HUNTER-PRO SERIES

INTRUDER ALARM SYSTEMS FOR 8-144 ZONES

HUNTER-PRO 832, 896, 8144

INSTALLATION GUIDE

VERSION 6.0

FOR BETTER PROTECTION

PIMA Electronic Systems Ltd.
www.pima-alarms.com

P/N: 4410281, A1, XX en
March 2009

PIMA Electronic Systems Ltd. does not represent that its Product may not be compromised and/or circumvented, or that the Product will prevent any death, personal and/or bodily injury and/or damage to property resulting from burglary, robbery, fire or otherwise, or that the Product will in all cases provide adequate warning or protection. The User understands that a properly installed and maintained equipment may only reduce the risk of events such as burglary, robbery, and fire without warning, but it is not insurance or a guarantee that such will not occur or that there will be no death, personal damage and/or damage to property as a result.

PIMA Electronic Systems Ltd. shall have no liability for any death, personal and/or bodily injury and/or damage to property or other loss whether direct, indirect, incidental, consequential or otherwise, based on a claim that the Product failed to function.

Please refer to a separate warranty statement found on PIMA website at: http://www.pima-alarms.com/site/Content/t1.asp?pid=472&sid=57

Warning: The user should follow the installation and operation instructions and among other things test the Product and the whole system at least once a week. For various reasons, including, but not limited to, changes in environment conditions, electric or electronic disruptions and tampering, the Product may not perform as expected. The user is advised to take all necessary precautions for his/her safety and the protection of his/her property.

All efforts have been made to ensure that the content of this manual is accurate. Pima retains the right to modify this manual or any part thereof, from time to time, without serving any prior notice of such modification.

Please read this manual in its entirety before attempting to program or operate your system. Should you misunderstand any part of this manual, please contact the supplier or installer of this system.

Contact Us:

PIMA Electronic Systems Ltd.

5 Hatzoref Street, Holon 58856, Israel

Tel: +972.3.6506414 Fax: +972.3.5500442

Email: support@pima-alarms.com

Web: http://www.pima-alarms.com

Partner's website:
http://www.pima-alarms.com/site/modules/login.asp

Table of Contents

CH. 1. Introduction 6
1.1 Comparison table between the Hunter-Pro series models 6
1.2 The Hunter-Pro Series Main Features 7
1.3 Terms and Abbreviations 7
1.4 Entering names, digits and characters 8
1.5 Technical Specifications 8
1.6 The Control Panel's PCB 10
1.7 PCB Outputs and Output Types 13
CH. 2. Partitioning 15
2.1 Introduction 15
2.2 Examples 15
CH. 3. Connecting Zones & Accessories 18
3.1 Connecting Zones 18
3.2 Connecting Zone Expanders 21
3.3 Connecting a Key 28
3.4 TMPR1, TMPR2: Tamper Switches 28
3.5 Connecting Sirens 29
3.6 Relay Output 31
3.7 OUT-1000: Local Outputs Expansion Card 31
3.8 Keypads 32
3.9 Telephone Line and Devices 33
3.10 VKD-1: Virtual Keypad 33
3.11 TRV/TRU-100 Long Range Radio Transmitters 35
3.12 GSM-200: Cellular Transmitter 36
3.13 MIC-200: Microphone Unit 37
3.14 VU-20N: Dual Message Voice Unit 37
3.15 Battery 38
3.16 Mains 39
3.17 Initializing the System 39
3.18 Wireless Faults Display 40
CH. 4. Programming Basics 42
4.2 Default Codes 44
4.3 User Menu 44
4.4 Technician Menu 45
4.5 Express Programming Menu 45
CH. 5. Programming the System 47
5.1 The Technician Menu 47
5.2 Enhanced Communication Menu 47
5.3 **KEY #1**: System Installation 48
5.4 **KEY #2**: Zone Programming 50
5.5 **KEY #3**: Communication Parameters 54
5.6 **KEY #4**: Timers, Counters 66

5.7 KEY #5: General Parameters 69
5.8 KEY #6: System Responses 70
5.9 KEY #7: Outputs Configuration 71
5.10 KEY #8: Full Programming 75
5.11 KEY #9: Installer Code 76
5.12 ASTERISK KEY *: Express Programming Menu 76
5.13 KEY #0: Tests 76
5.14 Locating a Zone in an Expander 80
CH. 6. Remote Control via Touch-tone Telephone 81
6.1 Mode A 81
6.2 Mode B 82
CH. 7. Troubleshooting 84
7.1 Restoring the master & installer Codes 84
7.2 Faults Displayed on the LCD Keypad 84
7.3 Additional Faults 87
7.4 MS Report Formats & Codes 88
CH. 8. Supplementary Products For The HUNTER-PRO Series ... 91
Index 92

Default Codes

Master: 5555

Technician: 1234

The keypad keys table

Key	Functions	Page
[1]	System installation	48
[2]	Zone Configuration	50
[3]	Communication	54
[4]	Timers	66
[5]	General Parameters	69
[6]	System Responses	70
[7]	Outputs Configurations	71
[8]	Full programming (reset), Local and Fast Downloading	75
[9]	Change Installer Code	76
[*]	Fast programming	76
[0]	Tests	76

CH. 1. INTRODUCTION

This guide provides the installation, wiring and programming instructions for PIMA's intruder alarm series, Hunter-Pro 832, 896 & 8144 for 8-144 zones.
PIMA is enhancing its successful HUNTER-PRO 896 with 2 new versions: Hunter-Pro 832 and Hunter-Pro 8144 for 32 & 144 zones.
The Hunter-Pro 832 replaces the Hunter-Pro 32.

The Hunter-Pro series is based on the HUNTER-PRO 896 circuit and menus, with the only difference being the capacity, i.e. the overall number of zones, users and connected expanders (See the next table).

The HUNTER-PRO series is secured against radio-frequency (RF) interferences and electro-magnetic interferences (EMI).

1.1 Comparison table between the Hunter-Pro series models

	Panel Model		
Feature	**832**	**896**	**8144**
Zones	32	96	144
Users	32	96	144
Partitions	16	16	16
Wireless zones	24	32	32
Key fobs	24	24	24
Memory total	410	500	999
Memory non-volatile	128	250	512

SAFETY INSTRUCTIONS

Your HUNTER-PRO 832/896/8144 Alarm System has been registered in accordance with EN60950 and its rules. EN 60950 requires us to advise you the following information:

1. In this alarm system exist hazards of fire and electric shock. To reduce the risk of fire or electric shock, do not expose this alarm system to rain or moisture. Pay attention: Telephone cords could be a good conductor for lightings energy.
2. Do not open the door of the alarm system. Dangerous high voltages are present inside of the enclosure. Refer servicing to qualified personnel only. 3. This alarm system should be used with 230VAC/110VAC, 50/60Hz, protected by anti-electric shock breaker. To prevent electric shocks and fire hazards, do NOT use any other power source.
4. Do not spill liquid of any kind onto the unit. If liquid is accidentally spilled onto the unit, immediately consult a qualified service.

5. Install this product in a protected location where no one can trip over any line or power cord. Protect cords from damage or abrasion.
6. Disconnect all sources of power supply before proceeding with the installation. Pay attention: do not install low voltage wires near by AC power wires they should be separated.
7. Connect the AC transformer output to the terminal block on the control panel as marked.
8. Connect the AC line cord to line power terminals as marked. (GND; N; L)

1.2 The Hunter-Pro Series Main Features

- ✦ Hybrid system with 32/96/144 zones, of which 24/32 could be wireless
- ✦ Support in partitioning & zone doubling
- ✦ Outgoing SMS over PSTN or GSM
- ✦ Remote control of the system, including outputs, via touchtone telephone
- ✦ Full supervision data of wireless detectors (include. low battery, tamper)
- ✦ Comprehensive zone tests for flawless installation: Walk Test, Soak Test, etc.
- ✦ Several options for displaying the system status in LCD keypads
- ✦ 4 subscriber and SMS numbers with optional voice message and microphone
- ✦ 4 monitoring stations telephone numbers
- ✦ Integrated communicator for telephone, radio, GSM/GPRS and IP network
- ✦ Supports split and double reporting
- ✦ Prevention of burglary setup: limited bypass time, zone bypassing authorization, pre-alarm and more
- ✦ Continuous battery and telephone line checks
- ✦ LED keypad support
- ✦ Filtering of reoccurring faults: a fault (jamming, mains etc.) occurring 5 times in one hour will not be reported any more, before an hour passes with the fault not occurring again or the system is either armed or disarmed
- ✦ Memory log of up to 410/500/999 events with time and username

1.3 Terms and Abbreviations

Enabled User Code: A code enabled (by the technician) to enter the user menu

LCD Zone Numbers: The 1-16 & 17-32 numbers printed above and below the LCD display window; Indicating the first 32 zones' numbers

MS: Monitoring Station

1.4 Entering names, digits and characters

Each keypad key is used for entering letters, digits and other characters as follows:

	No. of presses							
Key	1	2	3	4	5	6	7	8
[1]	.	,	?	!	1			
[2]	A	B	C	2				
[3]	D	E	F	3				
[4]	G	H	I	4				
[5]	J	K	L	5				
[6]	M	N	O	6				
[7]	P	Q	R	S	7			
[8]	T	U	V	8				
[9]	W	X	Y	Z	9			
[0]	Space	Zero						
[*]	(	)	/	*	:	-	+	#
[#]	Enable/Disable							
[END]	Cancel/ Return to previous screen/s without saving							
[NEXT]	Next char.							
[BACK]	Prev. char.							
[ENTR]	Save							

1.5 Technical Specifications

Input voltage: 14VAC / 2A

Battery: 12VDC, Up to 7.5 Ah

Power Consumption

Control panel: 60mA

Keypads: 20mA

LCD keypad illuminating: 110mA

Siren: 2 outputs (Ext., Int.) up to 0.9 mA each

Power output: ~13.8VAC/up to 750mA

Operating temperatures (°C)

Control panel: -30 ~ +50

LCD keypad: 0 ~ +50

LED keypad: -10 ~ +50

Humidity 75% (Non-condensed)

Zone Protection

Single or double EOL circuits

Other Protection

Continuous battery telephone line monitoring

Panel Outputs

Relay: N.O./N.C. 1A

Transistor outputs: 4, 200 mA max

Bell/Siren outputs: 2 with separate thermal fuses protection

Serial output: RS-232

Communication Channels

PSTN: Telephone interface and communicator

GSM: GSM-200 transmitter

SMS: SMS-100 module (via PSTN)

Ethernet: net4pro TCP/IP module

Radio: TRV/TRU-100: long range VHF/UHF transmitters

1.6 The Control Panel's PCB

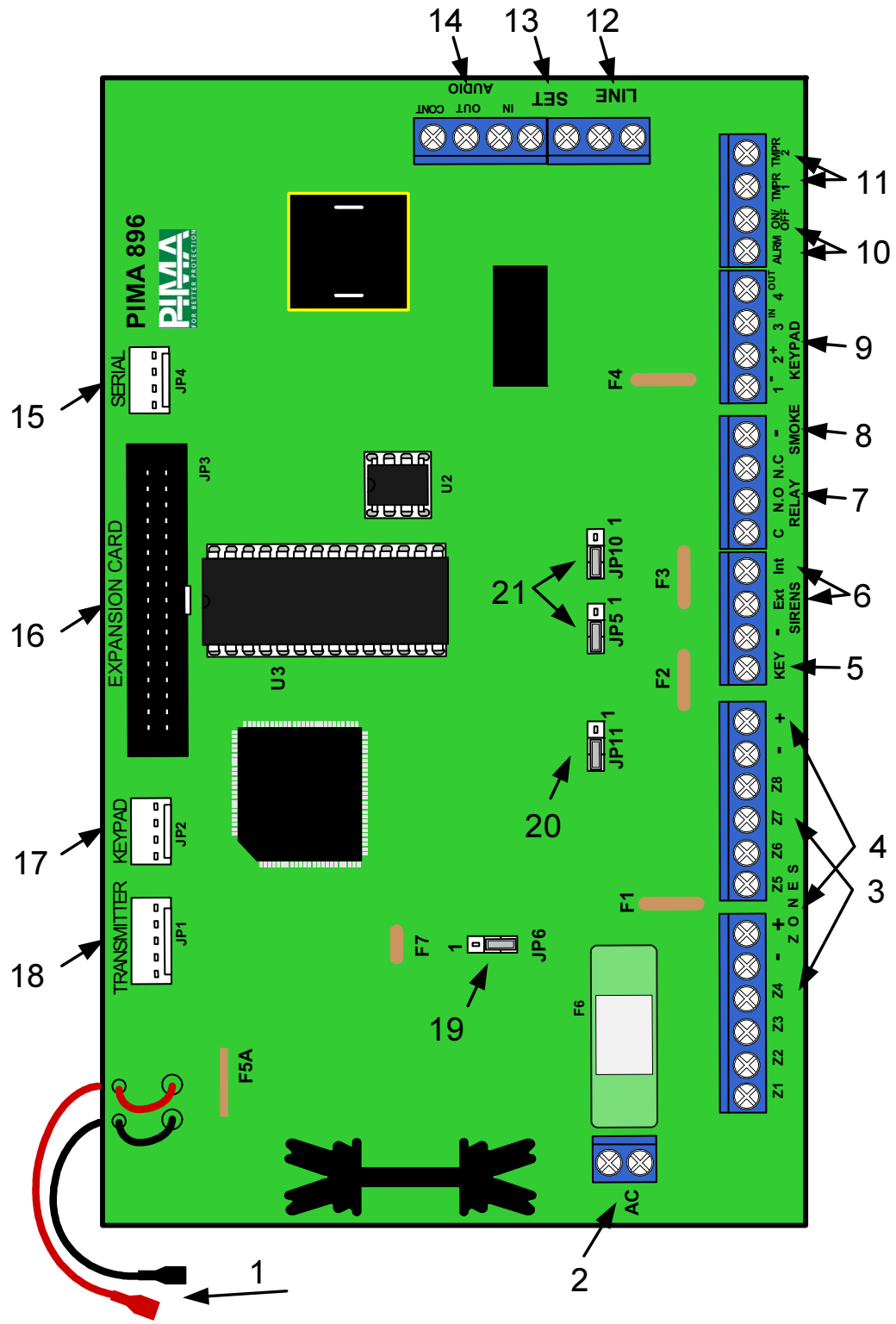


Figure 1. HUNTER-PRO Series PCB

1.6.1 Model & Version

The PCB/System model (832, 896 or 8144) is printed on a colored sticker on the EPROM.

- **A model can be expanded to its limit number of zones and users. For example, Hunter-Pro 896 cannot be expanded to 97 zones or 97 users**
- **The EPROM version and the system's software version must match, or a 'System Error' is displayed. For example, the Hunter-Pro 896 EPROM cannot be used with a Hunter-Pro 832 software**

1.6.2 Fuses

F5A - protects the PCB and the battery from high current (Thermo 5A/250VAC)

F6 - protects the PCB from an AC short (Fast 3.15A/250 V

1.6.2.1 Thermal Fuses to limit current:

F1 – Detectors power supply (750mA)

F2, F3 – Siren 1 and Siren 2 (1.1A)

F4 – Keypad power supply (750mA)

F7 – Radio transmitter protection (200mA)

1.6.3 Connections & Terminals

1 AC: Voltage Input

14VAC input supplied by a transformer

2 "+", "-": Connections to backup Battery

Red wire: "+" (positive) contact of the battery

Black wire: "-" (negative) contact of the battery

Connecting the battery inverted will damage the PCB

3 Z1–Z8: Zones terminals

Eight zone terminals for connecting dry contact detectors. Each zone can be protected by a single or double EOL resistors (refer to "Connecting Zones", section 3.1)

4 (+): Power Supply for DC Detectors

12V power supply for DC detectors: infrared, ultrasonic, beam etc.

5 KEY input

An input for momentary or on/off keys or Key fob for arming/disarming the panel

6 Ext., Int.: External & Internal Sirens terminals

Dedicated automatic thermal fuses (F2 and F3) for the sirens (see section 3.6)

7 RELAY output

An onboard relay that can be triggered in response to alarm/event and via telephone or remote control

8 SMOKE output

An output used to reset smoke/anti mask detectors. Normally, the output is switched to (-). In alarm, it is disconnected for a predetermined period of time (See section 5.6.2). To reset manually: ☞ [#]

9 KEYPAD terminals

There are 4 KEYPAD terminals:
"+" & "–" for keypads power supply; Up to 8 monitored RXN-400/410 LCD keypads can be connected simultaneously, as well as the wireless receiver I/O-WN and I/O-8N/16/R expanders.
IN/OUT for data transfer to/from the keypad. Thermal fuse F4 protects the 13.8 VDC power supply.

10 ALRM and ON/OFF outputs

ALRM – Is switched by default to (-) when alarm occurs;
ON/OFF – Is switched by default to (-) when the system is armed.

These terminals have two conditions: disconnection or short to ground. They can serve as indicators to auxiliary units and to system or alarm status, or other modes (see section 5.9.1).

11 TMPR1 and TMPR2: Input terminals for Tampers switches

Input terminals for tamper switches in detectors and cases. The switches can be connected with EOL resistors. They can also serve as monitoring indicators for 24 hour zones, panic buttons etc. TMPR 2 input can serve as zone #9 (see section 3.2.2).

12 LINE: Telephone line terminal

The telephone line is used both for dialing and receiving remote programming calls. If the telephone line is used by other accessories, it is recommended that the system will be the first to connect to the line.

13 SET: Telephone set terminal

Two outputs for connecting appliances such as answering machine and fax. All devices will be disconnected by the system when it requires the telephone line.

14 AUD IN, AUD OUT, CONT: Microphone and Voice Unit Connectors

CONT is used for controlling voice unit (VU-20N) and microphone (MIC-200). Only one device can be connected at a time.

AUD IN is used for 2 purposes: receiving information from audio resources and sending SMS messages using SMS-100.

15 TRANSMITTER: Radio, GSM-200 & SMS-100 unit

TRANSMITTER is a connector to PIMA long-range radio transmitters TRU/TRV-100, to the cellular transmitter GSM-200 (see section 3.12) and to the SMS-100 PSTN SMS unit.

- GSM-200 and SMS-100 cannot be installed simultaneously
- To connect a radio transmitter other than PIMA's use TX-1000 adaptor

16 KEYPAD: Technician keypad Molex terminal

A terminal for connecting a technician keypad (using the TC-3 cable)

17 Expansion Cards terminal

Connector to OUT-1000 and EXP-PRO UNIV expansion cards

18 SERIAL terminal

Used for connecting to TCP/IP communication.

19 JP5, JP10: Siren Type Jumpers

Set the siren type in conjunction with JP6 (See section 3.5).

20 JP6: Siren Power Source

See section 3.5

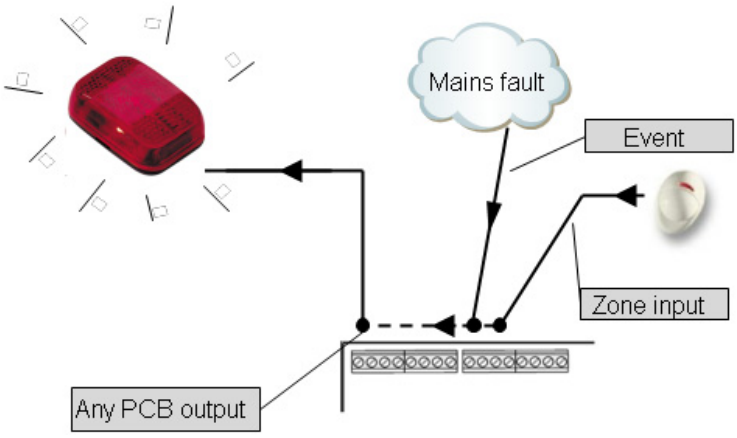
1.7 PCB Outputs and Output Types

Unlike in previous PIMA alarm systems such as the Hunter-Pro 32, the responses to events in the Hunter-Pro series are determined through a set of new functions called 'output types'. These are made of zone types and system events (more than 30 in all) that trigger the PCB outputs.

A PCB output can only be triggered by one output type, but an output type can trigger one or any of the PCB outputs.

Regardless of the printed output name, there is no limit as to what device can be connected to which output: a bell/bulb can be connected to the RELAY output or to the ON/OFF output, as long as the output type that should trigger it is linked to the right PCB output.

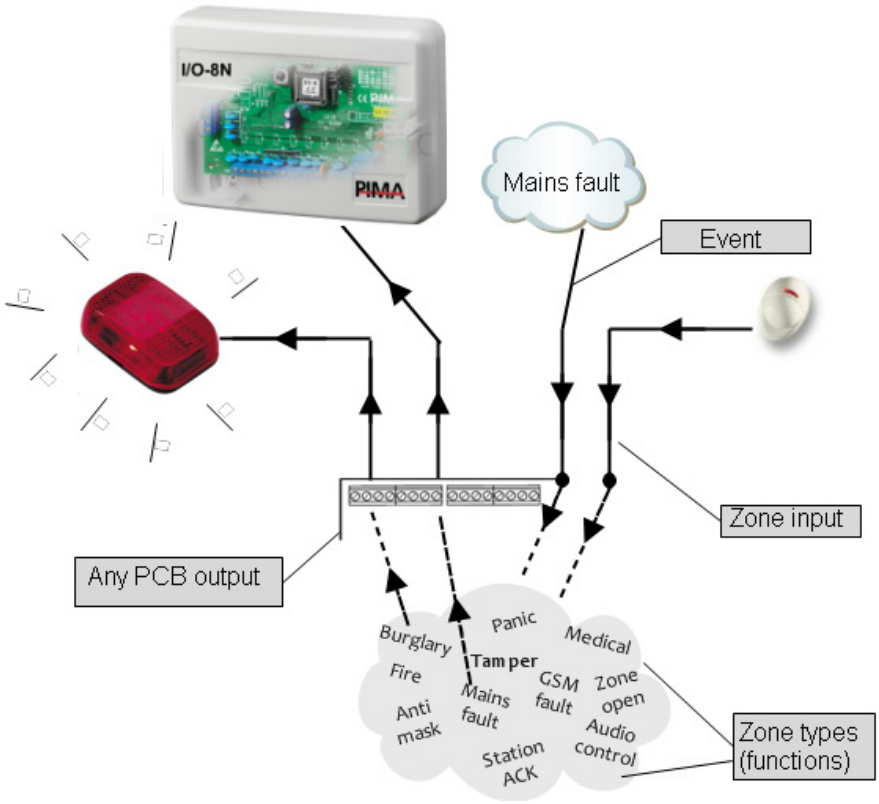
Hunter-Pro 32 mode of operation



An Alarm signal is received in the panel. Subject to the programmed response of the zone it came from, a physical PCB output is tripped. For example, the Burglary zone (type) is programmed to trigger the onboard relay and therefore, an alarm from any Burglary zone will trip the relay.

In the same manner the mains fault event can also trigger the relay. The only disadvantage is when only one zone type or event needs to trigger the relay: the technician should then verify that no other event or zone type is programmed to trigger the same output.

Hunter-Pro series mode of operation



The HUNTER-PRO series introduces a new concept, in which functions called 'output type', which represent various events or zone types in the system, are linked to the PCB physical outputs.
Through the 'Output configuration' menu (#7) an output type is linked to a certain PCB output (Relay, Ext. Siren, Smoke, Alarm, etc.) and by that, whenever an event that relates to this 'output type' occurs, the PCB output that is linked to is tripped. An example scenario goes like this:
A Panic signal (from a Panic zone or the keypad or a wireless device) is received in the panel. 'Panic' is one of the 30 and more 'Output types'. The Panic output type was previously linked to output #2 in I/O-8N expander and since so, it triggers that output and will continue to do so anytime a Panic alarm is generated.
In this mode, each physical output can be tripped by one and only one 'output type'. For example, Alarm and Low Battery output types, cannot both trip the ON/OFF onboard output.
This makes the HUNTER-PRO series a very versatile system in handling and responding to alarms and events. It is for the technician to decide how to handle each one.
Among the new 'output types' are: Panic, Fire, Anti mask, GSM fault, Medical, Station ACK. See section 5.9.2.

CH. 2. PARTITIONING

2.1 Introduction

A partition is a sub-division of the system, made of several zones. By using partitions you can control user access authorizations. Each partition can be controlled by one or more keypads and a user can be given a code that will allow him to control only a specific partition in a specified time frame.

HUNTER-PRO series can have up to 16 partitions and 8 keypads (i.e. monitored keypads). A keypad can control one or more partitions.

2.2 Examples

2.2.1 Example A

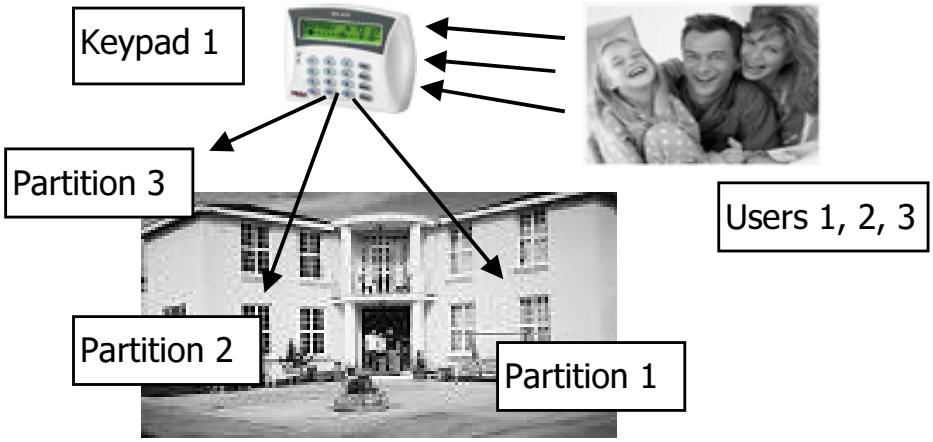


Figure 2. Implementing partitions - Example A

In example A, keypad 1 controls all 3 partitions and is used by all 3 users.

2.2.1.1 Common Application for Example A

Every office is defined as a partition

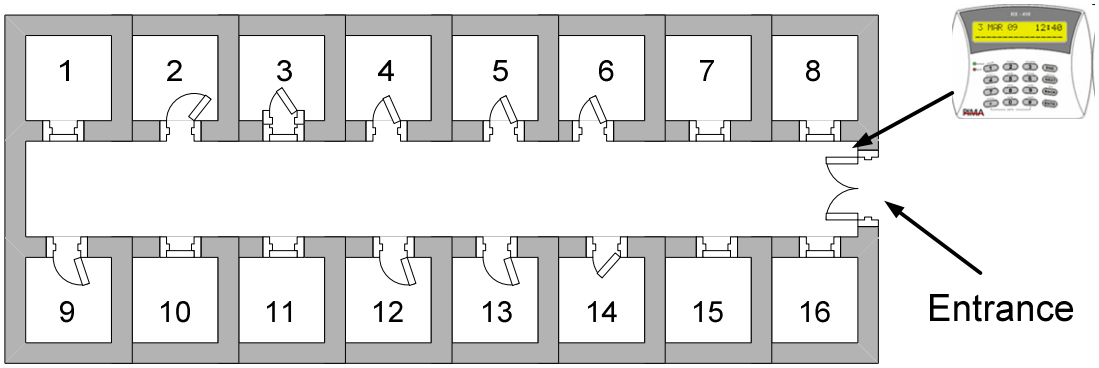


Figure 3. An office facility divided into rooms/partitions

A floor in an office building has 16 rooms. Each room is programmed as a partition and can have different User Codes/Remote Controls/TAGs for arming/disarming the system. A single keypad is installed at the entrance of the hallway. In this case, the keypad will display the entire system's status.

