

M6 - 6 zone alarm panel with UHF/VHF/GSM Installer Manual

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GSM/Radio 6 zone Alarm Control Panel June 2016

GENERAL FEATURES:

NOTE: M6 is the latter version of the Minitracer incorporating Auxilliary Expander and or GSM funtions. All general alarm and programming procedures are the same. GSM and Expander can work together, Radio is separate from the two.

The "M6" is a microprocessor based ALARM PANEL designed to perform all the functions

associated with the monitoring of alarm conditions, in both wired and wireless environment, and subsequent transmission by Radio to a REMOTE MONITORING CONTROL ROOM.

The "M6" not only conforms with SAIDSA specifications but offers many more features which are not available in traditional alarm panels.

The "M6" is capable of reporting the condition of all 6 zones in one transmission giving the full current status of the alarm panel

These features make the "M6" a versatile, efficient and most innovative ALARM CONTROL PANEL

- Supports 2 key pads.
- 6 zones BOTH WIRED and /or 6 WIRELESS.
- Arm/disarm and warning selection via Keypad, Key-Switch or Remote Control
- Normal or multi-user operation (4 partitions).
- Remembers all selections during power failures and will resume from the last status.
- Supervised alarm circuits/zones with end of line resistors (2k7).
- Programmable "entry / exit delay".
- Programmable siren activation on individual zones.
- UHF or VHF RADIO transmitter or GSM communicator
- Built-in battery 1.5 A charger for Stand-by 6 A/h battery (24 hrs autonomy on average installation).
- Buzzer output for auxiliary signals (arm, disarm, battery-low etc....).
- EEPROM memory for retention of both options and code selections during "power-down".
- Optional wired panic button
- Optional input for key-switch operation
- Programmable silent PANIC alarm.
- Programmable reporting of battery low condition in each wireless sensor .
- Programmable reporting of system mains failure, mains restoral, system battery low and restoral.
- Programmable reporting of arm and disarm with user identification.
- Programmable Auto arming with optional entry-exit feature (hands free).
- Subscriber ID code and options fully programmable by the installer.
- TEST transmission can be sent to control room via the remote control or keypad.
- Programmable "check-in" transmission from 1 to 250 hours.
- Four preset active levels "A, B, C, or D"
- Diagnostic for testing wireless devices.
- Easy programming and display of current options and settings.
- Programmable alarm reporting on individual zones.
- Each keypad can be switched off individually.
- Self Learning function for the Remote Control code and Wireless Detectors.
- Supports both Old and New report protocols and wireless codes.
- Quick setting of the four preset levels: "A, B, C or D" to ARM
 Quick setting of the four preset levels: "A, B, C or D" to WARN
- Keypad system security identification feature.
- Duress code.
- Tamper on Wireless Detectors
- Battery low on wireless detectors
- Wireless detectors Supervision
- Keypad wrong-code lockout
- 255 Event logging in non volatile memory.
- Zone "swinger" to automatically disable false triggering zones
- Additional 6 sector perimeter zones interface, for SPI beams

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GENERAL INFORMATION

The "M6" is capable of monitoring BOTH WIRED and WIRE-LESS detector circuits at the same time. A **REMOTE PANIC BUTTON** option is built in as a standard feature.

The "M6" will send an alarm/report whenever the following inputs are triggered:

- Any of the 6 wired active inputs.
- Any of the 6 wireless active inputs.
- Remote panic button.
- Supervisory signals such as:
 - battery low in the wireless sensors.
 - arm / disarm.
 - mains failure
 - mains restored
 - panic button

- low battery in the system.
- battery restored in system.
- test transmission
- Tamper & password change

For complete application flexibility the six wired inputs may be programmed to send an alarm whenever one of the following conditions occur:

- When the external circuit is opened (Normally Closed circuit).
- When the external circuit is closed (Normally Open circuit).
- Both when the external circuit is Opened or Closed.
- (In this case it is possible to program any of the circuits as an "alarm circuit" or a "door entry monitoring circuit").
- When the trigger condition remains for longer than 15 sec (slow detection).

For example: You may require that the particular circuit calls the control room both when an alarm occurs and when it is restored, or that a particular circuit calls the control room both when a door is locked or unlocked. The six wireless inputs work parallel to the wired inputs and therefore share all the available optional features such as:

- individual siren activation selection
- individual "ENTRY/EXIT DELAY" selection
- individual "warning only" selection
- individual "24 hrs" ready activation.

A great feature of the M6 is the fact that it is fully programmable to suit every possible requirement. You can for instance define 4 levels each containing a set of zones which you will most likely select in everyday operation. You do not have to remember which set you normally arm or set to warning mode.

The M6 will memorize the four patterns for you and so when arming the system, automatically step through these preset patterns allowing you to stop at the one you desire. These patterns may be changed at will by the installer or by the customer using the two buttons on the hand-held remote control. These preset levels can be "Quick selected". See "long-key" on table of key entries

ALL COMMANDS and INDICATIONS are performed / shown on up to 2 wall mounted Keypads.

The Key Pad / DISPLAY units can display the following information:

- the wired/wireless sensor which caused the alarm. - the wired/wireless sensor which caused the warning signal.
- the perimeter beam which was activated. - system armed / disarmed indication.
- which zone is set to 24hrs, armed or on warning. - Entry / exit delay activated.
- mains failure has occurred. - system battery is only 80 % charged.
- system has triggered and the signal was sent to control room.

The GREEN numeric display shows the Sector which was activated on the SPI perimeter beams.

The RED numeric display shows the type of transmission which was sent to the control room e.g.:-

- Numbers 1 to 6 indicating the alarm Zone which was triggered.
- The letter "p" indicating panic button activation.
- The letter " t " indicating transmission.
- The letter " b " indicating battery low in one of the wireless sensors.
- The letter " r " indicating that the system had a reset.
- The letter " h" indicating a warning or a call facility.
 The letter " u" indicating the system is not programmed yet.
 The letter " E" indicating a tamper condition is present.
- The letter "?" indicates that the ID of the keypad is not the same as the ID of the Tracer
- The letter " j " indicates wireless Radio Frequency blocking.

The Key Pad is used to do the following:

- program the system's options.
- access the 4 preset patterns and if necessary change them.
- access each zone individually.
- change the user codes (10 different user codes per key pad).
- activate a panic alarm .
- activate a test signal.
- reset the system /alarm .
- Quick-setting one of four preset levels: "A, B, C or D" to ALARM or WARNING
- to activate / deactivate the perimeter Sectors.
- to send a panic signal

Combination of 2 keys pressed simultaneously will give different conditions, these are shown in Appendix "A":

NOTE:

When arming the system if any of the zones are in open condition the system will sound the key pad bleeper 6 times before initializing the arming sequence.

