

Intruder Alarm System HUNTER-PRO (Ver. 2.8) Installation Manual



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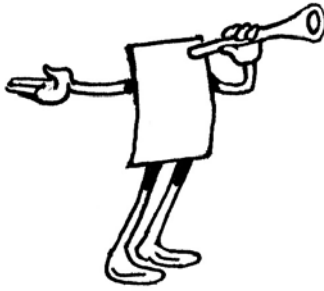
Please read this manual in its entirety before attempting to program or operate your system. Should you misunderstand any part of this manual, please contact the supplier or installer of this system.

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Introduction



The **HUNTER-PRO** includes many sophisticated features that allow you to custom tailor it to your individual needs, and yet remain easy to operate and program for both the user and installer.

This manual contains technical as well as end user instructions. Also available is a User Manual dedicated for the end user.

**IMPORTANT!**

Please refer to the HUNTER-PRO User Manual for a better in depth understanding of end user features and functions.

This installation manual contains technical and programming instructions for a quick and simple installation and maintenance of the system.

If, despite this detailed manual, questions remain or something is unclear, do not hesitate to contact your local **PIMA** distributor or **PIMA** directly at:

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Up to date literature is available to download from our website:

www.pima-alarms.com

Safety Instructions

Your HUNTER-PRO alarm system has been registered with the CE (complying with EN 60950 standard). Accordingly, this section is designed to assist you in identifying potentially unsafe conditions while operating our product:

- To reduce the risk of fire or electric shock, do not expose this alarm system to rain or moisture.
- Do not open the door of the alarm system. Dangerous high voltages are present inside of the enclosure. Refer servicing to qualified personnel only.
- This alarm system should be used with AC 230V, 50Hz. To prevent electric shocks and fire hazards, do NOT use any other power source.
- Do not spill liquid of any kind onto the unit. If liquid is accidentally spilled onto the unit, immediately consult a qualified service.
- Install this product in a protected location where no one can trip over any line or power cord. Protect cords from damage or abrasion.
- Disconnect all sources of power supply before proceeding with the installation.
- Connect the AC transformer output wires to the terminal block on the Control Panel as marked.



Table of Contents

Introduction	3
Safety Instructions	4
Chapter 1 The HUNTER-PRO Panel	7
1.1 FUSES ON THE CONTROL PANEL	7
1.1.1 Regular fuses	7
1.1.2 Thermal fuses	7
1.2 CONNECTIONS AND TERMINALS	8
Chapter 2 Installing Peripherals	11
2.1 GENERAL	11
2.2 ZONE INPUTS	12
2.2.1 Connection without EOL resistor	12
2.2.2 Connection with one EOL resistor	13
2.2.3 Connection with two EOL resistors	14
2.3 ARMING WITH KEY/REMOTE CONTROL	15
2.4 TMPR1 AND TMPR2	15
2.5 SIRENS	16
2.6 RELAY	16
2.7 ALARM AND ON/OFF	17
2.8 KEYPADS	17
2.9 TELEPHONE	17
2.10 MICROPHONE	18
2.11 VOICE UNIT	18
2.12 RADIO TRANSMITTER TRV/TRU-100	19
2.12.1 Connecting the Transmitter:	19
2.13 EXPANDERS	20
2.13.1 Outputs:	20
2.13.2 Input Zones:	20
2.14 CONNECTING RC-PRO	21
2.14.1 Connecting with the HUNTER-PRO	21
2.15 CONNECTING COMMAND 48	21
2.15.1 Programming COMMAND 48	22
2.16 BATTERY	22
2.17 MAINS VOLTAGE	22
2.18 SETTING THE SYSTEM	23
Chapter 3 Programming and Operation	25
3.1 INTRODUCTION	25
3.1.1 Local Uploading with PRG-22	25
3.1.2 Local programming with PC and LCL-11A	26
3.1.3 Remote Programming with COMAX Software (Upload/Download)	26
3.1.4 Programming with a Keypad	26
3.2 PROGRAMMING WITH AN LCD KEYPAD	28
3.2.1 Zone Sensitivity	29
3.2.2 Zone Characteristics and Responses	29
3.2.3 Monitoring Station Parameters	33

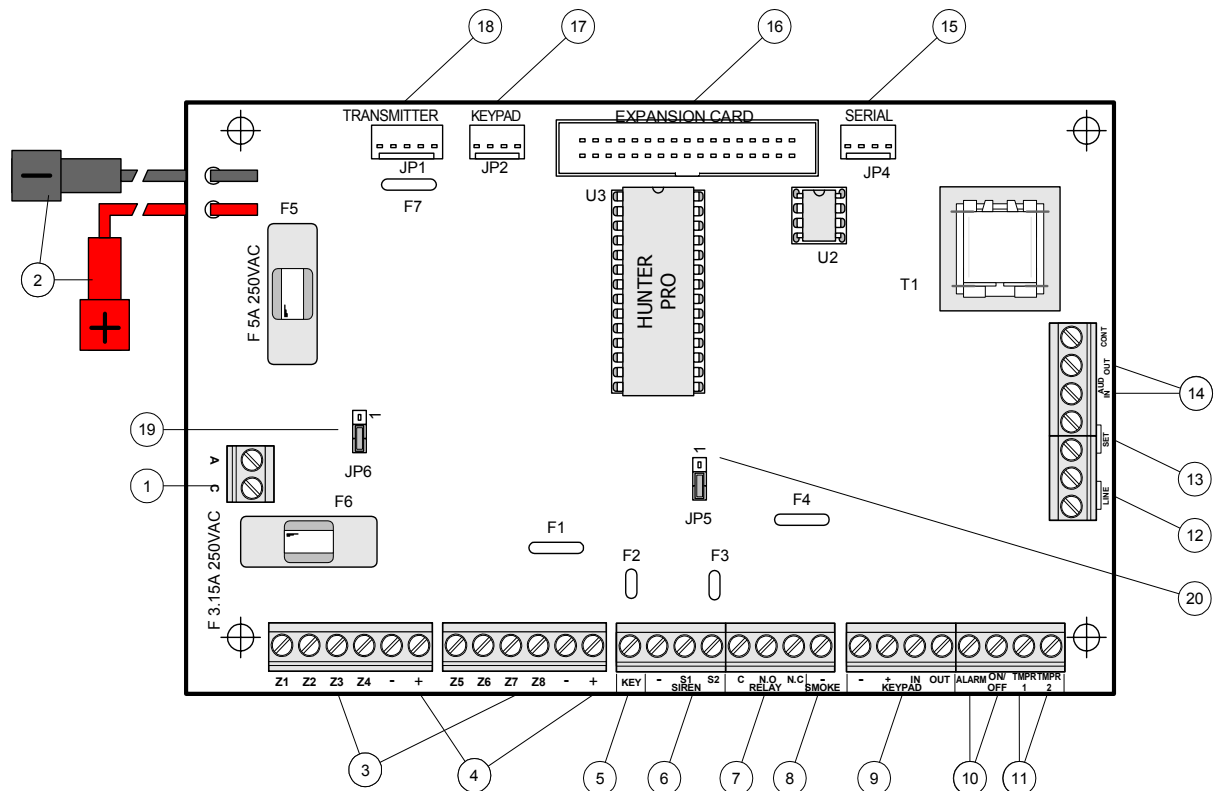
3.2.4	Telephone Line Characteristics.....	37
3.2.5	Siren, Relay, and Auxiliary Outputs.....	40
3.2.6	Automatic Test Events to Monitoring Stations	43
3.2.7	System Configuration	45
3.2.8	Responses to Failures and Events.....	51
3.2.9	Typing Zone Names.....	54
3.2.10	Radio Transmitter Test.....	54
3.2.11	Partitioning	54
3.2.12	Exit and Entry delay times.....	56
3.2.13	General Parameters.....	56
Chapter 4	Private Dialer and Communication to Monitoring Station	59
4.1	DIALER TO PRIVATE NUMBERS.....	59
4.2	TELEPHONE COMMUNICATION WITH MONITORING STATION	59
4.3	RADIO COMMUNICATION TO MONITORING STATIONS.....	60
Chapter 5	Troubleshooting	61
5.1	ACCESSING THE SYSTEM WITHOUT MASTER CODE.....	61
5.2	FAILURE INDICATIONS	62
5.3	TROUBLESHOOTING.....	62
5.3.14	No Radio Transmission to Monitoring Station.....	65
5.3.15	System is not answering telephone calls.....	65
5.3.16	Automatic arming is not functioning.....	65
5.3.17	Zone does not cause an alarm.....	65
Chapter 6	Expanders.....	67
6.1	OUTPUT EXPANSION CARD OUT-1000	67
6.2	ZONE EXPANSION CARD EXP-PRO	68
6.3	ZONE DOUBLING	68
6.3.1	Zone Doubling Options	70
Chapter 7	Keypads.....	73
7.1	LCD KEYPADS.....	73
7.1.1	Display Description	73
7.1.2	Zone Statuses Description	74
7.1.3	Key Functions	75
7.1.4	Accessing the RJ-11 Socket (in RX-400 keypad models, and up).....	76
7.2	OUTDOOR ANTI-VANDAL KEYPAD: RX-200	76
7.2.1	LED Description	77
7.2.2	Installing the RX-200.....	77
Chapter 8	Appendixes.....	79
	APPENDIX A: ENTERING NAMES WITH KEYPADS	79
	APPENDIX B: DEFAULT PARAMETERS.....	80
	B1- Zones	80
	B2- Zoning.....	81
	B3- Codes	81
	B4- System Configuration, General Parameters	82
	B5- Telephones.....	82
	B6- System Events Response	83
	B7- Line/Wireless Station Report Codes	83
	APPENDIX C: TABLE OF FORMAT CODES	84
	Pulse Formats.....	84
	DTMF Formats.....	85
	APPENDIX D: HUNTER-PRO QUICK REFERENCE GUIDE	86



Chapter 1

The HUNTER-PRO Panel

The following is a general drawing of the Control Panel:



1.1 Fuses on the Control Panel

1.1.1 Regular fuses

- F5 (5 Amp) - protects the battery from a short on the PCB.
- F6 (3.15 Amp) - protects the AC from a short on the PCB.

1.1.2 Thermal fuses

- F1 – Detector power supply (750mA)
- F2, F3 – Siren1 and Siren2 (1.1A)
- F4 – Keypad power supply (750mA)
- F7 – Protection for long range radio transmitter (200 mA)

1.2 Connections and Terminals

1) AC – Voltage Input

14VAC input supplied by the transformer.

2) Connections to Backup Battery

Two wires connect the backup battery to the PCB. The red wire connects to the positive (+) contact of the battery and the black wire connects to the negative (–) contact of the battery.



IMPORTANT!

Ensure correct connection of battery polarity! Switching the polarity will damage the PCB.

3) Z1–Z8 – Zone Inputs

Zone inputs can be connected to all types of detectors with dry contact outputs. All zones can be connected with single or double end-of-line resistors for short/disconnect monitoring. Zone doubling is possible by connecting a diode and resistor to each zone input. (See 6.3)



NOTE:

You can add 8 additional wired zones in one of two ways: 1. Zone inputs Z9–Z16 on expansion card EXP-PRO. 2. Zone Doubling

4) (+) – Power Supply for Detectors

Power supply for detectors that require DC operating voltage

5) KEY – Key or Remote Arming Input

Connection to a momentary or fixed position key to arm/disarm the system. It is also possible to connect the output of a remote control receiver. The input can be protected with a single 10KΩ EOL (end-of-line) resistor.

6) S1, S2 – Siren 1 and Siren 2 Outputs

Two siren outputs connected to the same on-board sound generator (driver). Connect the siren 2 connection to a ground (–) connection. Each siren has a dedicated automatic thermal fuse F2 and F3.


7) RELAY – Internal Relay Connections

Three connections to a relay mounted on the PCB. Can be used to activate various auxiliary accessories such as external lighting, CCTV, external communicator, electric locks, etc.

The three outputs are **C** (common), **NO** (normally open) and **NC** (normally closed).

8) SMOKE – Switched Ground

Switched GND for smoke detectors that require reset. Any zone can be programmed to be a “smoke detector” input; its activation will cause the GND to disconnect for approximately two minutes.

Manual reset is obtained by pressing and holding the  key.

9) KEYPAD – Connection to Keypads

There are four Keypad terminals: Voltage power supply (–) and (+). **OUT** is for data from the control panel to the keypad, and **IN** is for data from the keypad to the control panel. An automatic thermal fuse F4 protects the 13.8 VDC power supply. Up to 8 keypads with LCD display can be connected simultaneously.

10) ALRM and ON/OFF – Auxiliary Outputs

These outputs have two conditions: 'disconnect' or 'short to ground'. The outputs indicate auxiliary units' system status and alarm status.

11) TMPR1 and TMPR2 – Tamper Inputs

Inputs for tamper switches from detectors and metal box. Can be connected with/without an end-of-line resistor. Different responses can be programmed for ON and OFF system status. These inputs can serve as indicators other than tamper, for example: thermostat, 24 hours zone monitoring, panic button etc.

12) LINE – Connection to Telephone Line

Telephone line connection to dial to private numbers and Monitoring Stations, and for remote programming. For best results connect as close as possible to the line source to provide best protection against tampering.

13) SET – Connection to Telephone Set

Connection to a telephone set or answering machine. Do not connect a fax machine or modem if you enable "line snapping".

14) AUD IN, AUD OUT, CONT – Connections to Microphone and Voice modules

CONT activates voice and microphone modules VU-20 and MIC-100. Connect AUD IN and AUD OUT to the audio outputs from the microphone and voice modules. (Refer to sections 3.2.2.3 and 3.2.7.1.3)

15) JP4 - Serial Input

JP4 connects to a wireless detector receiver and home control system. Also connects to LCL-11A serial RS-232

16) JP3 – Connection to Expansion Cards

Connection to Output Expansion Cards OUT-1000 and EXP-PRO. (Refer to sections. 6.1 and 6.2)

17) JP2 KEYPAD – Connection to Technician Keypad

Connection to Technician Keypad and LCL-11A for local and PC assisted programming of the system.

18) TRANSMITTER – Connection to Long-Range Radio Transmitter

Connection to PIMA radio transmitters.

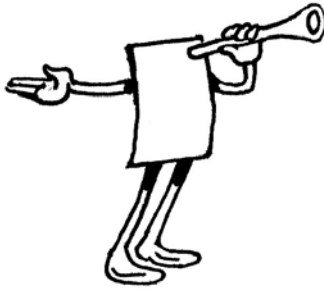
19) JP5-Select Siren Type

Connection to two types of sirens: with internal oscillator/driver/ speakers or without internal oscillator/ driver/ speakers. Designated for sirens consuming up to 200 mA.(Refer to section 2.5).

20) JP6-Select Siren Power Source

Connection to power source for sirens consuming over 200mA (Max is 3A). (Refer to section 2.5)

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Chapter 2

Installing Peripherals

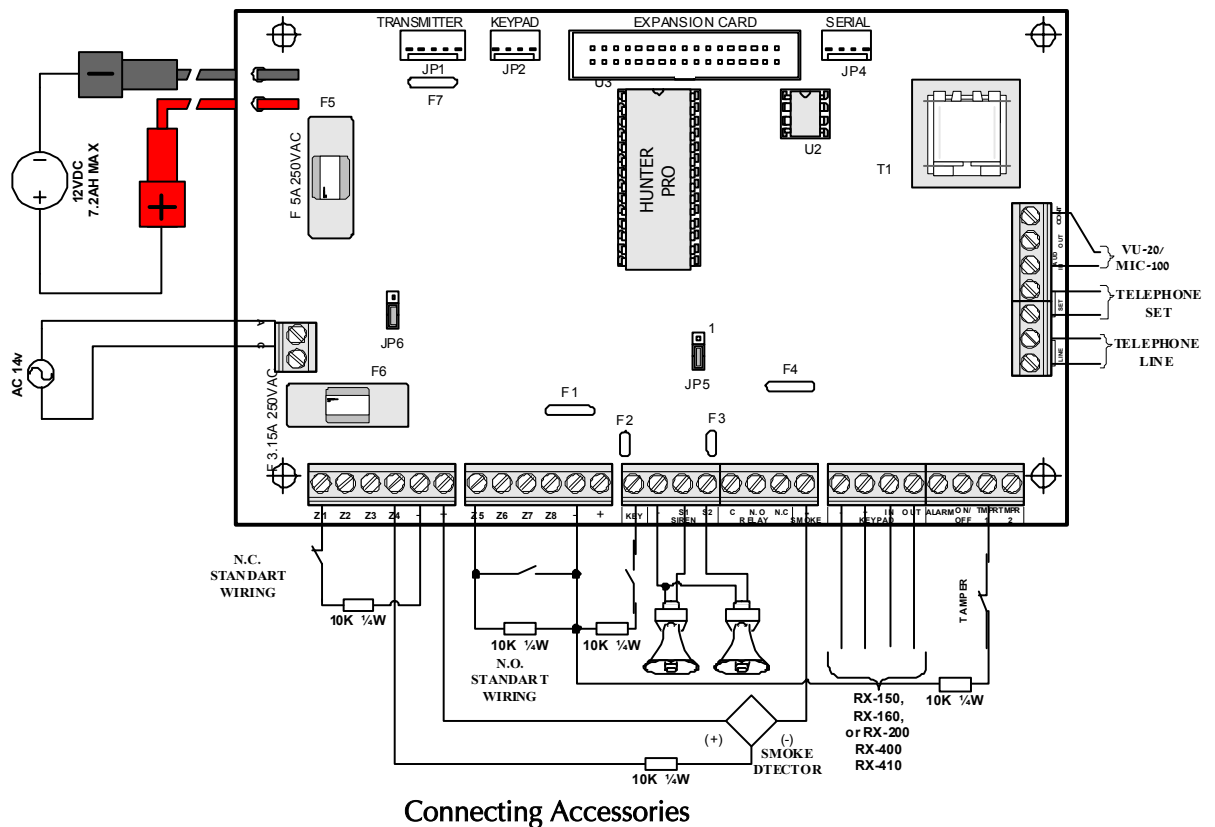
2.1 General

Connect the various accessories according to the following diagram and instructions.



IMPORTANT!

Always disconnect battery and mains power supply when you connect and disconnect wires.



IMPORTANT!

Disconnect all sources of power supply before proceeding with the installation!

2.2 Zone Inputs

You can connect each zone input with or without Single or Double end-of-line (EOL) resistors. Define each zone in the “system configuration” accordingly. The number of resistors you connect (one or two) is defined as a general rule for all the zones. (Refer to sections. 3.2.2 and 3.2.7.1.1)

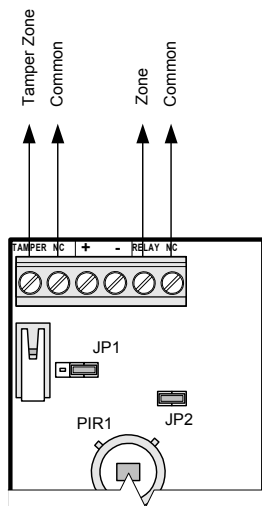
2.2.1 Connection without EOL resistor

Connect a detector with NC output (for example, Defender) without EOL resistor according to the below diagrams.

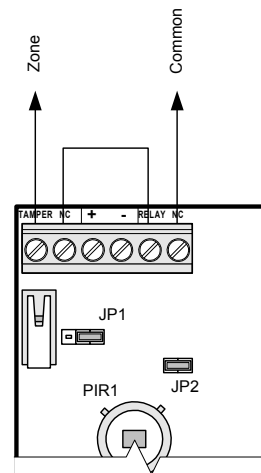
There are several options to connect the tamper outputs from the detectors: serial connection that can be connected to the tamper input in the control panel, or to a zone that is defined to as “24 hours”.

The Tamper can also be connected in serial to the relay output of the detector.

If you use the NO output from the detector then the zone should be configured as such. For zone configuration, refer to sections. 3.2.2.1 to 3.2.2.6; for tamper configurations, refer to section 3.2.7.1.2.



Separate connections for the relay and TAMPER outputs



TAMPER in serial to the detector relay

2.2.2 Connection with one EOL resistor

Connect a detector with NC output (for example, Defender) with one EOL resistor according to the below diagrams.

There are several options to connect the tamper outputs from the detectors: serial connection that can be connected to the tamper input in the control panel, or to a zone defined as "24 hours".