A detector located next to the entrance and allocated to all partitions protects the entrance, as soon as all partitions are armed. This zone will be unarmed as soon as the first partition is disarmed.

2.2.2 Example B

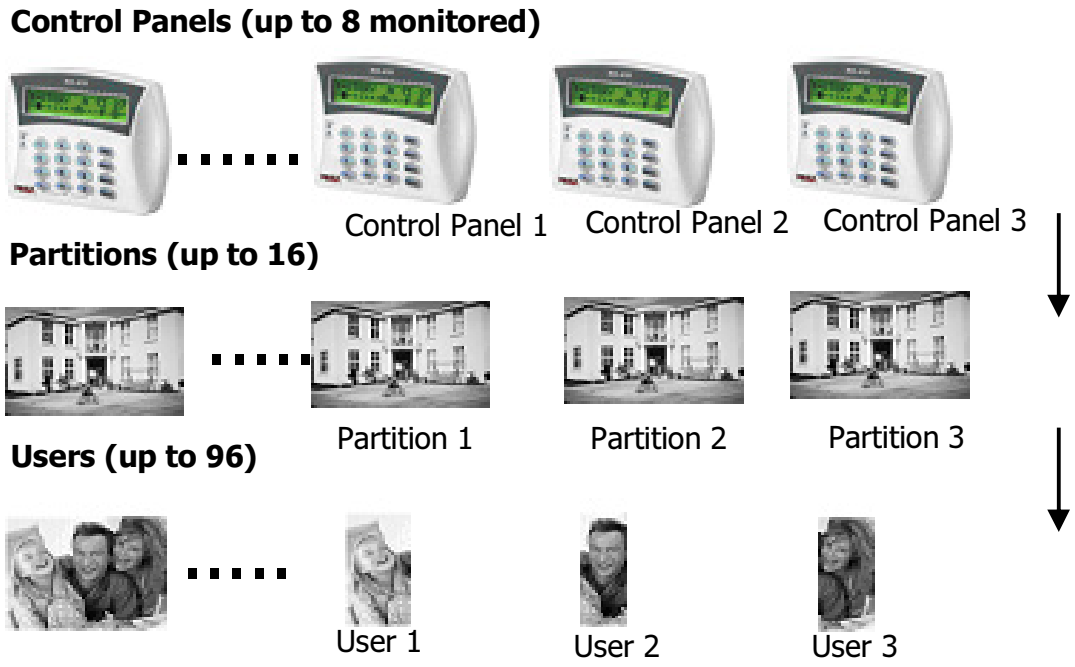


Figure 4. Implementing partitions - Example B

The system is divided into X partitions, each partition is controlled by its keypad/s (defined in "System Installation/Keypads Setup/Partitions for RKD"). A User Code has access authorizations based on partition/s (defined in User Menu/Code/User Codes/Partitioning), e.g. User 1 can only activate Partition 1 & 5. That implies for arming/disarming too.

A keypad displays the status of its authorized partition's only.

2.2.2.1 Common Application for Example B

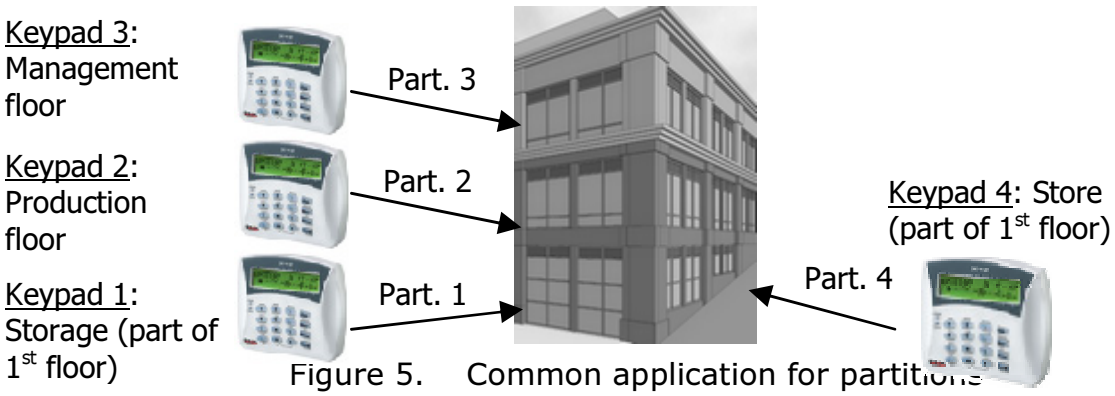


Figure 5. Common application for partitions

An office building is divided into 4 departments with different entrances and different working hours:

Each department has its keypad: Keypad 1 controls partition 1 (store/storage floor), Keypad 2 controls partition 2 (production floor), Keypad 3 controls partition 3 (management floor), Keypad 4 controls partition 4 (storage/store floor)

Employees (i.e. users) can have access only to their partition, or to several partitions.

2.2.3 Example C

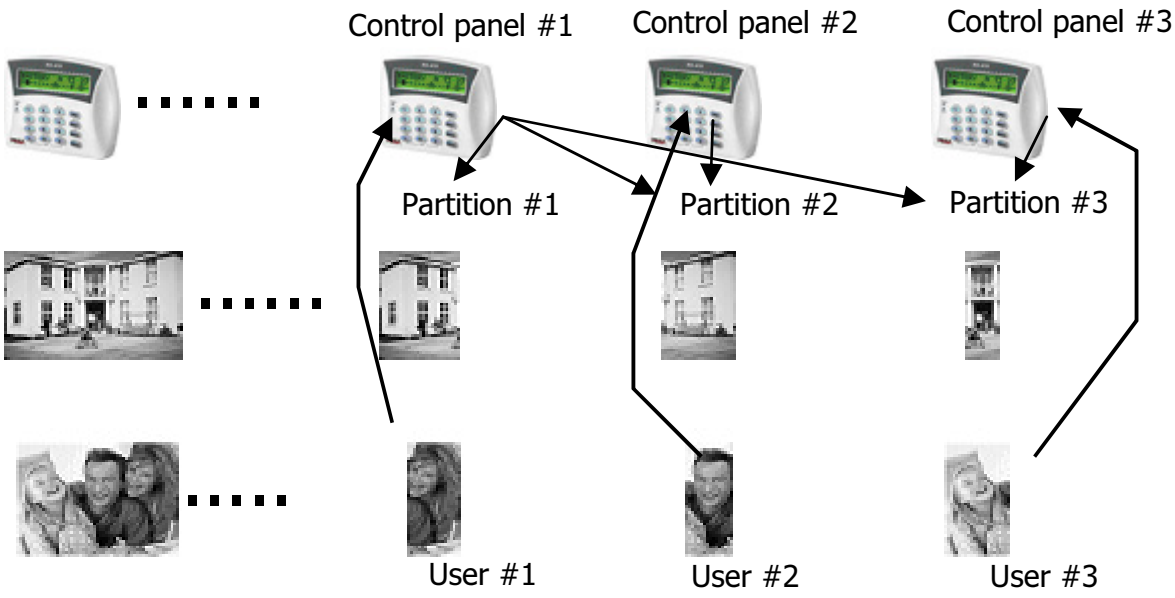


Figure 6. Implementing partitions - Example C

A private home has 3 floors: the first floor is defined as Partition #1, the second floor is Partition #2, and the third floor is Partition #3.

Keypad #1 controls all #3 partitions (& displays their status)

Keypad #2 controls partition #2 only (& displays its status only)

Keypad #3 controls partition #3 only (& displays its status only)

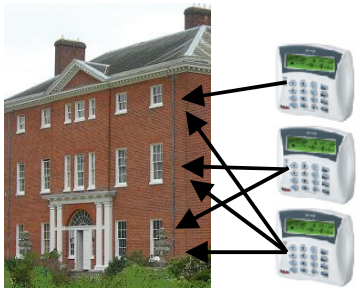
User #1 can control partitions #1, #2, #3 using keypad #1

User #2 can activate partition #2 with keypads #1, #2

User #3 can activate partition #3 with keypads #1, #3

2.2.3.1 Common Application for Example C

3rd floor: part. 1
2nd floor: part. 2
1st floor: part. 1



Users can be given different access authorization levels with regard to keypad/floor/partition

Figure 7. Common application for partitions

A user can control several partitions using a single code

CH. 3. CONNECTING ZONES & ACCESSORIES

Connect the accessories according to the following scheme and instructions:

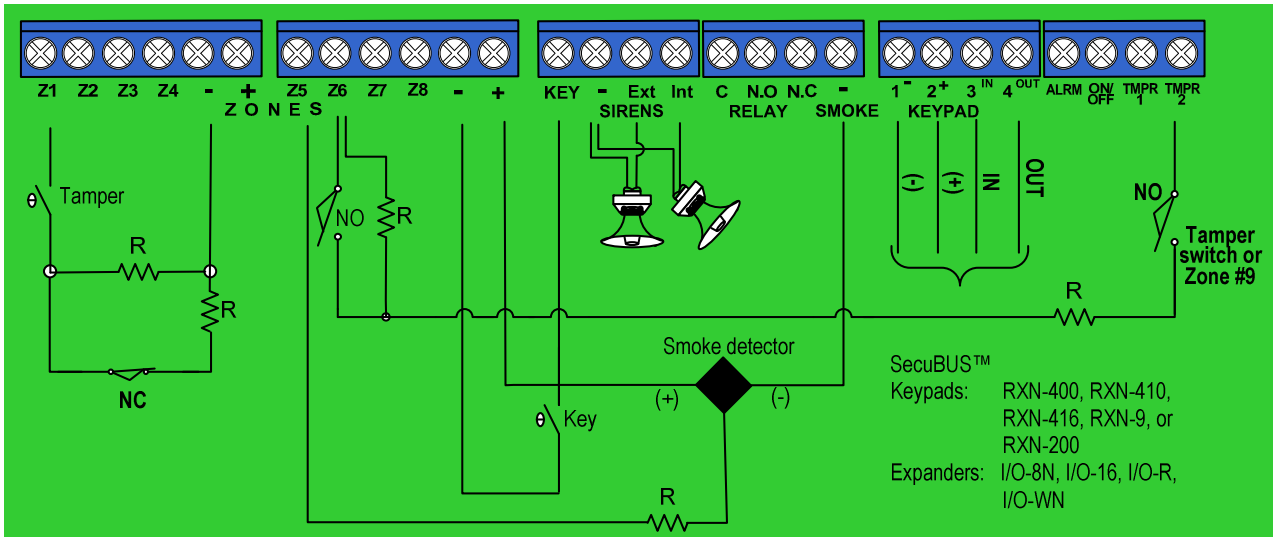


Figure 8. Connections scheme

- The overall length of the wirings connected to the SecuBus™ cannot exceed 500 meters (call PIMA support when longer distance is required)
- The SecuBus™ uses PIMA proprietary protocol

3.1 Connecting Zones

Disconnect all power supply prior to installation!

3.1.1 Zones Inputs

The system's default zone protection is without EOL (End of Line) resistor/s. A Zone protection can have either one or two EOLs.
The detectors' type and whether they are connected with or without EOL resistors are set in "Zone Characteristics" (see section 5.4.1). The number of EOL resistors is set to all EOL zones and is programmed in "General Parameters" (section 5.7). For zone programming refer to sections 5.4 & 5.7.

3.1.2 Connecting a Detector (without EOL)

Connecting N.C. detector with no EOL resistor is done according to the following diagram. The tamper can be connected in one of two ways:

A. To the TMPR input on the system's PCB.

B. As a "24 hours" separate zone.

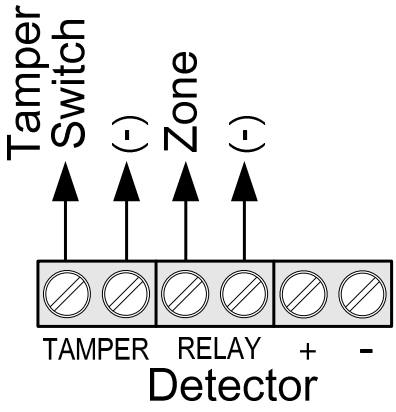


Figure 9. Connecting DEFENDER PIR without EOL resistor

3.1.3 Connecting a Detector using a Single EOL

Connecting N.C. detector with a single EOL resistor is done according to the next diagrams. The tamper needs be connected to the TMPR input on the control panel's PCB or as a "24 hours" separate

When connecting N.O. detector, configure the zone input accordingly (see section 5.4.1(

3.1.3.1 Connecting EOL resistor to N.C. DEFENDER PIR

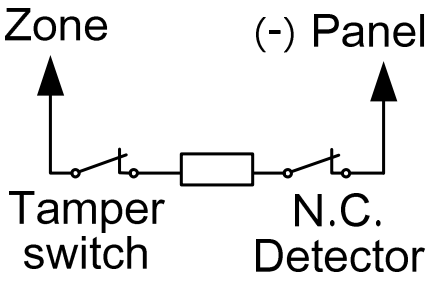


Figure 10. One EOL resistor connected to N.C. detector

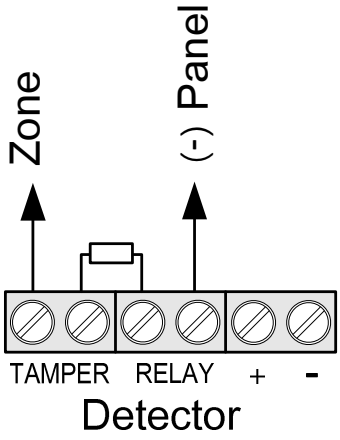


Figure 11. One EOL resistor in serial to the relay and the tamper

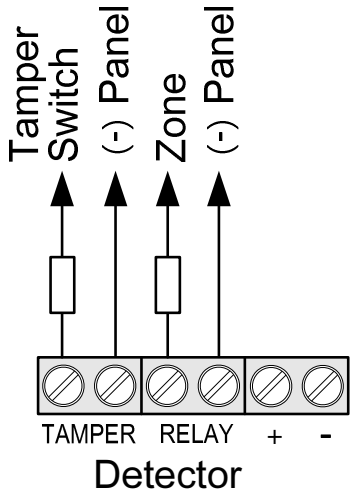


Figure 12. Separate connections for the relay and the tamper, each with its EOL resistor

3.1.3.2 Connecting EOL resistor to N.O. DEFENDER PIR Detector

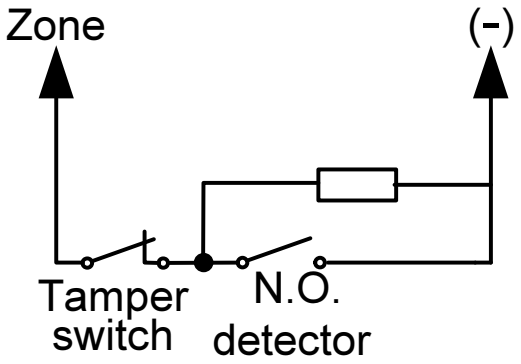


Figure 13. One EOL resistor connected to N.O. detector

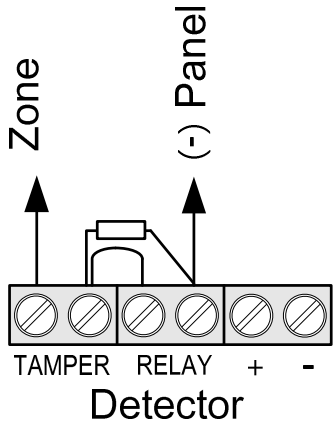


Figure 14. One EOL resistor in serial to the relay and the tamper

3.1.4 Connecting a Detector using 2 EOL resistors

Apart from the tamper connection there is no difference whether the detector is a N.O. or N.C. one. Connecting a detector with two EOL resistors is done according to the next diagrams.

2 EOL Resistors with DEFENDER PIR (N.C. or N.O.) & Tamper (N.C.)

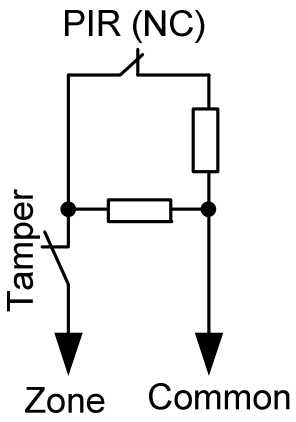


Figure 15. 2 EOL resistors with an N.C. detector and tamper

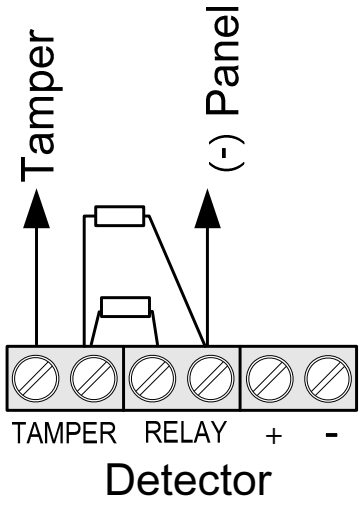


Figure 16. 2 EOL resistors connected to a tamper in serial to the relay output

3.2 Connecting Zone Expanders

The HUNTER-PRO series has 8 onboard zones. These can be expanded by using different expansion cards and add-on devices. The following is a brief scan of the zone and outputs expansion options. A detailed installation description is found further on.

EXP-PRO UNIV	Local expansion card with 8 hardwired zones. These zones will always be numbered 9-16. See further on page 23.
I/O-8N	8 zones and a relay. It connects to the KEYPAD connections of the control panel's PCB.
I/O-16	Expansion card with 16 zones and a relay. It connects to the KEYPAD connections of the control panel's PCB.
I/O-WN	Wireless expansion card with wireless receiver. The receiver supports 32 wireless zones as well as 24 key fobs, for arming/disarming, send duress code and trigger the onboard output.
OUT-1000	Expansion card with 8 outputs for triggering external units. See page 31 for connecting instructions.
I/O-R	Expansion card with 8 relays for operating CCTV and spotlights etc. The relays can be triggered directly or in respond to alarm. See more on page 26.

When connecting both hardwire and wireless expanders, the system first numbers the hardwire zones and only then the wireless zones. Within the line expanders, the system first numbers the EXP-PRO UNIV expander, if installed. Only afterwards the other expanders are numbered.
The expanders connected through the BUS are numbered in ascending order according to their ID

3.2.1.1 Max. no. of expanders

I/O-8N expanders:

- In Hunter-Pro 832: 3 expanders in total, 2 if EXP-PRO UNIV is installed
- In HUNTER-PRO 896: 11 expanders in total, 10 if EXP-PRO UNIV is installed
- In Hunter-Pro 8144: 16 expanders in total, 15 if EXP-PRO UNIV is installed

I/O-16 expanders:

- In Hunter-Pro 832: A single expander
- In HUNTER-PRO 896: 5 expanders
- In Hunter-Pro 8144: 8 expanders

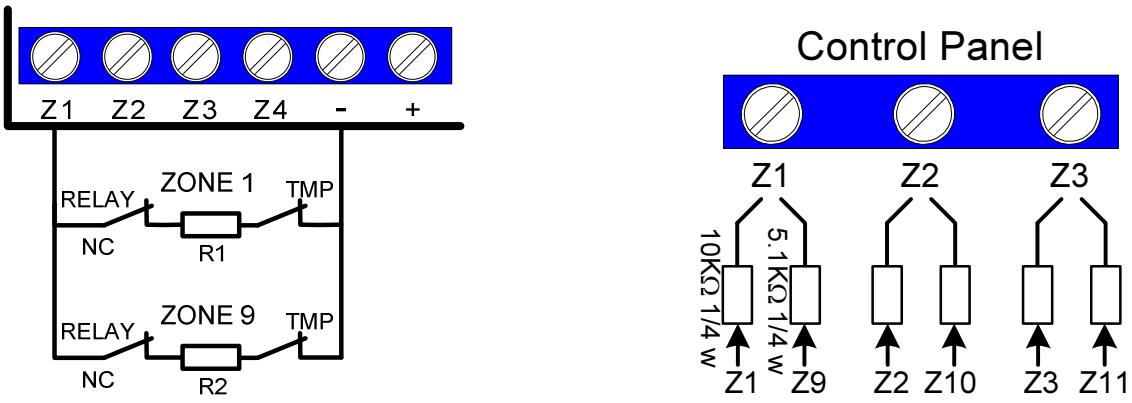
3.2.2 Tamper #2 Input Configured as Zone #9

The onboard TMPR #2 input can serve as a zone (#9), giving no expander is connected to the system and TMPR #2 is set accordingly in "General Parameters" (see parameter "2", in General Parameters First Screen, page 69).

3.2.3 Zone Doubling

The 8 onboard zones can be doubled to 16 by using different resistors, so zone #1 input is used by both zone #1 and zone #9, zone #2 input is used by both zone #2 and zone #10 etc., up to zone #16.

Zone doubling cannot be enabled if any expander is connected to the system



3.2.4 EXP-PRO UNIV

1. Connect the card to the system case, using the 2 supplied screws.
2. Use the supplied flat cable to connect the card to PCB's Expansion Card socket (see the following drawing)
3. To configure the EXP-PRO UNIV, refer to section 5.3.2.

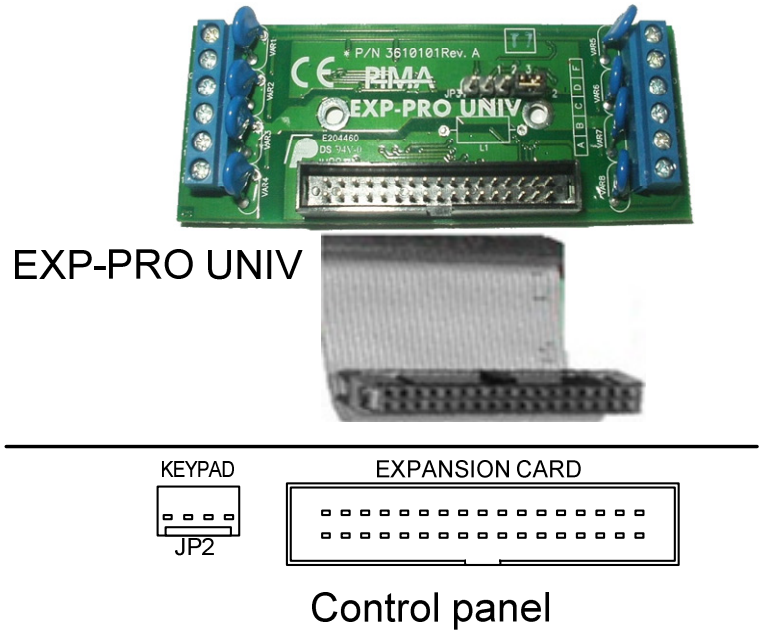
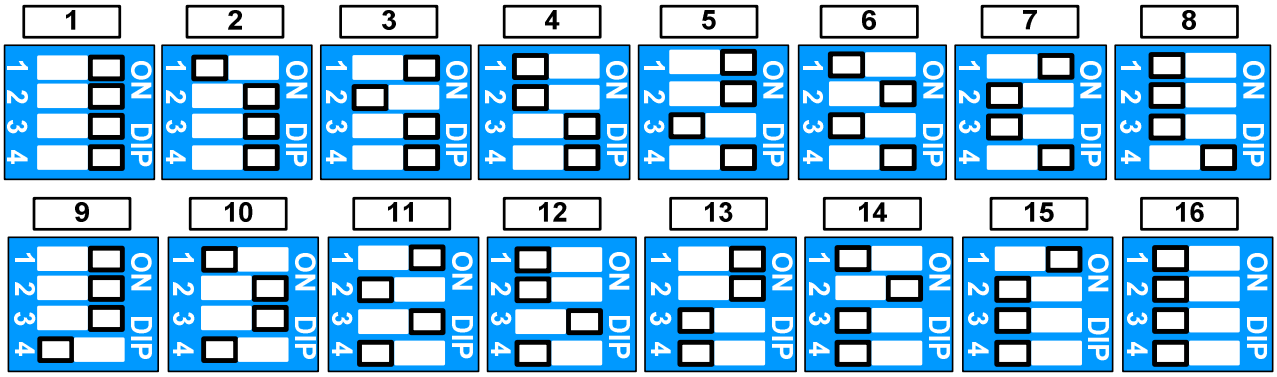


Figure 17. Connecting EXP-PRO UNIV to the PCB

3.2.5 I/O-8N, I/O-16, I/O-R

Each card must have a unique ID, determined by its dip-switch:



- 2 cards cannot have the same ID
- I/O-8N IDs must be successive. The I/O-16 IDs are 1, 3, 5, 7 or 2 ,4 ,6 etc.

3.2.5.1 Expanders' Numbering

Under the HUNTER-PRO series system, every 8 zones must have a unique ID; Therefore, I/O-16 takes two IDs. Here's an example for numbering few expansion cards:

Card #1	Card #2	Card #3	Card #4
I/O-8N	I/O-16	I/O-8N	I/O-16
ID=1	IDs=2 and 3	ID=4	IDs=5 and 6

It is recommended to connect all the accessories GND (-) to the system's PCB. That includes power suppliers.

3.2.5.2 Examples of expanders and zone numbering:

Single I/O-8N/R card:

- If EXP-PRO UNIV is installed: is numbered 17-24
- If EXP-PRO UNIV is not installed: is numbered 9-16.

Two I/O-8N/R cards (16 zones):

- If EXP-PRO UNIV is installed: are numbered 17-32
- If EXP-PRO UNIV is not installed: are numbered 9-24.

Two I/O-16 cards (32 zones)

- If EXP-PRO UNIV is installed: are numbered 17-48
- If EXP-PRO UNIV is not installed: are numbered 9-40.

Single I/O-WN card (32 wireless zones):

- If EXP-PRO UNIV and 2 I/O-8N cards are installed (32 zones in total) the I/O-WN zones will be numbered 33-64.

Follow the information in the next pages for connecting expansion cards. To program the number of expansion cards, refer to section 5.4.