During the arming sequence it is possible to cancel the operation by pressing '0' or shorten the delay by pressing '1'.

To stop the keypad beeping during a Mains Failure, push and hold the '0'.

Most COMMANDS are performed through a 2 CHANNEL HAND-HELD REMOTE CONTROL:

- arming and disarming of the system
- programming of the 4 different patterns of arming
- panic button
- test transmission

REPORTING OF AN ALARM TO A CONTROL ROOM

Reporting of an alarm is achieved in the following manner:

The system will transmit, via radio, 3 times at random intervals within 25 seconds NOTE: After each Radio transmission the system is dormant for 12 seconds to allow all detectors to settle down. During this period the "running" LED on the key board will flash at a faster rate.

EXTRA FUNCTIONS / FEATURES:

1- STAND-ALONE OPERATION (No Key Pad) - "SNIPER"

SNIPER operation can be set where a single Arm / Disarm level operation is needed. (Register 08 / bit 2) The remote control (All users) will arm only "level A" instantly

The Keypad can be removed after programming, leaving only remote control and/or Key-switch for Arming /Disarming.

2- ARM / DISARM CONFIRMATION

Re- transmission (confirmation) of Arming and Disarming signals can be selected (register 08 / bit 3, ON to Enable) This is meant for business installations where the monitoring of arming status is crucial.

The arming status is sent again, randomly between 30 to 60 minutes, after it was initially Armed or Disarmed.

The confirmation is reported to the base-station as a -user 33- Arm/Disarm.

3- DURESS

In a life threatening situation. (When someone forces you to disarm your alarm panel at gun-point) you can make the alarm panel send a duress to the control room.

4- DURESS ACTIVATION WHEN USING A KEYPAD

Increment first digit of user code by one (1) when disarming the alarm panel.

I.e if '1 2 3 4 # " is normally pressed, 'press '2 2 3 4 # " for duress.

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5- AUTO - ARMING

When auto -arming is selected (programable for 2 hours or 15 minutes by installer) the system will arm itself if no movement or any other activations have been detected within the selected time period.

A second (Installer programmable) option is to enable the entry / exit zone (zone 1 - Wired only).

When the last activation was detected on zone 1 the system will arm itself at Level 'D' after the expiry time. In the event where any of the other zones was the last to be triggered the system will arm at Level 'A' after the time period expired.

This function is useful when you forget to arm your alarm system. The system will arm itself 15 min /2 hours after you have left the house or went to bed. The Auto arming option is set in option register "08" bit 8.

Note: Entry / Exit will only function correctly if Zone 1 is the last zone triggered when you leave your premises. Level 'A' will be the "at home /sleep" arming pattern and Level 'D' the "away" arming pattern.

The exit delay is always calculated to be double the entry delay

6- DISABLING THE KEY PADS

Each key pad can be disabled individually. To disable temporarily a key pad, enter the user 1 code. Press # for approximately 4 seconds followed by the D key. To re-enable the keypad repeat the operation.

REMEMBER THAT THE SECOND TIME THERE IS NO INDICATION FROM THE BUZZER ON THE KEYPAD

7- TAMPER (WIRELESS SENSORS ONLY)

Circuit that monitors illegal violation of alarm devices when the system is not armed. When it's triggered it will send a tamper condition to the control room and the "WL TBL" and "TRIGG" leds will be illuminated on the keypad with buzzer sounding. To cancel the above, enter the user code followed by ##.

8- WIRELESS ZONE SUPERVISION

This feature enables the M6 to detect when a wireless passive is faulty (NOT REPORTING).

The user can program which wireless zone the M6 must monitor.

Please note that the wireless passive must be enabled for supervision - page 9.

-See also the wireless detector instructions.

9- EVENT MEMORY LOG FACILITY

The **M6** is capable of storing the last 255 events in memory. The installer can view these events in case of the user not reporting to a control room. The log facility will display the day the event was recorded, the time and the reason for the event.

10- WIRELESS RF BLOCKING

M6 will report a "System Tamper" if Radio Frequency blocking was detected on the system lasting longer then 30 seconds. This is to prevent intruders trying to "JAM" the system.

11- SPI PERIMETER BEAM

An extra 6 perimeter zones can be installed on the **M6**. The unit will detect an activation on the perimeter beam and sound an audible alarm. **This condition will not be reported to control the room**. Refer to the instruction of the **SPI** beam for installation and programming instructions.

12- RESPONSE / GUARD SUPERVISION

This features allows the control room to supervise all activities undertaken by the response officer.

For this purpose the MINI-TRACER uses a third remote control code.

On this special Officer remote control, button A will be the Panic button and button B will be "Guard Responded".

Please note that this feature is only active for 30 minutes after an alarm was triggered.

This Response code can only be stored on key "c" using the SELF-LEARNING method.(No manual code entry is available for the Duress code.)

13-REPEATER SELECTION

There M6 is capable of relaying alarm signals via repeaters (radio).

14- SWINGER ZONE DISABLE

If the same zone triggers more then 5 times during the same "armed" period the Super-Tracer automatically disables those zones until the next arming or until 10 hours have expired since the last alarm triggered by the "swinger" zone.

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INSTALLER PROGRAMMING THE M6

THE MG IS ORIGINALLY PROGRAMMED WITH A "FACTORY DEFAULT" SET OF OPTIONS. ALTHOUGH THE "FACTORY" OPTIONS REFLECT THE CHOICE OF THE MAJORITY OF INSTALLERS AND END-USERS, PROPER OPERATION AND COMPLIANCE WITH SPECIFIC REQUIREMENTS CAN BE ACHIEVED THIROUGH REPROGRAMMING. THE PROGRAMMABLE OPTIONS ARE DIVIDED INTO 4 SECTIONS: SECTIONS 1, 2, 3 AND A RELATE TO THE MAIN BOARD. SECTION 4 IS RELATES TO THE KEYPAD UNIT TISELF.

- 1 ENCODING THE WIRELESS DETECTORS AND REMOTE CONTROLS
- 2 SYSTEM OPTION REGISTERS.
- 3 SYSTEM I.D. CODES AND TEL. NUMBERS - 4 - CIRCUIT (ZONE) OPTION REGISTERS.
- 4 CIRCUIT (ZONE) OPTION REGISTERS.
 5 KEYPAD LOCAL OPTION REGISTERS.