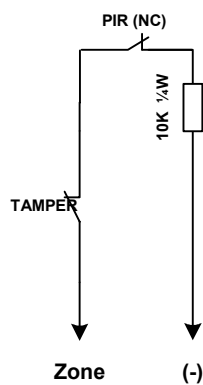


NOTE:

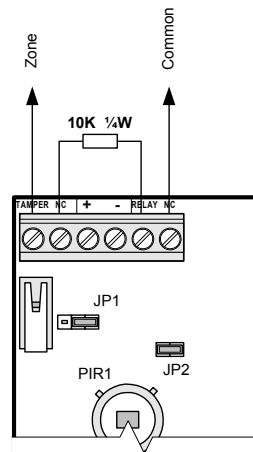
Connect one EOL resistor to all Tamper outputs that connected in a serial configuration.

If you use the NO output from the detector then the zone should be configured as such. For zone configuration, refer to sections 3.2.2.1-3.2.2.6; For tamper configurations, refer to section 3.2.7.1.2.

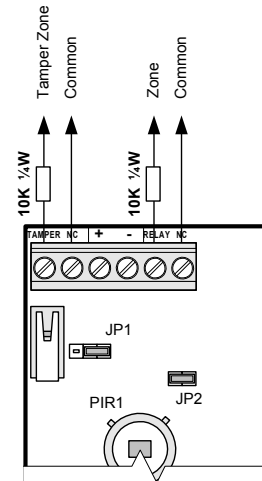
EOL resistor with a Normally Closed (NC) PIR



One EOL resistor connected to a NC detector

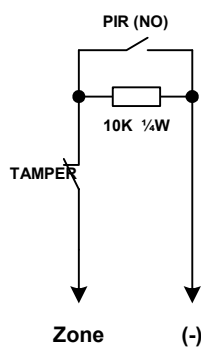


One EOL resistor in serial to the relay and the TAMPER

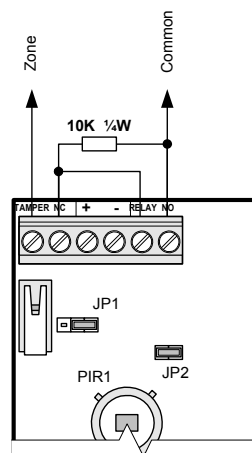


Separate connections for the relay and the TAMPER; each with a dedicated EOL resistor

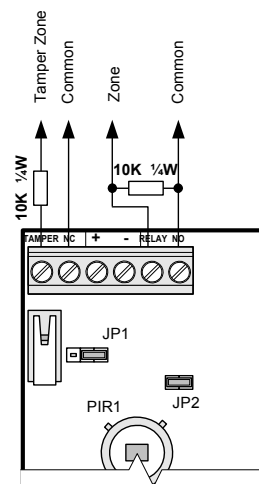
EOL resistor with a Normally Open (NO) PIR



One EOL resistor connected to a NC detector



One EOL resistor in serial to the relay and the TAMPER



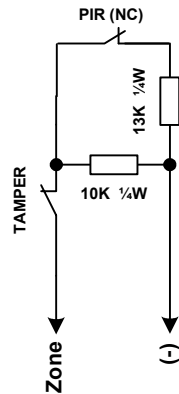
Separate connections for the relay and the TAMPER; each with a dedicated EOL resistor

2.2.3 Connection with two EOL resistors

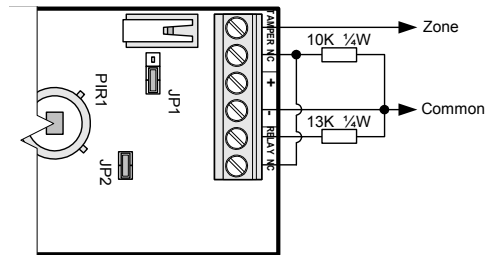
Connect a detector with NC output (for example, Defender) with two EOL resistors according to the below diagrams.

If you use the NO output from the detector then the zone should be configured as such. For zone configuration, refer to sections 3.2.2.1-3.2.2.6; For tamper configurations, refer to section 3.2.7.1.2.

Two EOL resistors with a Normally Closed (NC) PIR

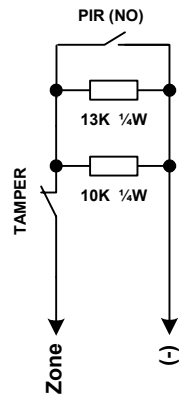


Two EOL resistors with a NC output

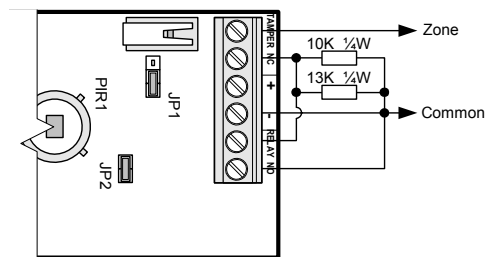


Two EOL resistors connected to a TAMPER in serial connection to a NC output

Two EOL resistors with a Normally Open (NO) PIR



Two EOL resistor with a NO output



Two EOL resistors connected to a TAMPER in serial connection to a NO output

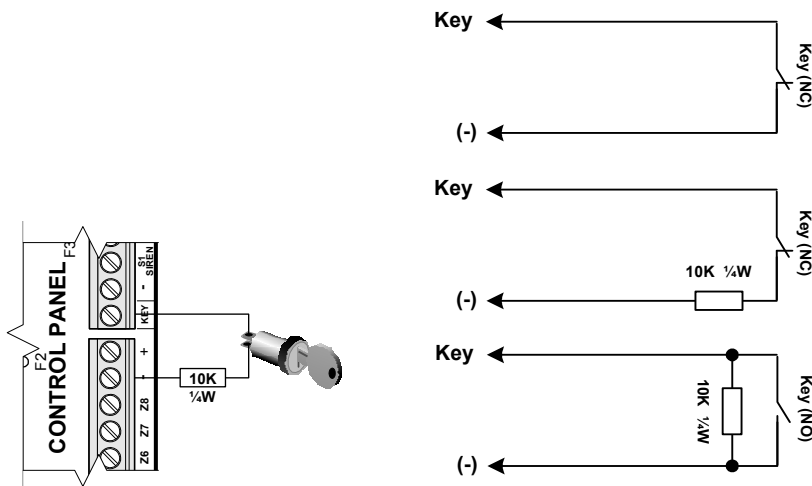
2.3 Arming with Key/Remote Control

Connect the key or remote control receiver according to the below diagram with a 10k Ω EOL resistor at the terminal input on the PCB. The key can have either a 'momentary' or 'fixed' type of switch.



NOTE:

Make sure momentary key is programmed when connecting remote control.



NOTE:

Program the Key input for an EOL resistor and the type of key; momentary or fixed (refer to section 3.2.7.1.2). The Key input can be used to arm the system to HOME1 (refer to section 3.2.7.1.1)

2.4 TMPR1 and TMPR2

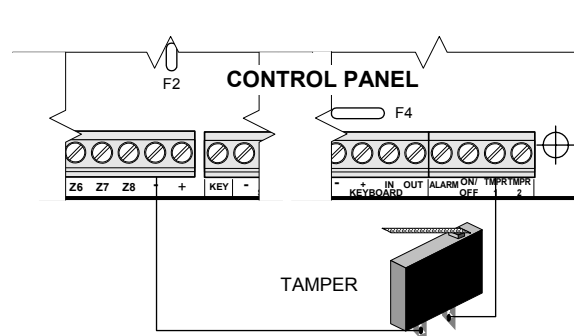
These inputs are used to monitor the control panel box, detector housings (in case EOL resistors are not used, refer to section 2.2.1), and siren cases with tamper switches. This input can also be utilized for panic buttons, temperature sensors with dry contact outputs and more.

Connect the tamper switch to the input, TMPR1 or TMPR2 and the ground (-). A 10 k Ω EOL resistor at the terminal input on the PCB. The EOL resistor provides a short/disconnect indication since the tamper switches are of the NO type.



NOTE:

Default programming is that both TAMPER inputs are enabled and without EOL. Refer to the "System Configuration" screen in order to change the defaults (section 3.2.7.1.2).

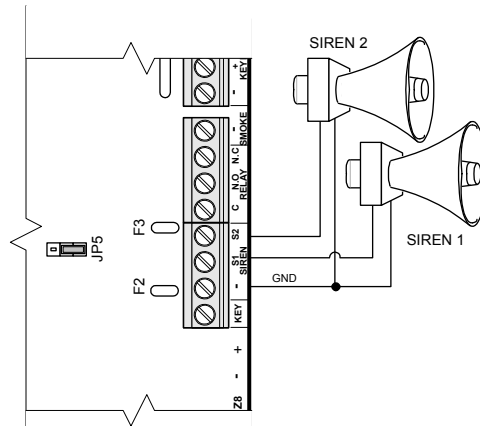


2.5 Sirens

You can connect three types of sirens:

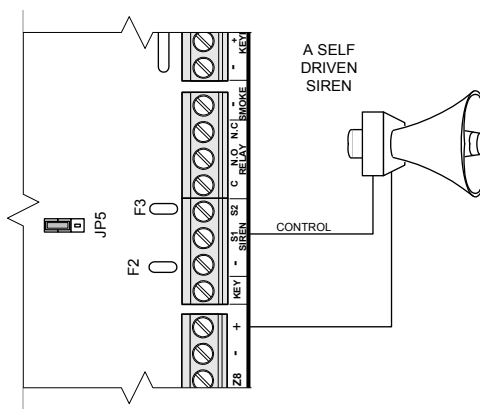
- Sirens without internal oscillator/ driver/ speakers (AC):

Connect each siren to terminals SRN1, SRN2, and ground (–). The sirens will be activated by the oscillator of the HUNTER-PRO. Verify that pins 2 and 3 are shorted by Jumper JP5 (factory default).



- Sirens with internal oscillator/ driver/ speakers (Low Current DC):

Short pins 1 and 2 on Jumper JP5 and then connect the self drive siren as following:



- High Current DC Sirens (consuming over 200 mA):

If the siren consumes more than 200mA shorten pin 2 and 3 in JP6, OR connect the (+) of the siren to an external power source (battery).

2.6 Relay

Connect the relay connections NO, NC and COM as required by your installation. The relay can be used to activate devices like lighting, CCTV, external sirens, and more. The relay is activated by a zone, relay code, remote touch-tone commands from a telephone, and response to failures (refer to section. 3.2.8).

2.7 ALARM and ON/OFF

These outputs serve various purposes:

- Output ON/OFF follows the system status (ON or OFF) and can trigger external devices accordingly.
- Output ALARM follows the Alarm status and can be used to trigger external devices such as CCTV or strobe.



NOTE:

During programming, output ON/OFF is referred to as AUX1 and output ALARM as AUX2.

2.8 Keypads

Up to 8 keypads of all supported types can be simultaneously connected in parallel (for 'supported types' refer to chapter 7). Connect all four wires coming from the keypad to (–), (+), IN and OUT



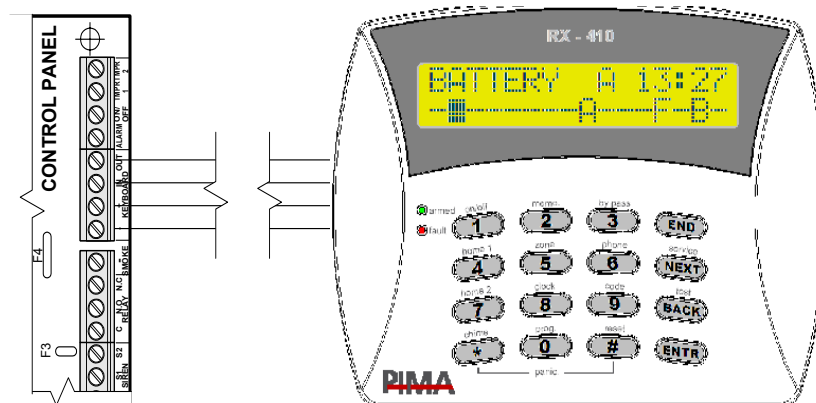
NOTE:

In older keypad models, there is color-coding: yellow wire =OUT, orange wire =IN, red wire=+ brown wire= – . However, in later keypad models, there is no color-coding. Instead, check for connecting information on the inner side of the keypad's case (diagram sticker).



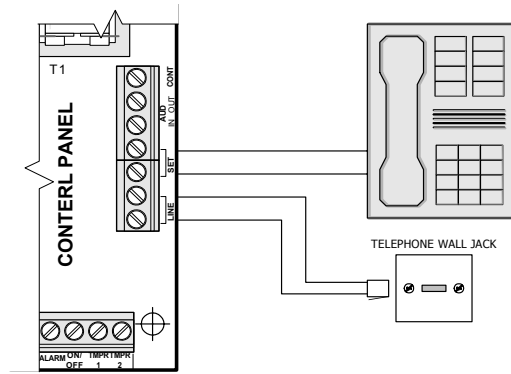
IMPORTANT!

Do not use the power supply of the keypads for detectors and vice versa. The power supply for the keypads must originate only from the control panel.



2.9 Telephone

Connect the pair of wires coming from the telephone provider to the **LINE** terminals. Connect all other telephony devices to the **SET** terminals. In case of alarm, the devices will be disconnected and the system will be immediately connected to the telephone line. The HUNTER-PRO should be the first device to connect to the telephone line (LINE terminals) for best "Line Snapping" results.

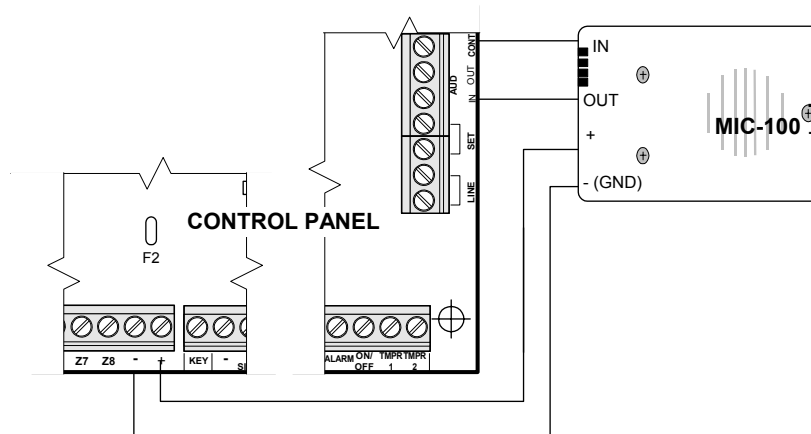
**IMPORTANT!**

If Line Snapping is enabled, you cannot connect a fax machine or modem to the SET terminals.

2.10 Microphone

The Microphone unit MIC-100 is used for listen-in via the telephone line

Use only one of the zone (+) terminals on the control panel as a power source for the microphone

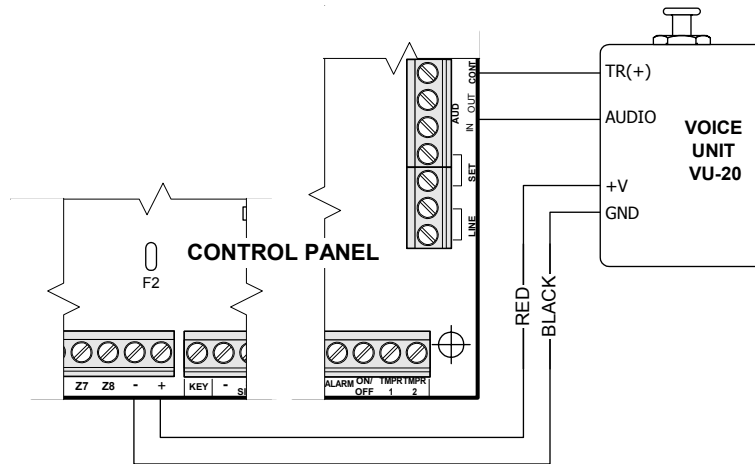


2.11 Voice Unit

The Voice Unit VU-20 plays a pre-recorded message when the alarm is triggered, instead of a synthesized tone over the telephone line.

Use only one of the zone (+) terminals on the control panel (except for the keypad's) as a power source for the Voice Unit.





2.12 Radio Transmitter TRV/TRU-100

The TRV-100/ TRU-100 is a long-range radio transmitter for communicating with a Monitoring Station.



IMPORTANT!

Note the below mounting guidelines for installing a Control Panel with an integrated transmitter. 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 antenna 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 straight
- * Close the HUNTER-PRO metal box when performing transmission tests

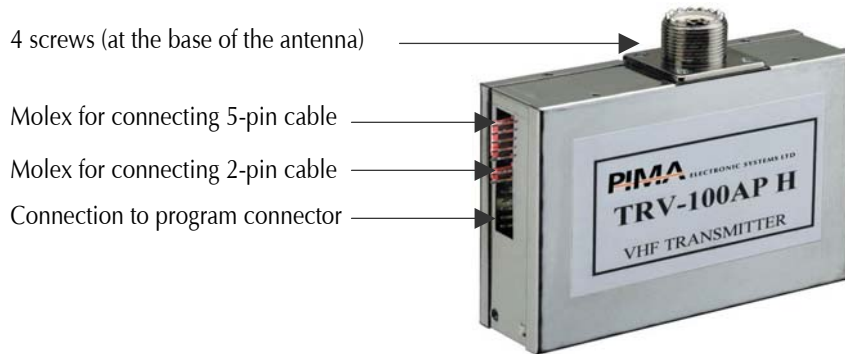
2.12.1 Connecting the Transmitter:



NOTE:

The TRV/TRU-100 can transmit in two frequencies.

1. Mount the HUNTER-PRO's metal box on the wall
2. Screw the transmitter to the box (4 screws at the base of the antenna.) 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.)
6. **If you wish to operate both frequencies, skip this step, since by following it the transmitter will operate only with the second frequency:**
Connect the 2-pin cable to the transmitter's F2 Molex (named F2 on the transmitter's sticker.) Connect the other end of the 2-pin cable to a negative (-) output on the Control Panel.



Cable connections in TRV/TRU-100 transmitter

2.13 Expanders

The HUNTER-PRO basic configuration includes 8 on-board input zones, two Tamper inputs, two siren outputs, one 2 Amp NC/NO relay output, Smoke & PGM transistor outputs, and two auxiliary outputs (also referred as Alarm & ON/OFF outputs).

These I/O capabilities can be expanded using different add-on cards and/or systems. Input zones can be connected to wired and/or wireless detectors and sensors. Currently the HUNTER-PRO is limited to a total of 16 input zones and 15 outputs (10 auxiliary). The extra I/Os can be gained using one of the following methods:

2.13.1 Outputs:

OUT-1000: Eight outputs expansion card used for connecting and activating different auxiliary devices (e.g., CCTV, relays, lights, etc.) as a response to system events and/or alarm from specific zones (detailed description in sections 3.2.5.2 and 6.1.)

2.13.2 Input Zones:

EXP-PRO: Eight zones expansion card used for local connection of additional eight wired zones. These zones are identical to the main PCB zones in features and programming (detailed description in section 6.2.)

RC-PRO: Eight to sixteen wireless zones receiver. The wireless receiver is used to connect wireless detectors, sensors, and remote controls to the HUNTER-PRO (detailed description in section 2.15 and in the RC-PRO installation manual.)



NOTE:

It is possible to use all 16 zones as wireless zones but then no wired zones can be connected to the HUNTER-PRO.

Zone Doubling: This is an option to expand the number of zones to 16 without any additional hardware. This technique is called 'Zone Doubling' and it uses the Smoke output, a resistor, and a diode (detailed description in section 6.3.)



IMPORTANT!

Doubled zones cannot be protected with two EOL resistors.

2.14 Connecting RC-PRO

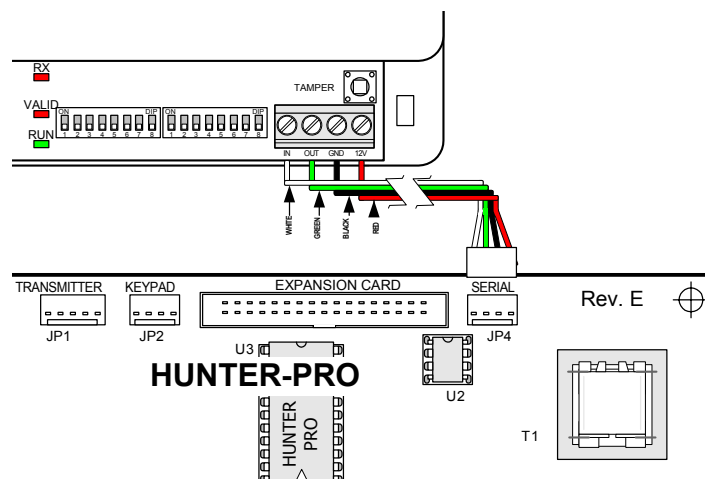
The RC-PRO is a narrow-band wireless receiver, designed to operate with the HUNTER-PRO control panel via its serial interface.