3.2.5.3 I/O-8N: 8 zones & a relay expansion card

I/O-8N has three LEDs described in the following table:

LED	STATUS	DESCRIPTION
RUN (Green)	ON	Card works OK
	OFF	Voltage fault
MASTER DATA (Red)	Flashes	Normal mode. LED flashes while data is transferred from the control panel to the card
	ON	Communication fault (disconnection)
	OFF	Communication fault (short)
FAIL (Red)	Flashes once a second	Data fault (expander does not receive communication from control panel)
	Flashes twice a second	Communication fault (check in the display)

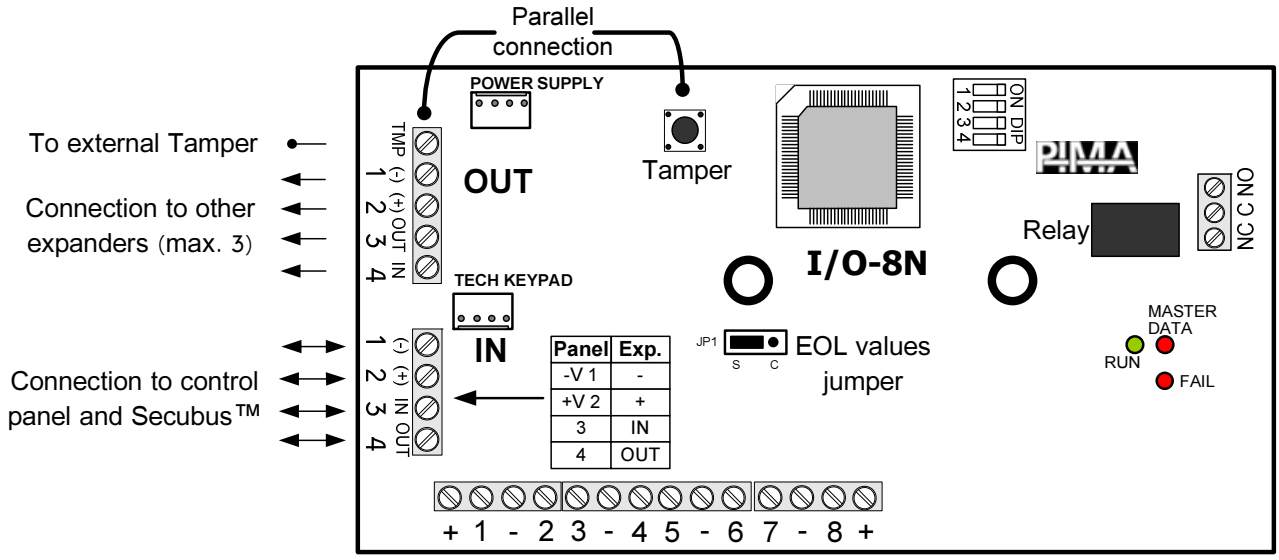


Figure 18. I/O-8N PCB

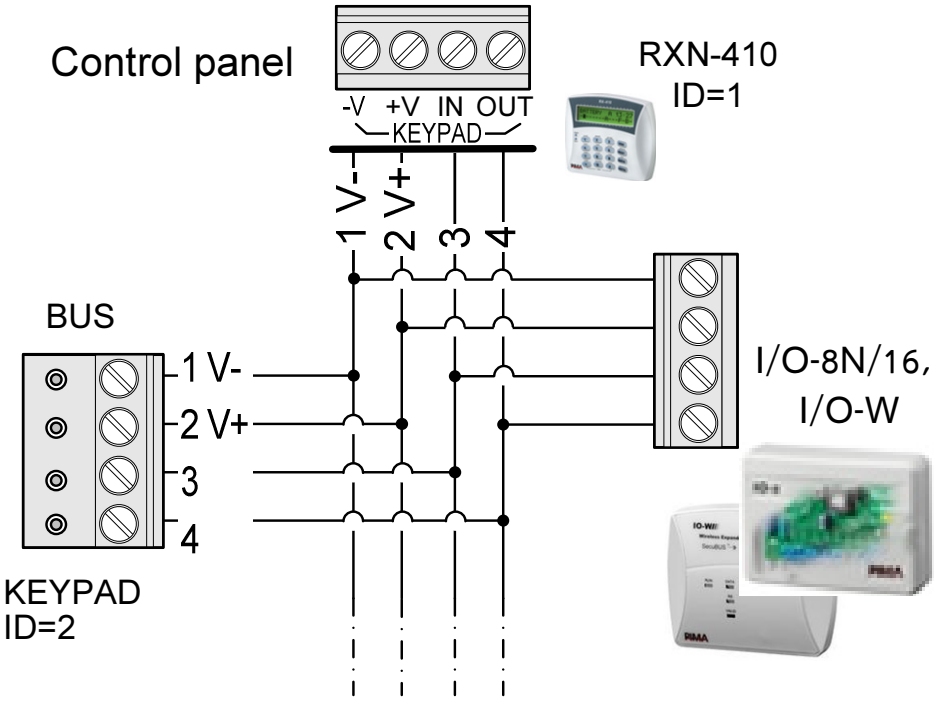


Figure 19. Connecting external expansion cards on control panel BUS

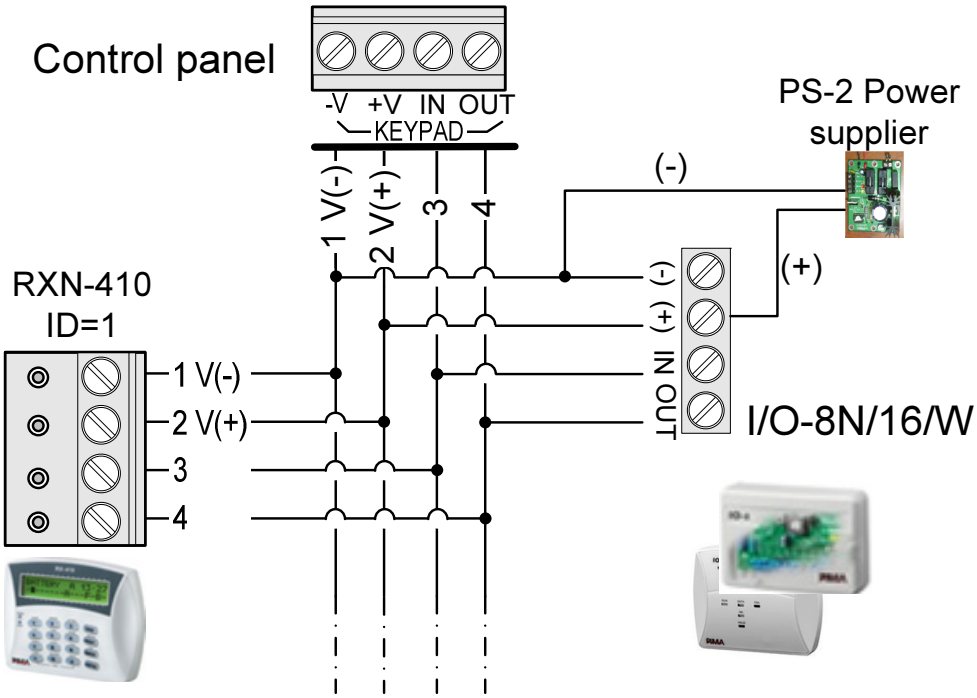


Figure 20. Connecting external expansion cards to control panel BUS with external power supplier PS-2

3.2.5.4 I/O-16: 16 zones & a relay expansion card

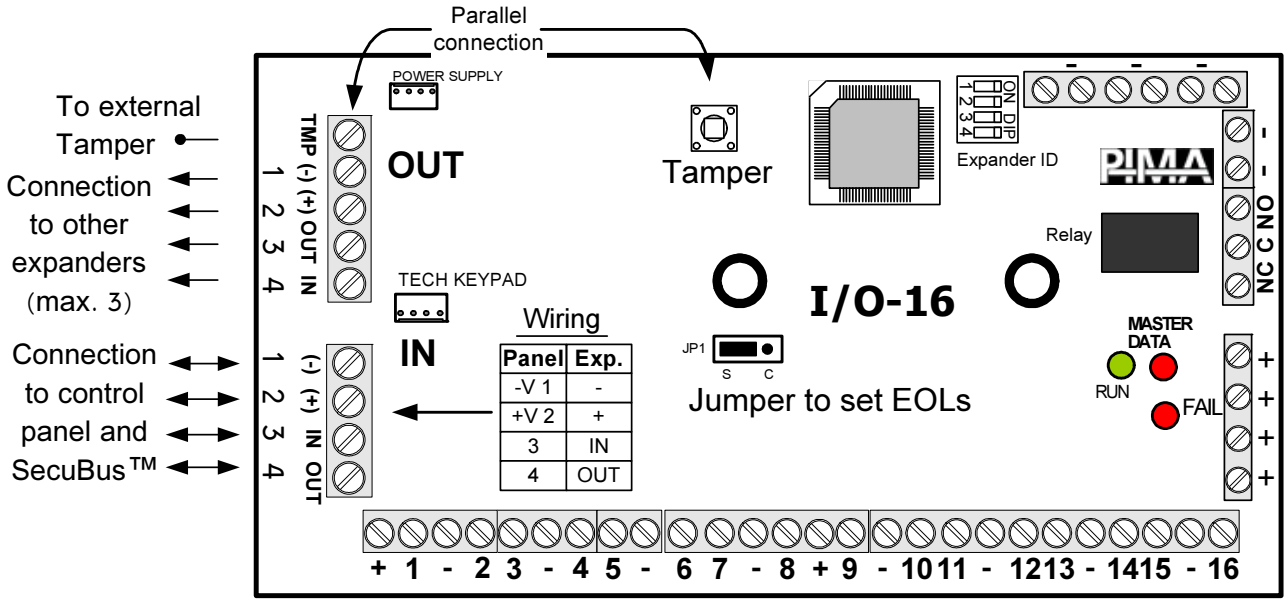
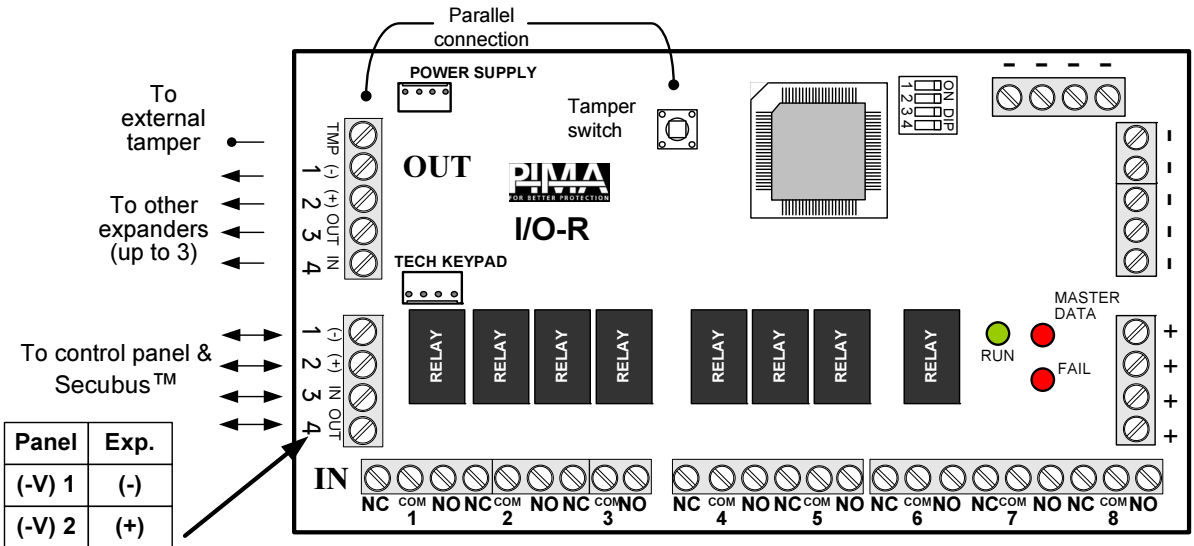


Figure 21. I/O-16 PCB

3.2.5.5 I/O-R: 8 relays expansion card



Panel	Exp.
(-V) 1	(-)
(-V) 2	(+)
3	IN
4	OUT

Figure 22. I/O-R PCB

3.2.6 I/O-WN

I/O-WN is a wireless receiver that integrates with HUNTER-PRO Series. It enables the connection of wireless detectors (such as PIR, Reed Switch etc).

See section 3.2 for more details.

I/O-WN connects to the PCB's KEYPAD connections. See the next drawing and the table that follows.

	I/O-WN	Control Panel
1	-V	-
2	+V	+
3	OUT	IN
4	IN	OUT

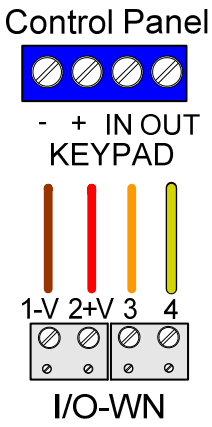


Figure 23. I/O-WN wiring

For further information regarding the I/O-WN, refer to its installation guide

3.2.6.1 I/O-WN LEDs

The I/O-WN has 5 LEDs, described in the following table:

LED	Description	Status	
RUN (Green)	I/O-WN operation and connection to voltage	ON	Card is operating and connected to voltage
		OFF	Fault in the connection to voltage
		Flashes	Fault in card voltage
DATA (Red)	I/O-WN connection to control panel	ON	Communication fault
		OFF	Short in communication wiring
		Flashes	Data connection is OK
RX (Red)	Receiving transmission	Flashes	The card is receiving transmission from a wireless device
		OFF	No transmission is received from any wireless device

LED	Description	Status	
VALID (Green)	Acquiring a signal from wireless devices	Flashes	Signal has been acquired
		OFF	Signal has not been acquired (no reception from the wireless device)
FAIL (Red)	Communication failure with the control panel	One	No valid frame is received from the panel
		2 long flashes	No ACK is received from the panel
		3 long flashes	The card is not programmed
		4 long flashes	General/Fatal error. Occurs when no communication is received for one minute

3.3 Connecting a Key

Connect a key or Key fob according to the next diagrams. The key can be set as momentary or ON/OFF switch. The default is momentary.

Figure 24. Connecting a key

3.4 TMPR1, TMPR2: Tamper Switches

In addition to cases and boxes protection, the tampers can be used for panic buttons, sensors (temperature, pressure etc.) with dry contact outputs and more.

Connect the tamper switch between the TMPR1/TMPR2 connections and ground (–). TMPR1 input is connected to the tamper switch onboard the PCB.
A 10kΩ resistor at the terminal input on the PCB provides a short/disconnect indication, since the tamper switches are NC type.

1. By default, TMPR1 & TMPR2 inputs are enabled and without EOL (see section 5.7.1).
2. To use tamper #2 as zone #9, see section 5.7.1

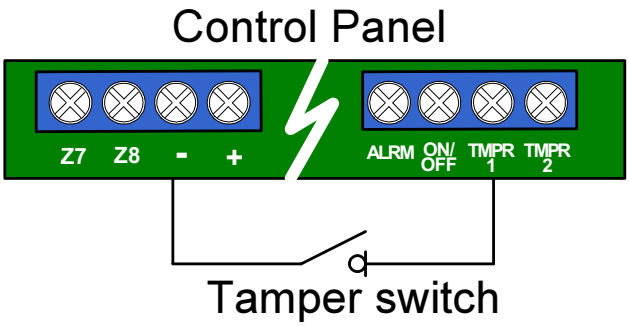


Figure 25. Connecting a tamper switch

3.5 Connecting Sirens

Two siren types can be connected to the HUNTER-PRO series control panel:

1. AC Siren**:** This is usually a horn or 8Ω speaker, driven by the control panel's built-in oscillator.

The AC siren can produce 2 different tones (frequencies). The tones are predetermined. See section 5.4.2

2. High current DC Siren: This can be a bell or any other high current device with internal oscillator. The control panel supplies 1.1A for activation only.

The sirens outputs are split: JP5 is associated with "Ext." (External) output; JP10 is associated with "Int." (Internal) output.

1. Different siren types cannot be connected simultaneously

2. The external siren cannot be activated without activating the internal one

3.5.1 AC Siren

The siren is connected between the terminal block outputs (Ext. or Int.) and GND (-). Make sure the siren is not set as DC (see section 5.7.1).

3.5.1.1 Setting a different siren tone

The siren's sound is produced by a built-in oscillator and programmed in "Zone Responses" menu. When zone type is programmed, a different siren tone to different zone types can be set (see section 5.4.2).

3.5.1.2 Settings for the AC siren

In "General Parameters", set "D" to "-". This will set the siren to AC (see section 5.7.1).

Set JP5, JP10 & JP6 to short pins 2 & 3.

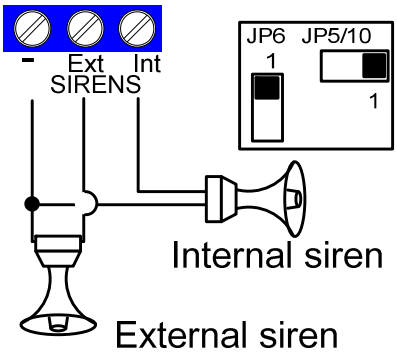


Figure 26. Connecting AC Siren

3.5.2 DC Siren

Connect the siren between the Ext. or Int. terminals and "-".In "General Parameters" screen, set "+" under "D" (see section 5.7.1). This will set the siren as DC.

Set JP5 & JP10 to short pins 2 & 3 and JP6 to short pins 1 & 2.

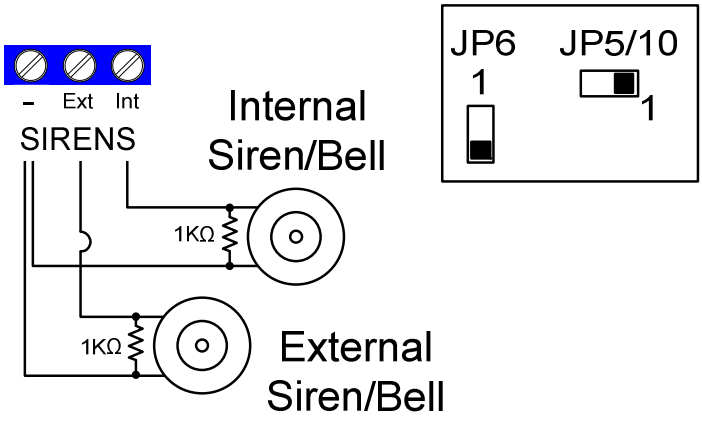


Figure 27. 2 DC/Bell siren wirings

When using a DC siren, it is recommended to connect a 1kΩ EOL resistor to eliminate noises

The following table describes the various siren installation possibilities:

Opt	Siren Type	JP5/ JP10	JP6	Parameter 'D' in "General" menu
1	Speaker: Panel generates a tone. Uses unregulated voltage	2-3	2-3	Set to "-"
2	High current self-activating bell (protected by 1.1A thermal fuse): Uses the panel's battery	2-3	1-2	Set to "+"

3.6 Relay Output

The relay can be used for activating external devices (light, CCTV etc.) and is activated response to alarm/fault, when entering relay code in the keypad and via telephone.

To program Relay Code refer to "HUNTER-PRO SERIES User Manual". To program relay trip time see section 5.6.2.

If the relay timer is programmed to zero, when triggered, it remains tripped until a code is entered or the system is disarmed

3.7 OUT-1000: Local Outputs Expansion Card

OUT-1000 is an 8 TTL outputs card, used to activate peripheral devices such as CCTV, alarm triggered lights, etc. Use the cable to connect the control panel's EXPANTION CARD connector to connect the OUT-1000.

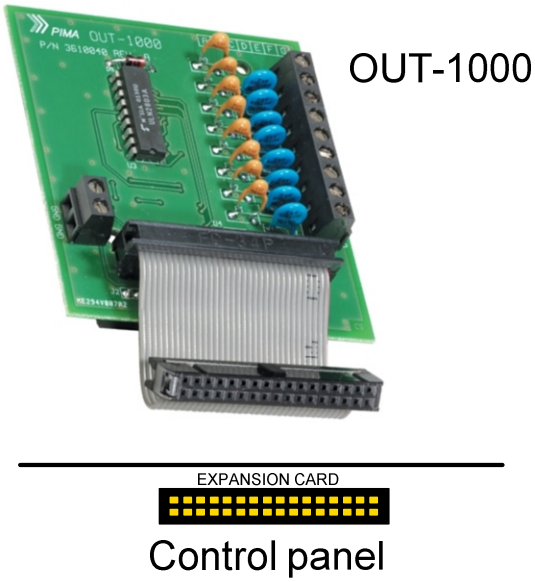


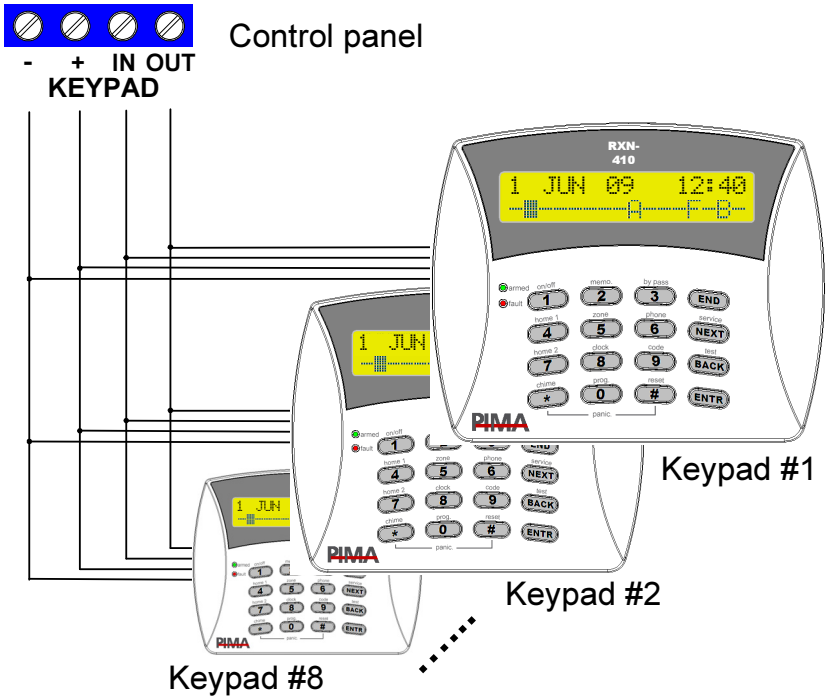
Figure 28. Connecting OUT-1000 to control panel

3.8 Keypads

Reminder: The system can monitor up to 8 keypads

Connect the keypad's wires to the PCB KEYPAD terminals. **The 4 keypad wires must be separated from other wires**

3.8.1 RXN-400 & RXN-410 LCD Keypads (Incl. ACE)



Keypads	Control Panel
-	-
+	+
OUT	IN
IN	OUT

Figure 29. Connecting 8 LCD keypads

To set the keypad's ID:

1) Short JP1 pins 1 & 2
2) The message onscreen should be: "Enter new ID: 0". Enter the new ID (1 to 8)
3) Short JP1 pins 2 & 3 back.
4) Repeat the process above for the remaining keypads. Note that each keypad must have a unique ID and that numbering must be consecutive

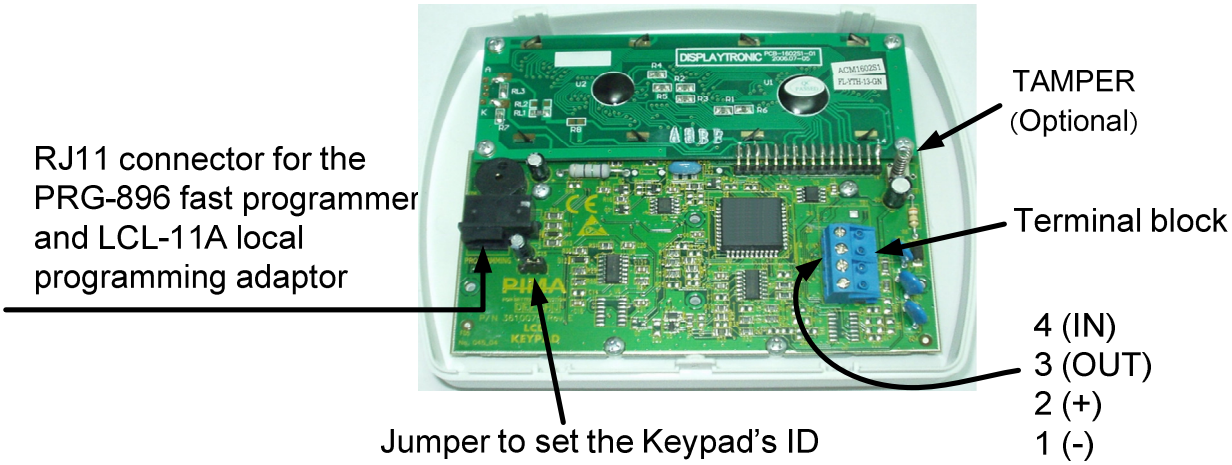


Figure 30. LCD keypad without back cover

1. If keypad supervision is not required, the number of keypads connected to the system (see section 5.3.4) and all keypads' IDs should be set to zero
2. Up to 8 keypads can be connected to the system, whether they are supervised or not

3.9 Telephone Line and Devices

The system should be the first device connected to the telephone line (through the LINE terminals). Other devices (telephone set, answering machine, etc.) need to be connected to the SET terminals to enable "line snapping".

When alarm occurs, these devices will be disconnected so the system can dial and receive calls. When calls are over the line will be reconnected to the SET terminals.

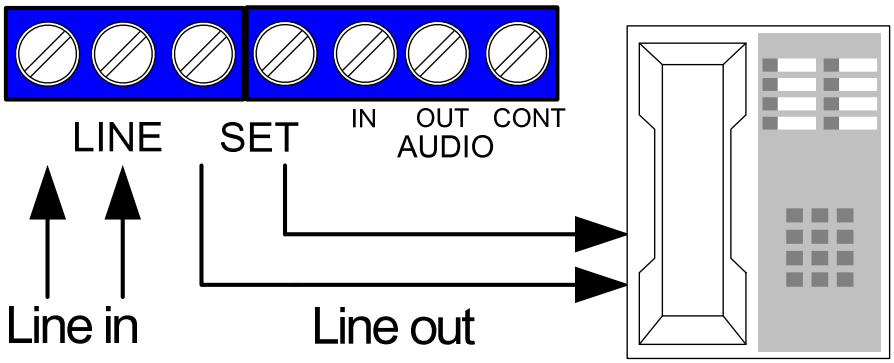


Figure 31. Telephone connections

3.10 VKD-1: Virtual Keypad

VKD-1 is PIMA's software for creating a virtual LCD keypad and connecting it to any PIMA control panel, locally (via cable) or remotely, via the internet. With VKD-1 you can view and control the system just as if you use a real LCD keypad connected to the system.

The VKD-1 can operate any PIMA control panel directly from your PC, is easy to install (does not require any special panel settings), and suitable for new and existing PIMA panels.