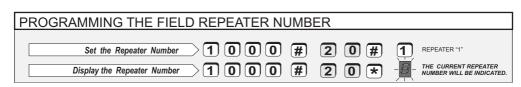


OPTIONS REGISTER NO. 1 1 0 0	# 01	NOTE: 0=ON O=OFF
ON = SIREN WITH PANIC BUTTON	OFF = SILENT PANIC BUTTON	◎ 1
ON = MULTI-USER OPERATION	OFF = NORMAL OPERATION	02 3
ON = AUXIL. SIGNALS ON BUZZER & SIREN	OFF = AUXIL. SIGNALS ON BUZZER ONLY	◎3 ₹
SPARE	SPARE	04 19
ON = WIRELESS RF BLOCKING ENABLED	OFF = WIRELESS RF BLOCKING DISABLED	05
ON = PERIMETER MASK LINKED TO ARM LEVEL	OFF = PERIMETER AND ARM MASKS NOT LII	VKED 06 5
ON = TRANSMIT CONTACT-ID CODE	OFF = TRANSMIT M.A.M.I CODE	07 5
ON = SILENT ARM/DISARM ON KEY-PAD	OFF = AUDIBLE ARM/DISARM ON KEY-PAD	08 🖫

OPTIONS REGISTER NO. 2	0 # 0 2	
ON = SEND VIA RADIO	OFF = NO RADIO	01
ON = SEND VIA GSM	OFF = NO GSM	● 2
ON = REPORT "BATTERY LOW" IN SENSORS	OFF = NO REPORT	● 3
ON = REPORT ARM / DISARM SIGNALS	OFF = NO REPORT	0 4
ON = REPORT SYSTEM BATTERY LOW	OFF = NO REPORT	⊕ 5
ON = REPORT SYSTEM MAINS FAILURE	OFF = NO REPORT	● 6
ON = SEND USING FTX	OFF = SEND USING DTMF	07
SPARE	SPARE	0.8

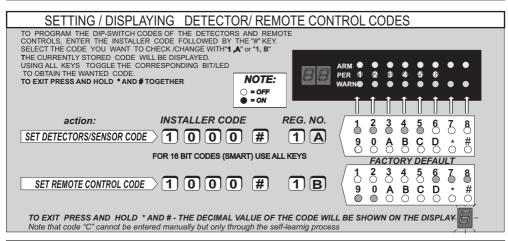
OPTIONS (MODE) REGISTER NO.8	# 08	
ON = USE KS INPUT WITH A KEY-SWITCH	OFF = USE KS INPUT FOR PANIC BUTTON	01
ON = SNIPER OPERATION(arm to level 'A')	OFF = TRACER OPERATION	O 2
ON = ARM/DISARM CONFIRMATION(REPEATED)	OFF = NO CONFIRMATION(REPEATED)	O 3
ON = SPARE	OFF = SPARE	04
ON = REPORT WIRELESS SUPERVISION	OFF = NO REPORT	05
ON = REPORT SPI ON ZONE 6	OFF = NO REPORT	06
ON = AUTO-ARM TIME - 2HRS	OFF = AUTO ARM TIME - 15 MINUTES	07
ON = AUTO ARM ENABLED	OFF= AUTO ARM - DISABLED	08

For the next 3 options you need to enter a value between 0 and 250. EXAMPLES: - To set the *entry-delay* to 35 seconds enter: 1000#17 035 (sec)
- To set the *check-in interval time* to 24 hours enter:: 1000#18 024 (hrs) - To set the siren duration to 4 minutes enter: 1000#19 240 (4x60) (sec) **FACTORY DEFAULTS** 1000 # 035 ENTRY / EXIT DELAY VALUE (SEC) (35SEC) \Box # **1** [8] 024 CHECK-IN INTERVAL (HRS) (24HRS) 240 1000 $\boxed{1}\boxed{9}$ SIREN DURATION (SEC) (240SEC) - A CHECK-IN INTERVAL VALUE OF "0" WILL AUTOMATICALLY DISABLE THE OPTION (NO CHECKING-IN TRANSMISSION).
- THE "EXIT" DELAY IS AUTOMATICALLY SET TO DOUBLE THE "ENTRY" DELAY



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PROGRAMMING (CONTINUED)



SELF LEARNING THE WIRELESS CODES

Enter the self learning mode by entering:

SELF LEARNING THE REMOTE CONTROL AND DETECTORS CODES.

1000#

- ים ע
- 1- TRANSMIT CODE FROM SENSOR OR REMOTE CONTROL UNTIL CODE AND CHANNEL ARE MEMORIZED BY THE DISPLAY
- 2- TO STORE THE RECEIVED CODE AS **DETECTOR SENSOR CODE**, PRESS "A" KEY ON THE KEYPAD 3- TO STORE THE RECEIVED CODE AS **REMOTE CONTROL CODE**, PRESS "B" KEY ON THE KEYPAD
- 4- TO STORE THE RECEIVED CODE AS THE RESPONSE CODE . PRESS "C" KEY ON THE KEYPAD

SUBSCRIBER I.D. SETTING (TRANSMITTER/CSID CODE)

This is the CUSTOMER i.d. NUMBER sent to the BASE STATION

(ATH DIGIT)

PROGRAM THE SUBSCRIBER ID

1 0 0 # 1 C # ? ? ?

AFTER ENTERING THE 4TH DIGIT THE NEW CODE IS AUTOMATICALLY STORED IN MEMORY

READ THE SUBSCRIBER ID

1 0 0 # 1 C *

THE CURRENT SUBSCRIBER CODE WILL BE DISPLAYED ONE DIGIT AT THE TIME.