This wireless receiver supports up to 16 zones with wireless detectors (i.e., PIR, Reed Switch, etc.) and up to 18 remote control units (used to arm/disarm the system, activate accessories and send a panic signal). The RC-PRO turns the HUNTER-PRO into a hybrid system that can be connected to wired and wireless detectors.



2.14.1 Connecting with the HUNTER-PRO

The illustration below shows how simple it is to connect the RC-PRO to the HUNTER-PRO. The two are connected via the supplied serial connection cable. Connect the Molex end to JP4 on the HUNTER-PRO card and the other end connect to the RC-PRO as described in the following illustration and table (next page):



Cable Color	Connected to (in RC-PRO terminal block)
RED	12V
BLACK	GND
GREEN	OUT
WHITE	IN

2.15 Connecting COMMAND 48

COMMAND-48 is a 48 zone remote annunciation for HUNTER-PRO (version 2.3 and above). The unit is used to drive indication LEDs displaying zone status: open, closed, alarmed and bypassed. **COMMAND-48** is designed to drive a graphic display (e.g., synoptic map) or a remote points annunciation (e.g., emergency call center). The unit is connected to the serial output of the HUNTER-PRO using three wires: Power ("+" & "-") and DATA.

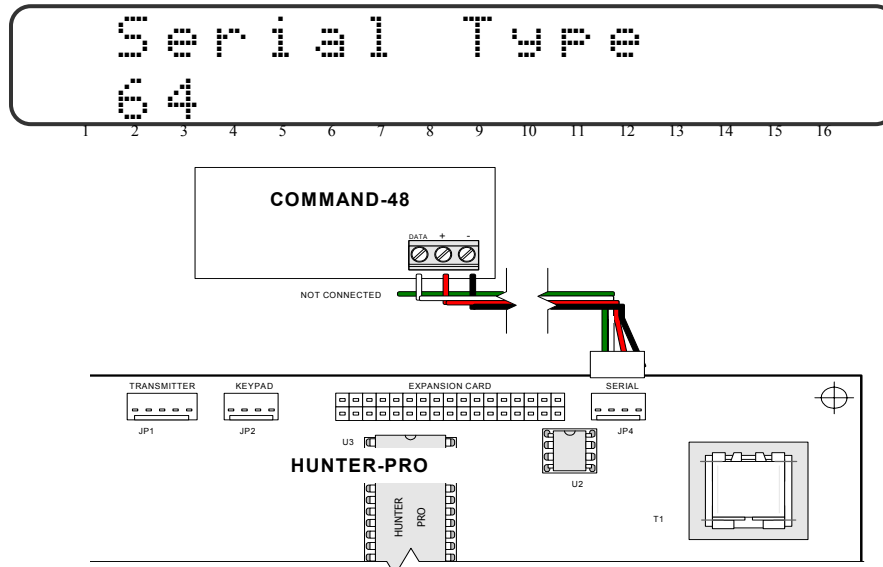


NOTE:

The COMMAND-48 cannot be used in conjunction with the RC-PRO, since the two devices use the serial communication port.

2.15.1 Programming COMMAND 48

In HUNTER-PRO "Serial type" menu, set the parameter to 64 (see section 3.2.7.1.10.)



2.16 Battery

The HUNTER-PRO incorporates a rechargeable 12V backup battery. The charging voltage for the battery is 13.8 V.

The system performs two battery tests:

- **"Low level" test** – A continuous monitoring for battery failures such as a disconnected wire, poor contact, etc.
- **"Under load" test** - Checks the battery capacity. This test is conducted in the following cases:
 - ✧ Each time the system is armed.
 - ✧ Every day at 24:00.
 - ✧ Manual battery test: Press and hold the **BACK** key for a complete system check that also includes a battery check.
 - ✧ Upon applying power to the system.

If the "under load" test fails, the system will respond as programmed in the failure responses (sounding sirens, dialing the Monitoring Station, etc.).

2.17 Mains Voltage



IMPORTANT!

Verify that the power cord is disconnected from the mains power supply.

Connect the three power cord wires to the connection terminals of the Power Supply terminals. Verify that the transformer outputs are connected to the AC terminals on the PCB, and that the transformer supplies 2A.

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.

Now you can connect the power cord to the mains power source.

**NOTE:**

A current limit device, such as a circuit breaker, fuse, etc., must be connected in series to the power cord. **You must connect the Electrical grounding!**

- Connect AC mains power supply.
- Connect the backup battery to the fast connection terminals, red wire to (+) and black wire to (-).

**IMPORTANT!**

Failing to connect the cables as described will permanently damage the control panel!

**NOTE:**


If you connect the battery before the Mains (AC), an AC FAULT will be displayed until you connect the AC. The AC FAULT will be logged in memory.

2.18 Setting the system









- Close the control panel case and verify that the screws do not touch the battery.
- Four seconds after you connect the power (AC or battery), the keypad will buzz and the display will show the time as 00:00 and the zones Status. The red LED will blink indicating a clock failure. Additional messages might be displayed according to the information that the control panel will sense. The red failure indication will turn off once you program the correct time and take care of other failures (if they exist).
- Perform the following tasks to program the time
 - ✧ Enter the Master Code (Default 5555).

✧ Press .



✧ Enter the time in 24 hour format (HH:MM) and press .

✧ Enter the date and press .

In the rest of this manual the above actions will be displayed in the following format:

   Time (HH:MM)    Date  

**NOTE:**

Use the  and  keys to move the cursor to the left and to the right.

Empty Page



Chapter 3 Programming and Operation

3.1 Introduction

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

An example for some default parameters:

- Zone 1 delayed
- Zones 2 and 3 Entry follower
- Entrance delay 20 seconds, exit delay 60 seconds

Refer to Appendix B for the entire list of default parameters.

**NOTE:**

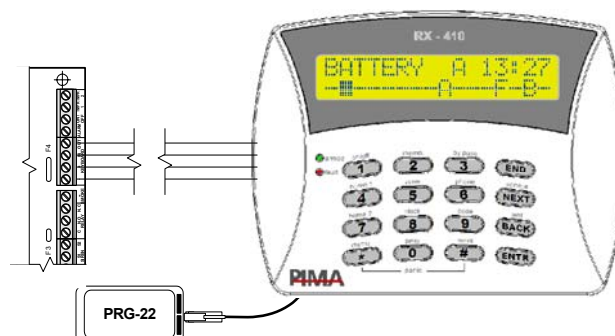
This manual contains programming references identical to all PIMA LCD keypads.

There are four different ways to program the HUNTER-PRO:

1. Fast Local-Uploading with the PIMA programmer PRG-22. The PRG-22 connects to any LCD keypads allowing fast upload of a choice of two predefined programs (refer to section 3.1.1).
2. Local Up/Download with a PC, LCL-11A PC interface, and COMAX software (refer to section 3.1.2).
3. Remote Up/Download over the telephone line with a PC, modem, and dedicated COMAX software from PIMA (refer to section 3.1.3).
4. Manual programming with any LCD keypad (refer to section 3.1.4).

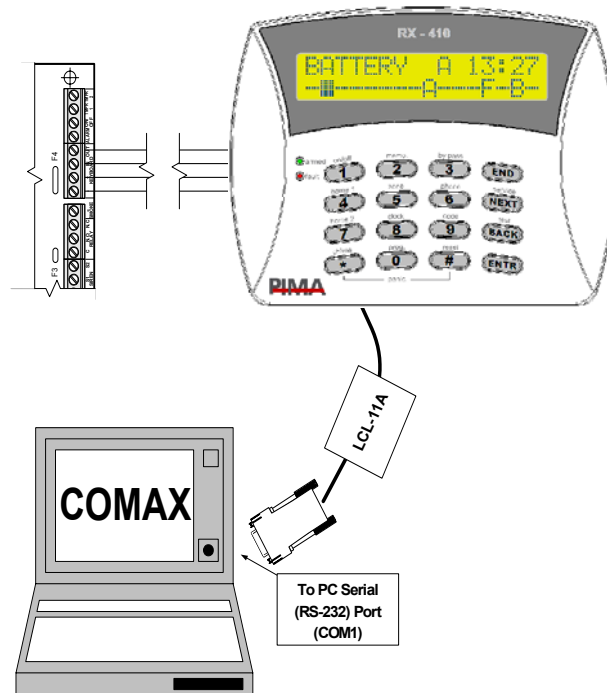
3.1.1 Local Uploading with PRG-22

This type of programming can be done only via the installer menu and an LCD Keypad. Connect the PRG-22 to the designated connector according to the following drawing. Please note that in older LCD keypad versions (RX-150/160) the RJ-11 connector is at the bottom right side; in later versions (RX-400/410), it is internal, on the PCB's upper left side (see section 7.1.4). Turn to section. 3.2.13.3 for connections and programming procedures.



3.1.2 Local programming with PC and LCL-11A

The LCL-11A is an interface between the HUNTER-PRO and a PC with COMAX Upload/Download Software.



This feature provides fast, easy, and convenient programming. You can program the parameters in advance and “upload” them after you complete the installation.

3.1.3 Remote Programming with COMAX Software (Upload/Download)

You can program the HUNTER-PRO over a telephone line with a PC, regular modem supporting 300 bps, and the COMAX programming software. In addition to programming, you also have access to the memory log. Please refer to the COMAX User Manual for detailed information.

3.1.4 Programming with a Keypad

The HUNTER-PRO has two levels of programming; User Menu and Installer Menu. Enter the Master Code (PIMA default 5555) to access the User Menu.

To enter the technician menu; enter the Master Code, then press **SERVICE NEXT**, then enter the technician code (PIMA default 1234).



NOTE:

You cannot access the Installer menu without first going through the User menu. (i.e. without entering the Master Code.)



IMPORTANT!

PIMA supplies the HUNTER-PRO with the following default codes:

Master Code: 5555

Installer code: 1234

We recommend that you change the codes after installing the system.

Once in the Installer menu, you can press one of the numbered keys to directly access succeeding sub menus without going through the entire menu tree (Refer to section. 3.2).

Press **ENTR** to enter the menu with the parameters you wish to program. The parameters are displayed in a horizontal menu as described in the next diagram.

Use the **SERVICE NEXT** and **BACK** keys to move the cursor to the right and left between the features and functions.

Press **RESET #** to enable or disable the function. A (+) under the letter representing the function indicates that the function is enabled. A (-) under the letter representing the function indicates that the function is disabled.

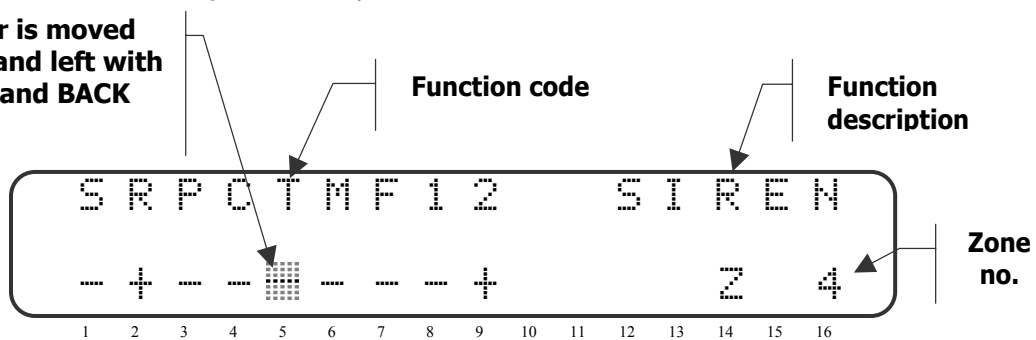
Press **ENTR** to save the changes.

Press **END** any time to exit without saving the changes.

The following pages provide detailed instructions of programming all the features and functions of the HUNTER-PRO. The instructions take into consideration that you are already in the installer menu.

Most of the screens appear in the form of “Bar Menus” in which you enable and disable functions. The following is an example of such a screen:

Cursor is moved right and left with NEXT and BACK keys



NOTE:

When the cursor moves from one function to another, a description of the function appears at the top right side of the screen.



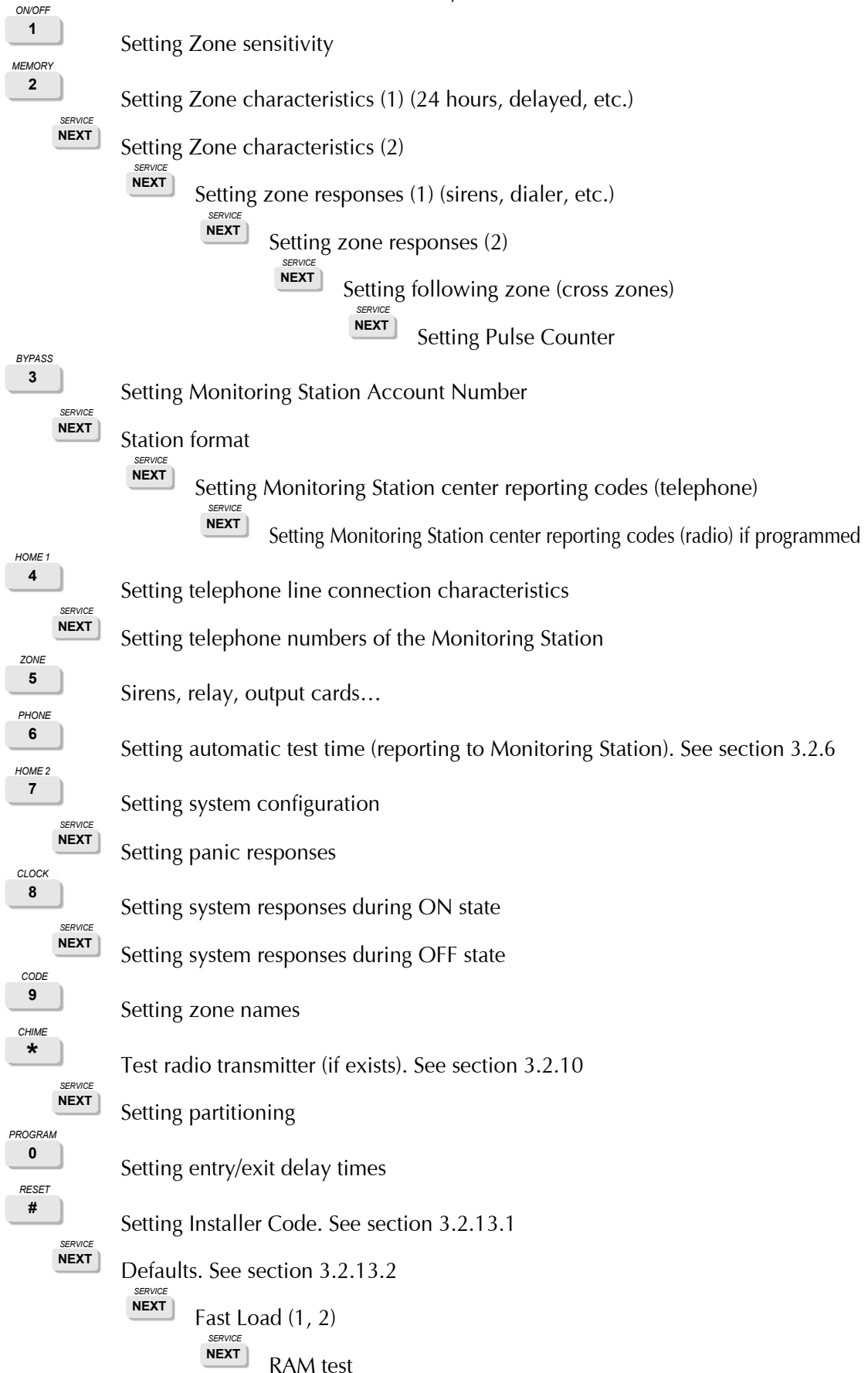
NOTE:

When you program zone functions, the zone number appears at the bottom right side of the screen, for example Z4. To jump directly from one zone to another, press keys 1–8 to obtain the zone number

or **CHIME *** to advance to the next zone.

3.2 Programming with an LCD keypad

Following entry of the correct installer code, the system enables modification and execution of functions that cannot be accessed by the end user:



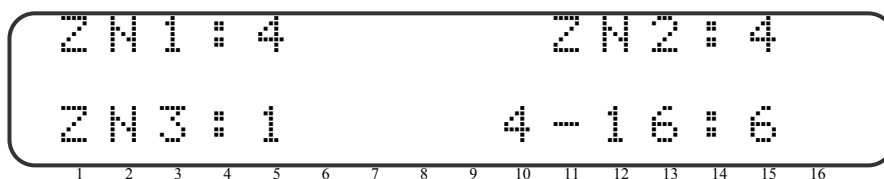
3.2.1 Zone Sensitivity

Press:



Zone sensitivity is the duration the magnet/detector will be open and trigger the zone causes an alarm. The system will ignore time intervals less than programmed. You can set different sensitivity levels for zones 1, 2, 3, and zones 4 – 16 as a group. The minimum time interval is 0.05 sec. (50 milliseconds) and the maximum is 12.75 seconds. The zone sensitivity is set in increments of 50 milliseconds.

Example: If you wish Zones 1 and 2 to respond to open time spans longer than 200 milliseconds, Zone 3 to 50 milliseconds and Zones 4-16 to 300 milliseconds, then program **4** for Zones 1 and 2, **1** for Zone 3 and **6** for Zones 4-16.



3.2.2 Zone Characteristics and Responses

Remember the following rules throughout the entire programming procedure:

Use the **SERVICE NEXT** and **BACK** keys to move the cursor to the right and to the left.

Press **RESET #** to enable or disable the function.

A (+) under the letter enables the function.

A (-) under the letter disables the function.

Press **CHIME *** to skip to the next zone without saving any changes.

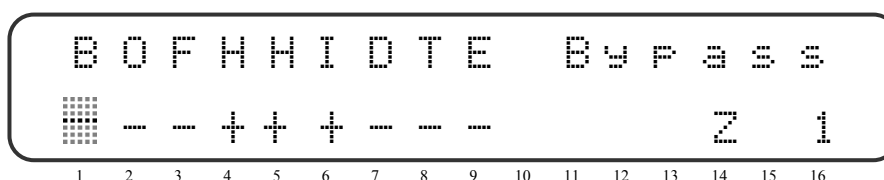
Press **END** to save the changes.

Press **END** any time to exit without saving the changes.

3.2.2.1 Zone Characteristics (1)

You can set different characteristics for each zone.

Press:



- B Bypass :** The system ignores the zone in all modes; armed, home, disarmed, etc.
- O N.O :** Normally Open detectors are connected to the zone input.
- F 24 Hrs :** Zone input is active when the system in armed and disarmed.
- H Home 1 :** Zone is allocated to the group of zones active in mode “Home 1”.
- H Home 2 :** Zone is allocated to the group of zones active in mode “Home 2”.
- I En.Dly :** Entry delay time – The time from the moment the zone is triggered until the alarm is activated. There are two entry delay times to choose from.
- D Follwr :** Zone is Entry Follower and will not cause an alarm while there is a zone in within an Entry/Exit delay time.
- T Time=B :** A (+) enables the Second choice as Entry delay time. Refer to section. 3.2.12
- E EOL :** End-of-line Resistor; detectors connected to this zone are EOL protected.

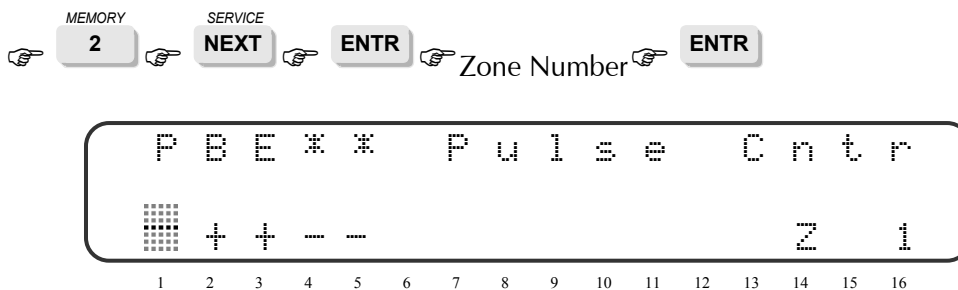
**NOTE:**

A zone defined as entry-delayed or entry-follower is also exit-delayed. The exit time is defined in section “Setting Exit/Entry Delay Time”.

3.2.2.2 Zone Characteristics (2)

You can set different characteristics for each zone.