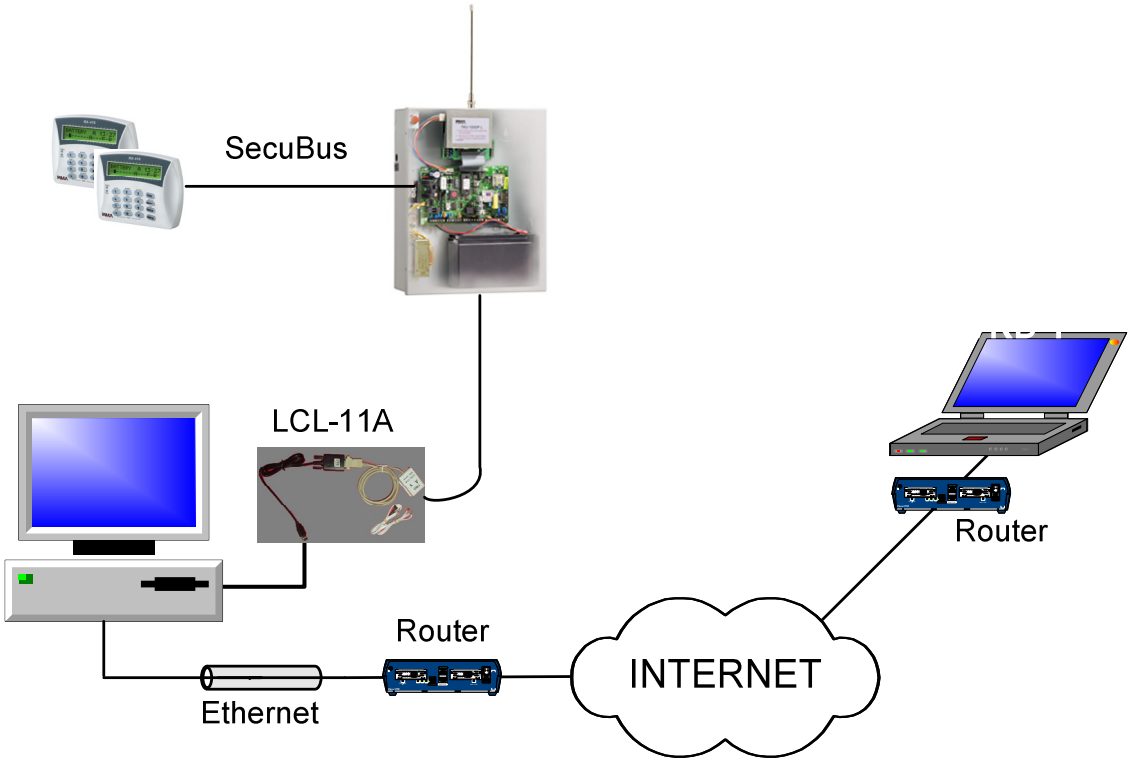


Figure 32. VKD-1 connection diagram

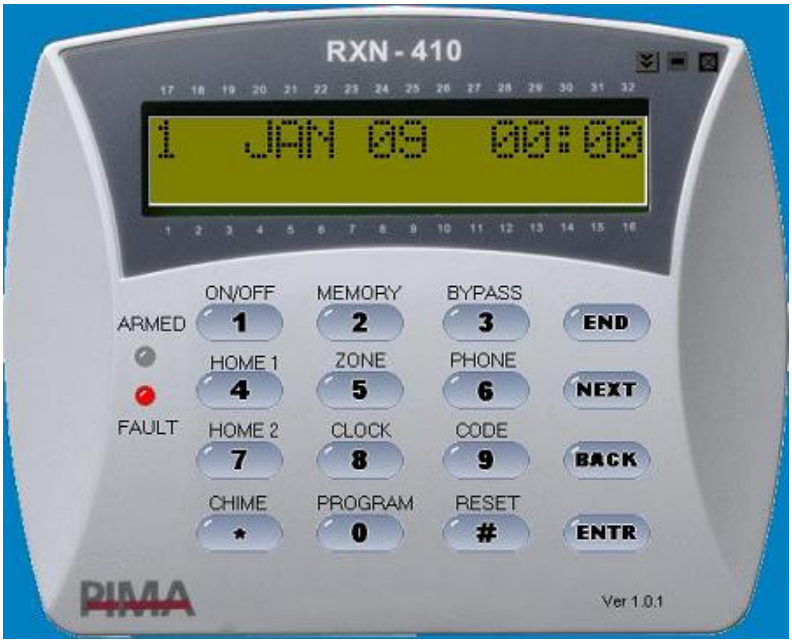


Figure 33. VKD-1 on the desktop

The VKD-1 installation guide can be downloaded from PIMA website at: www.pima-alarms.com

3.11 TRV/TRU-100 Long Range Radio Transmitters

3.11.1 Mounting Guidelines

Following these guidelines will minimize RF interference:

- Do not mount the Panel close to a metal wall or ceiling
- Make sure you leave enough space for the atenna between the metal box and the ceiling
- Install the antenna at a distance from the Control Panel's wiring
- Mount the antenna after you complete all other installations
- Make sure the antenna is not folded and is vertical
- Close the HUNTER-PRO SERIES metal box when performing transmission tests

3.11.2 Connecting the Transmitter

The TRV/TRU-100 can transmit in 2 frequencies

1. Mount the HUNTER-PRO SERIES metal box on a stable surface/ wall
2. Screw the transmitter's 4 screws (at the base) to the system box. Make sure the screws are tightened; else, the transmitter's range can be reduced.
3. Connect the antenna to the transmitter. Make sure the antenna is straight.
4. Make sure the 5-pin cable is connected to the transmitter's Molex (named: "To the system" on the transmitter's sticker.)
5. Connect the other end of the 5-pin cable to the male Molex, placed on the Control Panel's upper left side (named "Transmitter" on the Control Panel.)

<u>To use the second frequency only:</u>

Follow the pervious 1 to 5 instructions, and then:

1. Connect the 2-pin cable to the transmitter's F2 Molex (named F2 on the transmitter's sticker.)
2. Connect the other end of the 2-pin cable to the control panel depends on the desired transmitter operation:

<u>To constantly work with the second frequency:</u>
Connect it to (-) output on the Control Panel.

<u>To work with 2 frequencies according to event type:</u>

1. Connect it to one of the system's outputs, such as ALARM or ON/OFF to one of the PGM outputs: AL/ON/OFF/RELAY.
2. Program these outputs in "Outputs" menu (see section 5.9). The related parameters need to be programmed in "Communication Configuration" menu (see section 5.5.4).

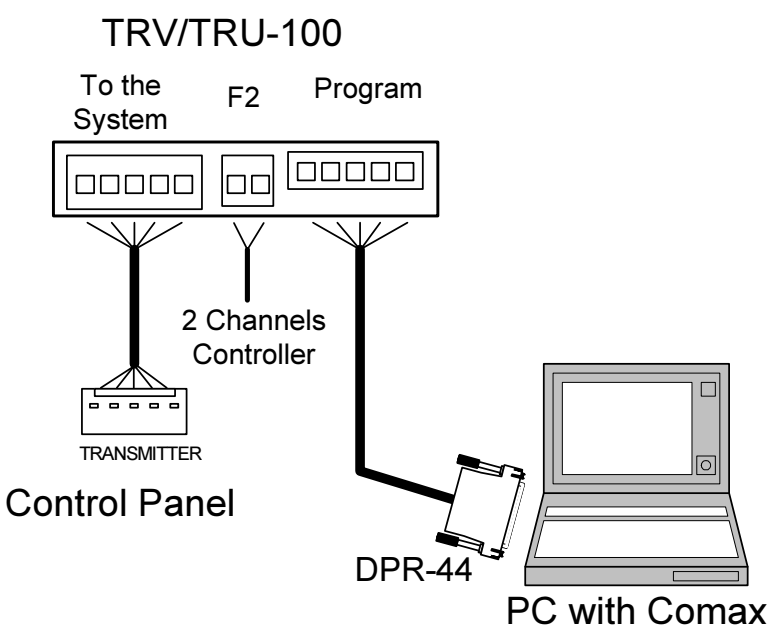


Figure 34. TRV-100 transmitter

Figure 35. TRV/TRU-100 Connections

3.12 GSM-200: Cellular Transmitter

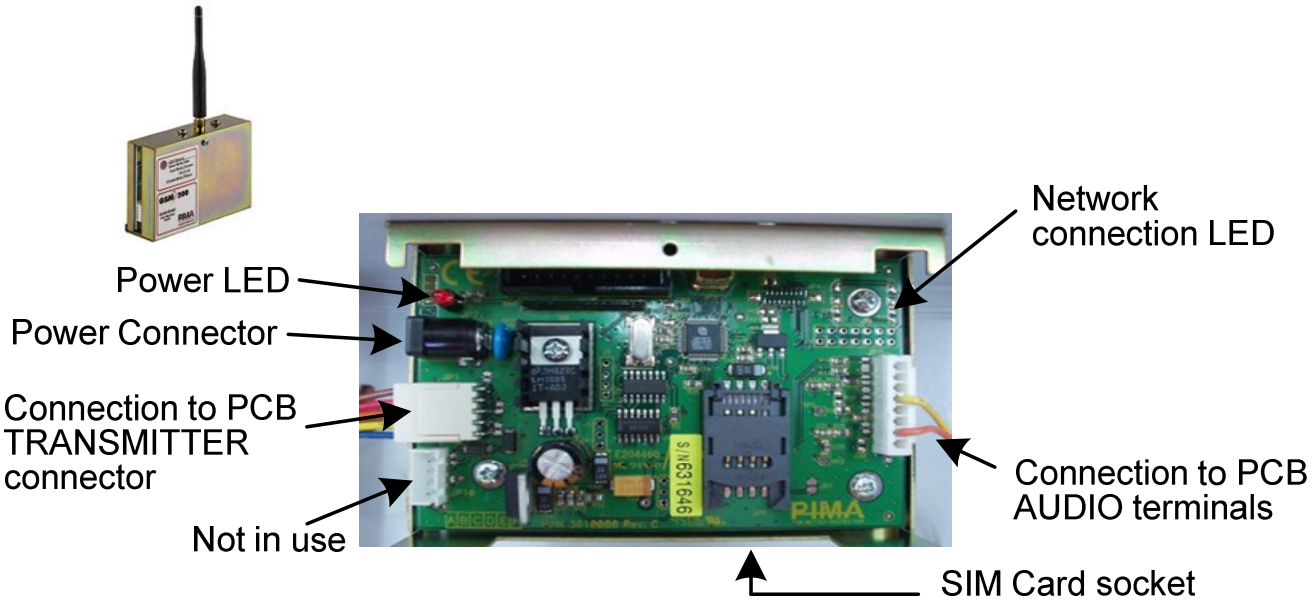


Figure 36. GSM-200 PCB

To prevent RF interference:

- **Do not mount the system close to a metal roof or wall**
- **Check that there is enough space for the antenna between the system and ceiling**
- **Keep wiring as distant as possible from antenna**
- **Install the antenna only after system installation is done**
- **Make sure the antenna is not folded**

3.13 MIC-200: Microphone Unit

1. Connect MIC-200's CON to the control panel's CONT terminal.
2. Connect MIC-200's OUT to the control panel's AUD IN terminal.
3. Connect MIC-200's (-) and (+) to the detectors' power source.

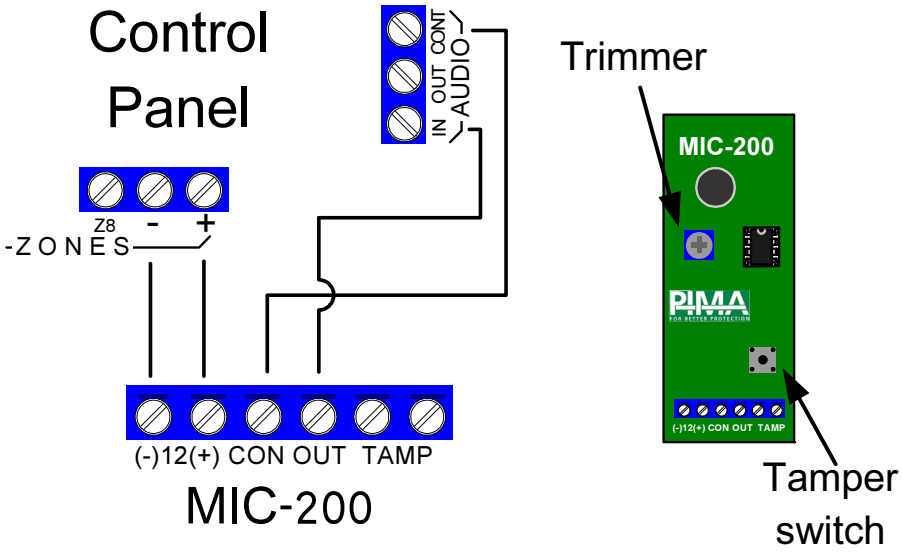


Figure 37. Connecting MIC-200 to the control panel

1) The Audio Control output polarity should be set to '+' (see section 5.9.4)
2) MIC-200 is supplied without wires

3.14 VU-20N: Dual Message Voice Unit

3.14.1 Single message programming

A zone that is supposed to trigger the VU-20N should be linked to 'Audio device' output type. Since any output in the Hunter-Pro series can be triggered by any output type, the VU-20N can be connected to any of the outputs, providing that the 'Audio device' output type was linked to it.

1. Navigate to a desired output (#7) and link the 'Audio control' output type to it
2. Press ENTR twice to Polarity and mark '-' under 'P'
3. Navigate to 'Zone responses' (#2), pick the Zone Type that will trigger the VU-20N 'Message 1' and mark '+' under 'M - Activate Audio'. Make sure the output trim time of 'Audio device' is the default 60 seconds (#4)
4. Navigate to 'Communication options' (#3) and mark '+' under 'V- Voice unit'

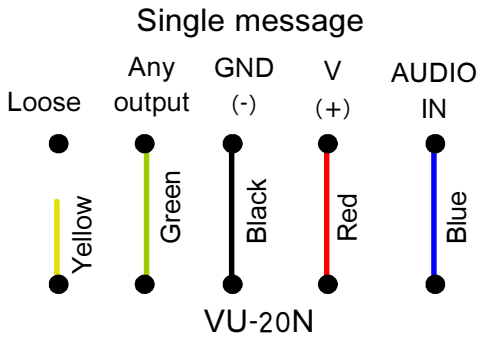


Figure 38. Single message

3.14.2 Programming the VU-20N for dual messages

Using VU-20N in HUNTER-PRO series for dual messages can be done only through partitioning, i.e., each voice message is sent from a zone and an output allocated to a different partition. When an alarm is triggered in a zone allocated to partition A, 'Message 1' is played, and when an alarm is triggered in a zone allocated to partition B, 'Message 2' is played.

1. Navigate to a desired output and link it to the 'Audio control' output type (#7)
2. Press ENTR and allocate the output to any partition, by marking '+' under that partition, and '-' under all others
3. Press ENTR to Polarity and mark '-' under 'P'
4. Repeat steps 1-3 with a second output
5. Navigate to 'Zone responses' (#2), pick the zone type/s that will trigger the VU-20N 'Message 1' and' Message 2' and mark '+' under 'M - Activate Audio'. Make sure that the output trim time of 'Audio device' is the default 60 seconds (#4)

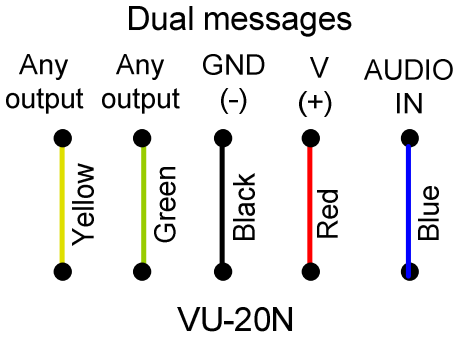


Figure 39. Dual messages

6. For each zone, navigate to Partitions (#2) and allocate the zone to the desired partition by marking '+' (All others should be marked with '-')
7. Navigate to 'Communication options' (#3) and mark '+' under 'V - Voice unit'

3.15 Battery

The HUNTER-PRO series has a rechargeable 12V battery. The system tests the battery continuously.

If a test fails, the system displays battery fault and responds as programmed in the faults responses (activating sirens, dialing the Monitoring Station, etc.)

3.15.1 Manual Battery and Phone Line Test

To manually test the battery and phone line: ☞ Master code ☞ BACK. If both tests are OK, a corresponding message is displayed.
If the battery is low, a "Low Battery" message is displayed and the battery should be replaced.

3.16 Mains

Before connecting the power cord to the system, verify that the cord is disconnected from mains

Connect the transformer to the AC terminals on the PCB and then to mains.

With an Ohm meter, check for continuity between the grounding point on the control panel, PCB and GND terminal, to the electrical outlet grounding point. The resistance must be less than 1 Ohm.

1. **A current limiting device, such as circuit breaker or fuse, must be connected in serial with the power cord**
2. **Electrical Grounding must be connected!**

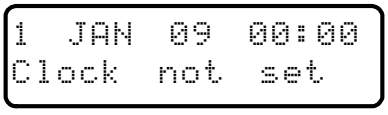
3.17 Initializing the System

- Make sure the connections to the system are as described in previous sections.
- Connect AC mains power supply.
- Connect the backup battery to the fast connection terminals, red wire to (+) and black wire to (-).
- Close the control panel case and verify that the screws do not touch the battery.

If you connect the battery before mains, an AC fault will be displayed until you connect the AC. The fault will be logged

When connecting to mains, the keypad will sound a long beep and display the keypad version & ID screen

Few seconds afterwards the "Please wait" screen is displayed



Then, the fault LED flashes, and a message that the clock is not set is displayed. If faults exist, they will be displayed one by one.

To turn the buzzer off, press END for 3 seconds. In case a new fault occur the buzz returns. Only after all faults are resolved, the red LED ceases to flash and the default display appears

3.17.1 Setting Time & Date

1. Enter the time (HH:MM format) and ENTR
2. Enter Date and then ENTR END

- Press BACK and NEXT to move the cursor to the left and right
- The user code must be enabled by the installer to set the time

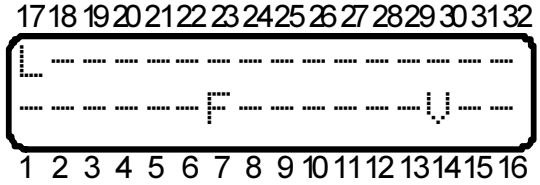
Another way to access the user menu: PROG. 0 Installer Code

3.18 Wireless Faults Display

3.18.1 In PIMA Fast Display

Wireless accessories faults:

Zone	Indi.	Fault
7	**F**	Wireless zone (Detector's tamper is open)
14	**V**	Supervision
17	**L**	Low battery



For example: zone #7 (tamper) is open, no supervision signal is received from zone (detector) #14, low battery in zone #17.

When the display is set to "Fast Display" and a battery, tamper or supervision fault occurs, the display is automatically set to "Open Zones Scan". When all the faults are resolved the fast display returns

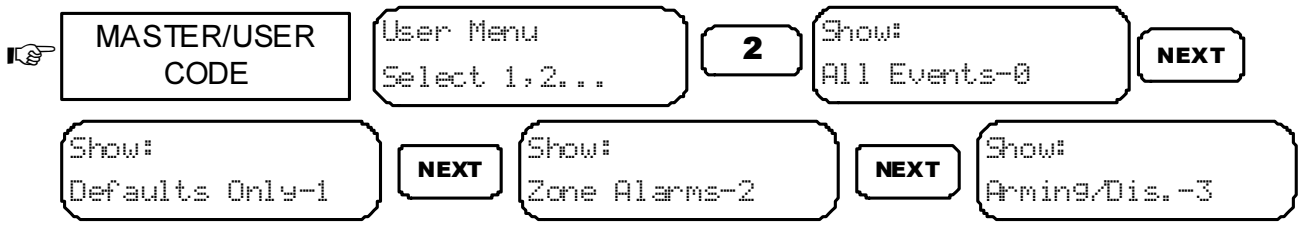
3.18.2 In Scan Open Zones Display

The following are example wireless receiver faults:

Display	Fault
2 JUL 07 13:10 Wireless Unit	Communication fault with the I/O-WN receiver
1 JUL 07 03:00 W/L Unit Tamper	I/O-WN's tamper is opened

Display	Fault
5 JUN 07 14:20 FL: Zone 14	Tamper open in zone #14
5 JUN 07 14:25 LB: Zone 19	Low Battery in zone #19
7 OCT 07 16:32 SV: Zone 35	No supervision signal from zone #35
W/L Recvr. fail ENTER/NEXT/END	This fault appears when trying to program the I/O-WN although the receiver is not installed

3.18.3 Memory Log of Faults



The memory log has 3 viewing options: 1 - all events, 2- alarms, 3 - arming/disarming.

The top line displays the memory event number (top left) and the time and date in which the event was registered. The event name is displayed in the bottom line.

3.18.3.1 Examples for faults as displayed in the memory log:

Memory Log	Fault
1) 5 JUN 07 14:20 W/L Recvr. fail	This fault appears when trying to program the I/O-WN although the receiver is not installed
2) 5 JUN 07 14:20 Wireless Z Fault	Wireless detector's tamper switch is open. The zone name and number are displayed intermittently
3) 5 JUN 07 14:20 Low Battery - 15	Low battery in zone #15 (wireless detector)
4) 5 JUN 07 14:20 Supervision - 28	Supervision fault in zone #28. The zone's name and number are displayed intermittently
5) 5 JUN 07 14:20 W/L Unit Tamper	I/O-WN receiver tamper fault
6) 5 JUN 07 14:20 Receiver Jamm.	I/O-WN receiver jamming fault

CH. 4. PROGRAMMING BASICS

The HUNTER-PRO series is supplied with factory default parameters. In most installations you will have none or few parameters to program, except for user-specific parameters, such as telephone numbers, zone names etc.

There are 3 ways to program the HUNTER-PRO series:

1. Locally with the PIMA Fast Programmer PRG–896. The PRG-896 can have 4/7 different presets. It connects to any LCD keypad.
2. Locally or remotely (via telephone or GSM DATA channel) using COMAX
3. Using the LCD keypad

4.1.1 Fast Programming with PRG-896

PRG-896 is based on ROM chip. It holds parameters that have been uploaded with COMAX and then downloaded to a system at a site. PRG-896 can only be programmed with an RXN LCD Keypads. It connects to RJ-11 connector on the keypad PCB. See the fast programming procedures on section 5.10.3.

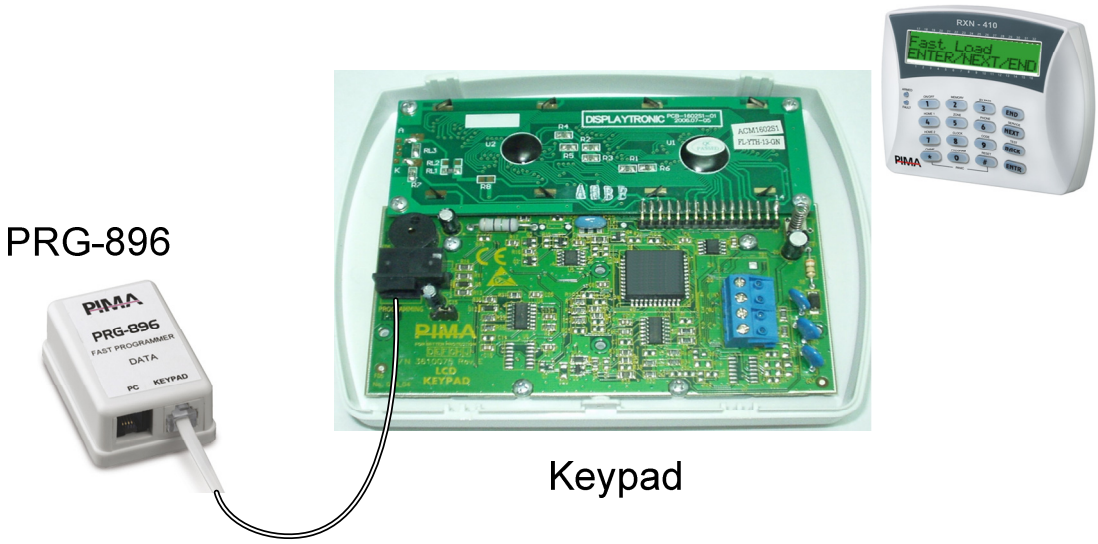


Figure 40. Connecting PRG-896 to the LCD Keypad

4.1.2 Local Programming with COMAX

COMAX gives a quick and easy way to upload sets of parameters in the service station and download them later on at a customer site. Connecting the PC with the COMAX to the control panel is done using LCL-11A adaptor.

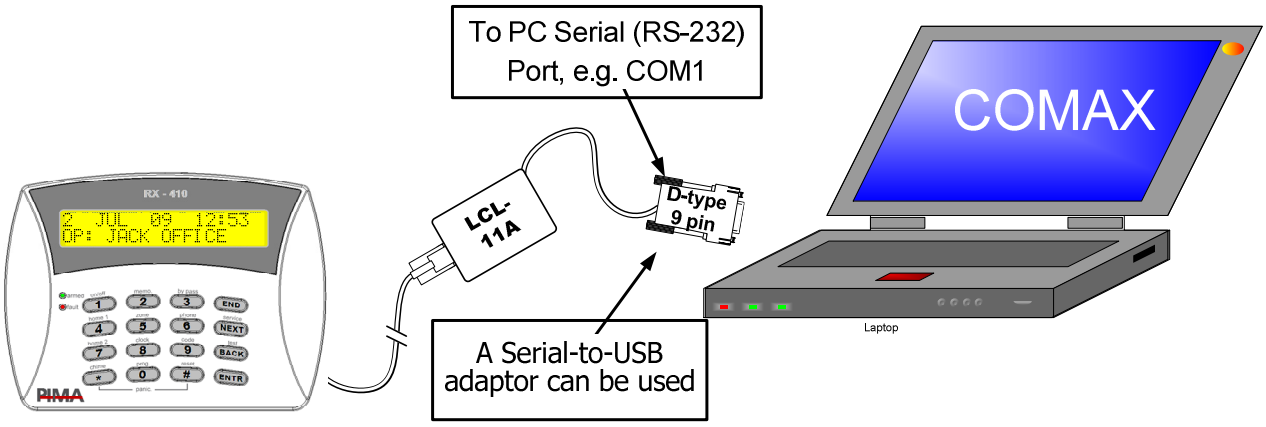


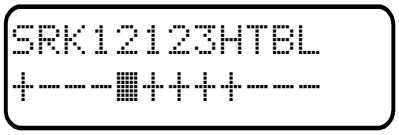
Figure 41. Connecting Keypad to Control Panel and PC with COMAX

4.1.3 Remote Programming with COMAX

The HUNTER-PRO series can be programmed and controlled remotely from any PC, using PIMA's COMAX software (with PIMA PSTN modem). Please refer to the COMAX user guide for detailed information.

4.1.4 Programming with a Keypad

The HUNTER-PRO series has two basic menus: User menu, made of single-press key commands (the commands are printed above the keypad's keys), and Installer menu.



Example for a zone status bar

This is a parameters set display.

(+): The parameter is enabled.

(-): The parameter is disabled.

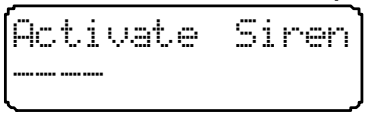
▓: The current programmed parameter

When the flashing sign ▓ reaches a letter, the display changes for 3 seconds and shows a brief description of the function.

For example:

Parameters screen

Parameter's description automatically appears for few seconds when curser moved upon parameter



4.1.5 Navigating through the menu

[NEXT] / [BACK]: Backward/Forward keys. Press these keys to navigate between screens/ options/parameters

[ENTR]: Selection/Conformation key

[END]: Exit/End key: Return to the previous screen without saving

[#]: Reset/Erase/Change status key ("-" to "+" and vice-versa)

4.2 Default Codes

The system default codes are:

Master Code	**5555**
Technician Code	**1234**

4.3 User Menu

There are 3 ways to enter the user menu, where parameters like date & time, dialer numbers and codes are programmed:

1. Using Master code: ☞ MASTER CODE → User Menu / Choose 1,2..
2. Using enabled (see notes below) User code: ☞ USER CODE → User Menu / Choose 1,2..
3. Using Technician code (see notes below) ☞ **0** TECHNICIAN CODE → User Menu / Choose 1,2..

1. Only enabled user code can access the user menu. To enable it, mark "+" under "M" in "General Parameters" menu (see section 5.7). As a result, actions such as arming and disarming cannot be activated directly, but by entering the user code first and then pressing the desired key.
2. User Code has no authorization to change Master Code.
3. When accessing the user menu from within the technician menu, changing codes is disabled.