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PROGRAMMING (CONTINUED)

CIRCUIT (ZONE) OPTION REGISTERS

Each of the 6 zones can be programmed to behave in different ways and perform different tasks. To do this there are several registers:

- TO PROGRAM EACH REGISTER:
- 1- ENTER THE INSTALLER CODE FOLLOWED BY THE CORRESPONDING REGISTER NUMBER:
- 2- USING KEYS "1 to 6" TOGGLE THE CORRESPONDING LED (ON=1 OFF=0) EXAMPLE 1:

- EARMINE 1: CHANGE PRESET LEVEL "A" FROM 1 & 2 ACTIVE TO 1 & 3 ACTIVE. CHANGE PRESET LEVEL "A" FROM 1 & 2 ACTIVE TO 1 & 3 ACTIVE. ENTER "3" LED 2 WILL TURN OFF. ENTER "3" LED 3 WILL TURN ON CHECK THAT THIS IS CORRECT

(REGISTER NAME)

- ENTER "#" TO EXIT

EXAMPLE 2:

- EXAMPLE 2: CHANGE CIRCUIT 6 NOT TO TRIP THE SIREN. CHANGE CIRCUIT 6 NOT TO TRIP THE SIREN. ENTER. "100 # #05". THE CURRENT SETTING WILL BE SHOWN (ALL LEDS = ON). ENTER "6" ... LED NO 6 WILL SWITCH OFF. ENTER "# "TO EXIT



DETECTION TIME OFF= 0.5 Sec. ON =15 Sec.	1000 #	04	00000
SIREN ACTIVATION	1000 #	05	<u> </u>
OPEN/CLOSE REPORTING	1000 #	06	
ALARM / RESTORE REPORTING	1000 #	07	000000
LEVEL "A" PRESET	1000 #	0 A	
LEVEL "B" PRESET	1000 #	0 B	
LEVEL "C" PRESET	1000 #	0 0	
LEVEL "D" PRESET	1000 #		000000
(future expansion)	1000 #	13	000000
ALARM REPORTING ZONE	1000 #	14	[00000]
ALWAYS (24Hrs) ACTIVE ZONE	1000 #	1 5	000000
"ENTRY/EXIT DELAY" ZONE	1000 #	16	00000

1000 # 22

(INSTALLER CODE)



USE D TO GO TO THE MORE RECENT EVENT

ACTIVE WirelessL SUPERVISION ZONES

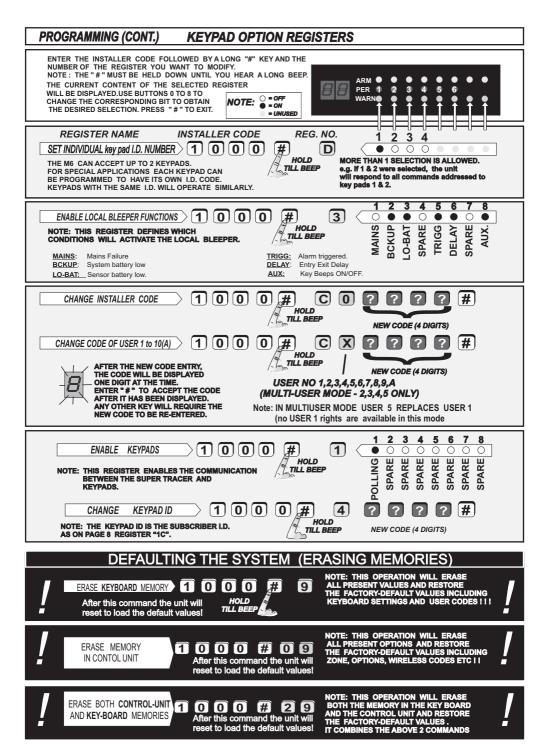
D = Duress d = System Disarmed

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6 = System Mains Fall 9 = System Battery Restore T = Test/Cancel

A = System Armed

000000



PROGRAMMING (CONT.) S.P.I. (SECTIONAL PERIMETER INTRUSION) OPTION REGISTERS

An extra 6 perimeter beams may be connected to the new M6. (See SPI installation instructions) The unit will monitor these perimeter beams and indicate which beam was triggered. The activation of the beams will either sound locally or will report the activation to the control room using exclusively zone 6. The perimeter SECTORS are set up, tested and activated by following this procedure: 1- Connect, align and program each beam number 2- Manually or automatically define the number of sectors / beams installed as follows: DEFINE INSTALLED SECTORS 0 0 123456 Or AUTO ASSESS SECTORS e.g. Only beam 1, 2, 3, 4, 5 and 6 are installed. INSTALLER CODE Wait for the display to show the sectors found then enter # to store the result or any other key to exit. To test the perimeter connections do the following: 1- Enable/ activate all (6 in this case) available beams installed with: 2- Enable testing mode as follows (in this mode no audible devices are activated and the faulty/ non aligned beams will be displayed 3- Exit test mode by entering: 1 0 0 Four preset perimeter selections may be pre-programmed to coincide with the arm/warn levels A,B,C & D. (This is done as shown below) If option 6 of register 01 (page8) is set, a selection will be active when the corresponding arm/warn level is selected (e.g. You can have zones 1&2 (level "A") on armed and perimeter sectors 1,2 &3 on warning ARM PER 1 2 WARN LEVEL "A" PRESET 0 LEVEL "B" PRESET LEVEL "C" PRESET # LEVEL "D" PRESET 0 0 0 Each segment may be programmed to have different response times (on interruption of the Infrared beam). These times may vary from 0,3 Seconds to 20 Seconds. Use the table to select the response (interruption time before alarm) This is done using the USER 1 code. 1=0.3 Sec 5= 2 Sec SET SENSITIVITY LEVELS FOR EACH 2=0.5 Sec 6= 5 Sec 3=0.8 Sec SECTOR OF THE PERIMETER ALARM 7=10 Sec Device No. I aval of USERT CODE 4=1.2 Sec 8=20 Sec response THE INSTALLER MAY FURTHERMORE PROGRAM THE FOLLOWING OPTIONS **OPTIONS (SPI MODE) REGISTER NO.9** [1][0][0][0] [#] SPARE SPARE 01 DEFAULT ON = USE COMMON OUTPUT (1) ON MASTER OFF = USE INDIVIDUAL OUTPUTS 02 ON = LIGHT RELAY FOR 20 MINUTES OFF = LIGHT RELAY FOR 3 MINUTES О 3 ON = IF THREE BREAKS (SAME 3 BEFORE ALARM) OFF = ANY 3 BREAKS 0.4 0 5 ON = SYSTEM RESETS EVERY 3 HOURS OFF = NO AUTO-RESETS CTORY SPARE SPARE 06 SPARE SPARE 07 ON = MASTER'S OUTPUT GOES LOW (1 - 6) OFF= MASTER'S OUTPUT GOES HIGH (1 - 6) O 8 Each segment may be programmed to activate either on a single or multiple break(3). See SPI instructions for this option To arm individual segment of the perimeters enter: 1 1 1 1 # 0 ARMING INDIVIDUAL PERIMETER SECTIONAL BEAMS "O" Indicates Perimeter PER • detection active WARN

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PROGRAMMING THE DETECTOR AND REMOTE CONTROL CODES

SELF LEARNING OF REMOTE CONTROL AND DETECTORS CODE.