Press:



- P Pulse Cntr:** The zone input will cause an alarm only after it detects a minimum number of “opening” pulses with a pre set time span between each pulse. Refer to section. 3.2.2.6 for instructions on programming the number of openings (pulses) and the time between the pulses. This feature reduces false alarms from detectors.

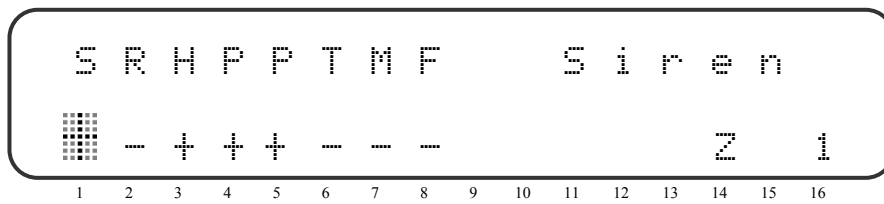
**NOTE:**

The number of pulses and the time between them is identical for all the zone inputs. However, you can choose which zones will have this attribute and which will not.

- B Auto ByPs :** The zone will be automatically bypassed (ignored) after 3 consequent alarms. The bypassed zone will be enabled after the system is turned off (disarmed)
- E ByPs Enabl : Zone Bypass Cancelled:** The system default is to allow manual bypassing of a zone. A (+) does not allow manual bypassing of the specific zone.
- * Spare:** Saved for future use.

3.2.2.3 Zone Responses

Press: Zone Number



The following are responses if you program a "+" under the function code:

- S Siren:** The siren will be activated when the zone triggers an alarm. You can set the duration of the siren time as described in section. 3.2.5.1.
- R Relay:** The on-board relay will be activated when the zone triggers an alarm. You can set the duration of the relay as described in section. 3.2.5.1.
- H Dialer:** When an alarm is triggered from the specific zone; the HUNTER-PRO will dial private telephone numbers and will play a distinct sound or play a pre-recorder message.
- P Stn.Ph1 :** Monitoring Station 1 - An alarm from the specific zone will initiate the control panel to call the first Monitoring Station by radio and telephone. If you program double or split reporting, then the alarm will be reported to Monitoring Station 1 using the first two telephone numbers. Refer to section. 3.2.3.2.4
- P Stn.Ph2:** Monitoring Station 2 - Only relevant if you use double or split reporting. The alarm will be reported to Monitoring Station 2 (using the third and fourth telephone number).
- T Tone :** You can choose two active siren tones (out of ten). A "+" indicates that the second tone will be activated if the specific zone is activated. Refer to section. 3.2.5.3.
- M Micropn :** After sounding the alarm tone over the telephone, the system will open the microphone channel at the end of siren time. This function is also used to activate the Voice Unit VU-20.



NOTES:

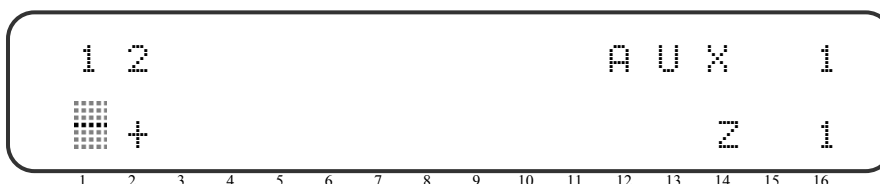
Listening is limited to 60 seconds. To listen for an additional 60 seconds, press "8" on your telephone set.

- F Smoke :** Voltage to fire/smoke detector will be disconnected for one minute for resetting the detectors at the end of siren-time; Does not work when system uses Zone Doubling.

3.2.2.4 Zone Responses (2)

Press:

Zone Number



- 1 **AUX 1:** Marked as **ON/OFF** on the Control Panel. An open collector output for various applications such as external siren or external dialer.

**NOTE:**

If you don't program any zones to activate the AUX1 output, then that output will "track" the system status: Disconnect when the system is not armed, and GND when the system is Armed.

- 2 **AUX 2:** Marked as **ALRM** on the Control Panel. An open collector output.

**NOTE:**

If you don't program any zones to activate the AUX2 output, then that output will "track" the status of the keypad buzzer; GND when the buzzer is active. Useful to connect external buzzers.

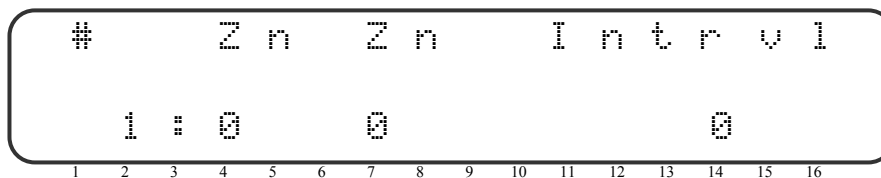
3.2.2.5 Cross Zones

A feature to reduce false alarms by conditioning one zone to be tripped within a certain time interval after another zone in order to trigger an alarm. Press:



Enter the two zones that you wish to "cross" and the maximum time interval.

Example:



Zone 5 and Zone 3 condition each other. An alarm will be activated if one of the zones will be triggered within 40 seconds after the other zone. If a zone is triggered 50 seconds after the other zone then the alarm will be withheld.

The Monitoring Station will receive Alarm events from both zones.

Programming **0** (zero) as a zone number to Disable the "cross zoning" feature.

**NOTE:**

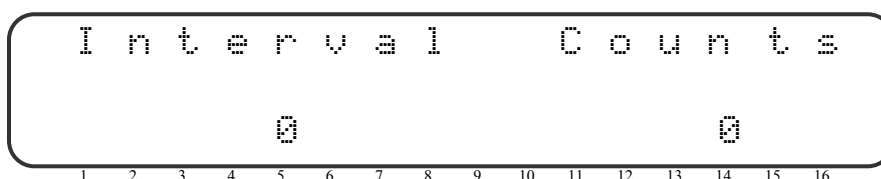
You can program up to 4 pairs of zones.

3.2.2.6 Pulse Counting

An additional feature to reduce false alarm by counting the number of times a zone is triggered and conditioning the time interval between each trigger. Press:



To enable the "pulse counter" feature; program a zone as "Pulse Cntr" in Zone Characteristics (2) (section 3.2.2.2), and the number of pulses and the time interval between them as described in this section (screen).



Interval Time in seconds between each pulse.

Counts Number of pulses that will cause an alarm.

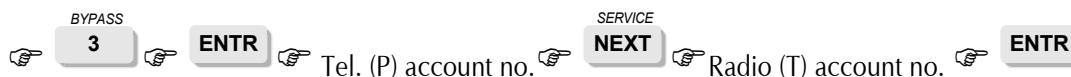
**IMPORTANT!**

The pulse count starts over again if the time between the two pulses is exceeded.

3.2.3 Monitoring Station Parameters

3.2.3.1 Monitoring Station Account Number

Press:



In the display you will see **I.D Account 1** which refers to **Partition No.1**. **I.D Account 1** refers to the entire system if the HUNTER-PRO is programmed not to have any partitions.

You can program the HUNTER-PRO to have up to 16 partitions. Each partition can have its own ID Account for telephone as well as for radio communications. That means that you can program up to 32 different ID Account numbers. You can program the same Account ID for both radio and telephone reporting.

In order not to go through all 16 ID programming screens; press **ENTR** to save the data, and then press **END** to pass to the next programming screen (Setting Communication Parameters).

**IMPORTANT!**

If you have partitions and you want all partitions to report with the same account number, then program the account number(s) for partition 1 and leave the rest account numbers with 0.

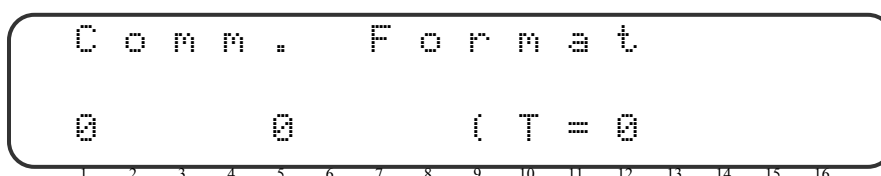
The largest Account number for the PIMA PAF format is 7999. For other formats – according to each format characteristics.

3.2.3.2 Communication Parameters for Monitoring Station.

3.2.3.2.1 Communication Format for First Monitoring Station

HUNTER-PRO can communicate simultaneously with more than one Monitoring Station with different protocols.

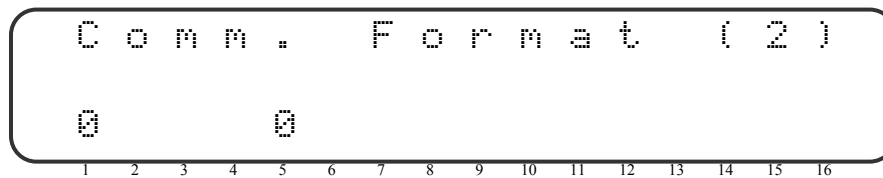
See Appendix C. for a list of communication formats. Each telephone format is programmed by a two-digit number/code; the radio format has a one-digit code. Press:



3.2.3.2.2 Communication Format for a Second Monitoring Station

If you connect the HUNTER-PRO to two Monitoring Stations (MS) then you can program a different telephone format for each MS with double or split reporting capabilities, however, the reporting codes are the same for both Monitoring Stations. Press:





The below table describes various options of reporting with two formats:

MS 1 Format	MS 2 Format	Event Report to MS1	Event Report to MS2
PIMA	PIMA	According to Programming	According to Programming
American	PIMA	According to Programming	Default
American	American	According to Programming	According to Programming
Contact ID	Contact ID	According to Programming	According to Programming
American	Contact ID	According to Programming	Default
PIMA	Contact ID	Default	Default
Contact ID	PIMA	Default	Default



NOTE:

American format – Universal High Speed, Radionics Fast, etc.

According to programming – event code according to format, for example; code for alarm from zone 1 – 31

For example:

Monitoring Station 1 – American format; Monitoring Station 2 – PIMA PAF format:

Program the event codes for each specific American format as specified by the format vendor. The reporting to MS #1 will be carried out as you program each code to each event, e.g. alarm zone 1 – code 31, alarm zone 2 – code 32, etc. The reporting to MS #2 with the PAF format will be with the default codes - all the codes are pre programmed to FF.

3.2.3.2.3 Wait for ACK

"Wait for ACK" is the time in seconds that the system will wait for the opening (confirmation) "ACK" from the Monitoring Station. Minimum time is 20 seconds. This feature is beneficial if slow formats or communication methods are used.

Press:



3.2.3.2.4 Types of Monitoring Stations

The HUNTER-PRO can communicate to one, two, three or four Monitoring Stations.

If you wish to communicate to more than one MS then the four telephone numbers are divided into two groups:

The first two telephone numbers are allocated to the "first MS" and the numbers three and four are allocated to the "second MS". Press:



Options of reporting to the Monitoring Station:

- 0 All four telephone numbers are allocated to one MS. The first number is the primary number and will be dialed first. The rest are backup numbers.
- 1 Telephone Numbers 1 and 2 are allocated to the first MS and numbers 3 and 4 to the second Monitoring Station.

You can program to send each event (sirens, faults, tests, etc.) to MS1 and/or MS2. In this case, telephone numbers 1 and 2 function as backup numbers for each other. The same is true for telephone numbers 3 and 4. If you program to send an event to MS1, the system will call telephone number 1; if it fails, the system will call telephone number 2; if it fails again, it will try number 1 and so on. If you program to send the event to MS2 as well (or only to MS2), the system will call numbers 3 and 4 as explained above.

- 2 Each telephone number is allocated to a different MS. You can program up to 4 telephone numbers; each number for a different MS. Every event can be reported to all MS. For example, if you program to send "Alarm zone 4" to MS2, then the system will dial telephone numbers 3 and 4. If you program to send "Alarm zone 5" to MS1, then the system will dial telephone numbers 1 and 2. If you program to send "Alarm zone 8" to MS1 and MS2, then the system will dial all four telephone numbers.

Table of allocating telephone numbers to Monitoring Stations:

Type of MS	Allocating telephone numbers			
	1	2	3	4
0	All 4 telephone numbers are allocated to one MS and function as backup for each other.			
1	1	2	3	4
	Telephone numbers 1 and 2 are allocated to MS1. Each number functions as backup for the other.		Telephone numbers 3 and 4 are allocated to MS2. Each number functions as backup for the other.	
2	1	⋮	3	⋮
	Telephone numbers 1 and 2 are allocated to MS1, however, the system does not identify "backup" numbers and expects to complete the communication process from both telephone numbers.		Telephone numbers 3 and 4 are allocated to MS2, however, the system does not identify "backup" numbers and expects to complete the communication process from both telephone numbers.	

The above table describes many communication capabilities to one, two, three and four separate Monitoring Stations as described in the below listings:

Report to one MS – All events are reported to one MS.

Full double report – All events are reported to both MS.

Partial double report – MS1 receives all the events – alarms, faults, tests, etc. MS2 receives only emergency events – alarms and faults.

Divided report – Some events are reported to MS1 and the rest is reported to MS2. For example, a system is connected to a Burglary Monitoring Station and to a Fire Monitoring Station.

Combination of the previous possibilities – Some of the events are reported to both MS, some to MS1 and some to MS2.

3.2.3.2.5 Number of Radio Transmissions

You can set the number of radio transmissions that the system will transmit for each event. Factory default is set to 5 transmissions.

Press:



3.2.3.3 Report Codes

You can, for each event, set custom reporting codes to the Monitoring Station. The code consists of one or two alphanumeric characters that accord with the format you choose. Note that programming the Report Codes is customized differently for Wired Stations (i.e. telephone MS) and Wireless Stations (i.e. radio MS).

Reports for Wired Stations (i.e. telephone MS):



Reports for Wireless Stations (i.e. radio MS):



Each character consists of the values 0 through 15. The letters A–F represent the values 10 to 15 (A=10, B=11, C=12, D=13, E=14, F=15).

Verify that the cursor is on the digit that you wish to change.

To obtain a digit between 0–9, press directly on the corresponding key.

To obtain a digit between A–F, press **CHIME *** several times until you obtain the desired letter.

Each screen has several function codes as described below:

Z1, Z2...Z16	Alarm reporting codes corresponding to the zone number
F1, F2...F16	Fault reporting codes corresponding to the zone number. Applicable only for EOL protected zones
R1, R2...R16	"Reset" Code corresponding to the zone number. This event is reported after the siren shuts down. If the system is programmed to "Reset according to zone ", the code will be reported only after the zone is closed. Applicable only with formats that support "Reset" reporting.
TM1	Reporting code for opening of TAMPER1
TM2	Reporting code for opening of TAMPER2
AC	Reporting code for mains voltage fault
LB	Reporting code for low battery
PF	Reporting code for very low card voltage (less than 9 V)

PH	Reporting code for telephone line failure
FUS	Reporting code for low AUX voltage
TST	Reporting code for testing (automatic, manual, remote)
PNC	Reporting code for panic (pressing of the "*" and "#" keys)
KON	Reporting code for system arming
KOF	Reporting code for system disarming
BPS	Reporting code for bypassed zones
FCODE	Reporting code when false User Code is used
ABR	Not used
RESTR	Reporting code for "Restore" of system faults

Low system voltage (PF) is the indication that the system does not receive AC power supply and that the battery is getting weak. This event is to be reported as an Emergency report.

**NOTE:**

The default reporting codes for the PIMA PAF and Contact ID formats is FF. If you do not change the report codes when using other formats, then the system will report FF for all events.

3.2.4 Telephone Line Characteristics

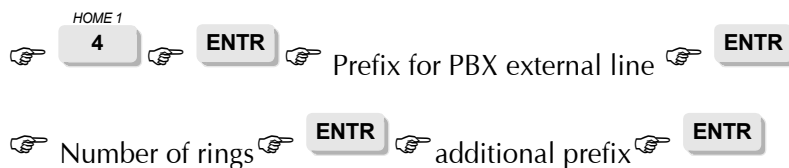
**IMPORTANT!**

Do not connect the HUNTER-PRO in parallel to fax machines and active PC modems that function as fax machines, internet communications, data transfer, etc.

3.2.4.1 Setting telephone line characteristics

You can set the telephone line characteristics to meet a variety of installation requirements.

Press:



3.2.4.1.1 Outside Line AC.: Prefix for PBX external line

If the system needs to dial a prefix to pass a PBX, then program the number – for example "9" – by which the public dial tone (line) is obtained.

**NOTE:**

The prefix is dialed with every call.

The system checks for the public dial tone after dialing the prefix to increase the reliability of the dialing process.

Program the prefix number(s) to obtain the public dial tone (line).

Press **ENTR** to save the data in the system.

3.2.4.1.2 No. of Rings

The HUNTER-PRO supports bi-directional remote control communication with a touch-tone telephone, including cellular phones. The system picks up the line after a pre-defined number of rings. If the system shares the line with other telephone sets; then define a long ringing time to permit the end user sufficient time to pick up the phone.

Enter the number of rings to wait before an incoming call is answered by the system.

Enter the prefix number and that number will then be inserted before each phone number.

Press **ENTR**

3.2.4.1.3 Pre-Number – Additional Prefix

You can add up to 6 digits to the prefix number. This feature is beneficial for installations that use specific telephone carriers.

Press **ENTR**



NOTE:

The system checks for the Public Dial Tone after it dials the prefix numbers, and before dialing the telephone number for MS or private numbers. The same process takes place when the system checks for telephone line integrity, which in turn also checks the integrity of the PBX.

3.2.4.2 Monitoring Station Telephone Numbers

You can display and program each of the four telephone numbers that communicate to the Monitoring Stations. In addition, you can check the integrity of the communication to the Monitoring Station from beginning to end, including verification that the Monitoring Station acknowledges the TEST event from the alarm system.

3.2.4.2.1 View Monitoring Station Telephone Numbers

In this screen you can only view the four telephone numbers. You cannot change the numbers nor check the integrity of the communication with the MS.

Press:



In the display you will see the first telephone number. You can view all four telephone

numbers with the **SERVICE NEXT** and **BACK** keys, or simply press the 1 – 4 digits for direct access to the corresponding telephone number. You can also press the number 5 (although it is not displayed as an option) to view the name and telephone number of the service provider.

Press **END** to continue to the Editing screen.

3.2.4.2.2 Edit Monitoring Station Telephone Numbers



IMPORTANT!

Take extra attention since you are about to change the telephone numbers that the HUNTER-PRO dials to the Monitoring Stations. Wrong numbers will result in failure to communicate to the Monitoring Stations.

Press:



Press a corresponding number (1-4) of the telephone number you wish to edit. The display will show the existing number.

Enter the desired number (up to 16 digits).

Press **ENTR** to save the new number.

Press **RESET #** to delete an existing number.



NOTE:

Some PBX systems require a pause between the prefix and public numbers. If you programmed a permanent Prefix number as described in section 3.2.4.1.1, then the system inserts that pause

automatically. If you didn't program a prefix number then enter **CHIME *** (star) to create a pause of one second. For example: 9*075552221.

3.2.4.2.3 Test the Monitoring Station Telephone Numbers

A very important feature to monitor and display the entire communication process between the HUNTER-PRO and the Monitoring Station without any assistance from an agent in the Monitoring Station. That includes, picking up the line, listening for the dial tone, dialing the telephone number, sending the event code, and identifying opening and closing ACKs.

Before you perform the test, check that the HUNTER-PRO is configured to communicate with a Monitoring Station; that includes confirmation that the system is connected to a telephone line, account number, and telephone number. The system will give you an **ERROR!!! Press END** message if you try to test the communication if the system is not configured right. If the system does not pass the test then you will get a **Failure** message at the stage where the test fails.

Press:



Press a corresponding number (1-4) of the telephone number you wish to test.

The display will show each step of the communication progress with the Monitoring Station as described above.

Press **END** to exit the testing menu.

To delete the current name and phone number; press **CHIME *** four times and then **ENTR**.

Description of the Communication Process with the Monitoring Station

The HUNTER-PRO dials the first telephone number; if the line is busy or not, there is no dial tone then the system will dial the next telephone number and so on until the communication is successful. The system will stop dialing after eight communication failures and will display a **Communications failure** message that will also be logged in the memory.


If the system is connected to two Monitoring Stations (split or double reporting), then the allocation of telephone numbers for the Monitoring Stations will be as described in section. 3.2.3.2.4.

3.2.4.2.4 Edit the Service Provider's Name and Telephone Number

The name and telephone number of the service provider are displayed when the system is armed, or by pressing and holding the  key.

Press:



Press ; the display will show the current name and telephone number of the Service Provider.