4.4 Technician Menu

To enter Technician Menu:

-OR-

4.5 Express Programming Menu

To make programming as easy and quick as possible, the HUNTER-PRO SERIES has a special menu, made of a sequence of screens with all the necessary parameters to initialize the system. This menu is accessed by pressing * in technician menu. Following is a table with the express programming screens and their details consecutively. Press ENTR to save and continue to the next parameter.

Sub-menu	**Details**
Hour 00:00	Set the time
Day Month Year 01 01 07	Set the date
Priv.Phn 1<Del=# ..... Priv.Phn 4<Del=#	Set the 4 private dialer numbers. Use the asterisk key for '+', '*', '#', 'P' (one second pause)
Entry 1 2 Exit 20 20 60	Set the entry/exit delay
XMW ----	Set the expanders - local and wireless
Remote Expanders 0	Set the number of remote expanders
Account No.1 Ph: 0000 Rd:0000	Set account #1 phone and radio codes
MS 1 Protocol 0 230 T= 0	Set monitoring station #1 protocol

Sub-menu	Details
MS Phone 1<Del=# ..... MS Phone 4<Del=#	Set the 4 phone numbers of the monitoring station #1. Use the asterisk key for '+', '*', '#', 'P' (one second pause)
AA12PFDMOLTWIR ++++++++++++++ 1	Set monitoring station #1 reports
Test Time: 00:00 Interval:24 Hrs	Set the monitoring station #1 test time and interval
Radio Tst Inter. Hrs:24 Min.s:0	Set monitoring station #1 radio test interval
Installer Code ****** (4-6)	Set the Installer code (4-6 digits)

☞ **[ENTR]** to save

CH. 5. PROGRAMMING THE SYSTEM

5.1 The Technician Menu

5.1.1 The Keypad Keys Functions

The Hunter-Pro series technician menu is made of 11 sub-menus, all accessed and programmed with the LCD keypad keys. The keys and sub-menus are:

Key	Functions	Page
[1]	System Installation: Expanders, Keypads Etc.	48
[2]	Zones: Types, Responses, Names, Partitions Etc.	50
[3]	Communication: MS1 Options, Subscriber Numbers, Communication Options, Radio Report Codes Etc.	54
[4]	Timers: Entry/Exit Delay, Outputs Times, Reports Delays, Soak Test Days Etc.	66
[5]	General Parameters	69
[6]	System Responses: Mains Fault, Battery Fault Etc.	70
[7]	Outputs Configurations	71
[8]	Full Programming (Reset), Local And Fast Download	75
[9]	Installer Code Change	76
[*]	Fast Programming	76
[0]	Tests	76

5.1.2 Navigating the Menu

Navigating the menu is easy: go to the next level or Save by pressing [ENTER], go forward and backward by pressing [NEXT] and [BACK], exit without saving or go one level up by pressing [END].

5.2 Enhanced Communication Menu

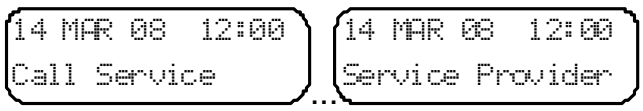
The HUNTER-PRO 832/896/8144 has an enhanced communication menu with various parameters. By default, this menu is not visible, because most installations do not require changing the defaults for these parameters, which necessitates knowledge in communication networks to set them.
To make the enhanced menu visible, either mark "+" under 'P' in the first "General Parameters" screen (see section 5.7.1) or press [*] for 3 seconds in the first screen of the Communication menu (key #3).

5.3 KEY #1: System Installation

5.3.1 Service Provider and End of Service Date

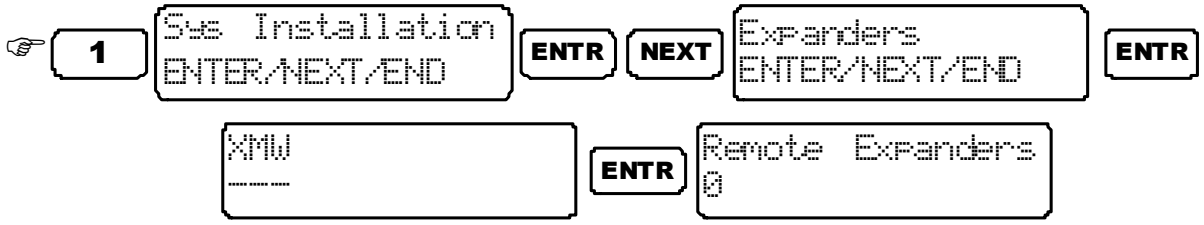
Enter the system's service provider's details, such as name and telephone number. To show this screen at any time, press [NEXT] for 2 seconds when the system is not armed.

Press [ENTR] and enter the date in which the service ends. In that date, the following 2 messages appear onscreen* intermittently:



. The messages cease to appear the next time the system is armed or when technician code is entered.

5.3.2 Expanders



5.3.2.1 Local

Par.	Name	Marking "+" means
X	Local Expander	Local expander EXP-PRO UNIV with 8 additional zones is installed
M	Zone Doubling	This feature is enabled
W	Wireless Expander	I/O-WN wireless receiver is installed

5.3.2.2 Remote Expanders

Set the number of the installed remote expanders (with no EXP-PRO UNIV installed). The no. of remote expanders varies according to the system:

In Hunter-Pro 832: 3 max.

In Hunter-Pro 896: 11 max.

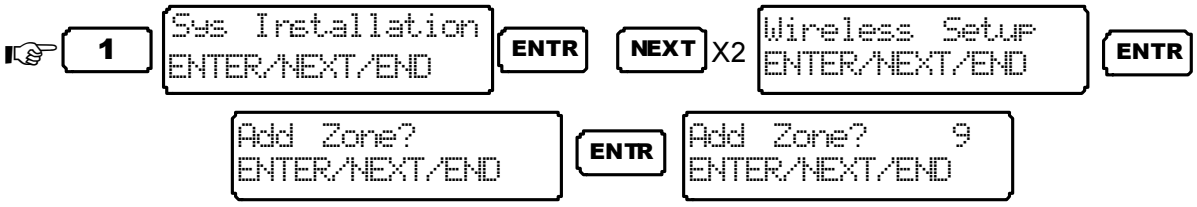
In Hunter-Pro 8144: 16 max.

Entering a number exceeding the max. will result in an error

* This message appears only if the service provider and the end of service date were set

5.3.3 Setting the Wireless Expander

To set the wireless expander parameters, first mark "+" under "W" in the expanders menu (see previous section).



The first available zone appears (zone #9 is first, if no expander is installed). Press [ENTR] 

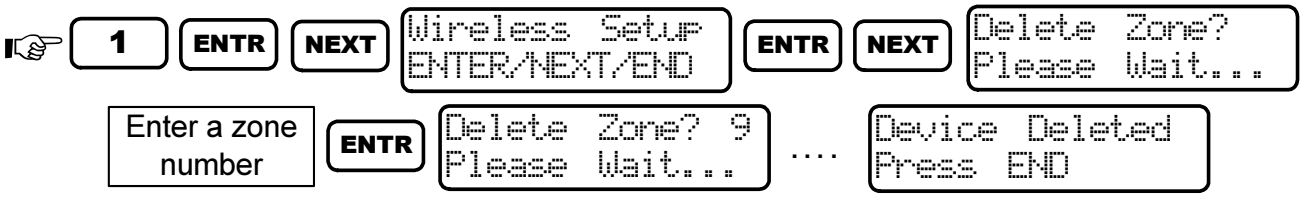
. Trigger the wireless device and wait for confirmation message: 

.

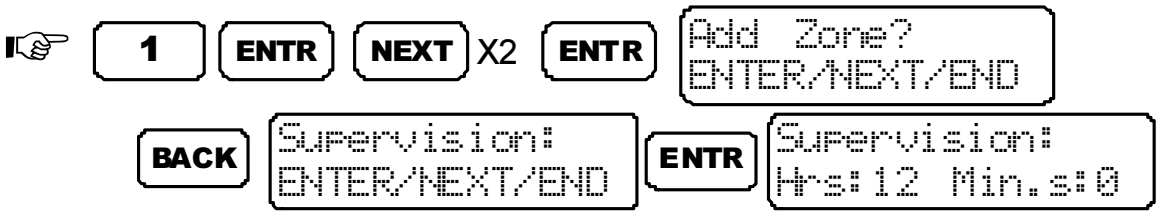
The number of wireless zones & accessories varies according to the system. See the table in section 1.1

The wireless zones are numbered only after all other zones, including hardwired expanders

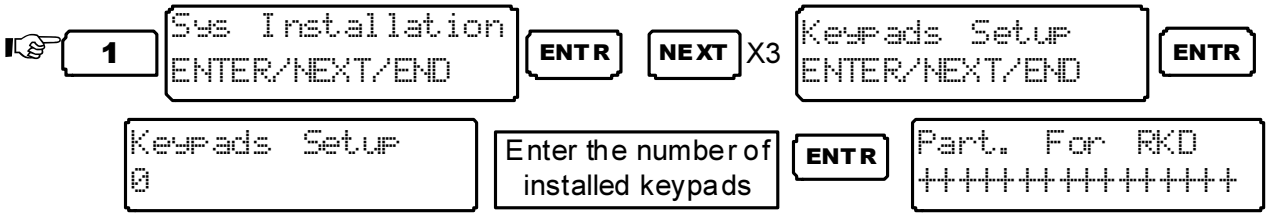
5.3.3.1 Deleting a Wireless Zone



5.3.3.2 Supervision Interval for Wireless Zones



5.3.4 Keypads



Set the number of monitored keypads (8 max.). Giving a different ID (other then zero, which indicates a non-monitored keypad) to each will indicate the system to supervise them, i.e. monitor their tampers. The IDs should be given consecutively from #1.

If monitoring the keypads is not required, the number of keypads should be set to zero

5.3.5 Keypad Partitions

In systems that use partitions, each keypad can control one or more partitions (and have no control on the others).

```
Part. For RKD 1
++++++++++++++++
```

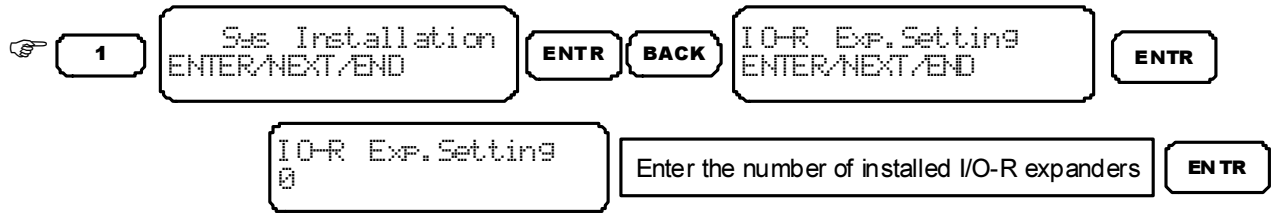
Mark '+' under the partitions that this keypad will control (In the example, keypad #1 controls all partitions). To set a different keypad, enter a keypad ID or scroll up/down using [NEXT] and [BACK]. Press [ENTR] to save and proceed to the next keypad.

For example, if keypad #2 should only control partition #2 through #4:

```
Part. For RKD 2
-+++-------------
```

5.3.6 I/O-R Expander Settings

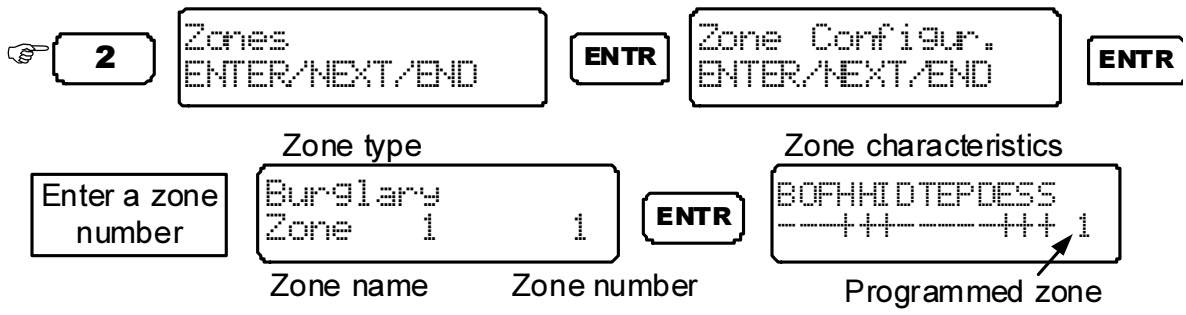
Set the number of I/O-R relay expanders that are connected to the system.



5.4 KEY #2: Zone Programming

Configure the system's zones: line, hardwired and expanders.

5.4.1 Zone Types

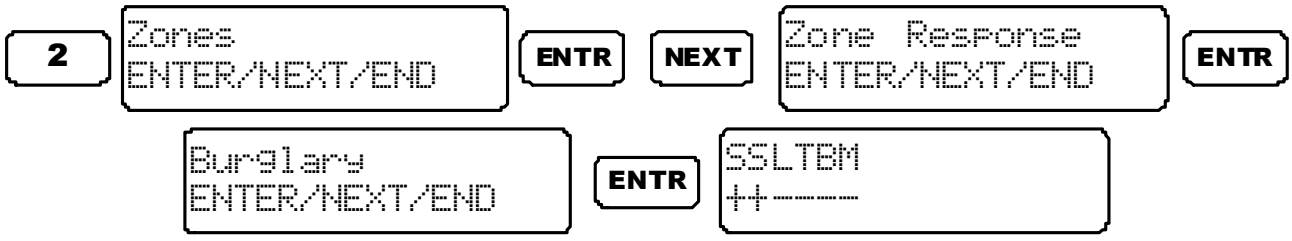


These are the HUNTER-PRO series zone types: BURGLARY, PANIC, FIRE, DURESS/HOLD-UP, MEDICAL, ANTI-MASK, SPECIAL BURGLARY 1, SPECIAL BURGLARY 2, SILENT PANIC, SPECIAL FIRE. Enter a number (or scroll with [*]) to pick a zone. Press [NEXT] to choose a different zone type.

The next table describes the zone characteristics:

Par.	Full Name	Enabling (marking "+") this parameter means
B	Bypassed Permanently	The zone is permanently bypassed
0	Normally Open	The zone is set as N.O. zone
F	24 Hour Zone	The zone is armed around the clock, regardless of the system arming state
H	Active in 'Home 1'	The zone is armed in 'Home 1' mode
H	Active in 'Home 2'	The zone is armed in 'Home 2' mode
I	Entry Delay	Exit/Entry delayed zone
D	Zone Follower	This zone will not trigger the alarm if opened during the Entry/Exit delay
T	Second Delay Time	Setting the Exit/Entry delay time to the second period (refer to section 5.6)
E	EOL Resistors	The zone is protected by EOL circuit
P	Conditioned Zone	The zone triggers the alarm only if other conditioned zone is violated within the "Cond. Zone Time" (refer to section 5.6.1)
D	Double Knock	The zone triggers the alarm only if 2 pulses occur within a preset period of time (refer to section 5.6.7)
E	User Bypass	Users can set the zone to be bypassed (temporarily)
S	Not in use	-
S	Not in use	-

5.4.2 Zone Responses

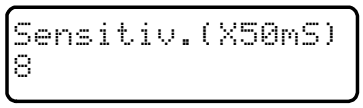


The 6 parameters defining the zone responses are:

Par.	Description	Enabling (marking "+") this parameter means...
S	Activate Siren	Alarms from this zone will trigger the sirens
S	Ext. SRN in OFF	Alarms from this zone will trigger the external siren even when the system is disarmed (OFF)
L	No Daytime MS	No report is sent to the MS when the system is disarmed
T	Dif. Siren Tone	Different siren tone (not applicable using a DC siren)
B	Automatic Bypass	False alarm prevention feature: The zone will automatically become bypassed if 3 alarms occur in it consecutively
M	Activate Audio	Alarms from this zone will activate the audio device* (VU-20N or MIC-200)

* Together with enabling "V" in Communication menu (section 5.5.4), for VU-20N only

5.4.3 Zone Sensitivity

Press [ENTR] 

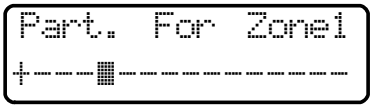
Set the zones' sensitivity in milliseconds. Sensitivity is the time a zone is violated before it triggers the alarm. The number entered is multiplied by 50. In the screen above, entering 8 means a sensitivity of 8 times 50, that is 400 ms.

5.4.4 Zone Name

Set the zones' name. A name can have up to 13 characters. The keypad keys are used for entering characters, similar to entering text in a cellular phone. See section 1.4
For example, to enter the words "REAR DOOR":

1. Press [7] 3 times=R
2. Press [3] twice=E
3. Press [2] once=A
4. Press [7] 3 times=R
5. Press [0] once=Space
6. Press [3] once=D
7. Press [6] 3 times=O
8. Press [6] 3 times=O
9. Press [7] 3 times=R

5.4.5 Setting Partitions

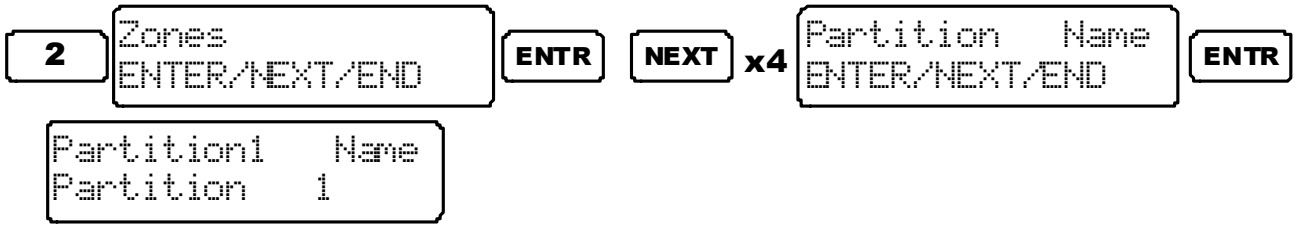


Drawing 6 - Allocating zones to a partition

Set the partitions to which the zones are allocated. Setting the partitions along with setting the keypads' partitions determines the nature of the system (i.e. Split System/ Partitioned System).
Marking "+" allocates a zone to a corresponding partition.

For more details on partitions, refer to CH. 2.

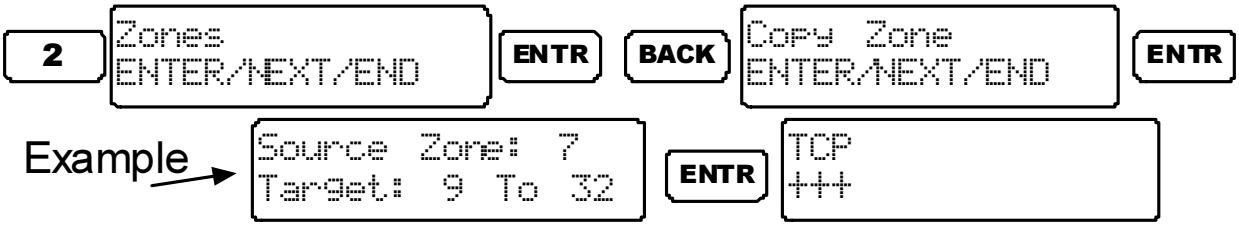
5.4.6 Partition Name



The partition's name will appear on every of its allocated keypad. To enable the displaying of partitions:

Partition names can only be displayed in partitioned keypads

5.4.7 Copy a Zone



Copy zone characteristics into other zones is a very useful installation feature, in which some or all characteristics of one zone can be copied to other zone/s. Once programming of a single "source" zone is done, copying it onto as many as all other zones is easy and quickly: Choose one or more 'target' zones, define what to copy (see the next sub-section) and press [ENTR].

5.4.7.1 Copying Options

Par.	Marking "+" means…
T	Copy the zone type
C	Copy the zone characteristics
P	Copy the zone allocated partitions

When copying is done the next message is displayed:

5.5 KEY #3: Communication Parameters

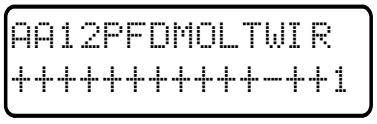
5.5.1 Monitoring Station #1 Options

5.5.1.1 Protocol

Set MS1 PSTN protocol and radio station no. 'A' & 'B' (above) determine the PSTN protocol (see the matching columns in the codes table, section 7.4) and 'T' determines the radio station number (which is determined by the MS).

1. MS 1 is programmed to use ContactID by default
2. If no Radio receiver is installed, do not change the default T=0 value

5.5.1.2 MS1 Reports



Set the events that will be reported to MS1:

Par.	Alarm/Event
A	All alarms
A	Anti-Mask
1	Special Burglary 1
2	Special Burglary 2
P	Panic
F	Fire
D	Duress/Hold-up
M	Medical
O	Remote open/close (by Phone)
L	Failures
T	Tests
W	Remote Test: When the system is armed, in response to 2 telephone rings and a hang up the system sends a test report to the MS
I	Technician code entered
R	Zone Open/Close reports are sent only via the radio

To save, press [ENTR]

5.5.1.3 PSTN Test Time and Interval

```
Test  Time:00:00
Interval:24  Hrs
```

Set the daily time and interval for sending test events to the MS. If the time is left 00:00, the system will send the tests only according to the interval.
For example, if the test time is set to 23:00 (11 PM) and the interval to 3 Hrs, then test reports will be sent every 3 hours **and** everyday at 23:00. If the time is 00:00 and the interval is set to 168 (hours), then the reports will be sent every 168 hours (once a week). Press [ENTR].

Counting starts only when pressing the [ENTR] key

5.5.1.4 Radio Test Interval

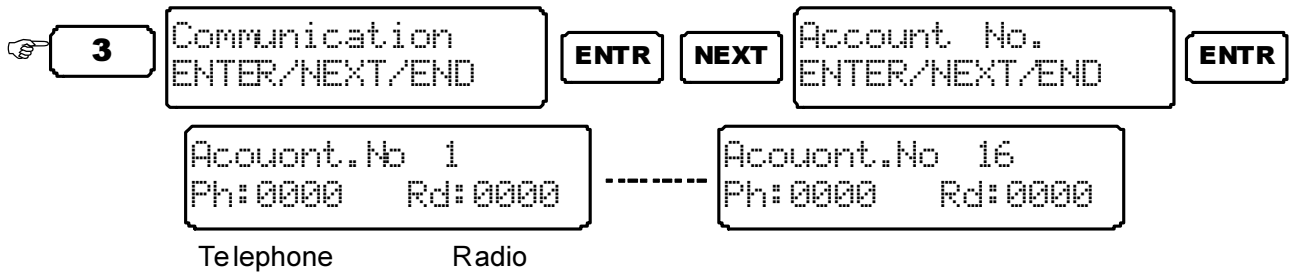
```
Radio  Tst.  Inter
Hrs:24  Min.s:0
```

Set the radio test interval. See the previous sub-section for how-to. Press [ENTR].

5.5.1.5 ID Account Addition

If the account number is made of 6 digits, the first 2 are set in this screen. The rest 4 are set according to the next sub-section.

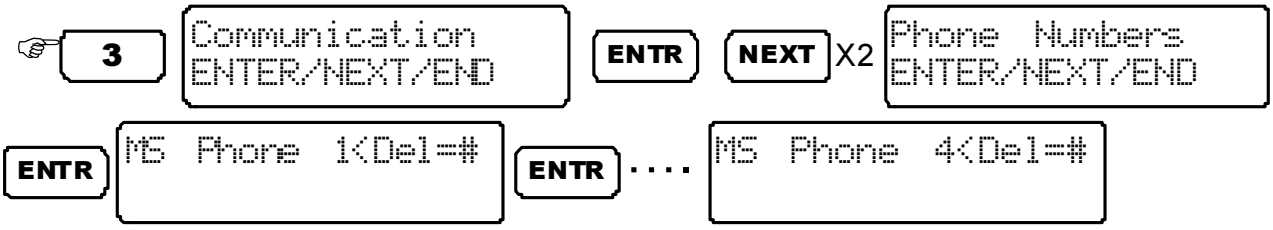
5.5.2 Account Numbers



Set the PSTN and Radio account numbers. There can only be 16 accounts (one for each partition), each with a PSTN subscriber no. and radio subscriber no.

- If all the accounts are the same, set only one account (open/close events will be sent without the account number)
- If no subscriber no. is entered, no reports will be sent to the MS
- In a system with no partitions, reports will send from account #1 only

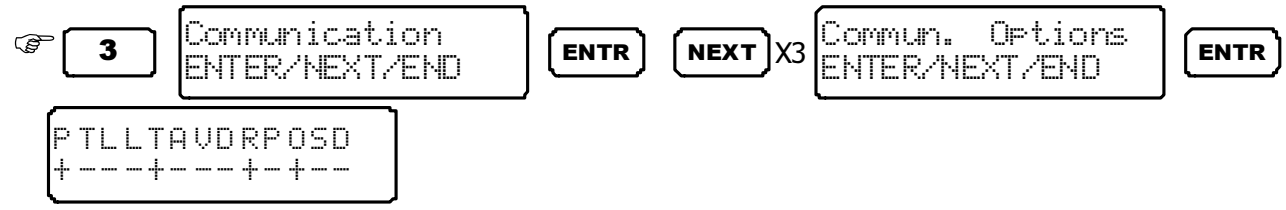
5.5.3 The MS Telephone Numbers



Set MS1 telephone numbers (4 max.). If the system reports to 2 MSs (double report), telephones #1 & #2 are allocated to MS1, and #3 & #4 to MS2. Press [ENTR].

When the MS does not answer a call from telephone #1, the system tries to dial the other numbers. The system performs up to 8 dialing attempts in all

5.5.4 Communication Options



Par.	Description	Setting to '+' means...
P	Connected T.Line	A telephone line is connected to the system
T	No Dia. tone chck	The system dials without checking for a dial tone (in case the system connected via switch-board or the line is not clear)
L	Line Test in ON	The system tests the phone line once a minute when it is armed
L	Line Test in OFF	The system tests the phone line once a minute when it is disarmed
T	Tone Dial	"+" For tone (DTMF) "-" For Pulse
A	Answer. Machine	If answering or fax machine are connected to the phone line, the system snaps incoming call following a sequence of two rings, hang-up, 10 seconds pause and a ring Set the answering machine to pick calls after more than 2 rings
V	Voice Unit	VU-20 voice unit is connected to the system
D	Download Disable	Downloading parameters remotely using COMAX is disabled (default). To enable it, the user must enter Master code and press [ENTR] twice (The Comax must dial the system within 2 minutes or it will be reset to '+' [disabled])
R	Rem. Disarm Disab	Remote disarming by the telephone is disabled

Par.	Description	Setting to '+' means...
P	Pre Alarm Report	The system reports when entry delay starts
O	Tst Rprt in OFF	Test reports are sent when the system is disarmed
S	Split Account No.	When reporting to 2 MSs (with different account numbers), account #1 will be reported to MS1 and #2 to MS2. Assigning account number per partition is disabled.
D	Disarm after Al.	The system will report a zone open event that occurs immediately after alarm, even when the open/close parameter is disabled (in MS1 options menu).