Following is the procedure to program the Detectors and Remote Controls to operate properly with the M6:

- 1- program the sensors / detectors following the instructions supplied with each device keeping THE SAME code for all detectors.
- 2- program the ZONE number (function) according to your requirements (table 1- page9)
- 3- enter the self learning mode in the M6 by entering:

1][0][0][0]

- 4- activate any of the programmed DETECTORS making sure that the M6 displays the received code
- 5- press (A) to store/learn the DETECTOR's code
- 6- Re-enter the self learning mode in the MINI-TRACER by entering:

0 1 0 1 0

7- press any button on the REMOTE CONTROL until the MINI-TRACER displays the different code received.

5- press to store / learn the REMOTE CONTROL code.

Using the same method a 3rd code may be stored using the C key to define the code used by an Armed Response officer to send a "standing" signal to base. Please note that this code cannot be entered manually (only by self-learn)

MANUALLY PROGRAMMING THE REMOTE CONTROL AND DETECTORS CODE.

1 - Enter the manual setting mode by entering: 1 0 0 0 #

1000 # 1B

1 A

for the Detectors code for the Remote Control code

ARM

2 - set the desired code by toggling each bit of the code using keys 1 to # BIT NO 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 (see TABLE) 1 2 3 4 5 6 7 8 9 0 A B C D * # KFY

The new introduces a new Code structure known as "SMART CODE"

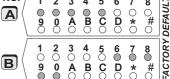
- 3 press * and # buttons together to store the code and exit .
- 4 the decimal equivalent of the stored code will be displayed one digit at the time. Enter # to exit

PER **INSTALLER CODE** REG. NO. 1 2 3 5

SET DETECTORS CODE







SET REMOTE CONTROL CODE

- multiple PARITY and CHECKSUM

- 16 BITS

which has many advantages to the old 10 bit code. These features are: = 65,535 CODE COMBINATIONS. = each segment of the code has CHECK SUM and PARITY. which results in: - wider scope and applications, less duplicate codes and very reliable operation.



WIRELESS ZONE SUPERVISION TEST

Please note: Both the "Wireless Zone supervision" option (Pg 7) and the active wireless zones (pg 9) need to be enabled by the installer before this function will work correctly.)

The M 6 is capable of reporting a faulty wireless detector.

To display the faulty (non reporting) wireless detector press and hold the 🕟 key until it beeps

WIRELESS ZONE SUPERVISION



An "F" is shown on the display.



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WIRELESS DETECTORS and REMOTE CONTROL operation

Using wireless sensors is simple provided you are aware of the following facts:

- 1 The operating range may vary widely from one installation and location to another. The position of the radio receiver is therefore critical and must be chosen accordingly.
- 2- Each installation requires two exclusive I.D. Codes:
 - a DETECTOR CODE for sensors and detectors and...
 - a REMOTE CONTROL CODE for the hand held remote controls an optional 3rd CODE (RESPONSE) may be used to indicate to the control room that armed response is on site
- Each code has two parts: IDENTIFICATION and FUNCTION

IDENTIFICATION: This is the part that makes that device recognizable by the system.

The MINI-TRACER recognizes a 16 BIT code known as Smart-Code.

FUNCTION: This is the part of the code which defines the function which that device has e.g. ZONE number (for detectors) or arm/disarm, panic, test (for remote controls). The functions are determined by a 4 bit configuration. See table 1 and 2

NOTE:

- A wireless sensor transmits an alarm condition only for a short period of time (2 4 Seconds)
- To save power the sensors are designed not to transmit if continuous movement is detected.
- A detector will only transmit if either a 30 seconds (test mode) or 3 minutes (normal mode) has elapsed from the last detection.

Although each code and function can be programmed individually IT IS EASIER TO PROGRAM THE DETECTOR and THE REMOTE CONTROL FIRST and then program the code into the MINI-TRACER unit using the self learning method. (see page 7)

	FUNCTION selection of the	DETECTO	RS CODE	Table 1
BIT SETTING: 4 3 2 1	FUNCTION WHEN ACTIVATED	BIT SETTING: 4 3 2 1	FUNCTION WHEN ACTIVATED	
0 0 0 0 0 0 0 0 0 0 0 1 0 0 1 0 0 0 1 1 0 0 0 1 1 0 1 0 0 1 1 1 0 0 1	WARNING (1 SEC ON BLEEPER) PANIC ACTIVATED DURESS not used KEYPAD RELAY 1 KEYPAD RELAY 2 not used not used	1 0 0 0 1 0 0 1 1 0 1 0 1 0 1 1 1 1 0 0 1 1 0 1	ZONE 1 ZONE 2 ZONE 3 ZONE 4 ZONE 5 ZONE 6	

To program the sensors and detectors see the intructions supplied with each device

	FUNCTION se	lection of the REMOTE	CONTRO	L CODE Table 2
BRIDGE NO. 1=ON 0=OFF 4 3 2 1	FUNCTION WHEN ACTIVATED	APPLICATION	BRIDGE NO. 1=ON 0=OFF 4 3 2 1	FUNCTION
0 0 0 0 0 0 0 1 0 0 1 0 0 0 1 1 0 1 0 0 0 1 0 1 0 1 1 0 0 1 1 1	WARNING (1 SEC ON BLEEPER) PANIC ACTIVATED ARM/DISARM (USER1) TEST TRANSMISSION ARM ONLY (to "D" level) DISARM ONLY not used not used	DOOR BELL/POOL WARNING EMERGENCY / MEDICAL ASSISTANCE TURN SYSTEM ON OR OFF CHECK IF THE SYSTEM IS WORKING	1 0 0 0 1 0 0 1 1 0 1 0 1 0 1 1 1 1 0 0 1 1 0 1 1 1 1 0 1 1 1 1	ARM/DISARM Remote Control USER 2 not used ARM/DISARM Remote Control USER 3 not used ARM/DISARM Remote control USER 4 not used ARM/DISARM Remote Control USER 5 not used

Remote Control may have up to four buttons and each button may be. programmed to carry out a specific task The standard unit supplied has only two buttons 1= Panic, 2=Arm/Disarm.

