before input has been blocked
AR4	5	Default is 5 alarm triggers before input has been blocked

Example

GSM CONTROLLER PROGRAMMING TABLE		
SIM CARD PHONE BOOK		
NAME	NUMBER	DESCRIPTION
AR1	3	The Input will be blocked after 3 alarm triggers
AR2	10	The Input will be blocked after 10 alarm triggers
AR3	10	The Input will be blocked after 10 alarm triggers
AR4	30	The Input will be blocked after 30 alarm triggers

7.13.1 The input trigger counter before block remote programming by SMS

For the above example send the following SMS from an authorised phone
;AR1=3;AR2=10;AR3=10;AR=30;

If you want to get the confirmation SMS back then write “+” before SMS command:
;+ AR1=3;AR2=10;AR3=10;AR=30;

7.14 SECURITY LEVEL - SL

The Security Level parameter defines which of the numbers stored in the SIM card phone book (TN) are authorised to enter into remote control or programming mode (DTMF control or SMS programming). The setting is defined by SL parameter and allows various combinations of the (TN) numbers access to the system.

NOTE

When the SL level is 0, User access to the GSM Controller is open and any caller is allowed to call and use the DTMF codes or SMS programming commands. This is the default setting. Change it if you want to restrict use to certain Authorised Users (TN).

7.14.1 Programming table for security level definition – SL

GSM CONTROLLER PROGRAMMING TABLE		
SIM CARD PHONE BOOK		
Name	Number	Description
SL	0	All calls & SMS commands will be accepted
SL	1	Only number stored under parameter TN1 has access to unit
SL	2	Numbers stored under parameters TN1 to TN2 have access to unit
SL	3	Numbers stored under parameters TN1 to TN3 have access to unit
SL	4	Numbers stored under parameters TN1 to TN4 have access to unit
SL	5	Numbers stored under parameters TN1 to TN5 have access to unit
SL	6	Numbers stored under parameters TN1 to TN6 have access to unit
SL	7	Numbers stored under parameters TN1 to TN7 have access to unit
SL	8	Numbers stored under parameters TN1 to TN8 have access to unit
SL	9	Numbers stored under parameters TN1 to TN9 have access to unit
SL	10	Numbers stored under parameters TN1 to TN0 have access to unit

7.14.2 SL parameter remote programming by SMS

For the above example send the following SMS from an authorised phone

;SL=2;

If you want a reply confirmation SMS put "+" before the SMS command

;+SL=2;

7.15 PRE-PAID SIM CARD CREDIT & VALIDITY INFORMATION

If you use a Pre-Paid SIM card in the GSM Controller, you can get some useful information sent automatically by the network when your SIM card is low on credit or if it's about to expire through non-activity (180 days). This is not usually an issue with GSM intercoms as they are used more frequently.

GSM network providers have different ways to get the credit information. The GSM Controller can hold up to 3 different strings although you only need the one of the SIM in the GSM Controller.

The GSM Controller is set to automatically send a low credit SMS when the credit goes under £4.00. It repeats at £3.00. Lastly at £2.00. The device stops sending alerts to conserve the last £1.00 in case of other important alarm events.

7.15.1 Programming PRE-PAID SIM card credit

Reference for mobile network information [here](#)

<i>GSM CONTROLLER PROGRAMMING TABLE</i>		
<i>SIM CARD PHONE BOOK</i>		
<i>Name</i>	<i>Number</i>	<i>Description</i>
CC1	*#2345#	Vodafone UK
CC2	*#10#	02 UK
CC3	*100#	02 Ireland

This feature will only be useful for pre-paid SIM cards.

CC1 = *#2345# for Vodafone UK

You can use the same method for Network operators who use a similar command string
ie. press *# [code number] # and then the call button

Note: Orange SIM cards cannot use this feature as Orange do not provide this code method to check SIM card credit.

CC2 = *#10# is dedicated to 02 UK

CC3 = *100# is dedicated to 02 Ireland

7.15.2CC parameter for remote programming

For the example above send the following SMS to the unit and also receive confirmation:

```
;+CC1=*#2345#;CC2=*#10#;CC3=*#100#;
```

7.16 GSM CONTROLLER OTHER PARAMETERS

- ⇒ **CRE** – repetition of alarm input calling sequences. With a number from 1 to 99 you can define how often the sequence is repeated in case the number is busy or not answered. The default value is set to 3.
- ⇒ **HTN** – hidden telephone number. This function ("0" value) is used in order to conceal the telephone number of the GSM Controller. The default value is set to "1" which means that the number is always displayed.
- ⇒ **SCV** – SIM card validity. (only used for pre-paid SIM cards – rarely needed feature because the alarm & intercom are actively used ensuring the SIM stays active). The period of valid operating time varies with different GSM network providers. The value can be programmed from 1 to 360 days. The default value does not presume any kind of expiry warning. Typically it is 180 days.
- ⇒ **TST** – A test SMS is sent periodically if any telephone numbers (TN) are set to receive it. The GSM Controller can send the test message at intervals ranging from 1 hour up to 240 hours.

Example if the TST=12, the numbers (TN) linked to "LN7" get a test SMS message every 12 hours. A test message can be set for any length of time to ensure a prepaid card stays active.

- ⇒ **MNF** - When is necessary to fix the GSM network to one provider use the MNF parameter. The MNF parameter will switch automatic network searching to manual. Necessary only when the device is near a Country border and the Network needs to be fixed to prevent unwanted roaming incurring higher than expected call rates. **Not necessary to change in UK.**

For example:

MCC/MNC code for Vodafone UK is 23415, Vodafone IRELAND is 27201, O2 UK is 23402 & O2 IRELAND 27202

More information's about national MCC/MNC codes see:

http://en.wikipedia.org/wiki/Mobile_network_code

- ⇒ **RAN** – Number of rings before the GSM Controller will answer incoming calls. Used when Authorised Users want DTMF System Control or Status. With this command you can set the ring counter and the device will automatically answer after number of rings programmed with this parameter. The default value is 5 rings. Never set less than 3 rings especially if you use the CLP Caller ID Access Control feature otherwise, the device may answer the call when not required.
- ⇒ **MUT** – Silence panel sound while calling numbers (GSM intercom panel feature)
 1 = call panel plays ringing sound while calling (default)
 0 = silent while calling
- ⇒ **SPK** – Speaker volume (75 – 100) Default 80.

Programming table for GSM Controller Set-up parameters

GSM CONTROLLER GSM PROGRAMMING TABLE		
SIM CARD PHONE BOOK		
Name	Number	Description
CRE	3	Number of dialing attempts (1 – 99)
HTN	1	Show telephone number (1 = displayed, 0 = hidden)
RAN	5	Number of rings before answering
SCV	for prepaid SIM	SIM card validity time from 1 - 360 days
MNF		Automatic network searching (leave default)
TST		Periodic test SMS - disabled

Example:

To change set-up parameters with following values:

GSM CONTROLLER GSM PROGRAMMING TABLE		
SIM CARD PHONE BOOK		
Name	Number	Description
CRE	2	Number of dialing attempts for alerts - 2

HTN	0	Hide telephone number of GSM Controller
RAN	3	The unit will answer after 5 rings
SCV	360	SIM Validity or max. no activity refill period is 360 days
MNF	23402	Manual fixing of the GSM provider (02 UK)
TST	24	24 hours periodic test SMS sent to TN linked to LN7
SPK	83	Panel Speaker volume
MUT	0	Mute feature for intercom panel sound ringing or silent

7.16.1 Set-up parameters programming by SMS

For the above example send the following SMS from an authorised phone
;**CRE=2;HTN=0; RAN=3;SCV=360;MNF=23402;TST=24; SPK=83;MUT=0;**

If you want a reply confirmation SMS put "+" before the SMS command
;**+CRE=2;HTN=0; RAN=3;SCV=360;MNF=23402;TST=24; SPK=83;MUT=0;**

7.17 SMS MESSAGES EDITOR

You can set a short SMS message for each alarm input. Each message is built from 3 parts and the user can write the first (System Location) and the second (alarm event) part of the message. The device will send the third part (alarm event description) automatically. The message is stored in the SIM phone book so you must add any number for correct operation.