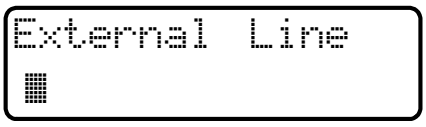
5.5.4.1 Number of Rings

Set the number of rings before the system picks up an incoming call. To manually answer, enter Master code and press [ENTR] twice. Press [ENTR]

5.5.4.2 ACK Waiting Time

Set ACK time (the time in seconds in which the panel waits for MS handshake signal). If no ACK is received, a communication error is displayed. HUNTER-PRO series allows different waiting times for PSTN and GSM modules. The max. waiting time for both is 60 sec. Press [ENTR]

5.5.4.3 External Line



Set a dial-up access number (up to 2 digits). Press [ENTR]

5.5.4.4 Number of Transmissions

Set the number of the long-range radio re-transmissions. The interval between the transmissions is 10 seconds. Press [ENTR]

5.5.4.5 Communication Channels

Set the main communication channel with the MS: PSTN, GSM or IP. If the system cannot communicate through the main channel, it will try to send reports through the other two, while continuing to try in the first.

Par.	Channel
P	PSTN (default)
G	GSM
N	IP network (MS1 only)

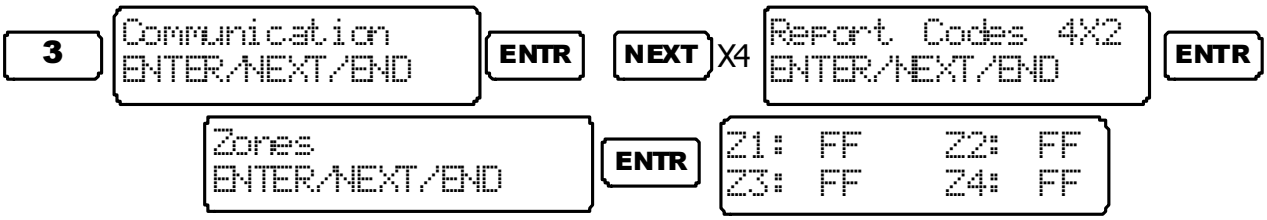
5.5.5 Report Codes 4X2

5.5.5.1 Zones

Report codes are hexadecimal number (and can therefore be made of the digits "0" through "9" and the letters "A" to "F"). The system's default code is FF for all zones. If the FF codes are not changed, the system uses ContactID© protocol (which includes PAF & NPAF). To change a code, do as follows: subtract 100 from the ContactID event number and convert the result to hexadecimal number.

For example, to send "High Temperature" event (ContactID event 158): 158 less 100 is 58. converted to Hex. is 3A.

The restore code must match the alarm code



The PSTN report codes (4x2) menu and the following radio menu have 3 sub-menus: Zones, Zones' restore and General Reports.
To set a code: Use [NEXT] and [BACK] to move between zones, [*] to pick letters and the keypad keys to pick digits, [ENTR] to the move to the next screen.

5.5.5.2 Codes Table

Code	Details
Z1 ,Z2 ... ,Z96	Alarm from zone #1, #2, etc.
R1 ,R2 ... ,R96	Restore code from zones #1, #2, etc. The report is sent at the end of the siren time or when the system is disarmed immediately after alarm.
ZFL + RESTR	Zone fault in EOL zone + Restore code
BYP	Zone Bypassed
TM1, TM2 + RESTR	TMPR 1 and/or TMPR 2 are violated + Restore Code

Code	Details
AC + RESTR	Mains voltage (AC) failure + Restore Code
LB + RESTR	Low Battery + Restore Code
PF + RESTR	Power Failure: Card voltage lower than 9 volts + Restore Code. Low card voltage indicates AC failure and low battery
PHN + RESTR	Telephone Line Failure + Restore Code
PNC	Panic code
ICODE	Incorrect code entered
FUS + RESTR	Fail-Unsafe State: Detectors' Voltage Fault + Restore Code
ARM	System has been armed
DISAR	System has been disarmed
TST	System has been tested (manually, automatically, or "wake-up").

The restore code is displayed as "RESTR" to the event's right

5.5.6 GSM Transmitter

The following menus are available only if the enhanced menu is enabled (see section 5.2)

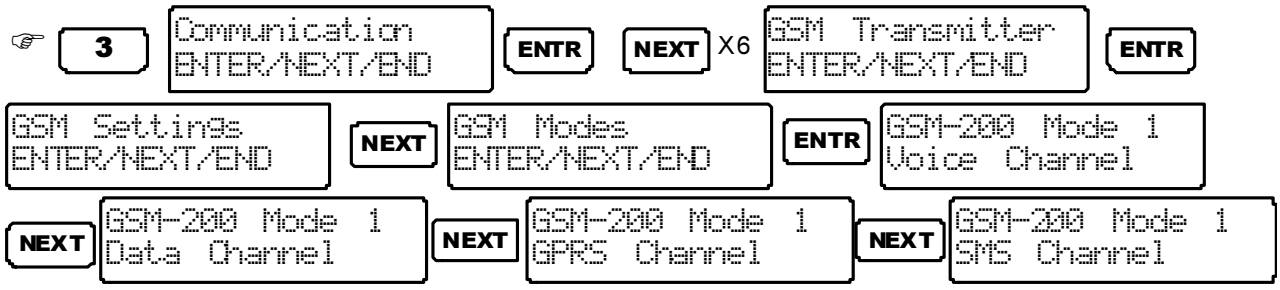
Configure the GSM-200 cellular transmitter.

5.5.6.1 GSM Settings

Par.	Name	Mark "+" to indicate that...
G	GSM TX Installed	GSM-200 transmitter is installed
R	Use Radio ID Account	Radio Account IDs will be used for GSM reports
T	Auto Test Report	Reports for auto-test will be sent via GSM (in addition to PSTN)
Y	GPRS Encryption	The information sent via GSM will be encrypted and sent via GPRS

If there is no radio transmitter connected to the system, 'T' (wireless communication) should be set to zero in the communication format screen (see section 5.5.1.1)

5.5.6.2 GSM Modes

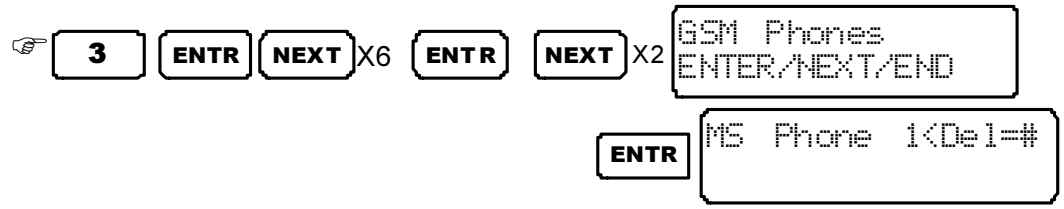


Set the GSM-200 one of two operation modes: Mode 1 for MS1 and mode 2 for MS2 (double report). Each mode can be set to one of four channels: Voice, Data, GPRS or SMS*. In each screen, press [ENTR] to choose Mode 2.

The Data channel can be used by COMAX. To do so, the GSM-200 SIM card must carry 2 separate phone numbers.

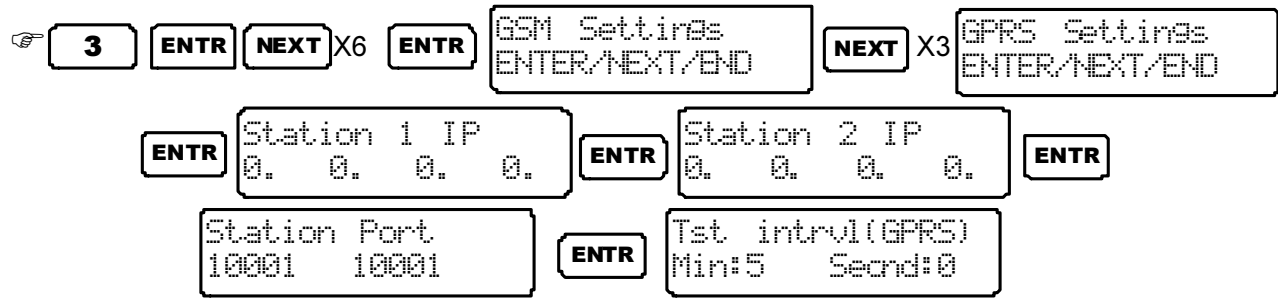
If both MSs use GPRS (Mode 1 & Mode 2), the second mode will be used to report to MS2.

5.5.6.3 GSM Phones



Set MS1 GSM phone numbers 1 to 4.

5.5.6.4 GPRS Settings

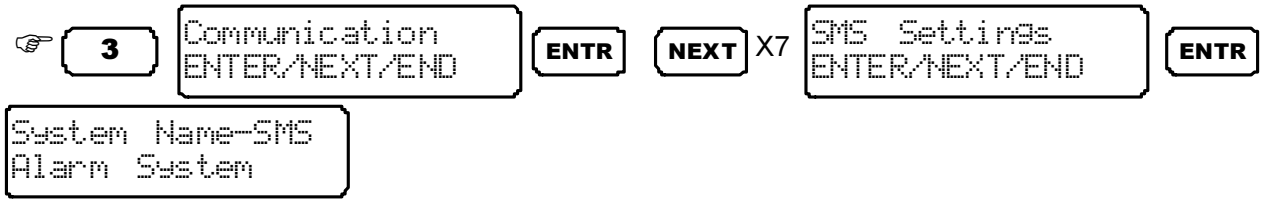


Set the GPRS parameters for the MSs. These include the IP no., port no. and test interval.

To see the GSM-200 version (and the SMS-100, if installed), in the main screen, press [ENTR] until it is displayed. The display will show both the transmitter and the system version.

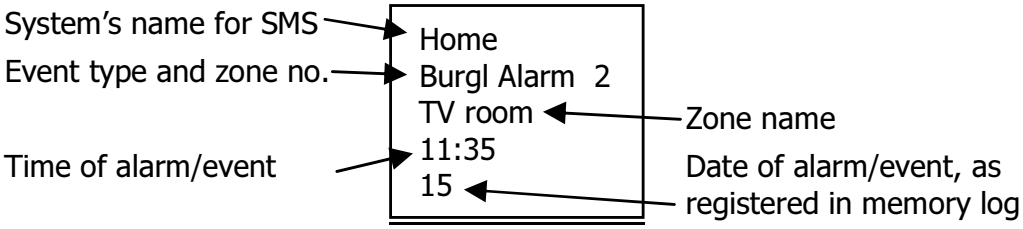
* GSM-200 and SMS-100 cannot be installed in the same system

5.5.7 SMS Settings



Set a name to identify the system in SMS reports. A name can be the customer's name or any other. "Alarm System" is the default name.

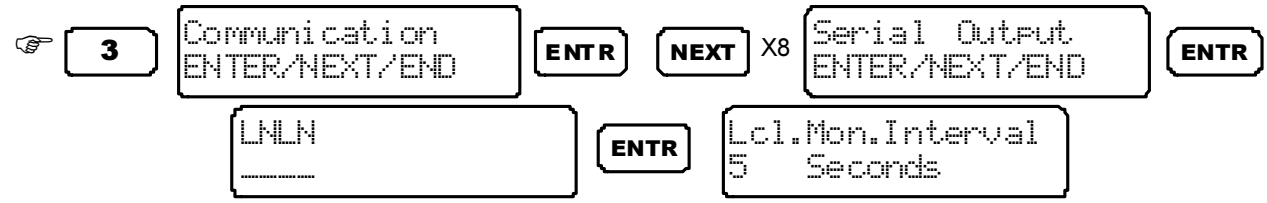
5.5.7.1 A demo cell phone SMS message



The text and time for the SMS messages is taken from the system's memory log

For further SMS definitions, refer to section 5.5.12.2

5.5.8 Serial Output

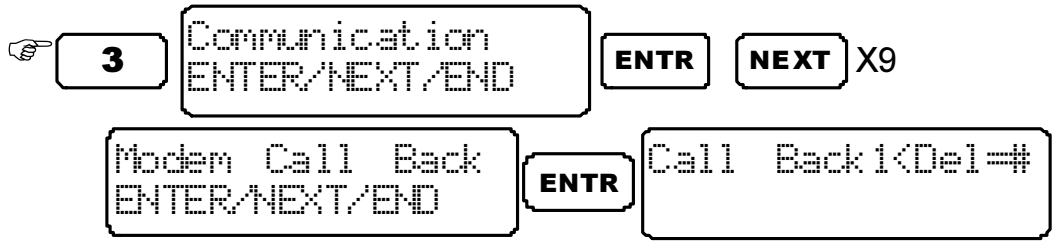


Set the serial output use, regarding the connection to the MS. The MS can be connected locally, using RS-232 cable, or remotely, through the net4pro IP interface. It can use a home automation ("Smart home") or PIMA proprietary protocol.

Par.	Name	Marking "+" means the device is...
L	Home Automat. 1	MS1 uses Home automation*/Building management protocol
N	Network MS	MS1 uses PIMA's proprietary protocol
L	Home Automat. 2	MS2 uses Home automation*/Building management protocol
N	Network MS	MS2 uses PIMA's proprietary protocol

* Known also as "Smart home"

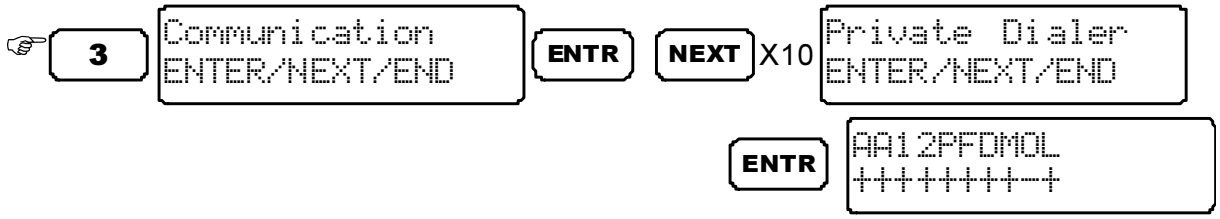
5.5.9 Modem Call Back



Set the modem callback phone numbers. Up to 3 numbers can be programmed.

If callback telephone #1 is set, in any attempt to contact the system over the telephone line, the panel will hang up and call the PC back. This is yet another safety step to protect the system from unauthorized access

5.5.10 The Private Dialer



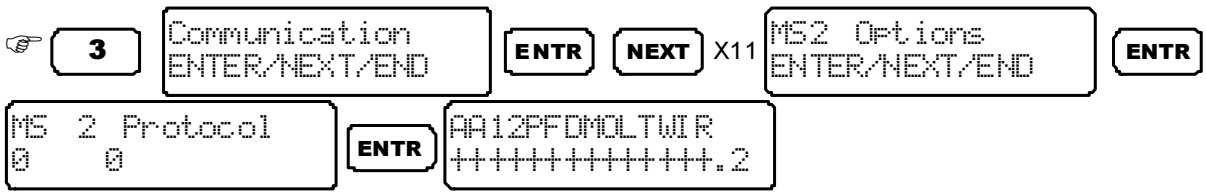
Set which alarms and events will be reported through the private dialer. Open/Close events are relevant to SMS only.

Par.	Name
A	Alarms
A	Anti-mask Alarm
1	Special Burglary 1
2	Special Burglary 2
P	Panic

Par.	Name
F	Fire
D	Duress
M	Medical
O	Open/Close (SMS only)*
L	Failures

* For a user to receive open/close reports by SMS, its settings (in the User menu -> User codes -> User settings, Parameter 'O') must enable it specifically, or only the system arming/disarming SMS reports will be sent to him.

5.5.11 MS2 Options



5.5.11.1 MS2 Protocol

Set MS2 PSTN protocol. Setting this protocol indicates the system to report to 2 monitoring stations (Double report).

In order to report to 2 monitoring stations with 2 different account IDs, mark "+" under "S" (Split Subscriber) in "Communication Options" menu (section 5.5). In this case, Account #1 subscriber numbers will be sent to MS1 and Account #2 subscriber numbers to MS2.

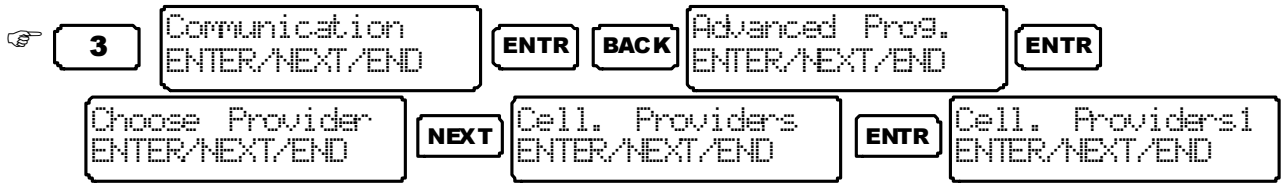
To disable the reporting to MS2 set its protocol to (0 0).

5.5.11.2 MS2 Report Parameters

Set which alarm/event will be reported to Monitoring Station 2. All parameters are similar to those of Monitoring Station 1 as described in section 5.5.1, accept for the radio ('R'): Reporting to MS2 via radio is not available.

5.5.12 Advanced Programming

Advanced programming may require professional knowledge in communication protocols. Beware not to change the default parameters unless you checked it with the cellular provider first. To enter Advanced Programming you must first enable it. See how in section 5.2



5.5.12.1 Cellular Providers

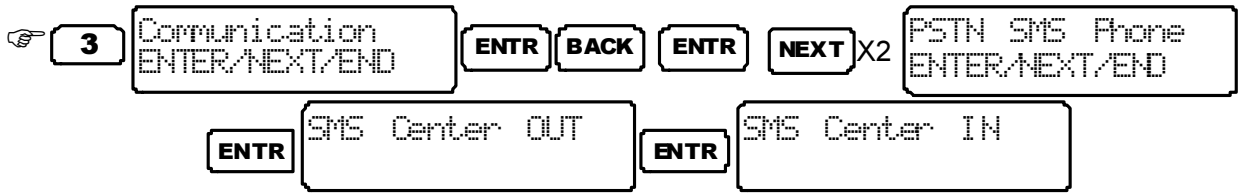
Set the information regarding the cellular providers. Up to 5 providers can be programmed. The system is pre-programmed with some local providers.

The information should be provided by the cellular provider. Press [ENTR]. The next screens are:

Screen	**Information to enter**
Provider Name 1	Provider 1 name
SMS center phone 1	Provider 1 SMS center phone no.
Provider APN…1	Provider 1 APN no.
Provider APN…1	Continue
User… 1	Username for provider 1
User 1	Continue
Password… 1	Password
Password 1	Continue

To set another provider press [NEXT] in "Cell. Providers1" screen.

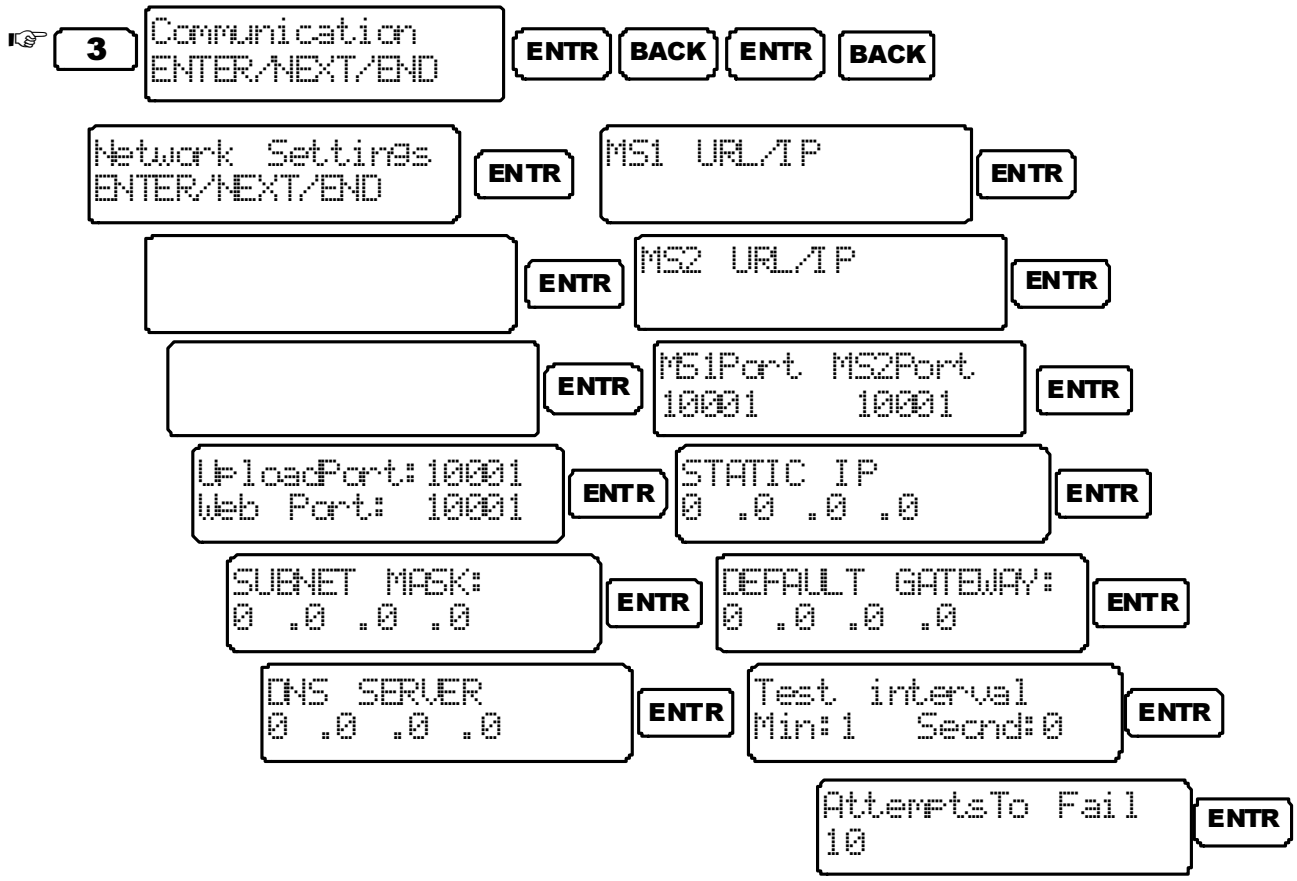
5.5.12.2 PSTN SMS Phones



Set the details for the SMS-100 PSTN module.

- OUT is the PSTN SMS center phone no.
- IN is currently not in use

5.5.12.3 Network Settings



Enter the IP network parameters. As in any IP network, the IP no. can either be static, or dynamic, using a DHCP (Dynamic Host Configuration Protocol) server.

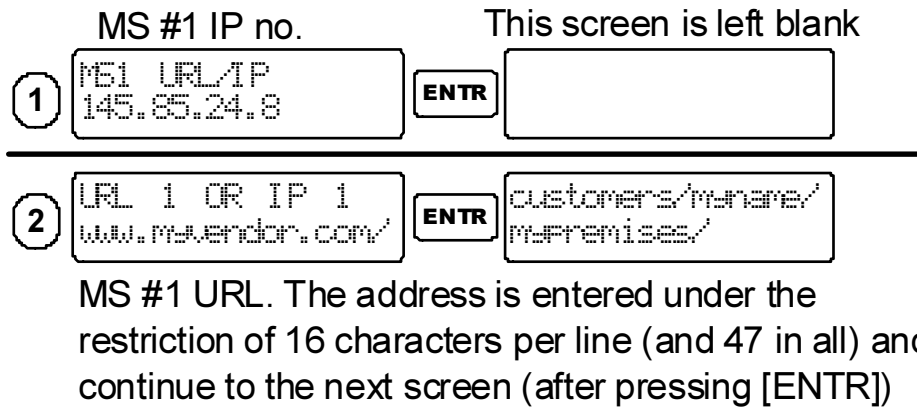
If you use net4pro-i (P/N 6247001), the URL/IP screen must be left blank

To use static IP fill in the parameters in the next screens. If you use a DHCP server the system will ignore the Static IP screen and the 3 following screens.

The URL/IP and Station Port screens are mandatory, both when using static or dynamic IP. See the next table for further details.

Screen	Data
URL or IP	Enter either the MS IP no. (e.g. 145.85.24.8) or URL (e.g. www.cmsaddress.com). Use up to 47 characters including spaces.
Station port	MS1 & MS2 NETsoft/PIMAnet port no.'s.
Upload port	For future use
Web port	For future use
Static IP	IP no. for the net4pro
Default gateway	The router address
DNS server	To manually enter a DNS server address
Test Interval	Enter time in minutes and seconds
Attempts to Fail	No. of attempts to contact the MS before "comm. error" appears

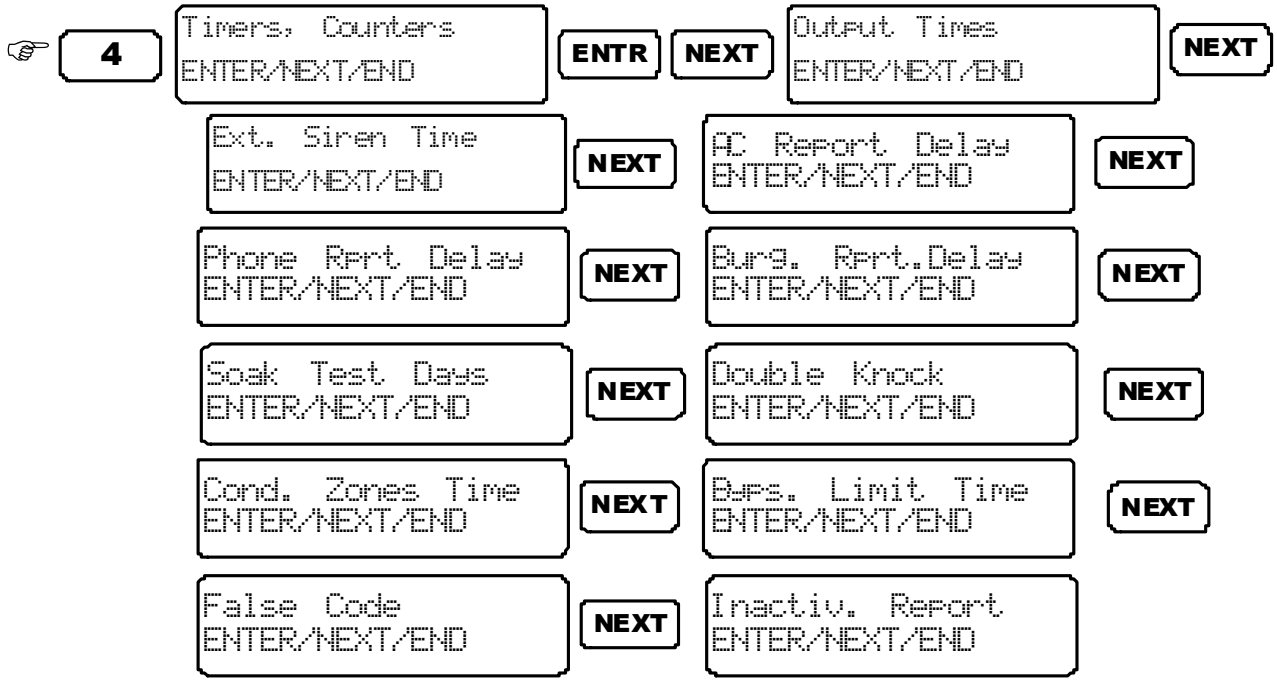
Example: Entering IP no. or URL



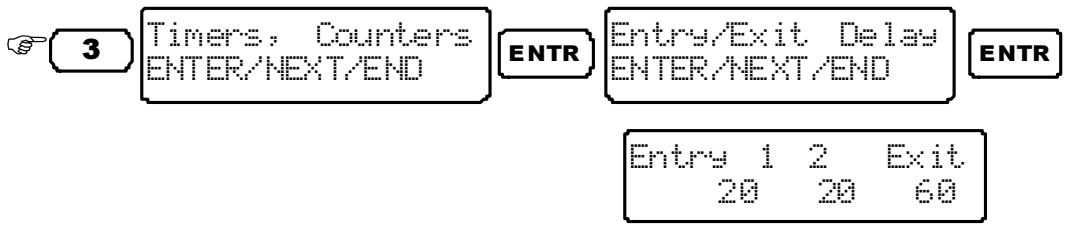
MS #1 URL. The address is entered under the restriction of 16 characters per line (and 47 in all) and continue to the next screen (after pressing [ENTR])

5.6 KEY #4: Timers, Counters

Set the system's timings for entry/exit delays, outputs tripping, faults response and more.