Edit the Service Provider's name that can consist of up to 16 alpha numeric characters (maximum 8 different characters – refer to Appendix A “typing names”).

Press  to save the data.



NOTE:

This display is shown when the customer presses



The system starts calling with the first telephone number. If the communication fails, for example due to, busy tone or no dial tone, the system will try the second number until communication with the Monitoring Station will be successfully completed.

The system will stop after eight failing dialing attempts, and will log a Communication Failure event in the memory log.

3.2.5 Siren, Relay, and Auxiliary Outputs

3.2.5.1 Alarm Time

To access the first programming screen, press:



Siren Time

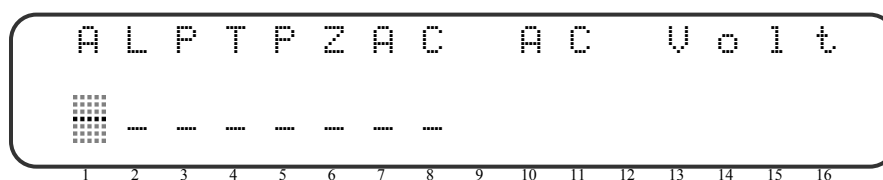
Defines the time in seconds that the siren will sound.

- Relay Time** Defines the time in seconds that the on-board relay will be active. You can activate the Relay as a response to zone opening, failures, Tamper, and by telephone remote control (refer to sections. 3.2.2.3 and 3.2.8). Program **0** (Zero) seconds to maintain the relay Open while the system is disarmed. This feature can be used to activate a Strobe or CCTV when an alarm is triggered while the system is armed.
- Out Time** Defines the duration time for all the output on the Output Card.
- Press **ENTR** or **END** to commence to the second programming screen:
- Aux1 Time** Output AUX1 (ON/OFF). This output connects to the ground (–) when the system is armed (refer to section. 3.2.7.1.3). You can also activate this output as a response to opening zones and failures; in this case the output will respond only to zones and failures and will not “follow” the “Alarm” status of the system. Program **0** (zero) seconds to keep the output active while the system is armed.
- Aux2 Time** Output AUX2 (ALRM). This output connects to the ground (–) during an Alarm (refer to section. 3.2.7.1.3). You can also activate this output as a response to opening zones and failures; in this case the output will respond only to zones and failures and will not “follow” the “armed” status of the system. Program **0** (zero) seconds to keep the output active while the system is armed.
- Delay** Delay time to activate AUX2. To be used when you need to activate an external device with a delay, for example; if you want to delay an external siren if a disarm code is not entered within the entry delay time.

3.2.5.2 Output Card (OUT-1000)

The OUT-1000 is a card with 8 Open Collector outputs. You can program each output to be NO or NC. You can program to activate each output as response to zones, failures, and additional events as described in the below.

Press:





Set a “+” to the event that will activate an output on the OUT-1000.

Each event has a single pre-specified output that it will activate:

- A AC Volt:** AC voltage failure will activate **Output 1** until AC voltage returns.
- L Low Vol:** Low voltage will activate **Output 2** until voltage level return to normal.
- P Ph. Line:** Failure to dial due to busy tone and no tone will activate **Output 3**. The Output will return to Normal status when the system succeeds to dial.

T Tamper: Triggering one or both Tamper will activate **Output 4** until the Tamper output/s return to normal status.

P Panic: Simultaneously press and hold the  and  to activate the Panic event. This action will also activate **Output 5** for the duration as of time that you have defined in section 3.2.5.1.

Z Zn.Trbl: A zone failure activates **Output 6** for the duration of the failure.

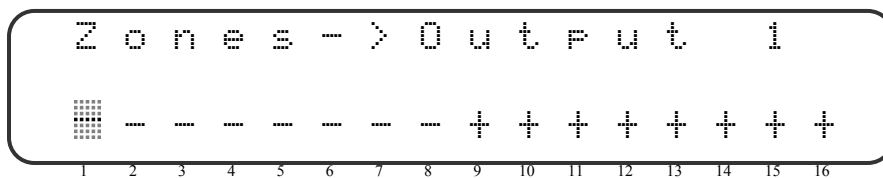
A Abort: Not in use.

C Confirm: Not in use.



Press:



ENTR



In this screen you choose the zones that will activate Output 1 on the Output Card (OUT-1000).

Press  to progress to Output2. Each time you press  you will progress to the screen to program the next output. You have eight outputs in total.

For example, if you set a “+” above numbers 1,3,9, then the zones 1 or 3 or 9 will activate the Exit Output 1 during alarm.

Application Example: OUT-1000 can selectively activate remote video surveillance cameras as response to alarm from different zones.



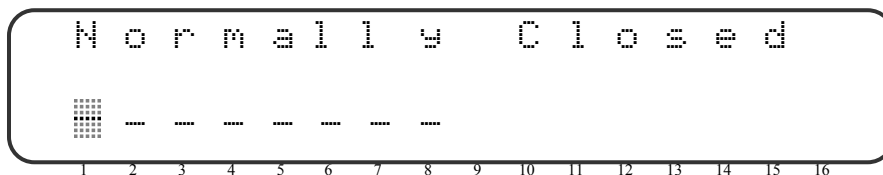
NOTE:

See paragraph 3.2.5.1 to set output duration time.

Press:



ENTR



In this screen you define each output to be either Normally Closed or Normally Open.

“-” Defines the output as “Normally Closed” (NC).

“+” Defines the output as “Normally Open” (NO).

3.2.5.3 Siren Tones

The HUNTER-PRO has an internal siren generator with a bank of eleven (marked 0-10) different siren tones, out of which you enable two (refer to section. 3.2.2.3). You can program every zone to set off one of the two enabled siren tones to differentiate between different events, for example; you can sound a different siren tone for zones configured as a fire/smoke inputs. You can try out each siren tone before you choose it as explained in the following paragraph.

Press:



Enter the number for the corresponding siren to you wish to enable.



NOTE:

Tones 9 and 10 are used only for sirens with internal driver (refer to section. 2.5.)

3.2.5.4 “Check Now” – Playing and saving Siren Tones

Choose this option to hear the siren tones.

Press:



Press **ENTR** to listen to tone number **0**. Press number **1-8** to listen to the corresponding siren tones.

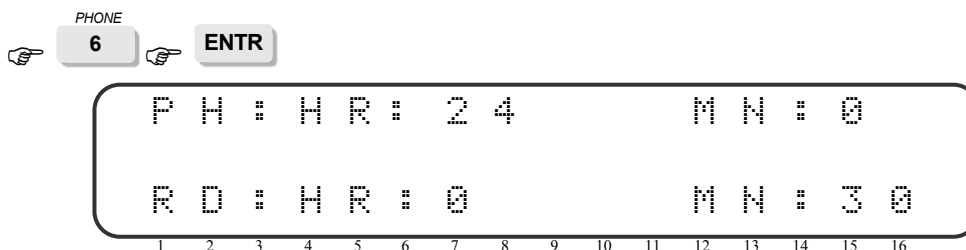
Press **ENTR** to save the siren tone you like. Keep in mind that you can choose only two siren tones.

3.2.6 Automatic Test Events to Monitoring Stations

The HUNTER-PRO can send TEST events (TEST codes) to the Monitoring Stations every day on the same time, and after a fixed time between the last event (any event) that is sent to the Monitoring Station.

3.2.6.1 Fixed time interval from any last report

Press:



The first line on the display refers to sending the TEST report to the Monitoring Station by telephone.

The second line on the display refers to sending the TEST report to the Monitoring Station by radio.

According to the above display; the HUNTER-PRO will transmit a test report every 24 hours (and 0 minutes) by telephone; and every 30 minutes (and 0 hours) by radio.

**NOTE:**

The maximum time value is 250 hrs.

The HUNTER-PRO will transmit the TEST event not only after a preceding TEST event, but also after any event.

Press  **ENTR** to continue to the next screen.

3.2.6.2 Test events on regular intervals

In this screen you program to send a TEST event to the Monitoring Station by telephone and radio every day on the same time.

**NOTE:**

Program "00:00" in order to disable this feature.

A	u	t	o	T	e	s	t	H	o	u	r
0	0	:	0	0							
1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16								

Press  **ENTR** to continue to the next screen.

P	P	T	P	P	T	D	T	r	g	r	.	P	h	1
■	—	—	—	—	—	—	—							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
16														

In the above configuration screen you define additional parameters for TEST event transmissions, including remote triggering by telephone.

- P Trgr.Ph1 - Remote triggering:** If the HUNTER-PRO detects two or three rings while it is ARMED, the system will transmit a TEST event to Monitoring Station #1 by telephone. If the system is configured for two Monitoring Stations (double or split reporting), then the HUNTER-PRO will transmit the TEST event with the first two telephone numbers.
- P Trgr.Ph2 - Remote triggering:** If the HUNTER-PRO detects two or three rings while it is ARMED, the system will transmit a TEST event to Monitoring Station #2 by telephone. If the system is configured for two Monitoring Stations (double or split reporting), then the HUNTER-PRO will transmit the TEST event with the third and fourth telephone numbers.
- T Trgr.Rad - Remote triggering:** If the HUNTER-PRO detects two or three rings while it is ARMED, the system will transmit a TEST event by radio.
- P Auto Ph1 – A “+”** enables the Automatic Test transmission (as described in section 3.2.6.1) to Monitoring Station #1 by phone when the system is armed. If the system is configured for two Monitoring Stations (double or split reporting), then the HUNTER-PRO will transmit the TEST event with the first two telephone numbers.
- P Auto Ph2 – A “+”** enables the Automatic Test transmission (as described in section 3.2.6.1) to Monitoring Station #2 by phone when the system is armed. If the system is configured for two Monitoring Stations (double or split reporting), then the HUNTER-PRO will transmit the TEST event with the third and forth telephone numbers.

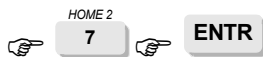
- T **Auto Rad** - A "+" enables the Automatic Test transmission by radio as configured in section 3.2.6.1.
- D **In OFF** - A "+" enables the Automatic Test transmissions as configured in section 3.2.6.1. when the HUNTER-PRO is DISARMED.

3.2.7 System Configuration

Consists of eleven (11) screens of system parameters, and responses to duress and failure events.

3.2.7.1 Defining System Configuration

Press:



Press **ENTR** again and again to move to proceeding configuration screens.

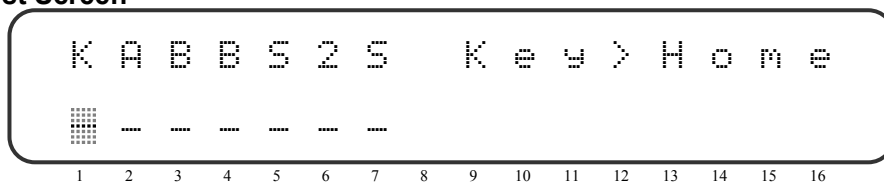
Press **BACK** and **NEXT** (labeled SERVICE) to move the cursor to the left and right.

Press **#** (labeled RESET) to change the "-" to "+" and vice versa to disable or enable a feature.

Press **ENTR** any time to save the changes and proceed to the next configuration screen.

Press **END** any time to proceed to the next configuration screen without saving the changes.

3.2.7.1.1 First Screen

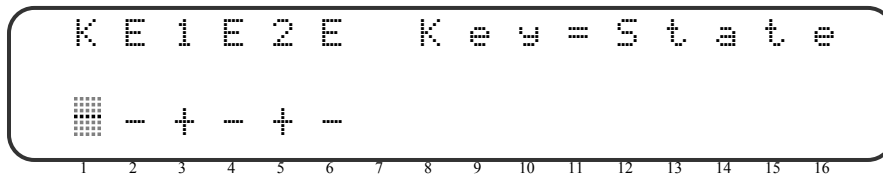


- K **Key>Home** : Arming the system via the KEY terminal will arm the system in "HOME1" mode.
- A **Auto>Hom** : Auto Arming will arm the system in "HOME1" mode.
- B **ByPsInKy** : Auto Arming or Arming the system via the KEY terminal will automatically bypass all the open zones.
- B **ByPsReqs** : The system will alert to open zones defined as Delayed or Delayed Dependents, and the keypad will display a "BYPASS or END!" message.
- S **1 Period** : Temporary Automatic Zone bypass until the zone is closed. The open zone will not trigger the siren for a second time.
- 2 **2 Resist** : *Double EOL resistors* - A "+" enables the Double EOL resistors feature to monitor "short" and "cut" while the system is Armed and Disarmed. One EOL resistor monitors "short" for a NC zone, and "cut" for a NO zone.
- S **Special** : A unique programming feature. Information about this feature is obtained directly from PIMA or PIMA distributor.

3.2.7.1.2 Second Screen



ENTR

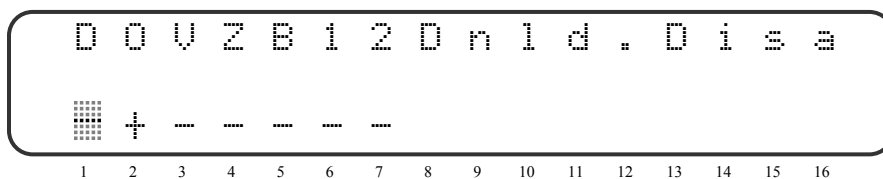


- K Key=State** : Defines the Type of key switch that is connected to the KEY terminal; A "+" defines an ON/OFF key switch; ON arms the system and OFF disarms the system. A "-" defines a momentary key.
- E Key EOL** : A "+" defines an EOL Resistor (Only one resistor) connected to the KEY terminal.
- 1 Tmpr1 act** : EnablesTMPR1.
- E Tmpr1 EOL** : TMPR1 is protected by one or two EOL resistors. One EOL resistor monitors "short" if the input is defined as NC, and "cut" if it is defined as NO.
- 2 Tmpr2 act** : Enables TMPR2.
- E Tmpr2 EOL** : TMPR2 is protected by one or two EOL resistors. One EOL resistor monitors "short" if the input is defined as NC, and "cut" if it is defined as NO.

3.2.7.1.3 Third Screen



ENTR



- D Dnld.Disa : Download Disable** - A "+" blocks all Up/Download programming without the Master Code (without the user's approval). Enter the Master Code and press **ENTR** twice to unlock the system for 10 minutes. Once you establish the Up/download connection you are not limited in time as long as the system identifies ongoing Up and Download communication. The system disconnects if there is no communication for two minutes.
- O DisArmDis : Disable Remote Disarming** – Disables Remote disarming with touch tone telephones.
- V Voice Unt : Voice Unit** – A "+" activates a Voice Unit, such as the VU-20 from PIMA, when the user pick up the phone after the HUNTER-PRO calls him as response to an alarm. The user will hear a recorded message instead of the synthesized alarm tone.



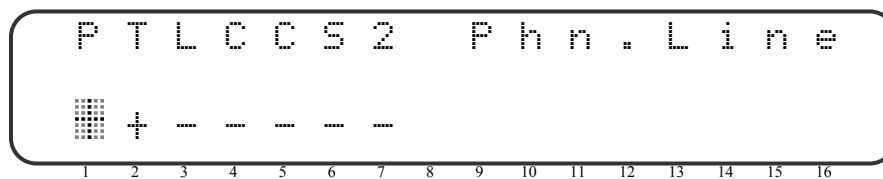
NOTE:

You can enable each zone independently to trigger the Voice Unit by programming a "+" under the **M** (microphone) feature in "Zone Response". Refer to section 3.2.2.3.

- Z Zone Disp** : The regular display of zones status remains visible when the system is armed.

- B BuzzerAlr :** The Keypad buzzer is active every time the siren is active.
- AUX1 N.C :** A “+” designates the ON/OFF output to connect to GND by default, and disconnect from GND when it is active. A “-” sets the output to Open by default and connect to GND when active.
 - AUX2 N.C :** A “+” designates the ALRM output to connect to GND by default, and disconnect from GND when it is active. A “-” sets the output to Open by default and connect to GND when active.

3.2.7.1.4 Fourth Screen



- P Phn.Line :** Phone line is connected to the system. Program “-” if the system is not connected to a telephone line in order to prevent unnecessary display of telephone related failures.
- T ToneDial :** “+” enables tone dialing. “-” enables pulse dialing.
- L NoLineCh :** The system will dial without checking for dial tone. Useful for places with uncommon dial tones.
- C CkLnInOn :** Continuous monitoring for dial tone (telephone line integrity) while the system is ARMED.
- C CkLnInOf :** Continuous monitoring for dial tone (telephone line integrity) while the system is DISARMED. Use this feature only if the HUNTER-PRO does not share the telephone line with other telephony devices.
- S LineSnap :** Enables “line snapping”. The system “listens” for one minute to every incoming call, and will “snap” the line if it detects data communications or Master Code as entered by the end user with a touch-tone telephone. Useful if the phone line is shared with an electronic answering machine. Do not enable this feature if the line is shared with PC (data) modems.
- 2 2 RngSnP –** This feature is for remote UP/DOWNLOAD with the COMAX software and also helps bypasses service providers’ voice mail or an answering machine. The HUNTER-PRO will “snap” the line if it identifies the following sequence of events which is executed automatically by the COMAX application : 2 rings and hang-up – silence for 10 seconds - ring. The panel will pick up the line on the first ring and enable remote programming.



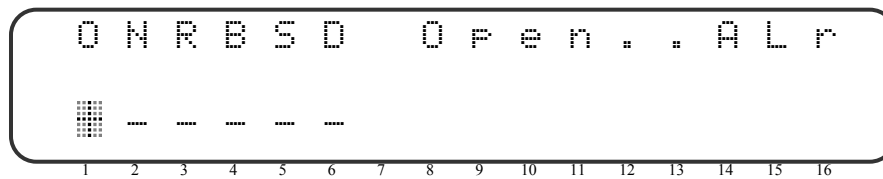
IMPORTANT!

Do not share the phone line with a fax or data modem if you enable Ring Snap.

3.2.7.1.5 Fifth Screen



ENTR

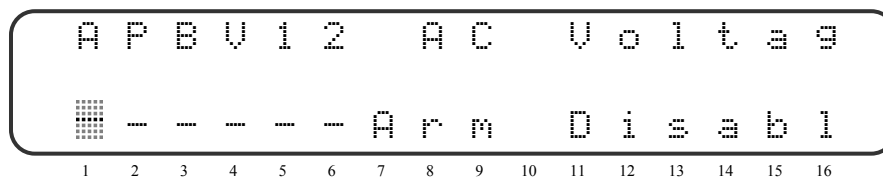


- O Open..Alr :** The HUNTER-PRO will transmit to the Monitoring Station a 'DISARM' event (sometimes called "OPENING") when the system is disarmed after an alarm was triggered.
- N No Reset :** The HUNTER-PRO will not transmit any RESET events to the Monitoring Station.
- R RstPerZon :** Reset Per Zone – The HUNTER-PRO will transmit to the Monitoring Station a RESET event every time the zone is closed after it triggered an alarm. To be used only with the New PAF format and Contact ID.
- B ByPsRport :** The HUNTER-PRO will transmit a Bypass event to the Monitoring Station if the HUNTER-PRO automatically bypasses a zone that triggered three consecutive alarms (if the bypass feature is enabled). To be used only with the New PAF format.
- S Acc.Split :** Used in double and split reporting to two Monitoring Stations; the first account number is allocated to MS #1 and the second account number to MS #2 (see section 3.2.3.2.4).
- D Delay Arm - :** Upon arming the system, the HUNTER-PRO will not start the exit countdown, but will first transmit an ARM (KeyOn) event to the Monitoring Station. Once the HUNTER-PRO receives the ACK from the Monitoring Station it will display an appropriate message and then start the exit countdown. The HUNTER-PRO will start the exit countdown if it fails to receive the ACK after eight attempts, and a Communications Failure event will be displayed in the keypad.

3.2.7.1.6 Sixth Screen



ENTR



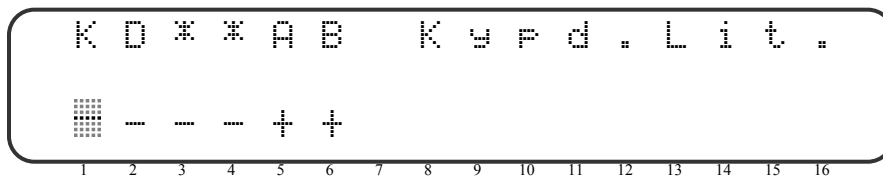
In this screen you define the Tamper status and failures that will prevent the HUNTER-PRO from going into ARMED mode, i.e. no one can arm the system as long as the particular failure is active alive .