NOTE

SMS Editor is used to edit the text of the alerts sent. Default SMS alerts will be sent specific to the input number 1 -4 or preset fault alerts such Mains Fail. You don't have to change the text unless you want to specify exactly what, for example input 1 is. **ie: INPUT 1 = Gate 1 Opened**
Every time INPUT 1 is triggered, the SMS text 'Gate 1 Opened' would be sent to the TN number assigned to receive alerts for that input.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
#	0	N	A	M	E		O	F		S	I	T	E		
#	1	G	a	t	e		1		O	p	e	n			
#	2	I	N	P	U	T		2							
#	3	I	N	P	U	T		3							

Message should not exceed 14 characters! Space is counted as one character!

7.17.1 Alarm messages remote editing by SMS command

To change, send the following SMS to the device:

;*#0NAME OF SITE=0;#1Gate 1 Open=1;#2INPUT 2=2;#3INPUT 3=3;*

If you want to get the confirmation SMS back then write "+" before SMS command:

;*+*#0NAME OF SITE=0;#1Gate 1 Open=1;#2INPUT 2=2;#3INPUT 3=3;**

8. GSM INTERCOM SET UP & PROGRAMMING

Introduction...

There are 3 main interface PCB's available

- 8.1 VX Videx 4000 Series Panel Interface (to fit into Videx 4837 speaker modules)
- 8.2 KC Kocom surface mount door panel (ready to use panel)
- 8.3 BX Universal boxed interface (designed to interface with various audio panels)

Tested Audio panels with the BX

- a) SRS Door Entry Stainless Steel / Brass 1 – 5 button range
- b) EntryPhone London Stainless Steel / Brass 9200 & VRS 1 – 5 button series

Want to use the BX with a specific panel? Ask us how.

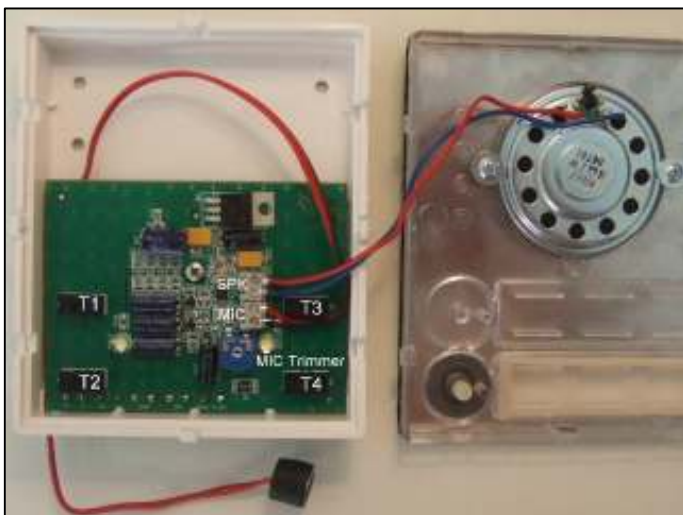
NOTE: The interface PCB's are all similar. VX has 4 call button inputs. KC has 1. BX has 1 call button input on board but 4 other call buttons can be directly connected across IN2-4 & GND terminals on the GSM controller.

8.1 VX Interface Panel Set Up

VX 4000 GSM Intercom System - Videx 4000 Series PCB Interface - Set Up Guide

Introduction

The VX 4000 GSM Interface PCB fits inside the Videx 4837-1, -1D, 2 & 2D speaker modules and connects to the GSM Controller with separate cables. 1. the supplied plug cable (MIC & SPK) and 2. a multi-core security cable (12V & call button returns).



1. Prepare the Videx 4000 Module

Firstly, remove the PCB from your Videx 4837 module & cut off the MIC & speaker wires.

Fit the VX Interface PCB in it's place & connect the speaker & MIC wires as shown. Don't over tighten the terminal screws.

- SPK+** (red)
- SPK-** (blue)
- MIC+** (red)
- MIC-** (red with black trace)

Turn the blue MIC trimmer anti-clockwise to reduce MIC level to prevent feed back.

2. Installing Equipment & Cables

a) Check the panel & control box are close enough to each other so the supplied interface plug & cable reaches between. Before mounting the control box, insert a SIM card & temporarily connect a 12V supply to the controller + & GND terminal or plug a battery onto the fly leads.

b) Watch the blue LED for a minute or so.

c) Count the blue LED flashes. 1 is weak signal. 5 is max signal. Try to achieve 3 -5 flashes. If you have 1 or 2 flashes, try the box in a slightly different spot (Antenna: SMA male type GSM 900/1800Mhz)

d) If you have 3+ flashes, **disconnect the power & mount the control box.**

e) **Install supplied interface cable and a separate shielded cable for the 12VDC power from the control box to the panel.**

f) **Mount the Videx panel** at approx. 1500mm from the ground level. Mounting the panel too low will affect the panels performance.

3. Cable Connections

a) **Connect the new VX interface panel as follows:**

Cable 1

+12VDC - Input Supply from +12V (RHS) on the controller

GND - Input Supply Negative from GND on the controller

T1 - CALL

T2 - CALL

T3 - CALL

T4 - CALL

Cable 2

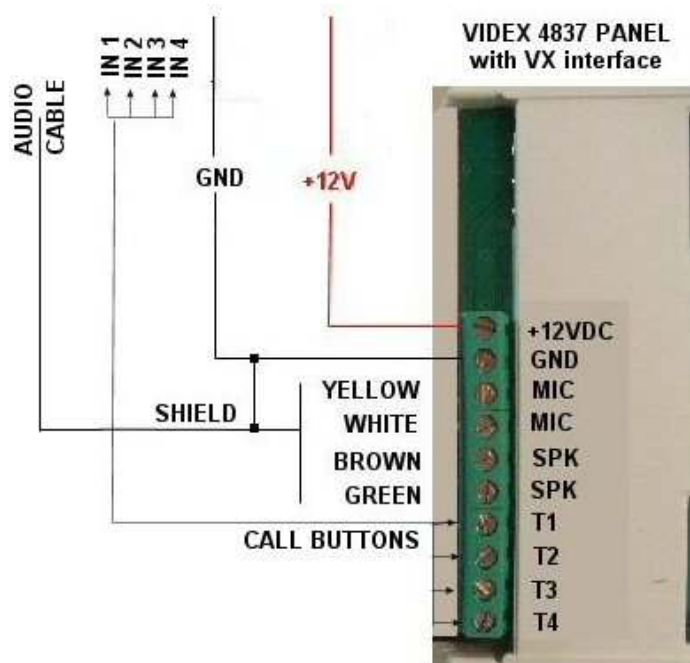
IN (MIC) - Yellow

IN (MIC) - White

OUT (SPK) - Brown

OUT (SPK) - Green

SHIELD (GND) - bare stranded shield



b) **Connect the Controller as follows:**

Plug the supplied audio cable onto the horizontal pins (J1) on the GSM controller lining up the white mark on the cable with the white dot on the PCB as shown in the next photo. **(DO NOT CONNECT THE CABLE TO THE VERTICAL PINS J2)**



Note the Call Button Connections:

The VX Interface is universal between the 4000 series modules however the button numbers don't line up with the terminal markings except for the 4 button 4837-2D.

Panel	Interface Call 1-4	GSM Controller Inputs 1-4
4837-1	T4	IN1
4837-1D	T2 & T4	IN1 & IN2
4837-2	T3 & T4	IN1 & IN2
4837-2D	T1,2,3 & 4	IN1, 2, 3 & 4

NOTE: 12V input power for the VX interface PCB

Connect the panel 12VDC to GND (next to the OFF input) & +12V on the far RHS of the controller.