5.6.1 Entry/Exit Delays



Set 'Entry 1' delay for all the zones (To use the 'Entry 2', refer to section 5.4.1, parameter 'T') and the exit delay. Default entry delay is 20 seconds; exit, 60 seconds.

5.6.2 Output Times

Set the outputs type timing, i.e., the time in which the related PCB output is tripped. In each output type screen press [ENTR] and set the time.

The HUNTER-PRO series has 3 trip times:

1. '0': The output is tripped until the system is disarmed
2. 1-9998: The output is tripped for this time (in seconds)
3. 9999: The output is tripped for as long as the event (By an output type. see further) that had triggered it exists. For example, the onboard relay is triggered by and for as long a phone line failure remains. As soon as the fault is resolved the output is switched off.

Following is a table of the output types (see section 1.7) with their default timing.

[NEXT]	Output type	Timing (Sec.)
-	Ext. Siren	240
X1	Int. Siren	240
X2	Burglary	240
X3	Anti-mask	240
X4	Special Burglary 1	240
X5	Special Burglary 2	240
X6	Smoke	240
X7	Fire	240
X8	Special Fire	240
X9	Panic	240
X10	Silent Panic	240
X11	Hold Up	240
X12	Medical	240
X13	Tamper	240
X14	Mains Fault	9999
X15	Low Battery	9999
X16	Phone Failure	9999
X17	Trouble	9999
X18	Zone Bypassed	9999
X19	GSM Fault	9999
X20	Comm. Fault	9999
X21	TAG Activation	240
X22	Door code	5
X23	W/L Remote	5
X24	Test	5
X25	Audio Device	60
X26	Remote control*	60
X27	Zone Open Hold**	0 (min.)

* The time an output remotely triggered remains triggered

** Energy saving feature: Can be used for automatically turn off air conditions and lights at the end of the day.

"Zone open hold" works in conjunction with the 'Zone Opened' output type (an event output type that follows the zones status): After setting the "Zone open hold" time, any PCB output that is triggered by 'Zone Opened' output type (i.e. triggered when any zone is violated) will remain triggered after the zone returns to normal mode, for the time set in the "Zone open hold" time (unless the zone is violated again first).

5.6.3 AC Report Delay

Set the time (in minutes) a mains (AC) failure report will be delayed (Up to 250 minutes).

5.6.4 Phone Report Delay

This is a feature which is meant to prevent false telephone line alarms: The fault report is delayed for the time (in minutes) set in this menu. If the line is normally clear it is recommended to set the delay time to zero (No delay).

5.6.5 Burglary Report Delay

Burglary alarms will not be reported immediately to the MS if they occur within entry delay, but delayed for the time set in this screen. If the system has been disarmed in the mean time, the report will not be sent at all. If the entry delay is very short it is recommended not to change the default time. This reduces superfluous reports.

5.6.6 Soak Test Days

Set the number of days a zone (Mostly, a zone that causes false alarms) will be in test mode. During this period of time, any violation of the zone will neither be reported to the MS nor trigger the alarm/private dialer. It will be displayed in the "Fast display" mode and will only be logged in the memory log.

The max test period is 7 days. After this period the zone will automatically return to normal operation. If set to "0" the zone returns to normal at midnight of the same day the test begun. There is no limit of the number of soaked zones.
The soak zone menu is located under Tests (#0).

In PIMA display mode, the letter "T" indicates the zone is under a test mode

5.6.7 Double Knock

Double Knock is a feature for reducing false alarms: A zone set as 'Double knock' will alarm only when it is violated twice within a period of time which is set in this screen (see "Zone Programming" section 5.4).

There is no limit with the no. of Double knock zones.

If a Double Knock zone is violated continuously, an alarm will be set off after the preset time

5.6.8 Conditioned Zones Time

Set the time span (in seconds) for conditioned zones to set off an alarm, only if 2 of them are violated within a pre-determined period of time, set in this screen (see "Zone Programming", section 5.4).

5.6.9 Bypass Limit Time

Set the time (in minutes) in which a zone can be bypassed (by a user, during arming), before it is automatically becomes armed again. This protects against burglary preparation by bypassing zones before the system is armed.

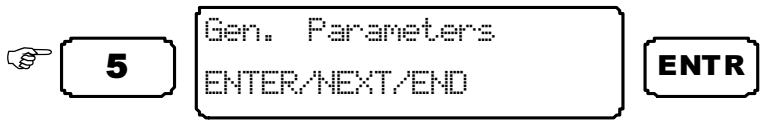
5.6.10 False Code

Set the number of allowed keystrokes (max 24), after which the system reports the MS and responds according to the system responses (see "System Responses", section 5.8).

5.6.11 Inactivity Report

This feature serves as an indication if the system has not been armed (fully or partially) for the number of days set in this screen. If so, a report is sent to the MS which can then check the integrity of the system with the customer.

5.7 KEY #5: General Parameters



General parameters are displayed in 2 consecutive screens.

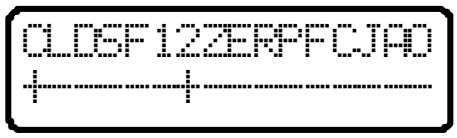
5.7.1 First Screen

Par.	Name	Marking "+" means...
K	State Key Switch	(+) Toggle key (On/Off) (-) Momentary key
D	DC Siren	DC Siren is installed
1	TAMPER 1 Connec.	TMPR #1 output is active
E	TAMPER 1 - EOL	TMPR #1 output is protected by EOL circuit
2	TAMPER 2 Connec.	(+) TMPR #2 output is active (-) TMPR #2 output serves as zone #9
E	TAMPER 2 - EOL	TMPR #2 is protected by EOL circuit
K	Key-> Home State	Arming with a key arms to 'HOME 1'
A	Automatic-> HOME	Automatic arming arms to 'HOME 1'
B	Byps. Zone in Au.	Any opened zones are bypassed in auto-arming
2	2 EOL Resistors	All EOL zones are protected by 2 resistors
S	Siren beep in ARM	The siren beeps once when arming the system. When disarming with a key or remote control the siren beeps twice.
M	User Code-> Menu	(+) Entering User code displays the user menu (-) Entering User code arms/disarms the system
P	Advanced Menu	Enhanced communication menu is enabled

Par.	Name	Marking "+" means...
Z	-	Not in use
T	Byps. Tmpr. in Arm	Arming is enabled with faulty tamper
F	Byps. Fail in ARM	Arming is enabled with system fault

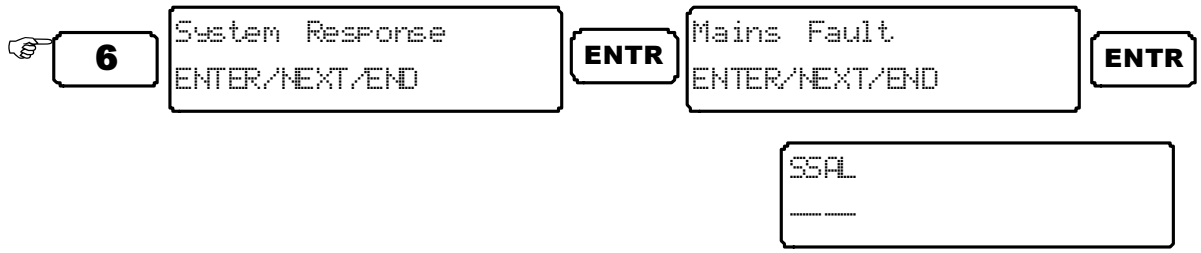
Press [ENTR] to save and proceed to the second parameters screen.

5.7.2 General Parameters Second Screen



Par.	Name	Marking "+" means...
C	Light KP continu	The keypad keys illuminate (weak) continuously
L	Light KP in Alrm	All keypads illuminate during alarms
D	Light KP in Dely	All keypads illuminate during exit/entry delays
S	Buzzer In Alarm	The Keypad buzzes in during alarms
F	Enable Fast Arm	Press the following keys until the exit countdown starts: [1] to fully arm the system [4] to arm the system to 'HOME 1' mode [7] to arm the system to 'HOME 2' mode
1	Cancel HOME1 Del	HOME1 entry delay time is '0'
2	Cancel HOME2 Del	HOME2 entry delay time is '0'
Z	Disp. Alrm in ON	Alarmed zones are displayed when the system is armed
E	Not in use	-
R	Retrigger Opn.Zn	Triggered zones will be re-triggered and send reports to the MS until they are closed or the system is disarmed
P	Disp. Armed Part	Armed partitions are displayed
F	Final door	Closing a delayed zone will terminate exit delay timing
C	Full remote cont	Enable full remote control (Mode B, including outputs)
J	Report W/L Jamm.	Wireless jamming is alerted & reported
A	Part. AutoArming	Auto-arming by partition is enabled
O	Not in use	

5.8 KEY #6: System Responses

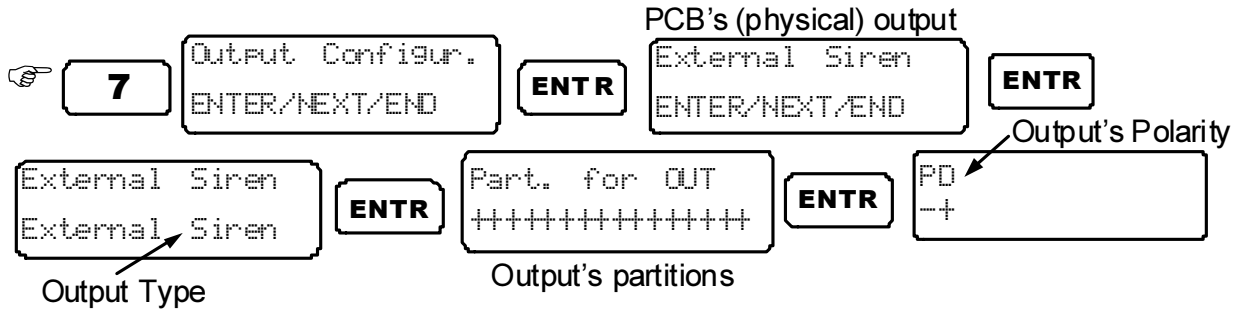


Set the system's responses to 5 faults/events: Mains fault, low battery, phone line fault, false code entry, and zone failure/tampering.

The differentiation of responses between armed & disarmed modes, as in other PIMA systems like the HUNTER-PRO 32, does not apply to HUNTER-PRO series and has been replaced by the parameter 'L'. See the next table

Par.	Response	Mark "+" means...
S	Activate Siren	1. When the system is armed, both the internal and external sirens are set off in alarm 2. When the system is disarmed, only the internal siren is set off in alarm
S	Ext. SRN in OFF	The external siren is activated in alarm even when the system is disarmed
A	Act. Burgl Output	Activate the burglary output type
L	No Daytime MS	The system does not report the MS when it is disarmed

5.9 KEY #7: Outputs Configuration



Configure the PCB outputs and the output types (see section 1.7 to distinct between the two). The outputs can be triggered based on partitions, i.e. be triggered only by alarms generated in the allocated partitions.

By default, the output types are allocated to the most likely PCB outputs, so the 'External siren' output type, for example, is the default type for the PCB 'Ext. SIREN' output. It is not advisable to change these unless specific installation requirements.

5.9.1 PCB & Expanders Outputs

There are seven outputs on the system's PCB: Ext. & Int. SIRENS, SMOKE, RELAY, ON/OFF, ALRM, Audio Ctrl. The expanders' outputs are also set in this menu.

Press [NEXT]	PCB/Expanders Output
X1	Internal Siren
X2	RELAY
X3	SMOKE (reset detectors)
X4	ON/OFF
X5	ALARM
X6	Audio Control
X7	OUT-1000 Outputs
X8	I/O-R Outputs
X9	I/O-8N Outputs

5.9.2 Output Types

Following, is a table of the output types by their order in the menu. To clarify, the process of programming is as follows:

Pick an output and press [ENTR]; Pick an output type and press [ENTR]; Set the output partition/s and press [ENTR]; set the output polarity (see how further on) and press [ENTR];

Output type	What trips the PCB output?
External Siren	Alarm from a zone programmed to trigger the external siren output type
Internal Siren	Alarm from a zone programmed to trigger the internal siren output type
Burglary	Alarm from 'Burglary' zone type*
Anti-Mask	Alarm from 'Anti-Mask' zone type
Special Burglary 1	Alarm from 'Special Burglary 1' zone type
Special Burglary 2	Alarm from 'Special Burglary 2' zone type
Burglary - All Types	All alarms from 'Burglary', 'Special Burglary 1' and 'Special Burglary 2' zone types
Fire	Alarms from 'Fire' zone type
Special Fire	Alarms from 'Special Fire' zone type
Panic	Alarms from 'Panic' zone type, or keypad panic code [*]+[#]
Silent Panic	Alarms from 'Silent Panic' zone type
Hold-Up (Duress)	Alarms from 'Hold-Up (Duress)' zone type, or keypad hold-up code
Medical	Alarms from 'Medical' zone type
Alarms - All Types	All the alarms from all the zones
Audio Control	Activating audio (MIC-200) or voice unit (VU-20N)
Zone Open	Zone violation
Zone Bypassed	Zone bypassing

* All the zone types are programmed by default to activate the external siren in response to alarm. To change this, see section 05.8.

Output type	What trips the PCB output?
Smoke Detector Power	Resetting smoke detectors
Tamper	Tamper switch opened
Zone Tamper/fail	Zone tamper switch triggered or zone failure
Buzzer	Keypad buzzer activated
Armed	Arming the system
Installer Program	Entering installer code
General Fault	System general fault
MAINS Fault	Mains fault
Low Battery	Low battery fault
Phone Fault	Phone fault
GSM Fault	GSM fault
Communication Fault	Failing to communicate with the MS
Not In Use	-
Door Code	Entering a door code
Wireless Remote	Pressing the [*] button in a remote control
Test	Sending test report
Not In Use	-
Not In Use	-
Remote Control	Activating an output remotely
Not Used	-
Station ACK	ACK received from the MS*.

* This output type is used for indication that a report that was previously sent to the MS has been received. When an alarm from a zone programmed to set off the "Station ACK" output type occurs, the PCB output programmed to be triggered by this output type "waits" for the system to receive ACK. As soon as the ACK is received the output is tripped for 10 seconds (and can turn on a bulb, for example).

5.9.3 Output Partitions

Set the outputs partitions (see drawing in section 5.9), i.e. define which partitions are enabled to activate which output.

5.9.4 Polarity & Activation in Disarm

Set the polarity of the output and whether it will be activated when the system is disarmed (See the drawing in section 5.9).

Par.	Name	When setting to "+"
P	Polarity <+=Pos.	'+': The output is normally tripped and is disconnected during alarms '-': The output is switched to GND during alarms
D	Active in Disarm	'+': The output is tripped when the system is disarmed '-': The output is tripped when the system is armed

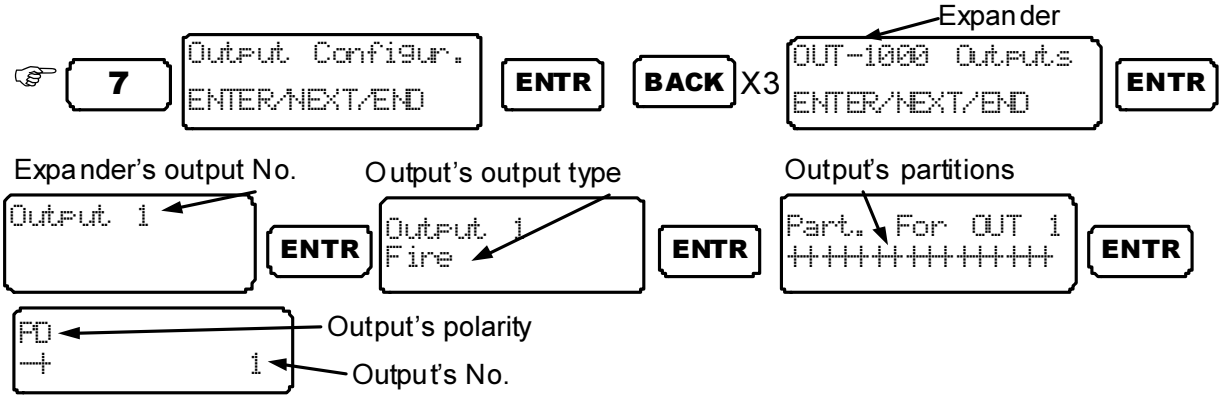
5.9.5 'Ext. Siren' and 'Int. Siren' Outputs

These 2 onboard outputs are both high current outputs and can trigger any speaker siren. However, the 'Ext. Siren' output can be triggered only when the 'Int. Siren' output is. As a result, the sirens connected to the HUNTER-PRO series can be activated in one of 3 ways: Both the internal and external, the internal only & no siren at all.

It is recommended not to allocate to the 'Ext. Siren' and 'Int. Siren' PCB outputs any other but the same output types

5.9.6 Expanders' Outputs

5.9.6.1 OUT-1000

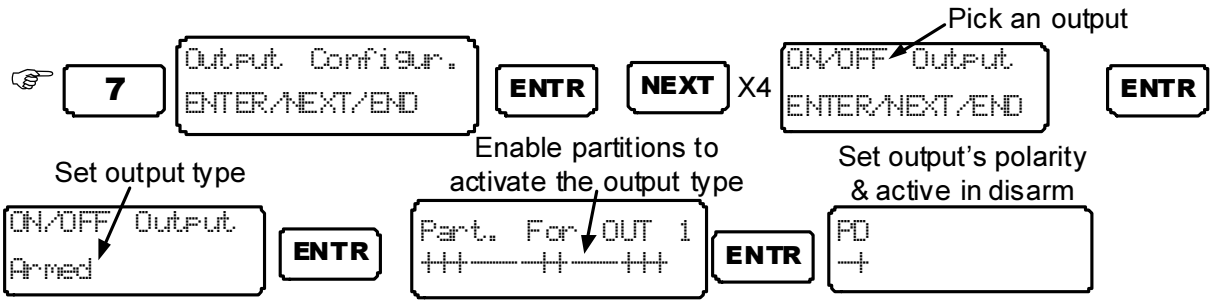


Configure the OUT-1000 (8 outputs expansion card) outputs. The screens are the same as those of the PCB outputs.

Press [NEXT] to configure the I/O-R 8 relays expansion card and the I/O-8N and I/O-16 outputs card

5.9.7 Examples for Programming the Outputs

1. ON/OFF output:

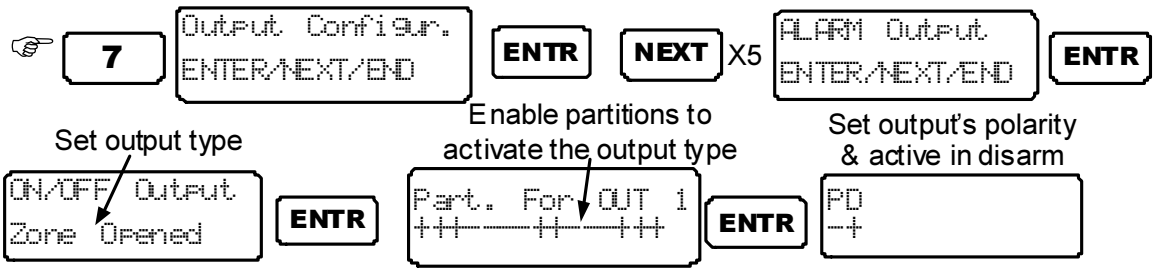


The procedure is as follows: First, pick the ON/OFF output. Then, determine what output type will be allocated (trigger) to it. In this case, the default output type is 'Armed', so when the system becomes armed, the ON/OFF output is tripped.

Then, determine from within which partition/s this output can be triggered. Then set the polarity of the output.

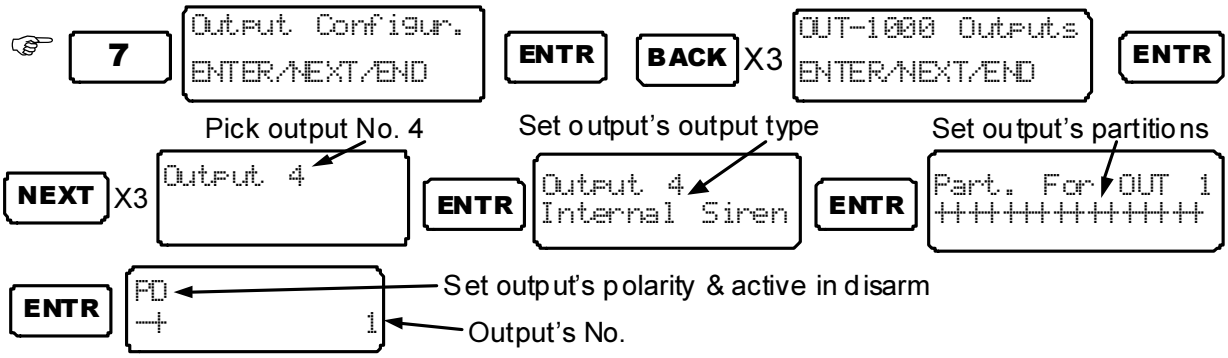
2. ALRM output:

Configure the ALRM output so when any zone is opened, the output is tripped. To do so, allocate the 'Zone opened' output type to the ALRM output.



3. OUT-1000 outputs

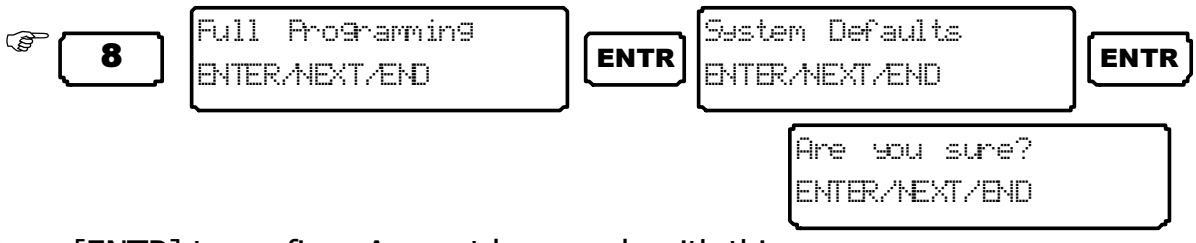
Set 'Internal Siren' output type to trigger output #4 on OUT-1000:



5.10 KEY #8: Full Programming

5.10.1 System Defaults

Initialize the system to factory defaults.



Press [ENTR] to confirm. A countdown ends with this message:

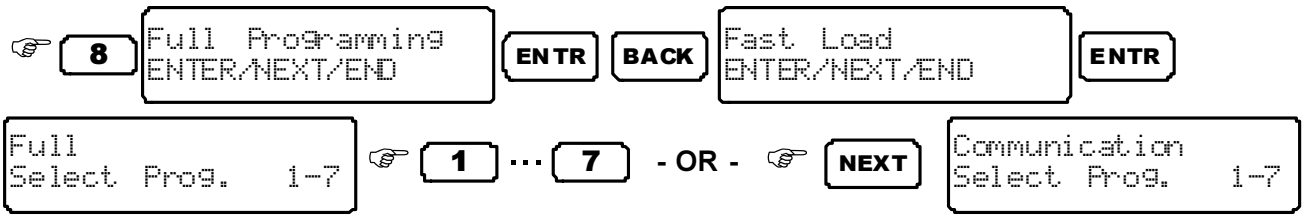
Press [END]

5.10.2 Local Download

Use this menu to program the HUNTER-PRO series with the COMAX upload/download software. COMAX runs on a local computer that connects to the panel using LCL-11A adaptor and the keypad (see section 4.1.2 and the COMAX user guide). Pressing

[ENTR] causes the system to standby, waiting to receive data. Immediately press 'Local' icon in COMAX to start the process. Wait until "Connected" message is displayed on the COMAX status bar. You can now start downloading information.

5.10.3 Fast Load



Set the options for the PRG-896 fast programmer: The HUNTER-PRO series has 2 downloading options: full 7 different programs or only the communication parameters.

PRG-896 is programmed with COMAX software using DPR-33 adaptor

5.11 KEY #9: Installer Code

Set/change the Installer code. A code is 4 - 6 digits long.

If the Installer code begins with zero it is locked and cannot be reset, in case of power loss. This is a security measure. If this happens, please contact PIMA support team

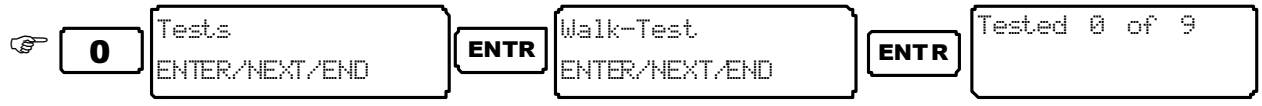
5.12 ASTERISK KEY *: Express Programming Menu

For details, refer to section 4.5.

5.13 KEY #0: Tests

Test menu has 9 sub-menus for testing the system's hardwired and wireless zones, the outputs, and the communication.

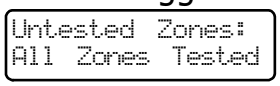
5.13.1 Walk-Test



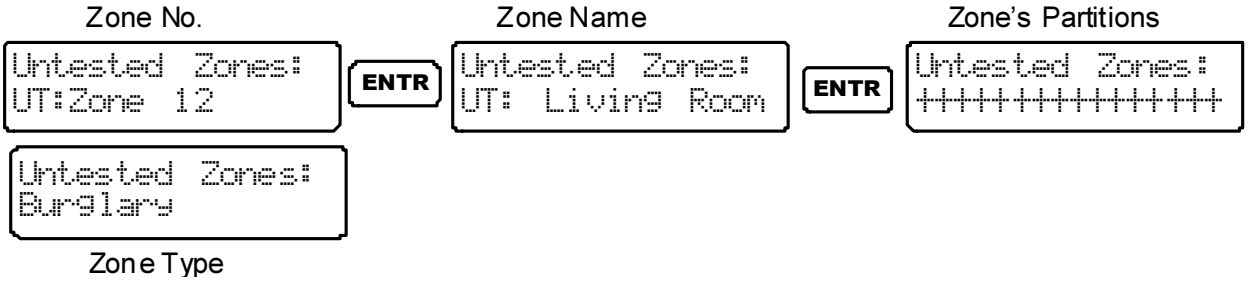
Test all the line and wireless zones in the system. During the test, the display shows the number of tested detectors out of the overall number of the detectors.

The memory log keeps record of the test, including the number of zones triggered.