- A AC Voltag Arm Disabl:** AC Voltage failure.
- P Phone Lin Arm Disabl :** Telephone failure.
- B Battery Arm Disabl :** Battery failure.
- V Det. Voltg Arm Disabl :** Detector current or any other failure associated with a zone input.
- 1 Tamper 1 Arm Disabl :** Tamper 1 is open.
- 2 Tamper 2 Arm Disabl :** Tamper 2 is open.

3.2.7.1.7 Seventh Screen



ENTR

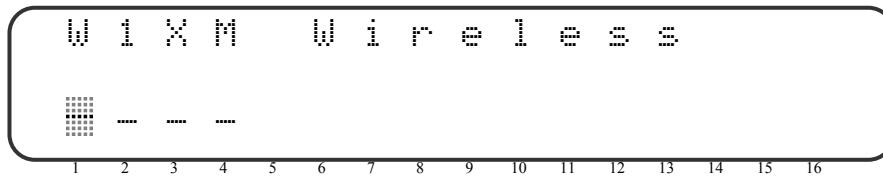


- K KyPd.Lit. :** Sets a weak permanent illumination for keys in the Keypad.
- D Light<Dly : Delayed illumination:** Sets full illumination for the Keypad keys during entry delay.
- * Spare :** Reserved for future use.
- * Spare :** Reserved for future use.
- A ByPs After :** Enables manual zone bypass if the zone is detected as open after entering an ARMING code. Bypass the zone by pressing  after entering a user code.
- B ByPs Befor :** Enables zone bypass of an open zone while arming the system without the need for a User Code (refer to the HUNTER-PRO User manual).

3.2.7.1.8 Eighth Screen



ENTR



- W Wireless :** RC-PRO Wireless receiver is connected to the system. Refer to a separate manual about wireless devices.
- 1 16 Zn.W/L : "+"** defines that all 16 zones are wireless zones.
- "-"** defines that zones 1-8 are regular wired zones and zones 9-16 are wireless.



IMPORTANT!

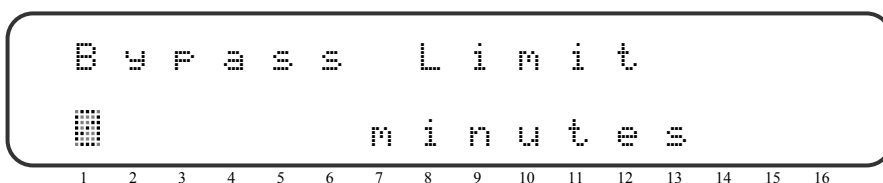
When you connect 8 wired and 8 wireless zones, then program zones 1-8 in the wireless receiver; those zones will be displayed as zones 9-16 respectively in the control panel.

- X EXP PRO :** EXP-PRO expansion card is connected to the system.
- M ZoneMultipl :** Enables Zone Doubling with resistors and diodes.

3.2.7.1.9 Ninth Screen

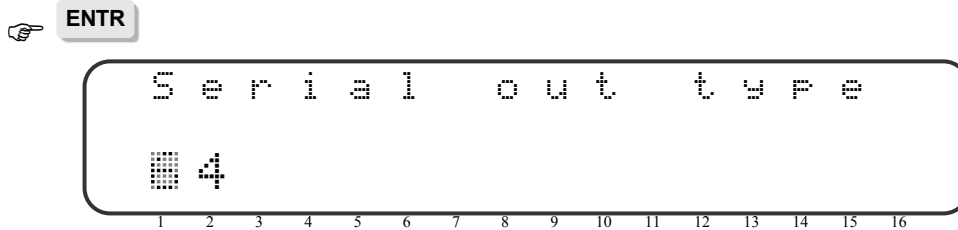


ENTR



In this screen you set the maximum time in minutes that a zone can remain bypassed while the system is disarmed. For example, if the time is set to 5 minutes and Zone 3 is bypassed without ARMING the system, then Zone 3 will be reactivated after 5 minutes. The zone will remain bypassed if the system is armed within 5 minutes of disabling the zone.

3.2.7.1.10 Tenth Screen



In this screen you define the type of serial output. Use the LCL-11A to support RS-232. Refer to the following table for serial output options:

Type of Output	Communication speed	Programming
COMMAND-48	2400	64
Real time event printer	2400	65
Real time event printer	4800	97
Real time event printer	9600	129
Wireless receiver		66



NOTE:

Communication is without PARITY.

3.2.7.1.11 Eleventh Screen



W/L Jam.Level : RSSI – Sets the weakest jamming signal level that the wireless receiver will acknowledge.

There are eleven levels marked 1-10. 0 disables this function. The blocking signal has to be active for at least one minute in order for the system to respond to the jamming signal.

SuperVsn: X (hrs : Supervision of wireless accessories. Sets the time interval in Hours (minimum 3 Hours) that the system expects to receive a LIFE signal from at least one of the wireless detectors. If the system does not receive a LIFE signal, it will respond to it like it responds to failures from regular zone inputs.

Set 0 Hours to disable this function.

**NOTE:**

The time to program must be more than 3 hours because a wireless PIR transmits a LIFE signal every 3 hours.

If the value is other than 0 then, then wireless zones that have no wireless detectors must be disabled in the HUNTER-PRO to avoid LIFE sign failures.

**EXAMPLE 1:**

Installing 8 wired and 8 wireless zones. Zones 9-13 are connected to wireless detectors. Zones 14-16 are not connected to any wireless device, therefore you must disable these three zones.

**EXAMPLE 2:**

Installing 16 wireless zones. Zones 1-12 are connected to wireless detectors. Zones 13-16 are not connected to any wireless device, therefore you must disable these four zones.

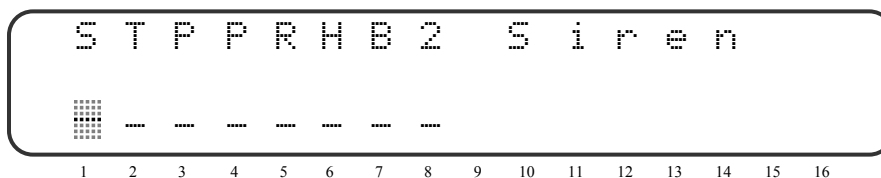
3.2.7.2 System responses to Panic



The user can trigger a PANIC event with custom responses by simultaneously pressing the



Press:



Below are the responses to the PANIC event:

- S Siren:** Siren.
- T Stn.Rad :** A PANIC event will be transmitted by radio to the Monitoring Station.
- P Stn.Ph1 :** A PANIC event will be reported over the telephone line to the MS. If Double or Split reporting are enabled then the event will be sent to the first MS with the first two telephone numbers.
- P Stn.Ph2 :** A PANIC event will be reported over the telephone line to the MS. If Double or Split reporting are enabled then the event will be sent to the second MS with the third and fourth telephone numbers.
- R Relay :** On-board relay.
- H Dialer :** The system will call the private telephone numbers.
- B Buzzer:** Keypad buzzer.
- 2 Aux 2:** ON/OFF output.

3.2.8 Responses to Failures and Events



You can program different responses with delay for identical failures and events depending on whether the system is armed or disarmed.

For responses while the system is armed (ON) press:





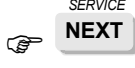




For responses while the system is disarmed (OFF) press:



Once you are in one of the above-obtained screens, press  to continue into the programming process of the specific failure/event, or press  to progress to the next failure/event.

Failures/Events with custom responses:

-  Loss of AC voltage
-  Low battery
-  Telephone line failure
-  TAMPER 1 and TAMPER 2
-  Wrong code – by counting keystrokes
-  Zone fault/Detector voltage drop
-  Report an ARM event (KeyOn) to the Monitoring Station in the ON (ARM) response menu **OR** report DISARM (KeyOff) to the Monitoring Station in the OFF (DISARM) response Menu (see section 3.2.8.2).



NOTE:

If you don't program any zone or failure to activate AUX2, then this output will monitor and follow the Keypad buzzer - AUX2 is active when the buzzer is active.

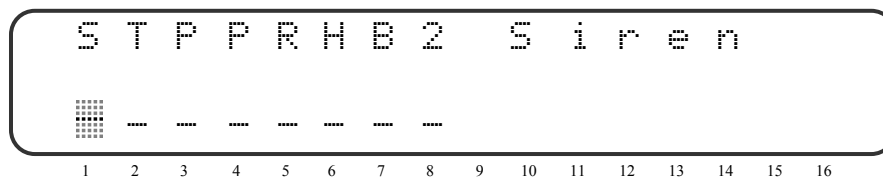
Purposes: Operate an additional external buzzer.

Response time: The delay time to activate a response from the moment a failure or event is identified. The time is set individually for each event, but is identical for ON and OFF status. The valid response time is the one that is updated last in either the ON or OFF screens. For example, if you program to trigger the siren as response to AC outage, with a response time of 30 minutes, then the sirens will operate after a continuous electrical outage of 30 minutes. The programming will be carried out as followed:

Enter the failure screen of "220V outage" and mark assign a "+" under the letter **S** (Siren),

press  and the display will show "Response time". Enter the number 30 which represents 30 minutes.

3.2.8.1 Failures and Events



The below are the responses for each of the failures and events in above list:

- S Siren:** Siren.
- T Stn.Rad :** A PANIC event will be transmitted by radio to the Monitoring Station.
- P Stn.Ph1 :** A PANIC event will be reported over the telephone line to the MS. If Double or Split reporting are enabled then the event will be sent to the first MS with the first two telephone numbers.
- P Stn.Ph2 :** A PANIC event will be reported over the telephone line to the MS. If Double or Split reporting are enabled then the event will be sent to the second MS with the third and forth telephone numbers.
- R Relay :** On-board relay.
- H Dialer :** The system will call the private telephone numbers.
- B Buzzer:** Keypad buzzer.
- 2 Aux 2:** On/OFF output.

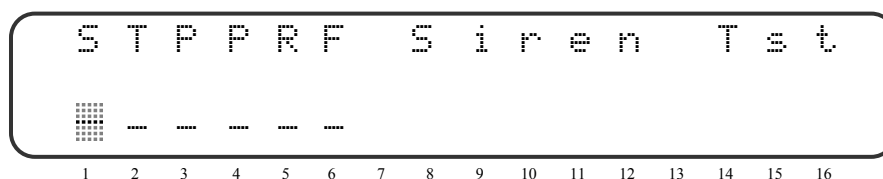
3.2.8.2 Arm and Disarm notification to Monitoring Station

This feature initiates the HUNTER-PRO to report to the Monitoring Station every time it is armed and disarmed.

To report every ARM (KeyOn) press:



To report every Disarm (KeyOff) event press:



- S Siren Tst :** The siren will emit one short burst of sound when the system is armed, and two short sounds when the system is disarmed via the Key input.
- T Stn.Radio :** ARM/DISARM events will be reported by radio to the Monitoring Station.
- P Stn.Ph1 :** ARM/DISARM events will be reported over the telephone line to the MS. If Double or Split reporting are enabled then the event will be sent to the first MS with the first two telephone numbers.
- P Stn.Ph2 :** ARM/DISARM event will be reported over the telephone line to the MS. If Double or Split reporting are enabled then the event will be sent to the second MS with the third and forth telephone numbers.
- R Relay:** ARM activates the on-board relay. The relay will be active for the duration it is programmed for. DISARM releases the relay.

- F **Smoke Out:** ARM will disconnect the voltage for two minutes to reset fire and smoke detectors.

3.2.9 Typing Zone Names

You can assign a custom name to each zone, for example; kitchen, bath, Ron's room, etc. The zone names are displayed when you access the memory, when a zone is open, etc.

Press:



Refer to Appendix A (chapter 8) for detailed instructions on using the Keypad to enter names.



NOTE:

You can use the COMAX Up/Download software to program names in a simpler and faster way.

3.2.10 Radio Transmitter Test




Press:

The system will transmit a TEST event to the Monitoring Station.



NOTE:

If you see a "Partitioning" message in the display after you press , then the system is not programmed with a radio account number. In this case, you must program an account number other than 0 and initiate the test again.


3.2.11 Partitioning


You can partition the HUNTER-PRO into 8 or 16 subsystems.

You can assign each zone to more than one partition.

Press:



Press  to change the cursor from "-" to "+" and vice versa. Choose a "+" to include the zone in the partition you edit.

Press  to save the changes.



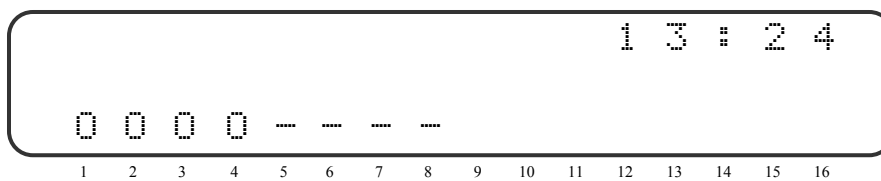
IMPORTANT!

User Code 1 arms and disarms Partition1, User Code 2 arms and disarms Partition2, etc.

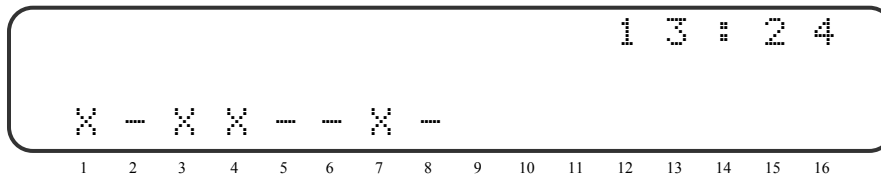
Codes that are not User Codes arm and disarm the entire system, i.e. all the zones are armed and disarmed.

Zones common to more than one partition will be armed (cause an alarm if opened) only if all the partitions that share this zone are armed.

3.2.11.1 Indications of a Partitioned System



The letter **O** marks armed. Zones.



The letter **X** marks armed partitions.

3.2.11.2 Allocating Keypads to Partitions

You can allocate each keypad to command and control partition One, Two, or the entire system as a primary keypad by setting a jumper on the back of the keypad.

Primary keypad – controlling the entire system:

Controls all the subsystems. Each User Code arms and disarms its partition. An armed partition is displayed with the letter “O” above it.

Secondary keypad 1 for partition 1:

Arms and disarms Partition 1 exclusively with valid User Codes for Partition 1. The main code converts the keypad into a regular primary keypad.

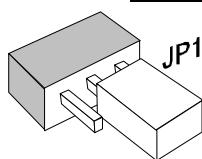
Secondary keypad 2 for partition 2:

Arms and disarms Partition 2 exclusively with valid User Codes for Partition 2. The main code converts the keypad into a regular primary keypad.

3.2.11.3 Jumper configuration for secondary keypads

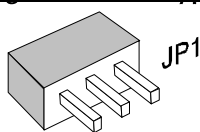
Connect the jumper as follows. Pay attention to the model you have:

(With wires coming out of the keypad) RX-150/160



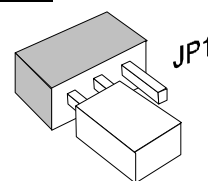
SECONDARY 1

Partition 1 exclusively



SECONDARY 2

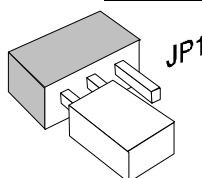
Partition 2 exclusively



PRIMARY

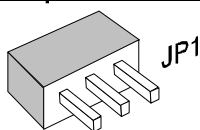
Controls all partitions

(With terminal block output) RX-400/410 + RX-150/160



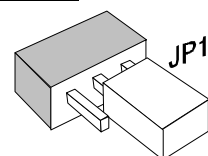
SECONDARY 1

Partition 1 exclusively



SECONDARY 2

Partition 2 exclusively



PRIMARY

Controls all partitions



NOTE:

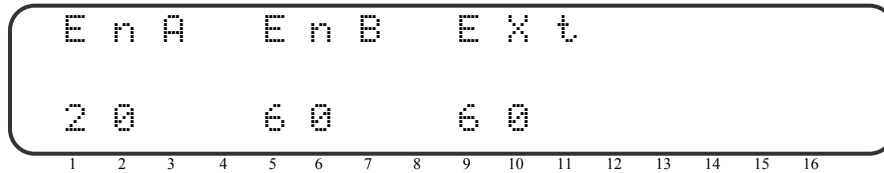
A secondary keypad will display only the information associated to the partition it controls.

3.2.12 Exit and Entry delay times

You can set two different entry delay times A and B, and associate one of them to be the delay time for any zone programmed as entry delayed. Press:



EnA – First entry delay time EnB – Second entry delay time Ext – Exit delay time



Delay time is in seconds. Maximum time allowed is 250 seconds.



NOTE:

All the zones that are “entry delayed” or “entry delay follower” are also “exit delayed”.

3.2.13 General Parameters

3.2.13.1 Setting Installer code

The Installer code provides access to the installer menu from the user menu. The code consists of 4 to 6 digits.

Press:



IMPORTANT!

The default main code is 5555 and installer code is 1234.

If you forget the regular codes (non default codes) then disconnect the system from all power sources (AC and battery), connect back the power source and you have 30 seconds in which the default codes are valid. This emergency access feature is not applicable if the technician code begins with the digit 0 (for example: 0384).

3.2.13.2 Initializing the System

Initialization restores the system with factory default parameters.



IMPORTANT!

Initialization deletes all previous programming parameters; memories, codes, names, etc.



As precaution, the system will prompt you to press **ENTR** again to commence with the initialization process.

3.2.13.3 Fast Load with PRG-22

The PRG-22 fast programmer contains two complete programs (Monitoring Station phone numbers, names, and more) that you can simply upload via a keypad.

Refer to the PRG-22 manual for detailed instructions.

Connect the PRG-22 to the RJ-11 socket:

In RX models prior to the RX-400 (i.e., model number smaller than 400), connect the PRG-22 to the RJ-11 socket at the keypad's bottom right side.

In later models (RX-400/RX-410 and up), connect the PRG-22 to the RJ-11 socket placed inside the keypad, on the PCB's upper left side (see section 7.1.4) and press:

now there are two choices:

Press to upload program number 1. OR press to upload program number 2.



NOTE:

The PRG-22 contains parameters for a system without zone expansions, i.e parameters for zones 1-8. Parameters for zones 9-16, such as zone names and responses, must be programmed manually or by Up/Download.

3.2.13.4 RAM Test

Perform this test if you suspect that the system is not operating properly. An appropriate indication will be displayed if the test fails. Press:

Press again to commence the RAM Test, and wait about 60 seconds for the system to resume regular operation and display (i.e, wait until display no longer shows "KEYBOARD NOT CONNECTED").

Empty Page



Chapter 4

Private Dialer and Communication to Monitoring Station

4.1 Dialer to private numbers

The HUNTER-PRO can call four private (not Monitoring Station's) telephone numbers and alerts that an alarm occurred, play a pre-recorded message, activate an on-site microphone, and open a command and control communications channel where the user can control the system with his touch-tone telephone. The telephone numbers are programmed on the User Level – Refer to the HUNTER-PRO User manual for more details.

The dialer stops the calling cycle in the following circumstances:

- The system is disarmed.
- A "Terminate Siren/Dialer" command is received by telephone command.
- All calls to the subscribers are completed; two calls to each subscriber.

4.2 Telephone communication with Monitoring Station

The HUNTER-PRO communicates to the Monitoring Station by telephone and/or radio. For additional communication capabilities such as TCP/IP contact your PIMA representative or PIMA directly.

The system supports different communication formats. The full potential of enhanced Monitoring Station reporting can be achieved by using the PAF (PIMA Advanced Format).

A unique code can be programmed for each event in accordance with Monitoring Station and/or customer requirements, such as a response code to open tamper of the box or to define zone number 5 as the zone connected to a Panic button. In the latter case, it is possible to program the Monitoring Station reporting code, telephone and/or radio, to report a Panic event instead of a regular alarm by programming the appropriate code.

Each of the reports mentioned above depends upon the corresponding option in the installer menu, (i.e. for each type of event it is possible to include or exclude reporting to the Monitoring Station.) For example, it is possible to cancel the reporting of arming/disarming using the phone communicator leaving radio reporting unchanged.

If a failure event is reported to the Monitoring Station, the restoration of serviceability will also be reported as an event. For example, in the case of a low-battery fault, after the battery is re-charged "Battery restore" will be reported to the Monitoring Station.

Four telephone numbers to the Monitoring Station can be programmed and the order of connection attempts to the Monitoring Station will be in the same order as the programming. Upon an unsuccessful connection attempt the system will try the next telephone number and so on until connection is established. When connection is established, the system will transmit to the Monitoring Station all events that accumulated until then.

Each system can be programmed with an account number of 1 to 9999 as well as the MS number. The MS number sets the format types for telephone reporting and wireless reporting.