If you do not connect to these terminals, the battery back up will not supply the panel if mains power fails, assuming battery back up is supplied via the GSM Controller fly leads. If the GSM Controller is battery backed up from an external source, still connect the panel in these terminals as the GSM controller filters the supply input.

c) **Connect the system input power supply**

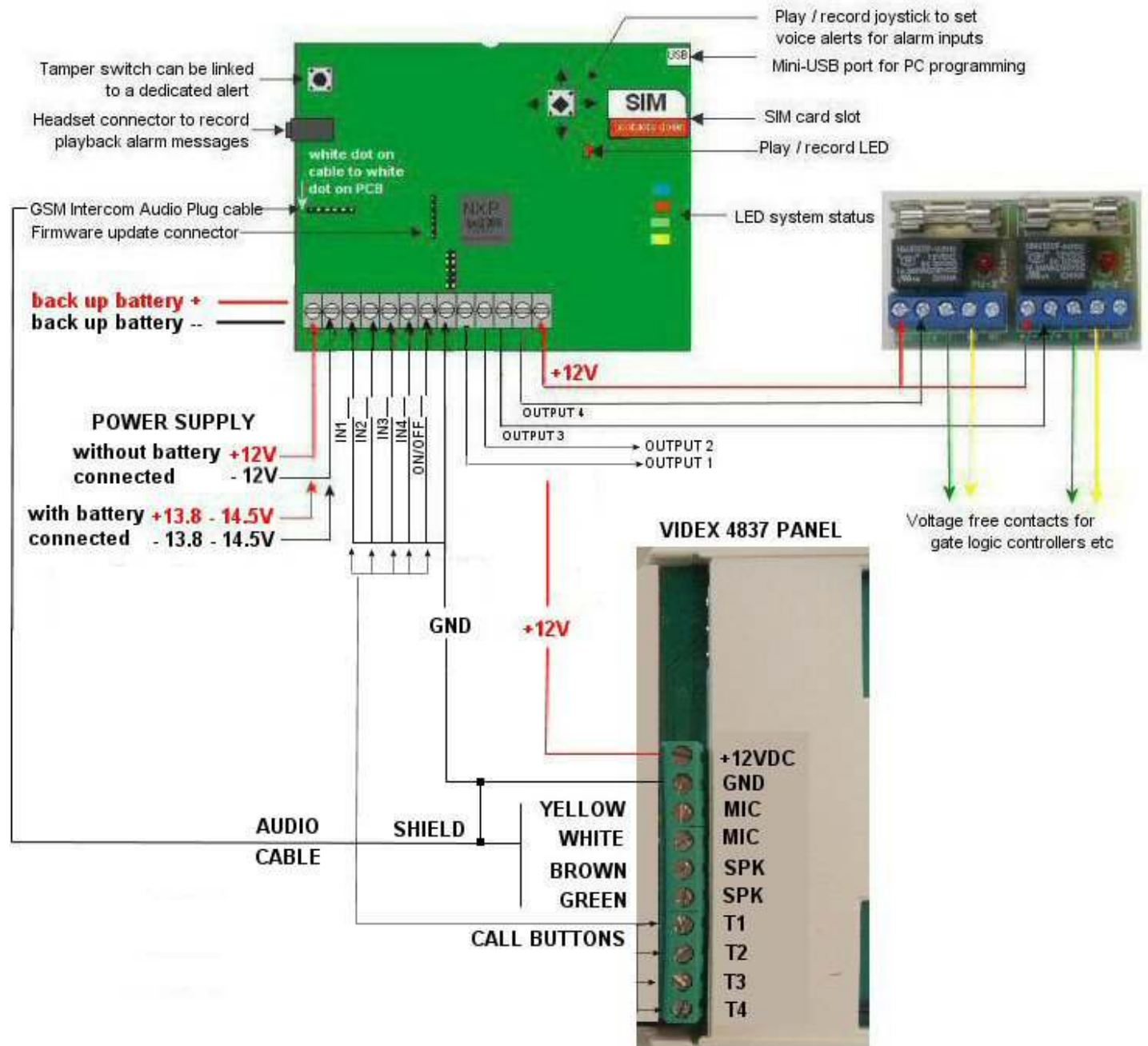
Connect the input supply positive to + on the far LHS terminal of the controller

- 12VDC 1A regulated minimum

- 13.8-14.5VDC 1.5A if also using connecting the battery. (Ask your supplier for a suitable option)

The controller needs the extra power to fully charge the battery if connected

VX 4000 GSM Intercom (Videx Interface PCB Wiring)



8.2 KC1 GSM Panel Set Up

KC1 GSM Intercom System - Kocom Panel - Set Up Guide

Introduction

The KC is a ready to fit panel with the GSM interface PCB already mounted inside. It connects to the GSM Controller with separate cables. 1. the supplied plug cable (MIC & SPK) and 2. a multi-core security cable (12V & call button returns).

Turn the blue MIC trimmer anti-clockwise a quarter turn. This reduces the MIC level to prevent feed back.

1. Installing Equipment & Cables

a) Check the panel & control box are close enough to each other so the supplied interface plug & cable reaches between. Before mounting the control box, insert a SIM card & temporarily connect a 12V supply to the controller + & GND terminal or plug a battery onto the fly leads.

b) Watch the blue LED for a minute or so.

c) Count the blue LED flashes. 1 is weak signal. 5 is max signal. Try to achieve 3 -5 flashes. If you have 1 or 2 flashes, try the box in a slightly different spot or fit an antenna on a fly lead (SMA male type GSM 900/1800Mhz) [more antenna options](#)

d) If you have 3+ flashes, disconnect the power & mount the control box.

e) Install the supplied interface plug cable and a separate shielded cable for the 12VDC power from the control box to the panel.

f) Mount the Kocom panel at approx. 1500mm from the ground level.

3. Cable Connections

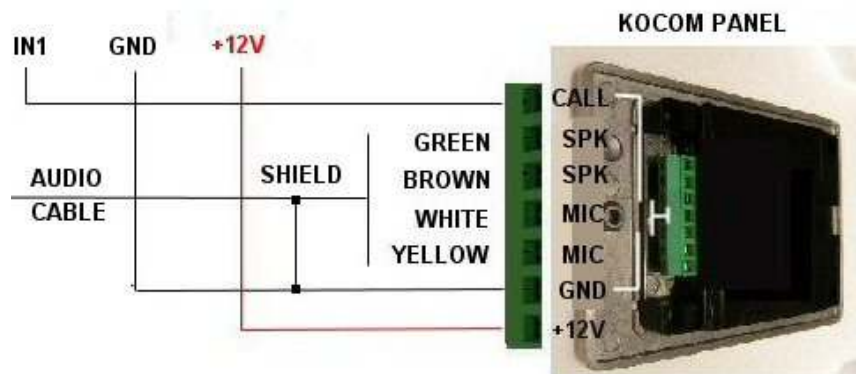
a) Connect KC door panel as follows:

Cable 1

+12VDC - Input Supply from +12V (RHS) on the controller
 GND - Input Supply Negative from GND on the controller
 T1 - CALL

Cable 2

IN (SPK) - Yellow
 IN (SPK) - White
 OUT (MIC) - Brown
 OUT (MIC) - Green
 SHIELD (GND) - Bare stranded shield



b) Connect the Controller as follows:

Plug the interface cable onto the horizontal pins (J1) on the GSM controller lining up the white mark on the cable with the white dot on the PCB as shown in the next photo. **(DO NOT CONNECT THE CABLE TO THE VERTICAL PINS J2)**

Connect the 12V input power for the panel

Connect the panel 12VDC to GND (next to the OFF input) & +12V on the far RHS of the controller.

If you don't connect to these terminals, the battery back up will not supply the panel if mains power fails.