CONFIGURATION OF REMOTE CONTROLS IN MULTI-USER MODE:

In MULTI-USER MODE Each user must have a remote control with button 2 set as shown below and in table 2 (Button 1 for Panic = Channel 1) (Button 2 ARM /DISARM USER X)









Solder Bridges on Back of Remote Control 1= Solder On 0= Solder Off

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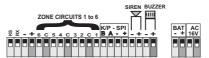
CONNECTIONS

Installing the "M 6" is very simple. The connections are easy to read and understand.

Connect the battery, the external transformer and wire up the different zone circuits and audible devices such as the buzzer and siren. These connections are as follows:

1 - ALARM CIRCUIT CONNECTIONS:

There are 6 inputs available on the MINI-TRACER. (ZONES CIRCUITS 1 to 6) For proper operation a series 2.7 KOhm resistor is required at the end of each zone (last detector)



Any zone will trigger if it is shorted to Ground or +12V. The Inputs have both lightning and short circuit protection. There is +12V on the "C" inputs between zones 5 & 6 . 4 & 3 . and 2 & 1.

- 2- KEYPAD / DISPLAY: 4 wires are required to connect remote display units. They are:
 (A) Transmitted data line, (B) Received data line, (Negative supply) and (Positive 12v supply)
- 3- SIREN: 12 Volts DC-1Amp is available between connectors (neg) & (pos) to operate the siren.
- 4-BUZZER: 12 Volts DC 1 Amp is available between (neg) & (pos) to operate an optional buzzer.
- 5-AC SUPPLY: A 220/16 Volts AC, 800 mA TRANSFORMER supplies power to the charger and on the panel
- terminals "AC 16V". This input is protected against lightning .(15W max)
- 6- BATTERY CONNECTIONS: A 6 Amp/hr, 12V stand-by battery must be connected between (NEGATIVE) and (POSITIVE). Accidental reversal of the battery connections is protected by a crowbar polarity protection device which will blow the safety fuse. It may therefore be necessary to change the BATTERY and OUTPUT fuses after connecting the battery incorrectly. The unit is NOT GUARANTEED for damages caused by REVERSE / INCORRECT connections.
- 7- KEY-SWITCH / PANIC INPUT [KS]: The [KS] input is programable for Arming/Disarming or Panic.
 To Arm / Disarm with a Key-switch, use the normally open contacts of a momentary key-switch.

Register 08 / bit 1 (see programming section) must be programmed ON for Key-switch operation (OFF for panic). The normally open contact of the key-switch is connected to 12v Positive "+" and "KS".

To use the **[KS]** input for hardwired panic buttons (normally open), program Register 08 / bit 1 as OFF. Panic buttons are connected in parallel between **12V Positive** "+" and "KS".

8- S.P.I. PERIMETER BEAM CONNECTIONS: The 4 wires to the Master unit of the SPI perimeter alarm system are connected to the same inputs as the remote keypad. (A) for transmitted data line (B) for the received data line.

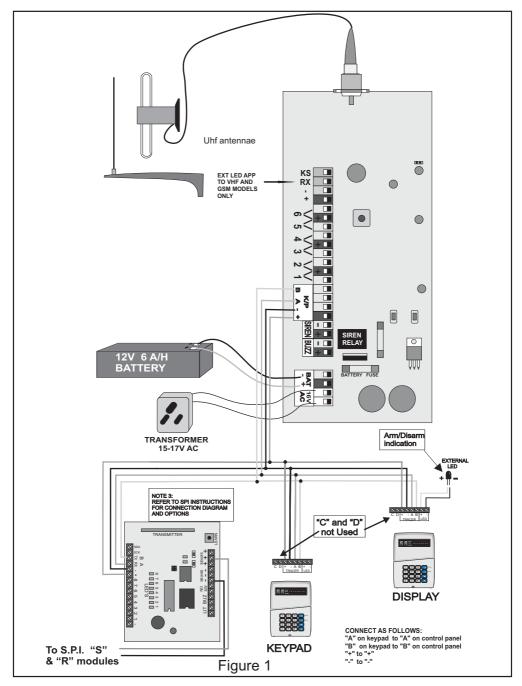
(-) for negative supply (+) for positive 12V DC supply.

Special components have been used to protect the key pad and detector power supply from short circuits. The characteristic of these devices is such that on excessive current they will heat up and TEMPORARELY SHUT DOWN. Only once the short has been removed will they slowly recover to their initial value.

THÉ MAXIMUM CURRENT TO KEYPADS AND SENSOR CIRCUITS IS LIMITED TO 700mA FOR EACH.

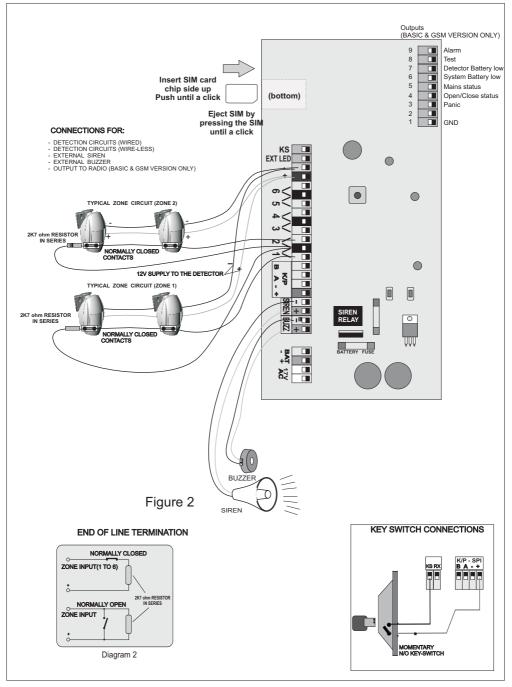
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M6 UHF/VHF CONNECTIONS(1)



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M6 GSM CONNECTIONS (2)



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SMS PROGRAMMING - M6 GSM (1)

GENERAL FEATURES:

- Supports the programming and reporting to 8 Telephone numbers.
- Programmable Password for security purposes.
- Programmable telephone number reporting rights.
- Programmable Panel identification by name or number.
- Programmable zone identification.
- Can request the status of the Panel.
- Remote Arming of any of the 4 preset levels.
- Remote Disarming of the panel.
- Report supervisory signals.

GENERAL INFORMATION

The M6 GSM will send an alarm/report whenever the following inputs are triggered:

- Any of the 6 wired zones
- Any of the 6 wireless zones
- Panic button.
- Supervisory signals such as:
 - battery low in the wireless sensors.
 - arm / disarm.
 - mains failure
 - mains restored

- Low battery in the system.
- Battery restored in system.
- Test transmission
- Tamper & password change

INITIAL SETUP

SIM Card:

The SIM Card for the GSM module can be for any of the following Networks: CellC, Vodacom or MTN. Before the SIM card is inserted into the SIM slot, make sure that the "PIN Request" feature has been switched off. If the feature is not switched off, insert the Sim Card in a normal Cell phone and disable this feature.