When it is necessary to check the connection with the Monitoring Station the progress of connection and the result (successful/failed) are displayed on the keypad.

To achieve this, one should enter the Installer code (default 1234) when the system is not in the programming mode (Master Code has not been entered). The entire telephone communication procedure with the MS will be displayed during the next 4 minutes. In order to interrupt this procedure, one should hold and press

4.3 Radio communication to Monitoring Stations

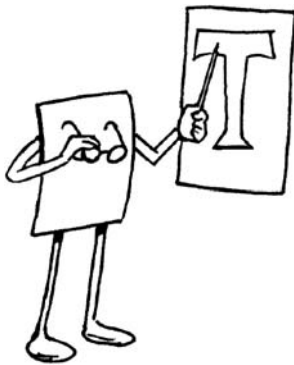
The HUNTER-PRO enables radio (wireless) communication to the Monitoring Station. The communication configuration is defined at installation.

The reporting options and their control are similar to those for telephone communication with the Monitoring Station (see the preceding paragraph). With the exception of zone alarms, it is possible to define for each event whether to report it by phone or radio, both or neither. One may set a separate account number for reporting by radio.



NOTE:

Radio transmission are performed on battery power only (AC is disconnected during the transmission.) Therefore, the battery must be connected and intact in order to facilitate radio communications.



Chapter 5 Troubleshooting

The HUNTER-PRO incorporates many operating parameters and options. Some of the system operations depend on the method of programming, and if one of the parameters is not programmed correctly, the operation depending on it will not be executed. This chapter describes the failures displayed on the keypad and their meanings, as well as various problems that may be encountered due to improper programming, and options for troubleshooting the failures that might occur due to incorrect installation and/or programming.

5.1 Accessing the System without Master Code

For maximum end-user protection and security, it is not possible to program the system without knowing the Master Code. If for some reason the Master Code is not available, then follow these steps to access the system:

- Open the Control Panel box.
- Disconnect Mains AC voltage from the system.
- Disconnect the battery.
- Wait several seconds and connect the battery.
- Wait until the display appears on the keypad unit.
- Enter the factory default Master Code (5555).
- Program a new Master Code (it is not possible to see the old code).
- Connect Mains AC voltage.
- Close the Control Panel box.

**NOTE:**

After battery connection, the system enables access by means of the default factory code (5555) for 30 seconds only. If you do not gain entry within this time, repeat the operations from the beginning. If the battery is weak, connect the main voltage.

The process above is also useful for technician code (Default 1234). With the exception of technician code that starts with 0.

5.2 Failure indications

In case of a Failure, the Failure LED on the keypad blinks. The description of the failure appears on the first line of the LCD Keypad at the right side. The possible failure indications are:

MESSAGE	DESCRIPTION and REMEDY
Clock	Clock failure, set the clock
Battery	Low battery power, check the battery or charging voltage
Low DC	Very low battery, appears before the battery is drained, usually after prolonged power failures
AC Line	No mains power
ROM	Software failure
RAM	System failure
TAMPER 1	Tamper 1 is open
TAMPER 2	Tamper 2 is open
Trouble	Zone failure due to line cut or short.
Communic.	Failure to communicate with the Monitoring Station.
Keypad not connected	No communication between the keypad and HUNTER-PRO PCB
Telephone	The system did not recognize a dial tone
Fuse	Detector power supply
Other display used	Programming is done from another keypad, by Upload/Download, or telephone

5.3 Troubleshooting

5.3.1 Clock

This failure appears after initial connection to Power such as first time operation or operation after AC and battery backup failure.

Repair:

Enter new time and date (refer to section. 2.18).

5.3.2 Battery

Battery failure indicates low battery power and appears after battery test and after a prolonged AC failure. (Refer to section. 2.16).

Repair:

Make sure battery fuse is intact.

Verify charging voltage is 13.8V.

Wait 24 hours for the indication to disappear.

Replace the battery if the failure persists for a couple of days.

5.3.3 Low DC

Indicates a very low DC supply to the PCB. This failure is a result of a prolonged AC failure that drains the backup battery. During this failure you can not change any system parameters.

Repair:

Connect AC.

If necessary, replace battery.

5.3.4 AC Line

AC mains power failure. If other electrical appliances are working, then check the entire AC conduit to the system.

Repair:

Connect AC power.

If you find a blown AC fuse, then replace the fuse; if failure persists then replace the PCB.

5.3.5 RAM

Memory is not intact.

Repair:

Replace the PCB.

5.3.6 ROM

Software failure

Repair:

Disconnect all power sources.

Wait for 30 seconds.

Reconnect all power sources.

If the problem persists, replace the EPROM (U3).

Replace the PCB if the problem persists.

5.3.7 Tamper 1

Tamper 1 is open.

5.3.8 Tamper 2

Tamper 2 is open.

5.3.9 Trouble

This failure indication can appear only for zones with EOL protection, and indicates either a short or open line. An indication; "S" or "F" above the zone number on the LCD display will accompany the flashing red failure light:

S = Short – check the wires.

F = Open (cut) line – check the wires or/and that the detector's tamper is closed.

5.3.10 Keyboard Not Connected

This is an indication that there is no data transfer between the control panel and the keypad. Check the following:

- Proper connection between the “OUT” terminal on the control panel and the input to the keypad via the yellow wire.
- Keypad receives 13.8V power supply. If the power source is not high enough then check that there are not too many keypads connected to the PCB.
- During RAM Test a message might appear. This is not a failure.
- The Jumpers at the back of the keypad correspond to system programming or partitioning.
- Check for malfunction in the keypad – Replace Keypad.
- Check for malfunction in the control panel – Replace PCB.

**NOTE:**

If there are several keypads connected to the control panel and all show the same indication then either the control panel PCB is malfunctioning or there is a short on one of the wires.

5.3.11 Telephone

The system did not recognize a dial tone. Appears after lack of communication on the last dialing trial.

The failure indication will remain while the system is disarmed even though the line and/or tone return.

To eliminate the ongoing display of this failure; run the TEST procedure by pressing and

holding the **BACK** key until the test procedure begins. The system will perform a self-test that includes an update of telephone status.

**NOTE:**

Assure that no telephones or other equipment connected to the telephone are active during the system dialing.

5.3.12 SB1

A memory failure triggered by the internal “Watchdog” system. Possible reasons for “Watchdog” activation:

- AC restored after a long AC failure, and battery was almost completely discharged.
- Software malfunctions as a result of sporadic background noise, such as from strong generators.



5.3.13 Communication: No telephone communication to Monitoring Station, also during test mode

This indication appears if the HUNTER-PRO communicator cannot transfer reports to MS. Possible reasons for this indication is incompatible protocols with the Monitoring Station or phone failure.

Check the following:

- The telephone line is properly connected to the LINE terminal blocks.
- In “system config” (section. 3.2.7.1.4) the P for telephone is programmed with +.
- At least one telephone number is programmed for MS.
- Telephone account ID for MS is other than 0.
- Format is compatible with the one used in the MS.
- Correct telephone numbers have been entered.
- A prefix has been programmed if the system is installed in an office (usually 9).

5.3.13.1 Checking communications to the Monitoring Station

Enter Installer code without the Master Code, press  and  in order to initiate an event and watch the progression of communication to the MS.

5.3.14 No Radio Transmission to Monitoring Station

Check the following:

- Proper connection between the HUNTER-PRO PCB and the transmitter.
- Radio account ID is other than 0.
- Station radio ID corresponds to the Monitoring Station.
- Format is compatible with the one used in the Monitoring Station.
- If the antenna is not installed on the HUNTER-PRO metal case, check the extension cable for the antenna is intact.
- Backup battery is connected and intact.

5.3.14.1 No telephone connection to private telephone numbers

Check the following:

- The telephone line is properly connected to the LINE terminal blocks.
- In “system config” (section. 3.2.7.1.4) the “P” for telephone is programmed with +.
- In zone responses + is programmed under subscriber dialer.
- At least one telephone number is programmed for private numbers.
- Correct telephone numbers have been entered.
- A prefix has been programmed if the system is installed in an office (usually 9).

5.3.15 System is not answering telephone calls

Check the following:

- The telephone line is properly connected to the LINE terminal block.
- In “system config” (section. 3.2.7.1.4) the “P” for telephone is programmed with +.
- The system is programmed to pick up after a reasonable number of rings – not more than 10.

5.3.16 Automatic arming is not functioning

Check the following:

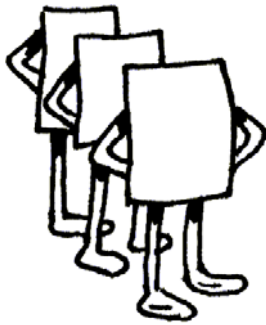
- No Clock failure indication.
- The Automatic arming feature is activated – The letter **A** is displayed to the left of the clock.
- Clock is set to the correct time.

5.3.17 Zone does not cause an alarm

Check the following:

- The Zone is not temporarily or permanently bypassed,
- The zone is programmed for the correct response, siren, relay, etc.
- If the zone is assigned to more than one partition, then all the partitions it is assigned to must be armed.
- Detectors are correctly installed and are not malfunctioning.
- Zone sensitivity settings.
- Cross zoning settings.
- Pulse counter settings.
- Power supply is not low – AC and backup battery power levels.

Empty Page



Chapter 6 Expenders

6.1 Output Expansion Card OUT-1000

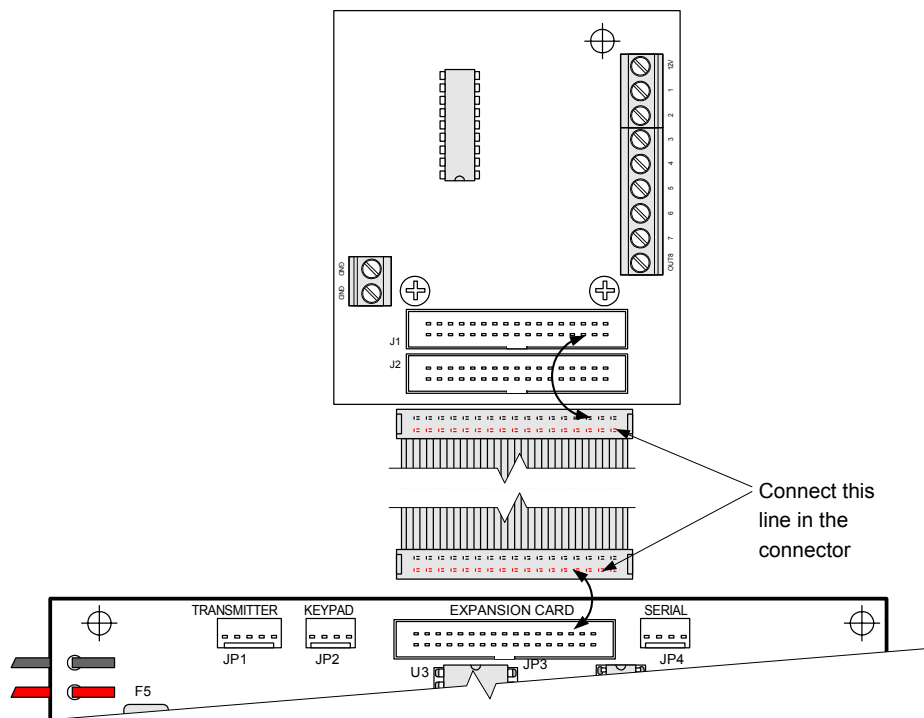


IMPORTANT!

Disconnect all power sources before installing the Output Expansion Card OUT-1000.

Adds 8 Open Collector TTL Transistor Outputs.

See the following diagram for connection of the Output Card to the control panel:



- Connect the cable between connector J1 on the output card to connector JP3 on the control panel. If the connector has two rows, make sure to connect the upper row on both cards.
- Program zone and failure responses according to section. 3.2.5.2.
- Define the length of time that the output will be active according to section. 3.2.5.1.



NOTE:

You can connect OUT-1000 with EXP-PRO by connecting J2 on OUT-1000 to connector J1 on EXP-PRO.

6.2 Zone Expansion Card EXP-PRO

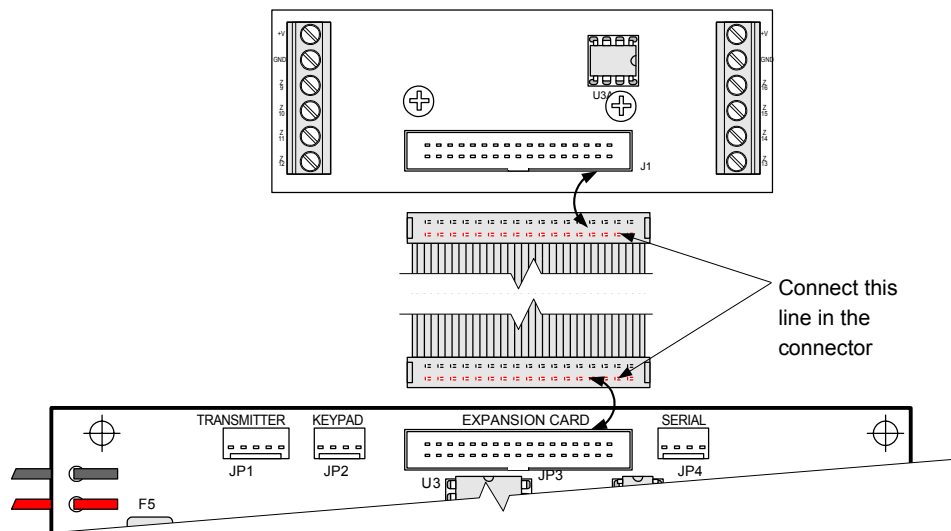
Adds 8 zone inputs to a total of 16 zones.



IMPORTANT!

Disconnect all power sources before installing the expansion card.

A diagram for connecting the expansion card to the control panel:



EXP-PRO connector with a single row:

Connect the flat-cable between connector J1 on the expansion card to connector JP3 on the control panel.

EXP-PRO connector with two rows:

Connect the upper row of the connector to JP3 on the control panel.



IMPORTANT!

When the EXP-PRO is supplied without the control panel, the connector is connected to the top row.

Define the EXP-PRO in System Configuration screen Eight by setting a “+” under the letter X. Make sure that this is the only parameter that you enable in the eighth screen (see section 3.2.7.1.8).

6.3 Zone Doubling

A method to double the number of zones from 8 to 16 without an expansion card by connecting resistors and diodes.

Zone Doubling is defined in the system according to section. 3.2.7.1.8.

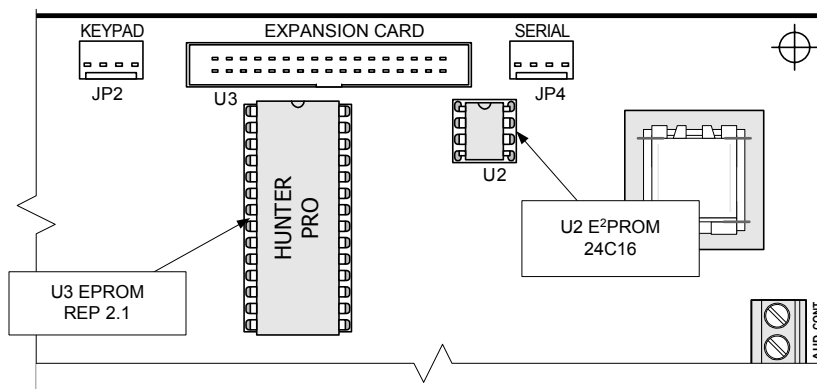
The following are requirements for zone doubling:

- EPROM software version 2.1 and above. Version is indicated on EPROM U3.
- U2 is of type 24C16.
- Zones cannot be protected with two end-of-line (EOL) resistors.
- Older systems can be upgraded by replacing U2 and U3.



IMPORTANT!

When replacing U2 all parameters are reset.

**IMPORTANT!**

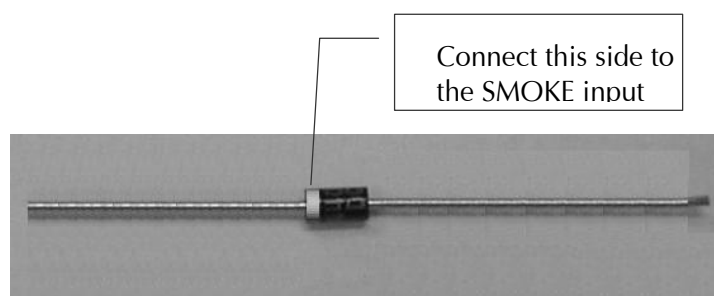
Disconnect all power sources before replacing U2 and U3. Connect the power after you verify that U2 and U3 are properly installed.

Table of connection options:

Type of connection	Number of zones	EOL connection options	Type of detectors NO or NC
Without zone doubling	Up to 8	<ul style="list-style-type: none"> ➤ Without EOL resistors ➤ One or two EOL on all zone inputs 	All zones are defined as NO <u>or</u> NC.
With Zone doubling	Up to 16	<p><u>All the zones are doubled</u></p> <ul style="list-style-type: none"> ➤ Without EOL resistors ➤ One EOL resistor <p><u>Some of the zones are doubled</u></p> <ul style="list-style-type: none"> ➤ Zones without Doubling <ul style="list-style-type: none"> ✧ Without EOL ✧ One EOL ✧ 2 EOL ➤ Doubled Zones <ul style="list-style-type: none"> ✧ Without EOL ✧ One EOL 	<p>Only NC for zones 1-8</p> <p>NC or NO for zones 9-16</p>

**IMPORTANT!**

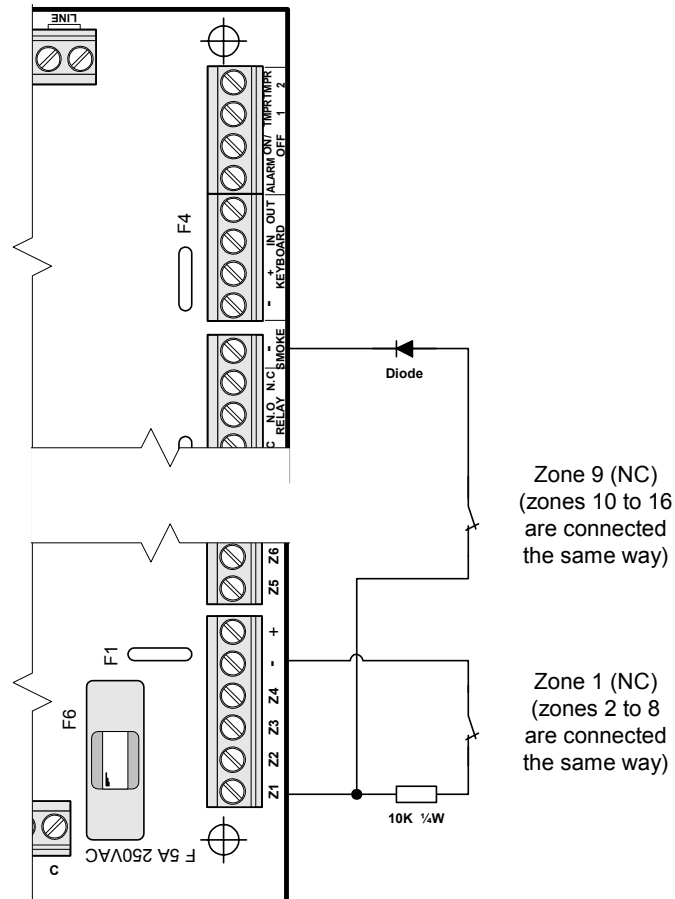
Pay special attention to the polarity of the diode you connect for doubling a zone.