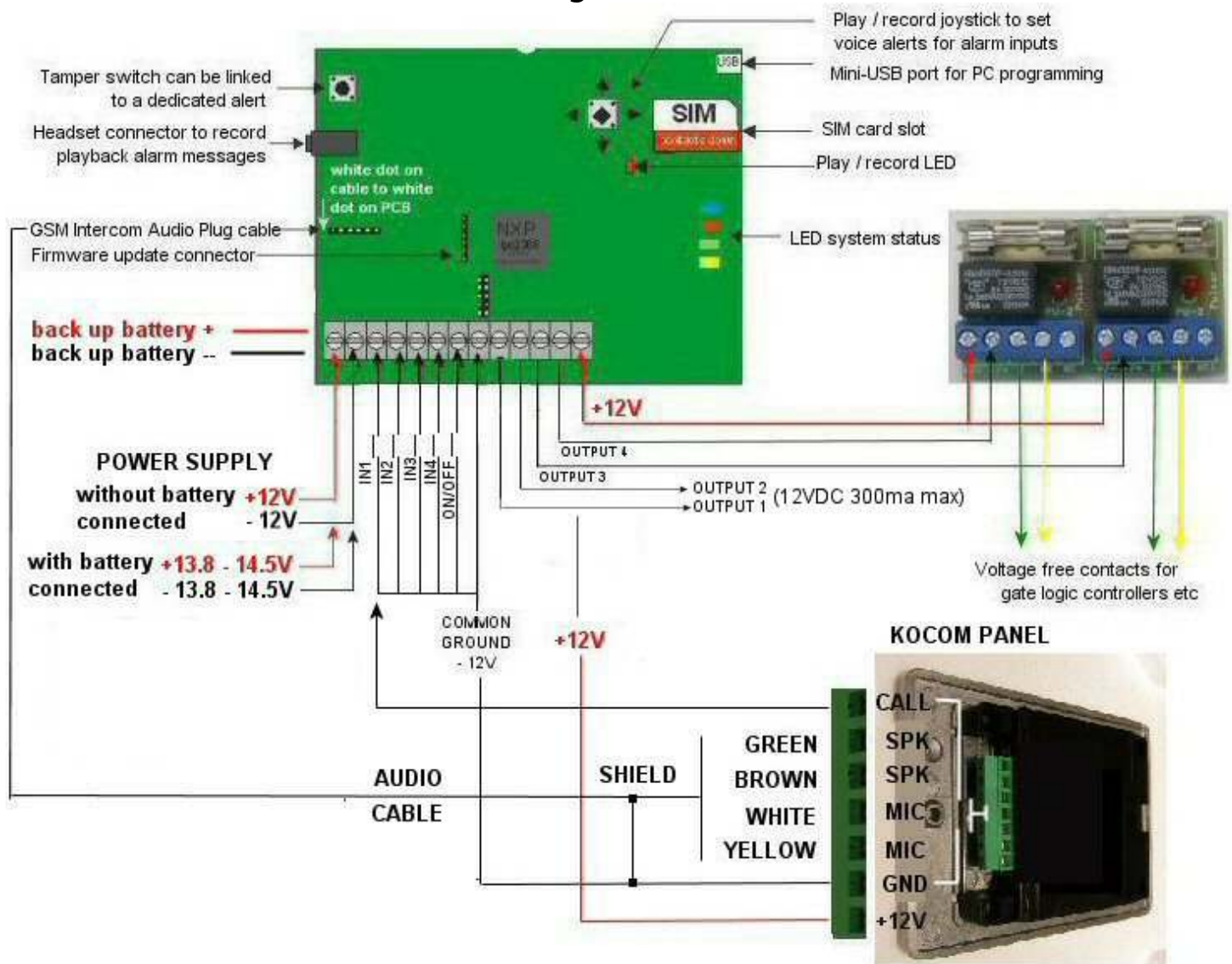
c) Connect the system input power supply

Connect the input supply positive to + on the far LHS terminal of the controller
 - 12VDC 1A regulated minimum



- 13.8-14.5VDC 1.5A if also using connecting the battery.

KC1 GSM Intercom (Kocom Panel Wiring)



8.3 BX Universal Boxed Interface Panel Set Up

BX Universal GSM Intercom System - Universal Boxed PCB Interface - Set Up Guide

Introduction

The BX Universal Boxed Interface PCB is intended to interface many audio panels with our GSM Controller. There are two ways to connect the BX.

1. Fit the BX into the control box with the GSM controller and wire it to the controller using the supplied plug in cable. Then run 1 shielded CAT 5 to the panel to pick up MIC, SPK & P/B. Over 3m it is recommended to use 2 twisted pairs for the MIC. Run a separate cable if you have more than one pushbutton.
2. Fit the BX inside the front panel and connect the MIC, SPK & P/B directly to it. Then run the supplied plug in cable back to the GSM Controller. Additional call buttons & the 12VDC supply for the VX interface PCB should be run in a separate cable.

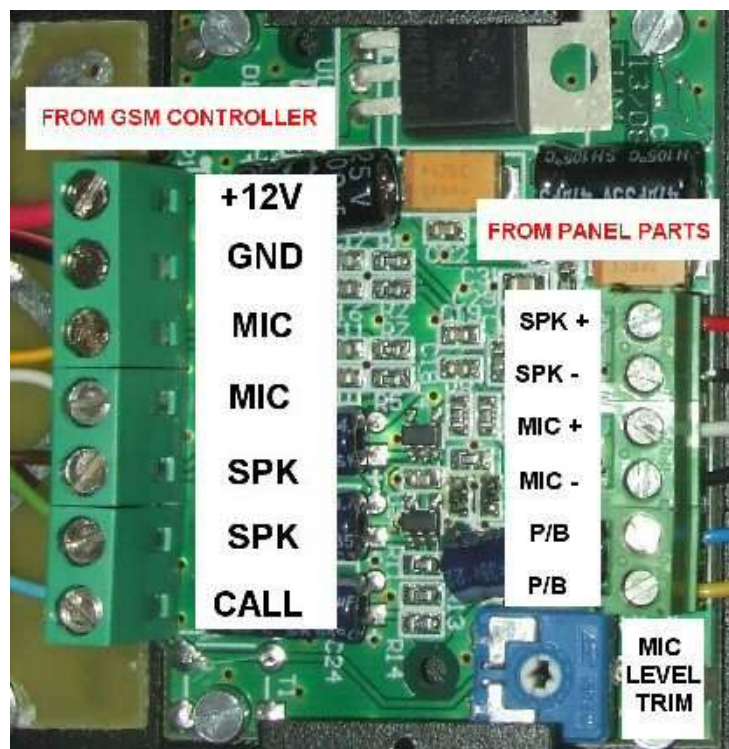
Note:

The BX Interface has been designed to work correctly with an 8 ohm speaker. Using a speaker with a different resistance will affect the audio quality. Please use an 8 ohm speaker for best results. If your panel does not come with an 8 ohm speaker, an 8 ohm speaker in the equivalent size can be easily obtained.

1. Prepare a Door Panel using the 2nd method (Example: EntryPhone London 9200 Surface Mount Panel)

Firstly, remove the PCB from your panel & cut off the MIC, Speaker & push button wires.

Fit the BX Boxed Interface PCB inside the panel enclosure or behind the pillar/wall in separate IP enclosure & connect the speaker, MIC & pushbutton wires to the BX Interface.



Turn the blue MIC trimmer anti-clockwise to reduce MIC level

2. Installing Equipment & Cables

a) Check the panel & control box are close enough to each other so the supplied interface plug & cable reaches between. Before mounting the control box, insert a SIM card & temporarily connect a 12V supply to the controller + & GND terminal or plug a battery onto the fly leads.

b) Watch the blue LED for a minute or so.

c) Count the blue LED flashes. 1 is weak signal. 5 is max signal. Try to achieve 3 -5 flashes. If you have 1 or 2 flashes, try the box in a slightly different spot or fit an antenna on a fly lead (SMA male type GSM 900/1800Mhz). Contact us for options.

d) If you have 3+ flashes, you have good signal. Disconnect the power & mount the control box in that position.

- e) Install the supplied interface cable & separate shielded cable for the 12VDC power from the control box to the panel.
- f) Mount the panel at approx. 1500mm from the ground level to ensure satisfactory microphone response.



3. Cable Connections

a) Connect the BX interface panel as follows:

Cable 1

+12VDC - Input Supply from +12V (RHS) on the GSM controller

GND - Input Supply Negative from GND on the GSM controller

T1 - CALL

(CALL buttons 2 - 5 can be directly connected from one side of each call button to IN2- 4 + OFF on the GSM Controller if more than one button is needed. Connect the other side of each call button to GND.)

Cable 2

IN (MIC) - Yellow

IN (MIC) - White

OUT (SPK) - Brown

OUT (SPK) - Green

SHIELD (GND) - Bare stranded shield



(CABLE 1) (CABLE 2))

The supplied plug in interface cable contains audio only + shield (yellow, white, brown, green). Connect the shield to GND (black).

Run a separate multi-core cable for 12VDC & all call button wires.

Mounting the BX Interface Amplifier

You can mount the BX inside the panel itself and connect the mic, speaker & call buttons directly to it.

Alternatively, you can mount it inside the control box & run a single CAT 5 to the door panel to connect the MIC, SPEAKER & PUSHBUTTON.

Make sure you use shielded CAT 5 & connect the shield to GND at both ends.

b) Connect the Controller as follows:

Plug the interface cable onto the **horizontal pins (J1)** on the GSM controller lining up the white mark on the cable with the white dot on the PCB as shown in the next photo. **(DO NOT CONNECT THE CABLE TO THE VERTICAL PINS J2)**

**Connect the 12V input power for the panel**

Connect the panel 12VDC to GND (next to the OFF input) & +12V on the far RHS of the controller.