Power-Up:

Before Power is applied to the GSM module, make sure that the Antenna is connected and the sim card is inserted Connect 12V DC to the unit and wait for the green LED to flash constantly and the blue LED to flash once every 3 seconds. Now the Module is ready for programming / operation.

SMS TO BE SENT

TELEPHONE NUMBER MANAGEMENT

Add a number with all reporting rights

1234 TEL ADDN 27821234567

Add a number with specific reporting rights

1234 TEL ADDN 27821234567,XYZ...

Refer to table1 below for reporting rights where XYZ... is the desired report

eg. To add a number to report panic and tamper only

1234 TEL ADDN 2782123456,1B

Delete a number

1234 TEL DELN 27821234567

Delete all the numbers

1234 TEL CLRN

CODE	Reporting Right Table 1
0	Zone Alarm
1	Panic
2	Duress
3	Test / Check-in
4	System Arm
5	System Disarm
6	System Mains Fail
7	System Battery Low
8	System Mains Restore
Α	System Battery Restore
В	System Tamper
R	Reports all alarms in MAMI raw code
	(used for GSM base station) -17 -

REPORTING RIGHTS
REFERENCE TABLE

SMS PROGRAMMING - M6 GSM (2)

SYSTEM SETTINGS	SMS TO BE SENT
System Name	
Change the system name that is reported at the beginning of an SMS from the unit (up to 15 chars) The default setting for this is "GSM TRACER <ver>" where <ver> is the software version</ver></ver>	*1234 SYS NAME JOHNS_HOUSE*
Zone Name	
Change the zone name that is reported from the unit (up to 15 chars) Zone number must be a 2 digit number	*1234 SYS ZONE01 KITCHEN*
Wireless Zone Name	
Change the name that is reported from a wireless zone (1 - 8)	*1234 SYS ZONEW1 GARAGE*
System Password	*1234 SYS PASS WWWW*
W = alphanumerical character. 1234 is the default system password	*1234 515 PASS WWWW*
Adding Air-Time	
W = Numeric recharge voucher number given by service provider.	*1234 SYS AIRT WWWWWWWW*
Retrieve Air-Time	*1234 SYS AIRT*
Examples:	*****
Change the system password from 1234 to 7788:	*1234 SYS PASS 7788*
Add airtime:	*1234 SYS AIRT 123412341234*

USING THE M6 GSM	SMS TO BE SENT
Arming the system	
The system can be armed at any of the 4 preset levels	*1234 ARM=W*
W = The preset arm level (either A,B,C or D)	
Disarming the system	*1234 DISARM*
NOTE: When sending the arm or disarm command to the unit relay 1 will be pulsed and relay 2 will be toggled (arm turns it on and disarm turns it off) You can use this function to activate a separate panel (eg. beams) or turn a light on and off	
Status Retrieval	
An sms will be sent with the status of the alarm.	*1234 GET STATUS*

RESETTING THE UNIT

To reset the unit, apply power while pressing the two buttons found in the centre of the board. This will reset the password to 1234. This will be acknowledged by the RED, GREEN and ORANGE LEDS flashing.

Thereafter, power-cycle the unit and send the following SMS: *1234 TEL CLRN* This will clear all the numbers

PROGRAMMING FORMAT:

- The GSM Combo is programmed via SMS
- All messages must start and end with a * (asterisk)
- All commands may be sent in either lower or uppercase

The default system password is 1234 and should be changed to avoid any security risks

NOTE

Service can only be guaranteed on network availability and uptime

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Summary of ALL Key-Pad entries

PROGRAMMING THE SPECIFIC KEYPAD OPTIONS (ONLY AVAILABLE THROUGH THE INSTALLER PASSWORD

PROGRAMMING THE OPTION REGISTERS (ONLY THROUGH TO THE INSTALLER PASSWORD)