When the tests are over, press [ENTR]. If all zones were tested:

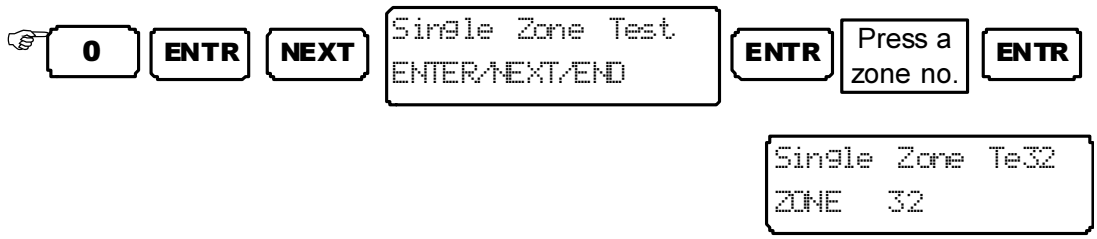


If not, the system displays the names of the zones not tested, in the following order:



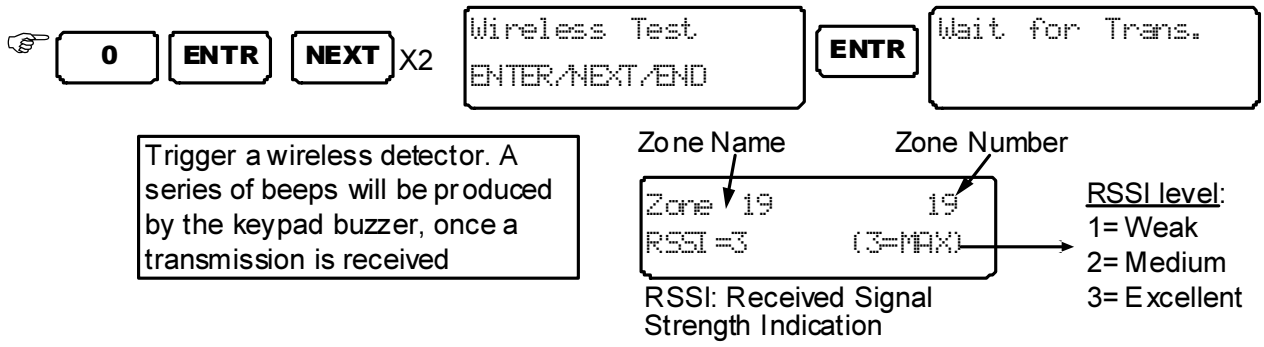
This test is useful for checking the system following an installation.

5.13.2 Single Zone Test



This test checks a single detector, hardwired or wireless: Press the desired zone number. The first 8 zones are the onboard outputs and are named "on board zone". Pressing [ENTR] displays the zone's name and then its partitions and type.

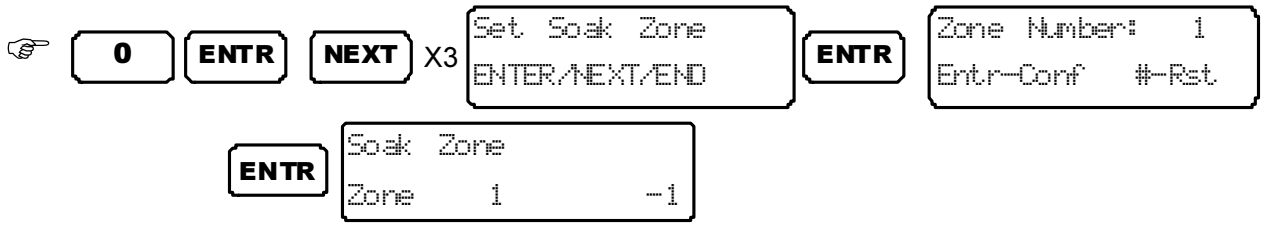
5.13.3 Wireless Test



Testing a wireless zone is the same as testing any zone. The detector's reception level (RSSI) level is displayed in response to receiving a transmission (see next section). All other screens match.

A transmission from a detector will be displayed, showing the detector's RSSI, and be registered in the memory log. This test is useful for finding the best location for wireless detectors and their optimal regularity.

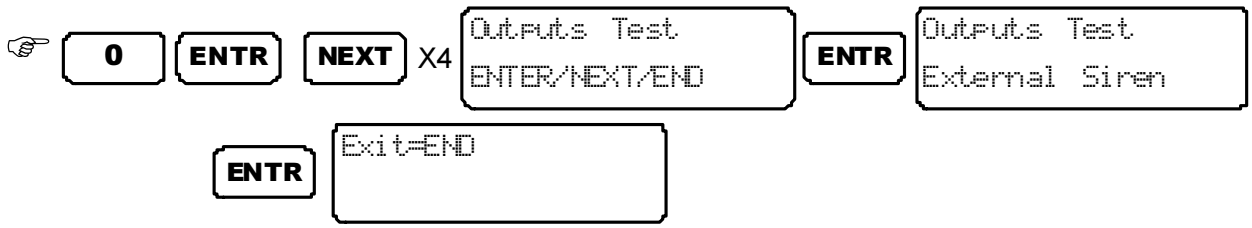
5.13.4 Set Soak Zone



Set a zone to be soaked (tested). When a zone/detector is suspected in causing false alarms, they can be tested. A test can last up to 7 days (to set the number of soak days, refer to section 5.6.6).
All the events from a tested zone will neither trigger the alarm, nor be reported to the MS. However, they will be logged.

When the soak test is over, the zone will automatically return to normal mode.
To manually change a zone status from soak to normal mode, press [#] in the zone no. screen.

5.13.5 Outputs Test



This feature lets you test every output directly - locally and remotely. Pressing [ENTR] trips the output for 10 seconds. Pressing [END] ends the test.

Testing the outputs has a great advantage - it allows the installer to define between connection problems and programming faults: if a device does not work properly but is triggered by the output test, then the problem lays with programming (or the device itself) and not connection.
On the other hand, failing to trigger the external siren (for example) through the output test, indicates a connection or other-than-programming problem.

These are the outputs test screens by their order:

Output	**Key Presses**	**Details**
External Siren	[ENTR]	Onboard Ext. output
Internal Siren	[ENTR] [NEXT]	Onboard Int. output
Relay	[ENTR] [NEXT] X2	Onboard Relay output
Smoke Output	[ENTR] [NEXT] X3	Onboard Smoke output
On/OFF Output	[ENTR] [NEXT] X4	Onboard ON/OFF output
ALARM Output	[ENTR] [NEXT] X5	Onboard ALRM output
Audio Contrl Out	[ENTR] [BACK] X4	Onboard Audio Cont. output
OUT-1000 Outputs	[ENTR] [BACK] X3	Press [ENTR], pick an output and press [ENTR] to trigger it

Output	Key Presses	Details
Exp IO-R Outputs	[ENTR] [BACK] X2	Press [ENTR], pick an output and press [ENTR] to trigger it
Exp IO-8 Outputs	[ENTR] [BACK]	Press [ENTR], pick an output and press [ENTR] to trigger it

5.13.6 MS Dialer Test

☞ [0] [ENTR] [NEXT] X5 → Test MS Dialer / Select T. No. 1-4 → [1] .... [4]

Test the Monitoring Station's PSTN dialer: Press [1] to dial phone #1; Press [2] to do so with phone #2, and so on.

When trying to test a no. that had not been programmed before, an error message is displayed, asking to press [END]. The system then shifts automatically to the screen where this information should be entered.

For example: Set Ph. Connect! / Press END. This error message occurs when trying to test the MS radio without programming the account number first. When pressing [END] the menu shifts to Commun. Options / ENTER/NEXT/END screen in "Communication" menu where this parameter is entered.

5.13.7 GSM MS Test

☞ [0] [ENTR] [BACK] X3 → Test MS GSM / ENTER/NEXT/END → [ENTR] → Test MS GSM / Select T. No. 1-4

Test the MS GSM numbers. The test is similar to the PSTN test (See the previous section).

5.13.8 Radio MS Test

☞ [0] [ENTR] [BACK] X2 → Test MS Radio / ENTER/NEXT/END → [ENTR] → Please Wait..

Test the long range radio transmitters, TRV/TRU-100. Pressing [ENTR] will send a transmission test to the MS. No ACK from the MS can be received in this test.

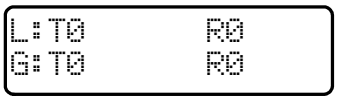
5.13.9 GSM Signal Strength

☞ [0] [ENTR] [BACK] X2 → GSM Sig. Strength / ENTER/NEXT/END → [ENTR] → GSM Sig.Strength / ▓▓▓▓▓▓▓▓▓▓▓▓..

Strong signal: ▓
Weak signal: .

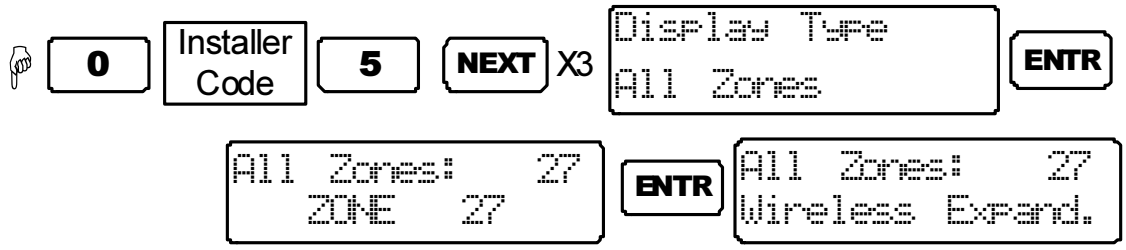
The GSM signal strength indication works as in a cell phone: If the reception is weak (less than 8 squares) the GSM receiver needs to be relocated.

5.13.10 Network Statistics



This screen gives information regarding the network and GPRS. The top line shows the PIMAnet™ IP network statistics and the bottom shows the GPRS. The numbers are the no. of packets sent and received.
When the 'L' and 'R' values in each line are equal or almost equal, the connection is OK. The values can be reset in coordination with the MS.

5.14 Locating a Zone in an Expander



The "All Zones" display type gives detailed information on every zone and enables the technician to quickly locate it. It is part of the User menu

CH. 6. REMOTE CONTROL VIA TOUCH-TONE TELEPHONE

HUNTER-PRO series can be remotely controlled via any touch-tone telephone, including a cellular. The system can be controlled in one of 2 options:

Mode A: Basic commands, including arming and disarming (the default mode).

Mode B: Full control, including triggering all the outputs

The entire chapter applies both when you call the system and vice versa

6.1 Mode A

1. Dial the system's telephone number
2. Wait for confirmation tone (a long tone followed with 2 beeps)
3. Enter Master Code
4. Wait for a status tone:

   Continuous: The system is disarmed

   Beeps: The system is armed

The system will not respond to commands while playing the confirmation tone. It is important to wait until the confirmation tone is over before pressing any telephone key

5. Press a key according to the next table. The system confirms the command with 2 short beeps.

key	Function
⓪	Turn off the external siren and stop the dialer from calling any other no.
①	Arm the system
②	Disarm the system
④	Arm the system to 'Home 1' mode
⑤	Trigger the onboard relay
⑥	Stop triggering the onboard relay
⑦	Arm the system to 'Home 2' mode
⑧	Listen in for one minute (available only with MIC-200). To extend listen in time (in one minute), press ⑧ again as needed

While the system is engaged in remote session, the following message is displayed on all connected keypads: "Other keypad in use".

If the system does not receive any command for a period of 60 seconds, it shall disconnect and return to normal mode. The system will remain in standby (displaying "Other keypad in use") for another 60 seconds, before returning to normal mode.

6.1.1 Example for Mode A

Arming the system via telephone: Dial the system's phone no. → The system answers → wait for the confirmation tone to end → Enter Main code → Wait for command confirmation tone to end → Press [1]

6.2 Mode B

1. Repeat steps 1-4 in Mode A to contact the system.
2. To trigger an output, press [*] and the corresponding command from the following tables.
3. To deactivate an output, press [#] and the corresponding command from the following tables.

General Commands	
Press	**Command**
∗**00**	Turn off the external siren and stop dialer
∗**01**	Arm the system
#01	Disarm the system
∗**04**	Arm to 'Home 1'
∗**07**	Arm to 'Home 2'
∗**08**	Start listening-in

PCB Outputs	
Press	**Command**
11	Ext. SIREN
12	Int. SIREN
13	RELAY
14	SMOKE
15	ON/OFF
16	ALARM
17	Audio Ctrl

OUT-1000	
Press	**Output**
21	#1
22	#2
23	#3
24	#4
25	#5
26	#6
27	#7
28	#8

Relays on I/O-8N Expanders					
Press	**I/O-8N**	**Press**	**I/O-8N**	**Press**	**I/O-8N**
31	#1	**37**	#7	**43**	#13
32	#2	**38**	#8	**44**	#14
33	#3	**39**	#9	**45**	#15
34	#4	**40**	#10	**46**	#16
35	#5	**41**	#11		
36	#6	**42**	#12		

I/O-R expander #1						I/O-R expander #2				
Press	**Relay**		**Press**	**Relay**		**Press**	**Relay**		**Press**	**Relay**
51	#1		**55**	#5		**59**	#1		**63**	#5
52	#2		**56**	#6		**60**	#2		**64**	#6
53	#3		**57**	#7		**61**	#3		**65**	#7
54	#4		**58**	#8		**62**	#4		**66**	#8
I/O-R expander #3						**I/O-R expander #4**				
Press	**Relay**		**Press**	**Relay**		**Press**	**Relay**		**Press**	**Relay**
67	#1		**71**	#5		**75**	#1		**79**	#5
68	#2		**72**	#6		**76**	#2		**80**	#6
69	#3		**73**	#7		**77**	#3		**81**	#7
70	#4		**74**	#8		**78**	#4		**82**	#8

Send system status via SMS to the private dialer				
Press	**Phone**		**Press**	**Phone**
91	#1		**93**	# 3
92	#2		**94**	# 4

6.2.1 Examples for Mode B

Activate the 'Ext. SIREN' output:
Dial → wait for confirmation tone→ Enter Main code → Wait for command confirmation tone to end → Press ∗11

Deactivate output #5 on OUT-1000:
Dial → Wait for confirmation tone→ Enter Main code → Wait for command confirmation tone to end → Press #25

CH. 7. TROUBLESHOOTING

This chapter describes failures displayed on the keypad, various problems that may be encountered due to improper programming, and options for troubleshooting failures that might occur due to incorrect installation and/or programming.

7.1 Restoring the master & installer Codes

In case both these codes are not available:

1. Disconnect mains
2. Disconnect the battery
3. Wait 10 seconds and reconnect the battery
4. Wait for "Clock Not Set" to be displayed
5. Enter 5555 (default master code)
6. Press [9] and enter the new Master code (4-6 digits) and press [ENTR]
7. Press [END] to the main screen.
8. Press 1234 (default technician code) to enter the technician menu.
9. Press [9] and enter a new technician code (4-6 digits). Press [ENTR]
10. Connect mains.
11. Set time & date.

After connecting power, the system enables access to the menus using the default master code (5555) for 30 seconds only. If access does not occur during this time, the process needs to be repeated

The process is also useful for Installer code (Default code 1234), with the exception of a code that begins with zero. In this case the code cannot be reset and you need to call PIMA support

7.2 Faults Displayed on the LCD Keypad

In case a fault occurs, the red fault LED on the keypad flashes. The description of the fault appears on the first line of the LCD Keypad at the right side. The faults are:

Fault	**Description & Repair**
Clock Not Set	Appears on first operation and when reconnecting after power/battery failure. Set time & date
Low Battery	1. Make sure the battery fuse is intact. 2. Check battery charge voltage. 3. Wait 24 hours for recharging and recheck. 4. If the message stays on, replace battery.
Low Voltage	Low PCB DC charge. Mostly occurs after long mains power failure that causes the battery to get drained. Programming is unavailable when this fault occurs. To repair: connect to mains and replace battery if required.

Fault	Description & Repair
Mains Fault	No mains power. If other appliances around are on, check the system's electric socket and fuse. If ok connect mains and the PCB AC fuse
TAMPER 1	Tamper 1 is open
TAMPER 2	Tamper 2 is open
Zone Fault	1. In EOL protected zones: F - Cut, S - Short 2. In detectors wires: AL Cut, SH - Short 3. In wireless detectors: detector's tamper is open
KEYPAD NOT CONNECTED	No communication between the keypad and the PCB. Check the following: 1. Disconnection between PCB's "OUT" and keypad. 2. Keypad's voltage supply is lower than 13v. (verify that no more than 8 keypads are connected) 3. Keypad fault - replace it. 4. PCB fault - replace it.
Phone Line Fault	The system does not indicate any dial tone. The system checks the phone line constantly.  To manually test the phone line, disconnect any appliance connected to it
Keypad X Fault	1. Check keypad X ID (if possible) 2. Check keypad X wiring 3. If ID and wiring is OK, disconnect the keypad and connect it as close as possible (50 cm max.) to the system box. If the keypad still out-of-order, consult PIMA support
Detec. Vol. Fault	Check for short in the detectors' wires
Expander X Fault	Expander's X comm. or vol. connection fault
Expander X Tamper	Expander's X tamper is open
Keypad X Tamper	Keypad's X tamper is open
Other Keypad in use	When more than one keypad is connected and one is being programmed, the others will have this message on screen. This message appears also when the system is being programmed from a different source such as remote programming via computer and telephone.
GSM-200 faults	
GSM Unit Fault	Connection problem or fault in GSM-200 receiver
GSM Comm. Fault	GSM-200 to MS1 connection problem
GSM Link Fault	Low reception or jamming in GSM channel
SIM Card Fault	No SIM card installed in GSM-200 or SIM card fault
GSM Com. Fault 2	GSM-200 to MS2 connection problem

 For further information on GSM-200 refer to the GSM-200 guide

Communication faults	
W/L Unit Tamper	Wireless receiver's tamper is opened or out-of-order. Check that its cover is closed

For further information on I/O-WN, refer to the I/O-WN guide

Check Keypad number	Keypad's ID does not match the programmed no. of keypads
MS. Com. Fault	Failure to communicate with the MS including in test mode. This fault appears if the HUNTER-PRO communicator cannot transfer reports to MS. Possible reasons are incompatible protocol or phone line failure. Check the following: ▪ The telephone line is properly connected to the LINE terminal blocks. ▪ In Communication menu (section. 5.4) the "P" for telephone is programmed with "+". ▪ At least one MS telephone number is programmed. ▪ Telephone account ID for MS is other than 0. ▪ Comm. format is compatible with the one used in the MS. ▪ Correct telephone numbers have been entered. ▪ If the system is connected to an extension of a private switchboard a prefix has been programmed.
SMS Com. Failure	Communication failure between the system and the provider's SMS center
Install SMS Unit	SMS-100 unit is not installed
Network Fault	Communication failure between the system and the PIMAnet card.
IO-R X Fault	Fault in I/O-R relay expander
IO-R X Tamper	I/O-R tamper is open
IO-R X Voltage	Low voltage to I/O-R
Wireless Jamming	Radio channel is jammed
IO-8 X Voltage	Low voltage to I/O-8
Supervision:	Wireless detector ceased to send reports to the system
System Error	The EPROM version and the system's software version do not match. Contact PIMA support

If more than one fault occurs simultaneously they will be displayed one by one

7.3 Additional Faults

7.3.1 MS Comm. Fault

The system has preset to test all aspects of communication to MS: Press [6] for 2 seconds and enter technician code. All testing process will be displayed on the keypad.

7.3.2 MS Radio Fault

Make sure that:

1. The wiring between system and radio receiver is ok.
2. Radio account no. is other than '0'.
3. Comm. format is compatible with the one used in the MS
4. The receiver's antenna is intact, not bended and is attached vertically.
5. If the antenna is installed on a separate surface, check its wires.

7.3.3 Private Dialer Fault

Make sure that:

1. The telephone line is properly connected to the LINE terminal blocks.
2. At least one private telephone number is programmed.
3. Correct telephone numbers have been entered
4. In Communication menu the "P" for telephone is set to "+".
5. In Communication/Private Dialer menu the parameters are programmed.
6. If the system is connected to an extension of a private switchboard a prefix has been programmed.

Disarming immediately after alarm will stop the dialer. To test the dialer, arm the system and wait for dialing

7.3.4 Incoming Calls Fault

If the system does not receive calls, make sure that:

1. In Communication menu (section. 5.4) the "P" for telephone is set to "+".
2. The programmed number of rings exceeds its limit.
3. The telephone line is properly connected to the LINE terminal blocks.

7.3.5 Tamper

TAMPER 1: Tamper 1 is triggered.

TAMPER 2: Tamper 2 is triggered.

7.3.6 Auto-Arming & Auto-Arming by Partition

Make sure that:

1. Auto-arming start time is programmed (see HUNTER-PRO series User guide).
2. System time is correct.
3. The desired partition is programmed as so.

7.3.7 Violating a Zone does not Set-off the Alarm

Make sure that:

1. The zone is neither temporarily nor permanently bypassed.
2. The zone is programmed to the desired responses (sirens, relay, etc.)
3. The zone is programmed to only one partition.
4. The detectors are in order and installed correctly.
5. Zone sensitivity is correct.
6. Zone conditioning is correct.
7. Zone no. of pulses is correct.
8. Zone is not programmed as soak zone.

7.4 MS Report Formats & Codes

7.4.1 Pulse Formats

Name	Rate (pps)	ACK (Hz)	Error Control	ID Event	A	B
Ademco Slow	10	1400	Double Round	3 - 1	162	1
				3 - 2	163	1
				4 - 1	162	129
				4 - 2	163	129
			Checksum	3 - 1	162	65
				3 - 2	163	65
				4 - 1	162	193
				4 - 2	163	193
		2300	Double Round	3 - 1	162	17
				3 - 2	163	17
				4 - 1	162	145
				4 - 2	163	145
			Checksum	3 - 1	162	81
				3 - 2	163	81
				4 - 1	162	209
				4 - 2	163	209

Name	Rate (pps)	ACK (Hz)	Error Control	ID Event	A	B
Silent Knight Fast	14	1400	Double Round	3 - 1	170	1
				3 - 2	171	1
				4 - 1	170	129
				4 - 2	171	129
			Checksum	3 - 1	170	65
				3 - 2	171	65
				4 - 1	170	193
				4 - 2	171	193
		2300	Double Round	3 - 1	170	17
				3 - 2	171	17
				4 - 1	170	145
				4 - 2	171	145
			Checksum	3 - 1	170	81
				3 - 2	171	81
				4 - 1	170	209
				4 - 2	171	209
Franklin	20	1400	Double Round	3 - 1	208	1
				3 - 2	209	1
				4 - 1	208	129
				4 - 2	209	129
			Checksum	3 - 1	208	65
				3 - 2	209	65
				4 - 1	208	193
				4 - 2	209	193
Franklin	20	2300	Double Round	3 - 1	208	17
				3 - 2	209	17
				4 - 1	208	145
				4 - 2	209	145
			Checksum	3 - 1	208	81
				3 - 2	209	81
				4 - 1	208	209
				4 - 2	209	209
Universal High-Speed	20	2300	Double Round	3 - 1	82	17
				3 - 2	83	17
				4 - 1	82	145
				4 - 2	83	145
Universal High-Speed	20	2300	Checksum	3 - 1	82	81
				3 - 2	83	81
				4 - 1	82	209
				4 - 2	83	209

Name	Rate (pps)	ACK (Hz)	Error Control	ID Event	A	B
Radionics	40	1400	Double Round	3 - 1	120	1
				3 - 2	121	1
				4 - 1	120	129
				4 - 2	121	129
			Checksum	3 - 1	120	65
				3 - 2	121	65
				4 - 1	120	193
				4 - 2	121	193
Radionics	40	2300	Double Round	3 - 1	120	17
				3 - 2	121	17
				4 - 1	120	145
				4 - 2	121	145
			Checksum	3 - 1	120	81
				3 - 2	121	81
				4 - 1	120	209
				4 - 2	121	209

7.4.2 DTMF Formats

Name	Rate (pps)	ACK (Hz)	Error Control	ID Event	A	B
DTMF		1400	Double Round	3 - 1	0	2
				3 - 2	1	2
				4 - 1	0	130
				4 - 2	1	130
			Checksum	3 - 1	0	66
				3 - 2	1	66
				4 - 1	0	194
				4 - 2	1	194
		2300	Double Round	3 - 1	0	18
				3 - 2	1	18
				4 - 1	0	146
				4 - 2	1	146
			Checksum	3 - 1	0	82
				3 - 2	1	82
				4 - 1	0	210
				4 - 2	1	210
Contact ID					0	230
PAF™		1400			0	5
		2300			0	21
NPAF™					Call PIMA support	
EPAF™						

CH. 8. SUPPLEMENTARY PRODUCTS FOR THE HUNTER-PRO SERIES

LCD Keypads

RXN-400 - Small LCD Display
RXN-410 - Large LCD Display
RXN-400 ACE – LCD Display W/RFID Tag

Communication Modules

SMS-100 - SMS Generated Via PSTN
GSM-200 - GSM/GPRS Transmitter
net4pro (Network) – TCP/IP Module
TRV-100 - VHF Radio Transmitter
TRU-100 - UHF Radio Transmitter

Wireless Accessories

MCT-234 - Key Fob
MCT-201 WP – Panic Pendant
MCT-302 - Magnetic Contact
NEXT PIR MCW – Supervised PIR

Voice Accessories

VU-20N – Dual Voice Message module
MIC-200 - Microphone

Led Keypads

RXN-416 – For 16 Zones
RXN-9 – For 9 Zones

Special Keypads

Wireless Technician Keypad
RXN-200 - Anti-Vandal (IP65)

System Expanders

EXP-PRO UNIV – 8 Zones, Local
I/O-8N – 8 Zones, Remote
I/O-16 - 16 Zones, Remote
I/O-WN – 32 Ch. Wireless receiver
I/O-R – 8 Relays, Remote
OUT-1000 – 8 Open Collectors, Local

Programming Modules

LCL-11A – Serial Interface
PRG-896 – Fast Programmer

INDEX

Accessories
MIC-200, 12, 37, 51, 72, 81, 91
PRG-896, 42
VU-20N, 37, 38
Comax, 42, 43, 56, 60, 75, 76
Enhanced Communication Menu, 47
Expanders
EXP-PRO, 13, 21, 22, 23, 48, 91
I/O-16, 23, 26
I/O-8N, 12, 14, 21, 23, 24, 72, 74, 82, 91
I/O-R, 21, 23, 26, 50, 72, 74, 83, 86, 91
I/O-WN, 12, 21, 23, 27, 40, 41, 48, 86, 91
I/O-WN programming, 49
Max. No., 21
OUT-1000, 13, 21, 31, 72, 74, 75, 78, 82, 83, 91
Programming, 48
Express Programming, 45
Keypads
ACE, 32
RXN-400/410, 32
Setting the keypads, 49
VKD-1, 33
Network Interface
net4pro, 9, 61, 64, 65
Output Types, 13, 72
Partitions
Example A, 15
Example B, 16
Example C, 17
Partitioning, 15
Serial interface
LCL-11A, 42, 43, 75
Transmitters
GSM-200, 9, 12, 36, 59, 60, 85, 91
SMS-100, 9, 12, 60, 64, 86, 91
TRV/TRU-100, 6, 9, 11, 12, 35, 36, 79