If you don't connect to these terminals, the battery back up will not supply the panel if mains power fails.

c) Connect the system input power supply

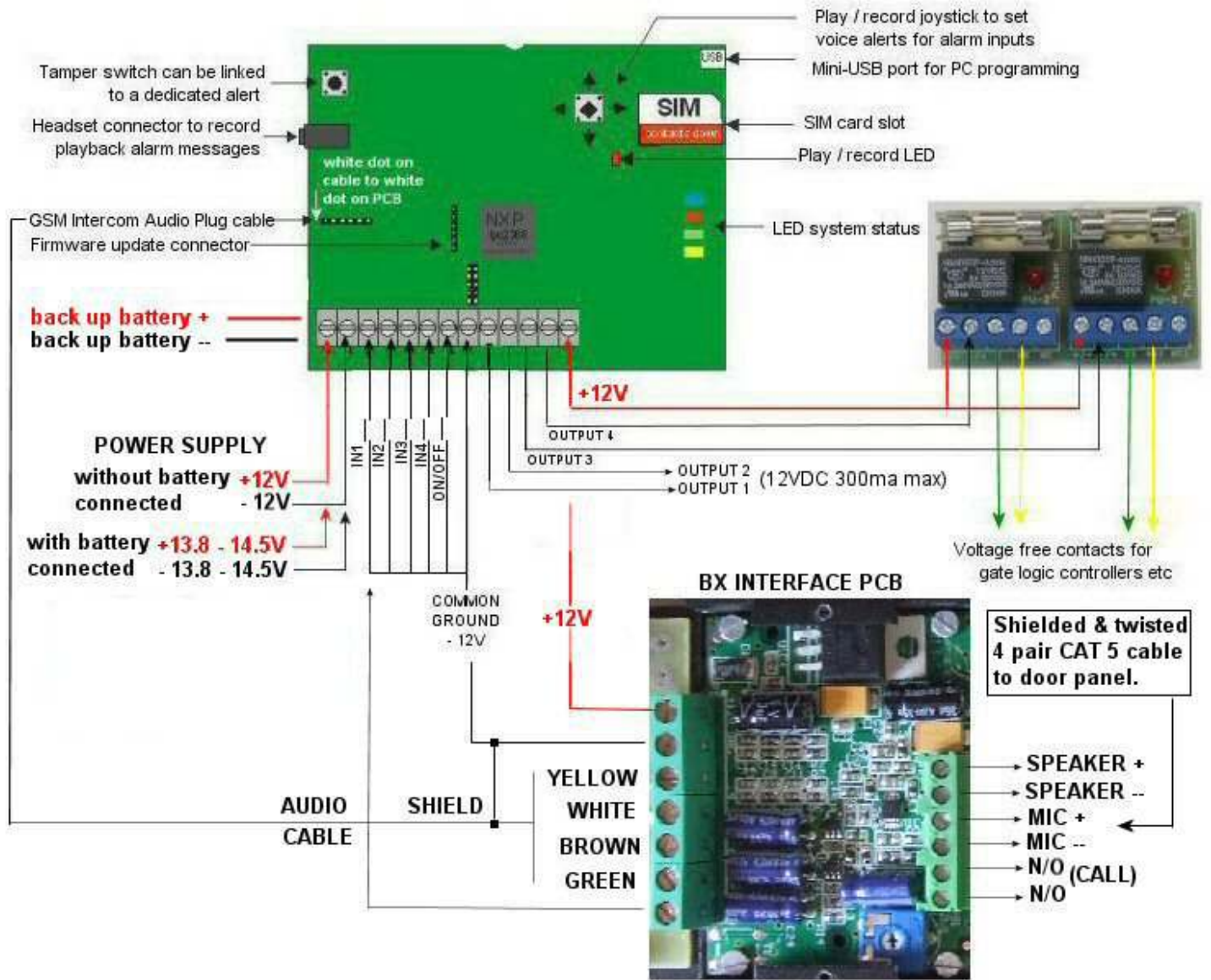
Connect the input supply positive to + on the far LHS terminal of the controller. The GND terminals are all common however the input supply should be connected to the second terminal from the LHS marked GND.

Supply:

- 12VDC 1A regulated minimum
- 13.8-14.5VDC 1.5A if also using connecting the battery.

Note: The controller needs this extra power to fully charge the battery if connected

BX Universal GSM Intercom (Universal Boxed Interface PCB Wiring)



Flexibility...

As shown in the diagram above, the BX can be connected as a GSM Door Panel shell. You can use any housing, panel, pushbutton you like. Use a 4 - 16 ohm speaker & pay careful attention to the polarity of the MIC & SPK connections.

The rest is flexible. Create bespoke GSM door entry panels using the BX Interface

8.4 GSM Intercom Programming & Settings

Introduction...

The call button phone numbers are easily set up by SMS however they can also be done by PC using the mini USB port in the top right hand corner of the GSM Controller.

Fit the SIM card and switch the unit on.

After about 1 minute the blue LED will begin to flash. The system is then ready to program.

8.4.1 Set Inputs not used as Call Buttons as Alarm Inputs

The inputs on the GSM Controller can be used as 5 GSM Intercom Call Buttons or 4 Alarm Inputs + 1 enable/disable input.

By default all 5 inputs are set as intercom call buttons. Short the input to GND to activate the calling procedure as set in 8.4.2..

To change Call Buttons to Alarm Inputs...

Send this SMS for call button 1 ;+W MOD =XXXXX;

le: This is all GSM call buttons ;+W MOD =12345;

le: This is all alarm inputs (inc. the enable/disable input [OFF]) ;+W MOD =;

le: This is 2 GSM call buttons, 2 alarm inputs and the enable/disable input [OFF] ;+W MOD =12;

X = The numbers of the inputs that will remain GSM Call Buttons.

[blank] = An alarm input or if 5 is [blank] the enable / disable input (OFF) works

8.4.2 Request Current & Edit the Call Button Settings

Step 1...

Request Current Settings for each call button .

Individually...

Send this SMS for call button 1 ;PDEA;

Send this SMS for call button 2 ;PDEB;

Send this SMS for call button 3 ;PDEC;

Send this SMS for call button 4 ;PDED;

Send this SMS for call button 5 ;PDEE;

NOTE: PC Programming

You can also send these commands exactly the same by PC using Hyper Terminal. Hyper Terminal creates a USB connection to the device and simulates send the SMS commands.

(See Programming by PC Section 5)

...You will receive an SMS (or Hyper Terminal) reply containing the current settings.

Button 1 (A) Example:

;ATN1=;ATN2=;ATN3=;ATN4=;ATN5=;ATN6=;ATN7=;ATN9=;ATN0=;GPOA=1234;RTNA=25;APINA=;

ATN1 - 9 = Numbers called in this order (default none)

ATN0 = Sole Authorised Admin Number (default none)

GPOA = Outputs button can activate (default is all outputs all users)

RTNA = Delay seconds between calling nos. (default is 25 seconds)
APINA = Add. Digits before O/P codes (default is standard output codes)

Step 2...

Forward the SMS back to the SIM card after editing the contents

Selecting forward to the SMS reply of the unit allows you to edit the received settings. Add the numbers & settings required between each = & ; as shown in **highlights** below. Then send the SMS back to update that call button.

Button 1 (A) Forward Reply Example:

Select Forward...

Edit SMS (automatically appears)

;ATN1=07796176567;ATN2=02074563764;ATN3=07756151445;ATN4=;ATN5=;ATN6=;ATN7=;ATN9=;ATN0=;GPOA=1;RTNA=15;APINA=99;

Send...

Explanation:

Button 1 will call the 1st 07796176567 and if no answer after 15 seconds will call the 2nd 02074563764 and after 15 seconds will call the 3rd 07756151445. The Users of this call button (ATN1-3) can only activate output 1 and must enter 99 before the standard output code 11 (9911) to activate the output.

Repeat the process for all 4 buttons. Note: button 1 = A, button 2 = B, button 3 = C, button 4 = D.

8.4.3 GSM Intercom Settings changed by SMS

a) Adjust delay time before calling the next number (RTN)

The default setting is 25 seconds. This setting can be changed when each call button's settings are requested however you can program it individually as follows.