1000 #--># 9 = CLEAR EEPROM ON LOCAL KP 1000 #--># D = SET KEYPAD NUMBER

1000 # 1 A = SET DIP SW OF SYSTEM 1000 # 1 B = SET DIP SW OF REMOTE

1000 #--># 1 = ENABLE LOCAL KEYPAD

= SPARE

1000 # 0 2

1000 # 0 3

1000 # 0 1 = SET OPTIONS 1 OF THE SYSTEM

1000 #-->#3 = SET LOCAL BEEPER FUNCTIONS ON KP 1000 #--># 4 = CHANGE KEYPAD SYSTEM ID

= SET OPTIONS 2 OF THE SYSTEM

```
1000 # 1 C # = PROG CUSTOMER ID CODE
1000 # 1 C * = DISP CUSTOMER ID CODE
  1000 # 0 4
             = SET DET. DELAY FOR EACH ZONE.
                                                                          1000 # 1 D = SELF LEARNING MODE ("0"=EXIT)
1000 # 2 0 # = PROGRAM "NEXT" REPEATER Number
  1000 # 0 5
             = SET SIREN ACTIVATION
             = SET OPEN / CLOSE REPORTING
  1000 # 0 6
             = SET ALM / RESTORE REPORTING
                                                                          1000 # 2 0 * = DISPLAY "NEXT"REPEATER Number
  1000 # 0 7
  1000 # 0 8
             = MODE REGISTER
                                                                          1000 # 2 1 # = PROGRAM the REPEATER Number
  1000 # 0 9
             = ERASE EEPROM IN THE CONTOLUNIT
                                                                          1000 # 2 1 * = DISPLAY the REPEATER Number
  1000 # 0 A
                                                                          1000 # 2 2 = PROGRAM ACTIVE WIRELESS SENSOR (SUPERVISION)
1000 # 2 3 = AUTO ASSESS ACTIVE PERIMETER BEAMS (SPI)
             = SET LEVEL A
  1000 # 0 B = SET | EVEL B
  1000 # 0 C
             = SET LEVEL C
                                                                          1000 # 2 4 = PROGRAM SPI MASTER OPTIONS
             = SET LEVEL D
                                                                          1000 # 2 5 = PROGRAM ACTIVE PERIMETER BEAMS (SPI)
  1000 # 1 3
             = TRANSMITTER INHIBIT TIME
                                                                          1000 # 2 9 = ERASE EEPROM IN BOTH KEYPAD AND THE CONTOLUNIT
                                                                          1000 # 3 3 = DISPLAY ALARM LOG FILE
1000 # 3 A = SET PERIMETER PATTERN "A"
  1000 # 1 4 = ALARM REPORTING ZONES
  1000 # 1 5
             = PERMANENT ACTIVE ZONE
                                                                          1000 # 3 B = SET PERIMETER PATTERN "B"
  1000 # 1 6 = ENTRY/EXIT DELAY
  1000 # 1 7
             = ENTRY/EXIT DELAY VALUE
                                                                          1000 # 3 C = SET PERIMETER PATTERN "C"
  1000 # 1 8 = CHECK-IN TIME
                                                                          1000 # 3 D = SET PERIMETER PATTERN "D"
  1000 # 1 9 = SIREN DURATION
CHANGING PASSWORDS (USING THE DEFAULT / EXISTING PASSWORDS)
  HOW THE INSTALLER CAN CHANGE PASSWORDS
                                                                        HOW USER-1 (MASTER) CAN CHANGE PASSWORDS
  1000 #--># C 0 [PASSWORD] = INSTALL PASSWORD
                                                                         1111 #--># 1 [PASSWORD] = USER 1 PASSWORD
  1000 #--># C 1 [PASSWORD] = USER 1 PASSWORD
1000 #--># C 2 [PASSWORD] = USER 2 PASSWORD
                                                                         1111 #--># 2 [PASSWORD] = USER 2 PASSWORD
1111 #--># 3 [PASSWORD] = USER 3 PASSWORD
1111 #--># 4 [PASSWORD] = USER 4 PASSWORD
  1000 #--># C 3 [PASSWORD] = USER 3 PASSWORD
  1000 #--># C 4 [PASSWORD] = USER 4 PASSWORD
                                                                         1111 #--># 5 [PASSWORD] = USER 5 PASSWORD
  1000 #--># C 5 [PASSWORD] = USER 5 PASSWORD
                                                                         1111 #--># 6 [PASSWORD] = USER 6 PASSWORD
  1000 #--># C 6 [PASSWORD] = USER 6 PASSWORD
                                                                         1111 #--># 7 [PASSWORD] = USER 7 PASSWORD
  1000 #---# C 7 [PASSWORD] = USER 7 PASSWORD
1000 #---# C 8 [PASSWORD] = USER 8 PASSWORD
1000 #---# C 9 [PASSWORD] = USER 9 PASSWORD
                                                                         1111 #--># 8 [PASSWORD] = USER 8 PASSWORD
                                                                        1111 #--># 9 [PASSWORD] = USER 9 PASSWORD
                                                                         1111 #--># A [PASSWORD] = USER 10 PASSWORD
  1000 #--># C A [PASSWORD] = USER 10 PASSWORD
 HOW USERS 2,3,4 & 5 CAN CHANGE THEIR OWN PASSWORDS
 2222 #--># = CHANGE PASSWORD USER 2
                                                                        3333 #--># = CHANGE PASSWORD USER 3
  4444 #--># = CHANGE PASSWORD USER 4
                                                                         5555 #--># = CHANGE PASSWORD USER 5
CHOOSING ARM / WARN LEVELS IN MULTI-USER MODE
 2222 # A = ARM LEVEL B (USER 2)
                                                                         2222 # # = DISARM LEVEL B (USER 2)
 3333 # A
          = ARM LEVEL C (USER 3)
                                                                         3333 ## = DISARM LEVEL C (USER 3)
 4444 # A
          = ARM LEVEL D (USER 4)
                                                                        4444## = DISARM LEVEL D (USER 4)
5555## = DISARM LEVEL A (USER 5)
 5555 # A = ARM LEVEL A (USER 5)
 2222 # [Y] B = WARNING MULTIPLE ZONES (ONLY WITHIN THE MASK)
                                                                                2222 # [Y] A = ARMING MULTIPLE ZONES (ONLY WITHIN THE MASK)
CHOOSING ARM / WARN LEVELS AND DISARMING IN NORMAL MODE
                                                         1111 # [Z] B = WARN SET BY USER 1
                                                                                                                1111 ## = DISARM SYSTEM
  1111 # [Z] A = ARM SET BY USER 1
                                                         2222 # [Z] B = WARN SET BY USER 2
 2222 # [Z] A = ARM SET BY USER 2
                                                                                                                2222 # # = DISARM SYSTEM
                                                         3333 # [Z] B = WARN SET BY USER 3
  3333 # [Z] A = ARM SET BY USER 3
                                                                                                                3333 # # = DISARM SYSTEM
  4444 # [Z] A = ARM SET BY USER 4
                                                         4444 # [Z] B = WARN SET BY USER 4
                                                                                                                4444## = DISARM SYSTEM
DUAL KEY OPERATIONS AVAILABLE TO THE USER
                                                                        OTHER KEY OPERATIONS AVAILABLE TO THE USER
                                                                        A --> A = SET ARM LEVEL A
  [A&0] -->[A&0] = DISABLE AUTO-ARMING
                                                                        B --> B = SET ARM LEVEL B
C --> C = SET ARM LEVEL C
  [A&1] --> [A&1] = ENABLE AUTO-ARMING
  [ *& #] --> [ *&#] = SEND PANIC SIGNAL
                                                                        D --> D = SET ARM LEVEL D
  [1&3] --> [1&3] = MEDICAL
  [4&6] --> [4&6] = SEND TEST SIGNAL
                                                                        * & A --> * & A = SET WARN-LEVEL A
                                                                        * & B --> * & B = SET WARN-LEVEL B
* & C --> * & C = SET WARN-LEVEL C
* & D --> * & D = SET WARN-LEVEL D
                                                                        ???? # 0 [Y] # = SET PERIMETER BEAM MASK
                                                                        1111 #--># D = DISABI F/ENABI F THIS KEYPAD
                                                                        1111 # 9 [Y] [Y] SET RESPONSE VALUE FOR SECTORS IN THE SPI
 NOTES
   A-->A Means: Press and hold the A key until it beeps
  [*&A -->*&A] Means: Press and hold the * and the A keys until it beeps
  [Y] Means: Any COMBINATIONS OF numbers 1,2,3,4,5,6,7 or 8
  [z]
          Means: any A, B, C, D key or any combination of 1,2,3,4,5,6,7 or 8 keys Denotes the value when the correct password has been entered
  [7&9] Means: Press BOTH KEYS (7&9) at the same time
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Appendix "A"

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