STEP 1.

- ⇒ Send this SMS to the SIM card in the device **;+RTNA=15;**
- 15 = The new time delay in seconds

NOTE: Repeat STEP 1 for all Call Button Groups using the SMS command **;+RTNA-B-C-D or E=x;** (x = seconds)

NOTE: Adding + at the start of the SMS command as shown above means a reply confirmation will be sent.

b) Limit Activation of Outputs per Call Button Group (GPO)

The default setting is 1234 (All 4 outputs can be activated by all call button Users). This setting can be changed when each call button's settings are requested however you can program it individually as follows.

STEP 1.

- ⇒ Send this SMS to the SIM card in the device **;+GPOA=12;**
- 12 = Group A is limited to activating outputs 1 & 2 only

STEP 2. Repeat STEP 1 for all Call Buttons using ;GPOA-B-C-D-E=XXX;

c) Set an Authorisation PIN for DTMF Output Control (APIN)

The default setting disabled. Add extra digits to the standard output activation code to improve security. This setting can be changed when each call button's settings are requested however you can program it individually as follows.

STEP 1. Set an Authorisation PIN for Call Button 1 (Group A)

⇒ Send this SMS to the SIM card in the device ;**+APINA=808;**

808 = Group A must enter 808 before the standard DTMF output code for each output.

Standard DTMF Output Codes (press these digits on the phone to trigger outputs during the call)

Output 1 = 11 Output 3 = 31 (outputs on)

Output 2 = 21 Output 4 = 41

Example: Group A (button 1) would now need to enter 80811 to activate output 1

NOTE: If you have set an output to latch, the above will switch it on and the codes below switch it off. Pulse contacts use the above only as they switch off automatically.

Output 1 = 10 Output 3 = 30 (outputs off)

Output 2 = 20 Output 4 = 40

STEP 2. Repeat STEP 1 for all Call Buttons using ;+APINB-C-D-E=XXX;**d) Adjust the Door Panel Speaker Volume Level (SPK)**

The default setting is 80 out of a 75 – 100 range.

STEP 1. Adjust the volume of the Door Panel Speaker

⇒ Send this SMS to the SIM card in the device ;**+SPK=75;**

75 = Reduces the speaker volume

NOTE: Increasing the speaker level too high can cause feedback & interference.

Adjust the MICROPHONE & SPEAKER by trial and error based on the installation location or background noise. In most cases the default settings will be OK.

e) Adjust the Door Panel Speaker Microphone Level (MIC2)

The default setting is 0 out of a 0 – 5 range. Generally the microphone wont need to be adjusted. If you need to adjust the mic up or down, try the blue trimmer on the panel interface PCB first, otherwise you can increase it by SMS:

NOTE: Increasing the mic level too high will cause feedback & interference.

STEP 1. Adjust the volume of the Door Panel Microphone

(note: 0 is default. Adjust blue level trimmer on the amplifier PCB before adjusting the MIC feature)

⇒ Send this SMS to the SIM card in the device ;**+MIC2=1;**

0 = Lower level 5 = highest level (only adjust one increment at a time)

NOTE: If you get whistling interference when the call connects, turn the blue trimmer on the interface PCB anti-clockwise. The blue trimmer should be mostly anticlockwise. **(NOTE: adjust it very slowly during a call so you can hear the effect it has on the audio – it's a sensitive adjustment)**

f) Adjust Output switching status (OS)

Default settings:

OUT 1 = 2 sec pulse (N/O) ;**OS1=2;**

OUT 2 = 2 sec pulse (N/O) ;**OS2=2;**

OUT 3 = Latch (OFF – N/O) ;**OS3=0;**

OUT 4 = Latch (OFF – N/O) ;**OS4=0;**

STEP 1. Adjust the Output switching status

⇒ Send this SMS to the SIM card in the device ;**+OS3=3600;**

3600 = 1 hr (secs) off delay (hold open)

⇒ Send this SMS to the SIM card in the device ;**+OS4=1;**

1 = Latched (ON – N/C)

f) Adjust the panel sound while calling (MUT)

The default setting is ringing (MUT=1). When a call is initiated, the ringing level is audible. The normal telephone ring sound can be turned off using this feature.

To mute panel sound

⇒ Send this SMS to the SIM card in the device **;**+MUT=0;****
1 = Ringing sound off (or MUTE feature on)

To set panel sound on (default)

⇒ Send this SMS to the SIM card in the device **;**+MUT=1;****
0 = Ringing sound on (MUTE feature off)

8.5 Free Call (Caller ID) Access Control (CLP)**8.5.1 Caller ID Access**

Introduction:

Up to 20 Authorised Users can call the SIM card in the GSM Controller and activate a preset output. Unauthorised callers can be set to trigger an alarm output (OD9).

SMS Commands:

;CLPEN=1;**** means the Caller ID access feature is enabled (default) **0=disabled (default = enabled)**

;CLPOU=1;**** means output 1 will activate when called by an Auth. User
CLPOU=2 means O/P 2 & so on. (default = 1)

;CLP1=07756156456;**** means this number is User 1

;CLP20=07796176545;**** means this number is User 20

Up to 20 Users can activate 1 specified output by calling the SIM card of the intercom.

Set up Caller ID Access Control...**STEP 1...**

Send SMS for currently programmed settings: **;**PCLP;****

The device SMS reply will read...

;CLP1=;**CLP2=;**CLP3=;CLP4=;CLP5=;CLP6=;CLP7=;CLP8=; CLP9=; CL108=; CLP11=; CLP12=; CLP13=;
CLP14=; CLP15=; CLP16=; CLP17=; CLP18=; CLP19=; CLP20=;**CLPEN=1;CLPOU=1; (DEFAULT)**

STEP 2...

Forward the SMS with new settings:

Forward Reply Example:**Select Forward...****Edit SMS (automatically appears on your phone SMS editor)**

;CLP1=07796176567;**CLP2=07756151445;**CLP3=;CLP4=;CLP5=;CLP6=;CLP7=;CLP8=; CLP9=; CL108=;
CLP11=; CLP12=; CLP13=; CLP14=; CLP15=; CLP16=; CLP17=; CLP18=; CLP19=;
CLP20=;CLPEN=1;CLPOU=1;

Send...**Explanation:**

Output 1 will be activated when SIM card is called from numbers **07796176567** and **07756151445**. The unit will ring between 1 -3 times before activating the output and hanging up. No call costs incurred.

8.5.2 Set the output to trigger on unauthorised access attempts

Introduction:

A dedicated alarm output (OD9) can be set to automatically switch when an unauthorised person tries to call for access.

SMS Command:

;OD9=1; means an unauthorised caller will trigger output 1

9. DTMF REMOTE COMMANDS

NOTE: If you can't enter remote control mode, check Security Level (SL) in section 7.14.1 first! (authorised numbers). SL0 allows any number to enter program mode by calling the GSM Controller. SL1 allows TN1. SL2 allows TN1 & TN2 and so on...

9.1 DTMF REMOTE COMMAND TABLE

REMOTE COMMAND	ACTION DESCRIPTION
00	All outputs OFF
01	All outputs ON
10	Output 1 OFF
11	Output 1 ON
12	Check the output 1 state (1 beep=ON, 3 beeps=OFF)
20	Output 2 OFF
21	Output 2 ON
22	Check the output 2 state (1 beep=ON, 3 beeps=OFF)
30	Output 3 OFF
31	Output 3 ON
32	Check the output3 state (1 beep=ON, 3 beeps=OFF)
40	Output 4 OFF
41	Output 4 ON
42	Check the output4 state (1 beep=ON, 3 beeps=OFF)
51	Input 1 status checking (1 beep=alarm, 3 beeps=normal)
52	Input 2 status checking (1 beep=alarm, 3 beeps=normal)
53	Input 3 status checking (1 beep=alarm, 3 beeps=normal)
54	Input 4 status checking (1 beep=alarm, 3 beeps=normal)
60	System OFF (3 beeps)
61	System ON (1 beep)
62	System status verification (1 beep=ON, 3 beeps=OFF)
99	Listen-in ON (2 way communication & control all of the above)
*	Don't call this tel. number again
#	Complete interruption of the dialing procedure

NOTE: If you use the APIN (ABCDor E) feature, you will have those extra digits in front of the above 'Output' digits.

10 PRINT-OUT OF CURRENT SYSTEM PARAMETERS

10.1 RECEIVE ALL PARAMETERS (PALL)

Command **;PALL;** *(best used by PC via mini USB port – good for fault finding)*

Sending this command to the GSM Controller you will receive multiple replies with all alarm parameters currently programmed in the device. If you need to find a programming fault, this is a good way to remotely read all parameters and then reply changing only the ones you want from each SMS sent to you. Intercom call buttons settings are not sent using ;PALL; because they can be tied in with separate Administrators preventing access. Use ;PDEx; as detailed in 10.16.

;PALL; is an Installer function for fault finding & general system adjustments.

10.2 RECEIVE AUTHORISED USER TELEPHONE NUMBERS (PTN)

Command **;PTN;**

Sending this command to the GSM Controller you will receive an SMS with all currently programmed telephone numbers (TN).

10.3 RECEIVE INPUTS TO AUTHORISED TELEPHONE NUMBERS (PLN)

Command **;PLN;**

Sending this command to the GSM Controller you will receive an SMS with all currently programmed links to Authorised User numbers (LN).

10.4 RECEIVE INPUT PARAMETERS (PIN)

Command **;PIN;**

Sending this command to the GSM Controller you will receive an SMS with all currently programmed Input parameters (IN1 – IN4).

10.5 RECEIVE INPUT FILTER VALUE (PID)

Command **;PID;**

Sending this command to the GSM Controller you will receive an SMS with all currently programmed Input filters (ID1 – ID4 and ION).

10.6 RECEIVE DELAY BEFORE DIAL VALUE (PDD)

Command **;PDD;**

Sending this command to the GSM Controller you will receive an SMS with all currently programmed Input filters (DD1 – DD4 and DON).

10.7 RECEIVE AUTH. USER CALLER ID SPECIAL FUNCTIONS (PTC)

Command ;**PTC**;

Sending this command to the GSM Controller you will receive an SMS with all currently programmed CLIP functions to dedicated telephone numbers (TN) and number of rings before answer (RAN).

10.8 RECEIVE ACCESS TELEPHONE NUMBERS (PSL)

Command ;**PSL**;

Sending this command to the GSM Controller you will receive an SMS with currently programmed security level (SL).

10.9 RECEIVE OUTPUT PARAMETERS (POS)

Command ;**POS**;

Sending this command to the GSM Controller you will receive an SMS with all currently programmed Output Status parameters (OS1 – OS4).

10.10 RECEIVE LINK FOR LOCAL ALARM OUTPUT (POD)

Command ;**POD**;

Sending this command to the GSM Controller you will receive an SMS with all currently programmed direct output alarm links (OD1 – OD8).

10.11 RECEIVE ALL PROGRAMMED SMS MESSAGES (P#)

Command ;**P#**;

Sending this command to the GSM Controller you will receive an SMS with all currently programmed alarm SMS message texts (#0 - #4)

10.12 RECEIVE THE POWER LEVEL ON THE UNIT (PPWR)

Sending this command to the GSM Controller you will receive an SMS with current input power supply level voltage & current back up battery voltage (if connected)

Command ;**PPWR**;

10.13 RECEIVE SET UP PARAMETERS VALUE (PPA)

Command ;**PPA**;

Sending this command to the GSM Controller you will receive an SMS with all currently programmed Set-up parameters.

10.14 STATE OF THE CREDIT FOR THE PRE-PAY CARD (PCC1)

⇒ CC1

Command ;**PCC1**;

Sending this command to the GSM Controller you will receive an SMS with Credit amount on your Pre-Paid SIM card

⇒ CC2

Command ;**PCC2**;

Sending this command to the GSM Controller you will receive an SMS with Credit amount on your Pre-pay SIM card

⇒ CC3

Command ;**PCC3**;

S Sending this command to the GSM Controller you will receive an SMS with Credit amount on your Pre-pay SIM card

10.15 STATE OF THE OUTPUTS (PORC)

Command ;**PORC**;

Sending this command to the GSM Controller you will receive an SMS with current outputs state.

10.16 GSM INTERCOM BUTTON SETTINGS (PDE)

Command ;**PDEA**; ;**PDEB**; ;**PDEC**; ;**PDED**; ;**PDEE**;

Sending this command to the GSM Controller you will receive an SMS with current settings for each call button.

10.17 CALLER ID ACCESS CONTROL SETTINGS (PCLP)

Command ;**PCLP**;

Sending this command to the GSM Controller you will receive an SMS with current settings for the Caller ID access control feature.

11 CHECKING & CHANGING SYSTEM STATUS (ON/OFF)

11.1 CHECKING SYSTEM STATUS BY SMS COMMAND (SYS)

Sending this command to the GSM Controller you will receive an SMS with state of the system.

;**SYS**;

The reply SMS can be:

- ⇒ ;SYS= ON; System is ON (inputs are currently active)
- ⇒ ;SYS= OFF; System is OFF (inputs are not active)

11.2 CHECKING SYSTEM STATUS BY DTMF COMMAND

If you want to check the system status (system ON/OFF) with DTMF command you call the GSM Controller SIM card and after one beep, enter the command "62". You will hear following response:

- ⇒ 1 beepsystem is ON (all alarm inputs are enabled)
- ⇒ 3 beeps.....system is OFF (all alarm inputs are disabled)

11.3 CHANGING SYSTEM STATUS OFF TO ON (SYSTEM ON)

Sending this command to the GSM Controller you will switch the system ON.

Command ;**SYS=ON**;

If you want a reply SMS put "+" before the SMS command:

Command ;+**SYS=ON**;

11.4 CHANGING SYSTEM STATUS ON TO OFF (SYSTEM OFF)

Sending this command to the GSM Controller you will switch the system OFF.

Command ;**SYS=OFF**;

If you want a reply SMS put "+" before the SMS command:

Command ;+**SYS=OFF**;

12 CHECKING THE INPUT STATUS

You can get the information's about input status in two different ways:

- ⇒ Call in the GSM Controller and use DTMF commands
- ⇒ Send the SMS command and get back the SMS with inputs status

12.1 CHECKING THE INPUT STATUS BY DTMF

After one short beep press the DTMF command. Response with 1 beep means that the input is in alarm state (active) and response with 3 beep means that the input is in normal (stand-by) state.

51	Input 1 status checking (1 beep=alarm, 3 beeps=normal)
52	Input 2 status checking (1 beep=alarm, 3 beeps=normal)
53	Input 3 status checking (1 beep=alarm, 3 beeps=normal)
54	Input 4 status checking (1 beep=alarm, 3 beeps=normal)

12.2 CHECKING THE INPUT STATUS BY SMS (INS)

Command ;**INS**;

This information refers to alarm inputs only. If you are using any of the inputs as GSM intercom call buttons, the status information for those inputs will always be ;INS(x)=normal open (GND) – OFF. This means the input is activated by shorting a normally open contact to GND and it is currently OFF.

Sending this command to the GSM Controller you will receive an SMS with each Input status.

The reply can be:

```
;INS(1) =normal open( GND) – OFF;
;INS(2) =normal open( GND) – OFF;
;INS(3) =normal open( GND) – OFF;
;INS(4) =normal open( GND) – OFF;
SYS=ON;
```

The above shows the system is active 'SYS=ON' and the inputs are idle or not active. All inputs 1-4 are set as 'normally open' contacts triggered by shorting to GND. If they are active, they would show 'ON'

13 OUTPUTS REMOTE CONTROL

You can use control outputs remotely in two different ways:

- ⇒ calling the GSM Controller and using DTMF commands with audio confirmation
- ⇒ sending the SMS command and get back an SMS with outputs status

13.1 OUTPUTS REMOTE CONTROL BY SMS COMMAND

Command ;**ORCX=1**;

Sending this command to the GSM Controller output X will switch ON.

X = output 1-4

Command ;**ORCX=0**;

Sending this command to the GSM Controller output X will switch OFF.

X = output 1-4

When you want to get a reply SMS with the Output status you must enter '+' before the command.

For example

Command ;**+ORCX=1**;

The reply SMS will be:

;**+ORCX=1**; Confirming the command received.

13.2 OUTPUT REMOTE CONTROL BY DTMF COMMAND

After one short beep press the DTMF command. Response with 1 beep means that the output is active (ON) and response with 3 beep means that the output is in inactive (OFF) mode.

11	Output 1 ON (bi-stable) or ON for mono-stable
12	Check the output 1 state (1 beep=ON, 3 beeps=OFF)
10	Output 1 OFF (bi-stable) or ON for mono-stable
20	Output 2 OFF (bi-stable) or ON for mono-stable
21	Output 2 ON (bi-stable)
22	Check the output 2 state (1 beep=ON, 3 beeps=OFF)
30	Output 3 OFF (bi-stable) or ON for mono-stable
31	Output 3 ON (bi-stable)
32	Check the output3 state (1 beep=ON, 3 beeps=OFF)
40	Output 4 OFF (bi-stable) or ON for mono-stable
41	Output 4 ON (bi-stable)
42	Check the output 4 state (1 beep=ON, 3 beeps=OFF)

Use 12, 22, 32 and 42 DTMF command to verify the output state. With DTMF command "00" you may switch all outputs **OFF** at the same time and with command "01" all outputs **ON** at the same time.

14 CLEAR ALL PROGRAMMED DATA FROM SIM

SMS Command ;**SDCLR**;

Sending this SMS to the GSM Controller will clear all before programmed parameters and numbers. It's a good practice to clear the SIM card before you start to be sure there are no unnecessary details stored in the phone book.

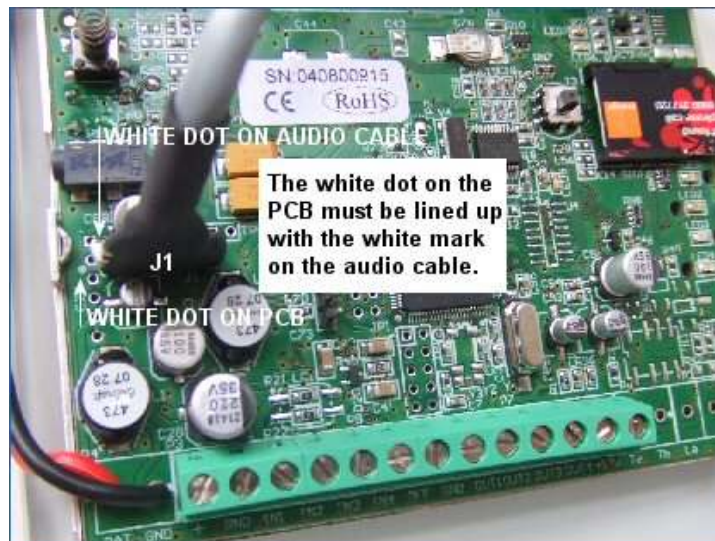
After sending this command you should wait at least 30 second for the execution of the command!

WARNING!!!

Sending this command to the GSM Controller will erase all programmed data from SIM card. Use only if absolutely necessary!

15 START UP

- ⇒ Insert SIM card to be used for GSM Controller into your personal mobile phone.
- ⇒ **ERASE THE START UP PIN CODE! IF IT ASKS FOR ONE.**
- ⇒ Remove the SIM card and put it in the SIM card slot on the GSM Controller.
- ⇒ **IMPORTANT: The device must be OFF when you insert or remove the SIM card.**
- ⇒ Temporarily connect 12VDC (plug pack or battery) to the controller and locate in the proposed position without fixing to the wall to check GSM signal.
- ⇒ Watch the Blue LED. When it starts flashing the unit is on the network. 1 flash is low signal. 5 flashes is full signal.
- ⇒ If the Blue LED flashes less than 3 times, it is advisable to position the controller in a different location or use the optional blade antenna on a 3m fly lead and mount up high.
- ⇒ Mount the GSM Controller and Door panel into the final positions and connect between the two using the supplied 2 pair audio cable.
- ⇒ Be sure the plug on the supplied audio cable at the GSM Controller end is connected on the PIN connector **J1** with the white mark to the LHS to the white dot on the PCB.



- ⇒ Connect alarm inputs & outputs to GSM Controller as detailed in the document
- ⇒ Check the antenna is connected. Mount higher and outside of enclosure if needed.
- ⇒ Double check the connections are correct & call panel cable is plugged in correct.
- ⇒ Connect controller to 12VDC 1A regulated power supply if you aren't using the battery back up OR a 13.8V -14.5VDC 1.3A supply if you are using the battery back up. A variable output power supply 12-15VDC enables adjustment to 13.8VDC and charges the back up battery.
- ⇒ Wait until LED1 (blue) starts flashing. This will be set in around 1 minute time.
- ⇒ Start the programming process by sending SMS: ;PDEA; (see section 8.4)

16 LED DISPLAY

Blue LED (LED1)

- When flashing, it shows the device is currently on the GSM network and the level of GSM signal is indicated by 1 - 5 LED flashes (1 = weak signal, 5 full signal)

Red LED (LED2)

- When the RED LED is ON permanent, the device has a problem with a GSM network connection or the GSM module is out of order.

Red LED (LED2) – alarm state

- During an alarm event the RED led will indicate on which input alarm is. For example, for the first input you'll see 1 flash, second input 2 flashes etc.

Green LED (LED3)

- When the alarm inputs on the unit are in active state (SYS=1) then the green LED is ON. With inputs disabled the green LED is OFF (SYS=0).

Yellow LED (LED4)

- Short flashing indicate that the GSM module is ON but it is not yet connected to the GSM network. After network connection the yellow led will flash with short pulse ON and a long pulse OFF.

17 TROUBLESHOOTING

First see the display of LED. They provide very good indication of any problems with the device or GSM signal.

1. Device won't connect to the GSM network

- Move the antenna higher
- Try another SIM card or check the SIM card PIN code request is disabled
- Change the antenna for a different type (must have an SMA type connector)
- Check supply voltage is sufficient

2. General audio interference during the call

- Make sure you have used only the supplied audio cable from the GSM controller to the panel without joins.
- The shield of the supplied 2 pair audio cable must be connected to GND on the panel
- Use a 12VDC regulated power supply 1 amp minimum. Switch mode preferably.
- Don't run other equipment on the same power supply as the intercom
- Keep the intercom audio cables away from mains power cables
- Keep the antenna outside any metal enclosures
- Connect any metal panel enclosures to GND especially if mounted to a steel post
- Check the audio connections (yellow, white, brown, green) are not loose on panel
- Lower the microphone trimmer on the panel as much as possible (anti-clockwise)

3. Whistling or interference all the time or during a call

- Turn the blue trimmer on the panel anti-clockwise to reduce mic sensitivity

4. Device won't respond and blue LED is solid

- Cables too long between door station and GSM Controller
- Shielded cable not used or cable shield not connected to GND door panel end

5. SMS programming doesn't work

- Check SL parameter to see if your phone is authorised to send SMS commands

6. DTMF connection doesn't work or voicemail cuts in first

- Cancel Voicemail on the GSM controller SIM card. It is not necessary.
- Decrease the 'rings to answer setting' RAN
- Check SL parameter to see if your phone is authorised to use DTMF commands

7. Speaker level is too low / high

- Adjust the settings SPK

8. Red LED is solid

- Check connections and polarity on GSM controller & intercom interface PCB
- Check PCB components visually to locate obvious damage
- Check power supply input voltage
- Contact service

9. If your issue is not listed here:

- Contact your Supplier for support

18 TECHNICAL SPECIFICATION

<i>Description</i>	<i>Value</i>
Power Supply (without using battery)	9VDC – 25VDC
Power Supply (with connecting battery)	13,8VVDC – 14,5VDC
Current consumption (peak)	2A
Current consumption (GSM active mode)	350 mA
Current consumption (GSM idle mode)	40 mA
Tri band GSM / GPRS module	900/1800/1900 MHz
Alarm or Intercom Call Button Inputs	4
ON/OFF Input	1
Programmable Transistor Outputs (12VDC 300ma)	4
Voice Call Alarm pre-recorded messages (1 per input)	4
SMS alert messages (4 for inputs 5 for direct fault alerts ie mains fail etc)	9
PCB dimensions	105 x 80mm
Unit dimensions	118 x 170 x 60 mm
Boxed Weight exc. Battery or power supply	550g
Antenna SMA Connector	1
Audio cable between Z4 GSM controller & panel interface	2 pair shielded belden type cable with braided shield
Cable for power supply and call buttons from GSM Controller to panel	Multi-core alarm preferably shielded