6.3.1 Zone Doubling Options

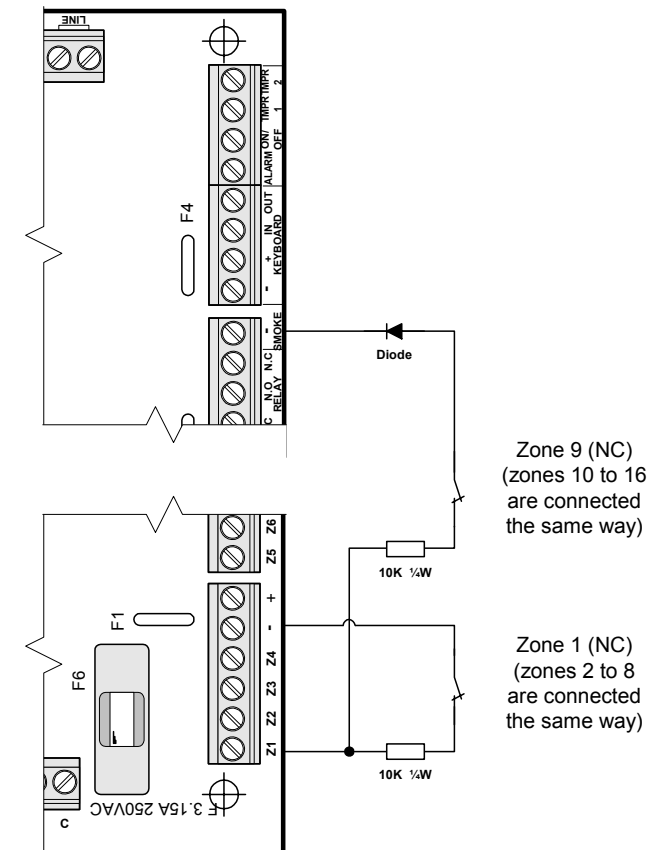
6.3.1.1 Zone Doubling without EOL Resistor

- To obtain zones 1-8: Connect a 10K Ω resistor in serial connection between the zone input and a negative (-) terminal.
- To obtain zones 9-16: Connect a diode in serial connection between the Zone input and the SMOKE input. Connection to Zone 1 yields Zone 9, connection to Zone 2 yields Zone 10, etc. Refer to the below diagram:



6.3.1.2 Zone doubling with one EOL resistor

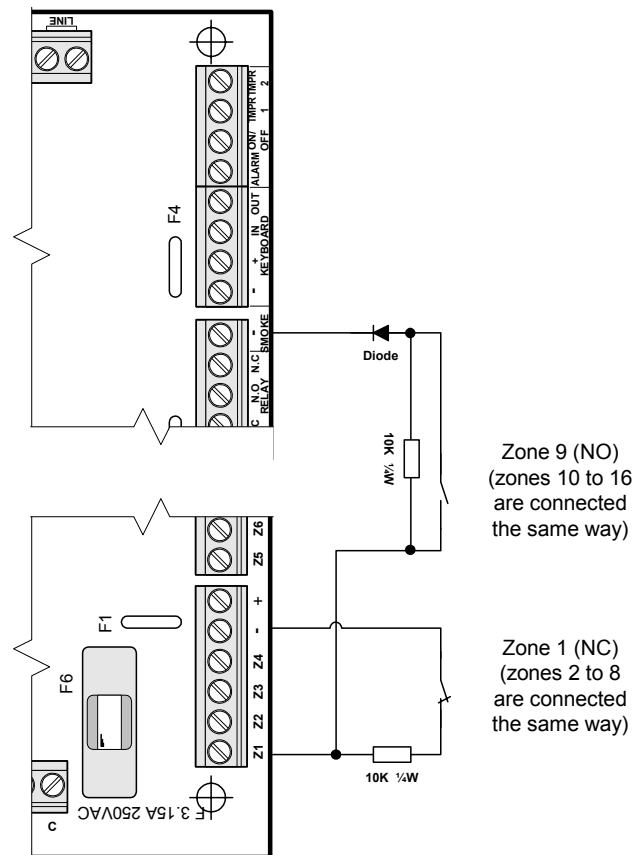
- Define EOL in zone configuration according to section. 3.2.2.1.
- To obtain zones 1-8: Connect a 10K Ω resistor in serial connection between the zone input and a negative (-) terminal.
- To obtain zones 9-16: Connect a diode and a 10K Ω resistor in serial connection between the Zone input and the SMOKE input. Connection to Zone 1 yields Zone 9, connection to Zone 2 yields Zone 10, etc. Refer to the below diagram:



6.3.1.3 Zone doubling with one EOL resistor for a NO detector

You can connect only NC type detectors to zones 1–8.

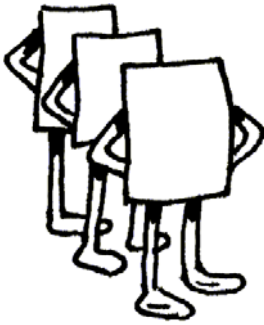
Connect NO type detectors according to the following diagram:



6.3.1.4 Zone doubling part of the zones

Bypass the “higher” zones if the corresponding “lower” zone is not doubled. For example: Bypass Zone 11 if Zone 3 is not doubled.

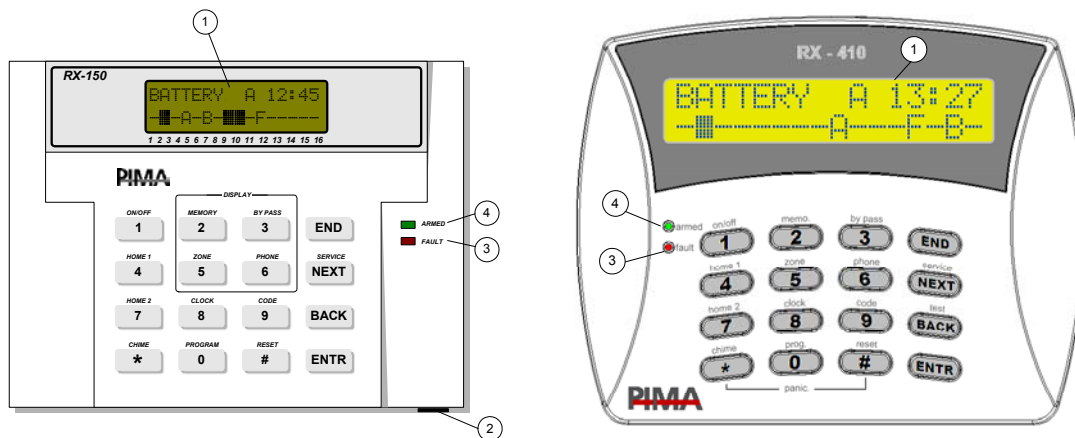
If you have at least one with two EOL resistors (a zone that is not doubled), then you must program all zones as NOT Doubled. Mark a “-” below the letter **M** in the programming screen for Double Zoning (refer to section. 3.2.7.1.8.)



Chapter 7 Keypads

7.1 LCD Keypads

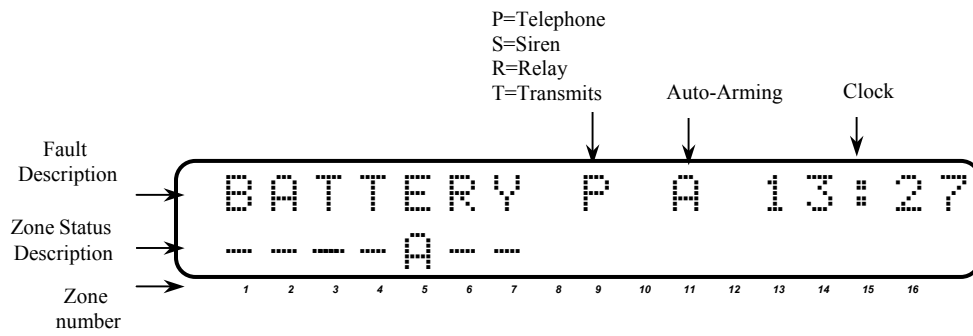
LCD Keypads: RX-150, RX-160, RX-400 & RX-410



7.1.1 Display Description

#	Indicator	Description
1	LCD DISPLAY	See below (section 7.1.2)
2	RJ-11 connector	Connects to PRG-22 fast programmer. NOTE: in RX-400/410, the keypad's cover needs to be removed in order to reach the RJ-11 (see section 7.1.4.). In prior keypad models, the RJ-11 connector is at the bottom right side.
3	FAULT	Lamp blinks when a failure is detected. A description of the failure appears on the alphanumeric display after any key is pressed
4	ARMED	On when "armed", blinks during delay count-down

7.1.2 Zone Statuses Description



---	Closed zone
	Open zone
B	Bypassed zone
A	Zone that triggered an alarm
C	Chime zone
S	Short zone
F	Disconnected zone / Wireless detector's TAMPER open
O	A zone that is associated with a partition is armed
L	Low battery in wireless detector
U	"Life sign" from wireless detector was not received

7.1.3 Key Functions



IMPORTANT!

To operate and program the system, enter the Master Code. Several keys are used for different operations, **without entering the code**. In order to do so, press the required key (for 2 seconds) until you hear a long beep.

#	Key	Function after Master Code	Function after Long Press
1	ON/OFF	System arming/disarming	
2	MEMORY	Display of arming, alarm, and failure histories	Continuous rolling display of arming, alarm, and failure histories
3	BYPASS	Temporary bypass of zones	Temporary bypass of zones or Display of bypassed zones
4	HOME 1	Arming the system to "Home 1" (partial arming)	Arming the system to "Home 1" (you must enter one of the User Codes after the long press)
5	ZONE	Display of all the zones by name	Display of all open zones by name
6	PHONE	Programming of telephone numbers	Display of telephone numbers
7	HOME 2	Arming the system to "Home 2" (partial arming)	Arming the system to "Home 2" (you must enter one of the User Codes after the long press)
8	CLOCK	Programming of time and date	
9	CODE	Programming of the various codes	
*	CHIME	Programming of zones to chime	Activation/cancellation of chime
0	PROGRAM	Programming for automatic daily arming	Enabling/Disabling the Exit delay function
#	RESET	Programming key	Smoke detector reset
	END	Programming key	
	NEXT	Programming key	Display of system service provider information
	BACK	1. Programming key 2. Checking battery, telephone line and siren	Checking battery, telephone line and siren
	ENTR	Programming key	Enables immediate answer to phone ring for remote upload



NOTE:

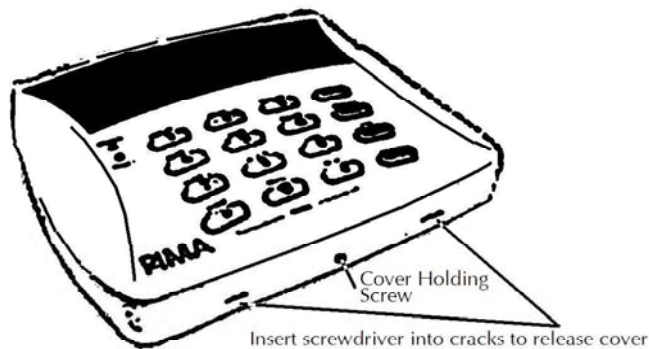
Press **ENTR** and **END** simultaneously to activate/cancel the buzzer.

Press **CHIME *** and **RESET #** simultaneously to trigger panic event and responses.

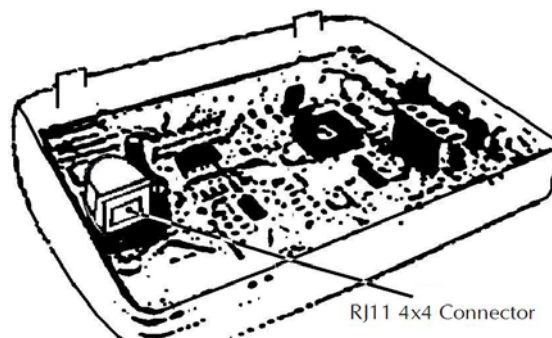
7.1.4 Accessing the RJ-11 Socket (in RX-400 keypad models, and up)

In order to connect with the RJ-11 connector, in keypad models RX-400 and up, do the following:

1. Release the screw (if fitted) holding the keypad's cover (see drawing 1.)
2. Remove the keypad's cover by inserting a screwdriver into the two cracks (see drawing 1.)
3. Connect the RJ-11 4x4 plug (from LCD keypad+ TC-3 or PRG-22) to the RJ-11 female socket in the keypad panel (see drawing 2.)
4. Replace the keypad's cover.



Drawing 1- Screw and two cracks at the keypad's bottom



Drawing 2-Situating RJ-11 on the PCB

7.2 Outdoor Anti-Vandal Keypad: RX-200

The RX-200 is a dual purpose Anti-Vandal keypad for outdoor installation meeting the IP-65 requirements. It incorporates state-of-the-art solid-state Piezo technology keys for exceptional reliability with audible and visible key activation signals.

The dual-purpose feature enables the RX-200 to arm/disarm the control panel and to activate the relay output to control the door electromagnet for access control purposes.



7.2.1 LED Description

- **Green:** ON when the system is armed.
Flashes when a key is pressed, and during Entry/Exit delay.
- **Red:** ON when a fault occurs.
- **Yellow:** ON when all zones are closed.



IMPORTANT!

The LED display can be cancelled (except for green flash after pressing a key) by disconnecting the 12V (blue wire)

7.2.2 Installing the RX-200

1. Drill two mounting Ø5mm holes using the provided template
2. Drill a Ø10mm side to side hole in the wall for the communication cord using the provided template
3. Fasten the magnet (optional) according to the provided template
4. Pass the keypad communication cord into its place
5. Mount the RX-200 into place using two screws



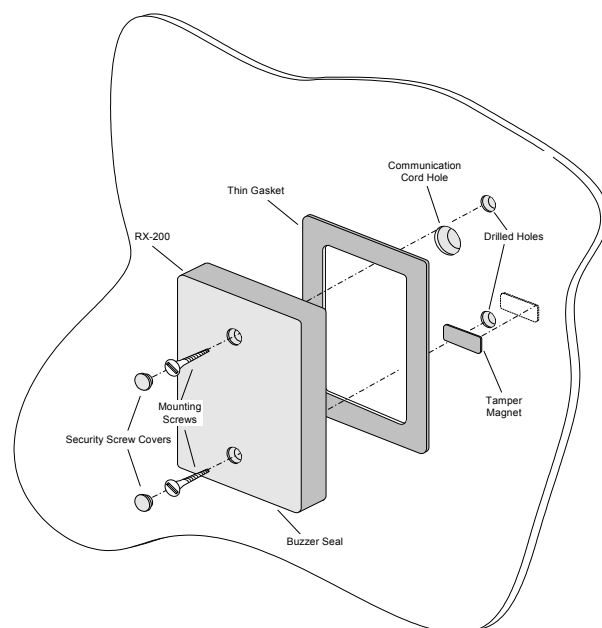
IMPORTANT!

Do not insert the security screw covers before all configuration and tests are completed, as they cannot be removed.

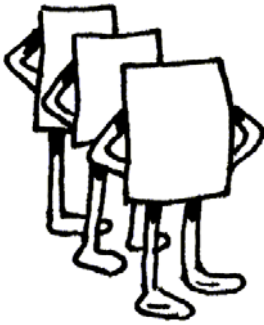
Once mounted, the Security screw covers can be removed only by drilling them out.

6. Connect the RX-200 wiring to the control panel according to the table below: "Wiring Description."
7. Remove the buzzer seal from the bottom of the keypad
8. Test the keypad with the control panel for arm/disarm and door access (when applicable)
9. Secure the Security Screw Covers into their place

Wire Color	Connect to (in control panel)
Gray	Tamper1/2 input (optional)
Black	GND (optional)
Brown	Keypad GND (-)
Red	Keypad +12V (+V)
White	Keypad OUT
Orange	Keypad IN
Blue	+12V for enabling the LEDs
Green	Should be connected to earth



Empty Page



Chapter 8 Appendixes

Appendix A: Entering Names with keypads

The following are instructions for entering names for zones, secondary codes, and service company-name with the keypad. Each key represents 3 letters and a number. Press the appropriate key over and over until you receive the desired letter or number. Then press

SERVICE

NEXT

for the next letter.

You can enter up to 16 characters with 8 different characters. For example:

Ted's room – Is a valid name; it has 10 characters (including space) with 8 different characters (T, e, d, s, ', r, o, m).

Master bedroom – Is not a valid name; it has 14 characters, but has 9 (more than 8) different characters (M, a, s, t, e, r, b, d, o).

Allocation of letters to keys:

A,B,C,1 <small>ON/OFF</small> 1	D,E,F,2 <small>MEMORY</small> 2	G,H,I,3 <small>BYPASS</small> 3	END
J,K,L,4 <small>HOME 1</small> 4	M,N,O,5 <small>ZONE</small> 5	P,Q,R,6 <small>PHONE</small> 6	<small>SERVICE</small> NEXT
S,T,U,7 <small>HOME 2</small> 7	V,W,X,8 <small>CLOCK</small> 8	Y,Z,9 <small>CODE</small> 9	BACK
()- "SPACE" <small>CHIME</small> *	0, ., + <small>PROGRAM</small> 0	<small>RESET</small> #	ENTR

Appendix B: Default Parameters

B1- Zones

Zone Parameters/ Zone number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Bypassed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NO	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24 Hours	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Home 1	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Home 2	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Entry Delay	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Entry Follower	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-
Delayed Time B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
End of Line	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pulse Counter	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Automatic Bypass	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Zone Bypass Cancelled	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Siren	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Relay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dialer to private numbers	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Monitoring Station 1	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Monitoring Station 2	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Siren tone B II	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Microphone	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Smoke detector	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AUX 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AUX 2	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Sensitivity Zone 1: 4

Sensitivity Zone 2: 4

Sensitivity Zone 3: 4

Sensitivity Zones 4-16: 4

Zone Conditioning

Zone	Zone	Time (in sec.)
1	0	0
2	0	0
3	0	0
4	0	0

Pulse Counter

Space: 0 Counter: 0

Zone Names:

zone 1, zone 2, zone 3, zone 4, zone 5, zone 6, zone 7, zone 8, zone 9, zone 10, zone 11, zone 12, zone 13, zone 14, zone 15, zone 16

B2- Zoning

	ZONES															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Partition 1	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Partition 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Partition 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Partition 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Partition 5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Partition 6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Partition 7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Partition 8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Partition 9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Partition 10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Partition 11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Partition 12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Partition 13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Partition 14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Partition 15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Partition 16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

B3- Codes

Master Code: 5555

Technician Code: 1234

Short Code: _____

Secondary Code 1-16: _____

Secondary Codes Names : _____

Secondary 1, Secondary 2, Secondary 3

Secondary Codes Deactivation Time: 00:00 -23:59

Code Activation> Zone 0 (all): _____

Relay Code: _____

Duress Code _____

Delays

Entering Delay: A=20 B=60

Exit Delay: 60 seconds

Sirens. Relay, Outputs:

Siren Circulation Time _____

Siren Tone: I=0 II=1

Circulation time AUX 1: 240 seconds

Circulation time AUX 1: 240 seconds

AUX 2 Delay: 0 seconds

Relay Circulation Time: 240 seconds

Output Unit: 240 seconds

Faults> To Outputs:

Mains: _____

Low Battery: _____

Telephone Line: _____

Tamper 1/2: _____

Panic: _____

Zone Failure: _____

Alarm Confirmation: _____

Zone Activated Outputs _____

No zone activates any output.

All outputs: Normally Open

False Code: _____

B4- System Configuration, General Parameters

Key> Home: -	Voice unit: -	Reset per zone: -
Auto> Home: -	Zone display: -	Bypass report: -
Key Bypass: -	Alarm buzzer: -	Split private number: -
Bypass required: -	AUX1=NC -	Delayed activation: -
1 Period: -	AUX1=NC -	Blocking fault Activation: -
Two resistors: -	Existing telephone line: +	Mains: -
State key: -	Tone dialer: +	Telephone line: -
End of line Key: -	No dialing tone check-up: -	Low battery: -
Tamper 1 activated: +	Line check (ON): -	Tamper 1 opened: -
Tamper 1 end of line: -	Line check (OFF): -	Detector voltage: -
Tamper 2 activated: +	Line Snapping: -	Tamper 2 opened: -
Tamper 2 end of line: -	2 rings snap: -	Light keypad: -
Up/Download blocked: -	Open alarm: +	Delay light: -
Disarming blocked: +	No reset: -	Bypass after: +
		Bypass before: +
		Wireless system: -
		16 wireless zones: -
		EXP-PRO: -
		Doubling zones: -
		Blocking cancellation: 0
		Serial output: 64
		Block: 0
		Activation signal: 0

B5- Telephones

PRIVATE TELEPHONE 1: _____
 PRIVATE TELEPHONE 2: _____
 PRIVATE TELEPHONE 3: _____
 PRIVATE TELEPHONE 4: _____
 FOLLOW-ME TELEPHONE: _____
 MONITORING STATION TELEPHONE 1: _____
 MONITORING STATION TELEPHONE 2: _____
 MONITORING STATION TELEPHONE 3: _____
 MONITORING STATION TELEPHONE 4: _____
 EXETRNAL LINE DIALER: _____
 SET PREFIX: _____
 NUMBER OF RINGS: _____
 PRIVATE NUMBER: _____
 FORMAT: _____
 MONITORING STATION CHECK-UPS: _____

Appendix C: Table of Format Codes

Pulse Formats

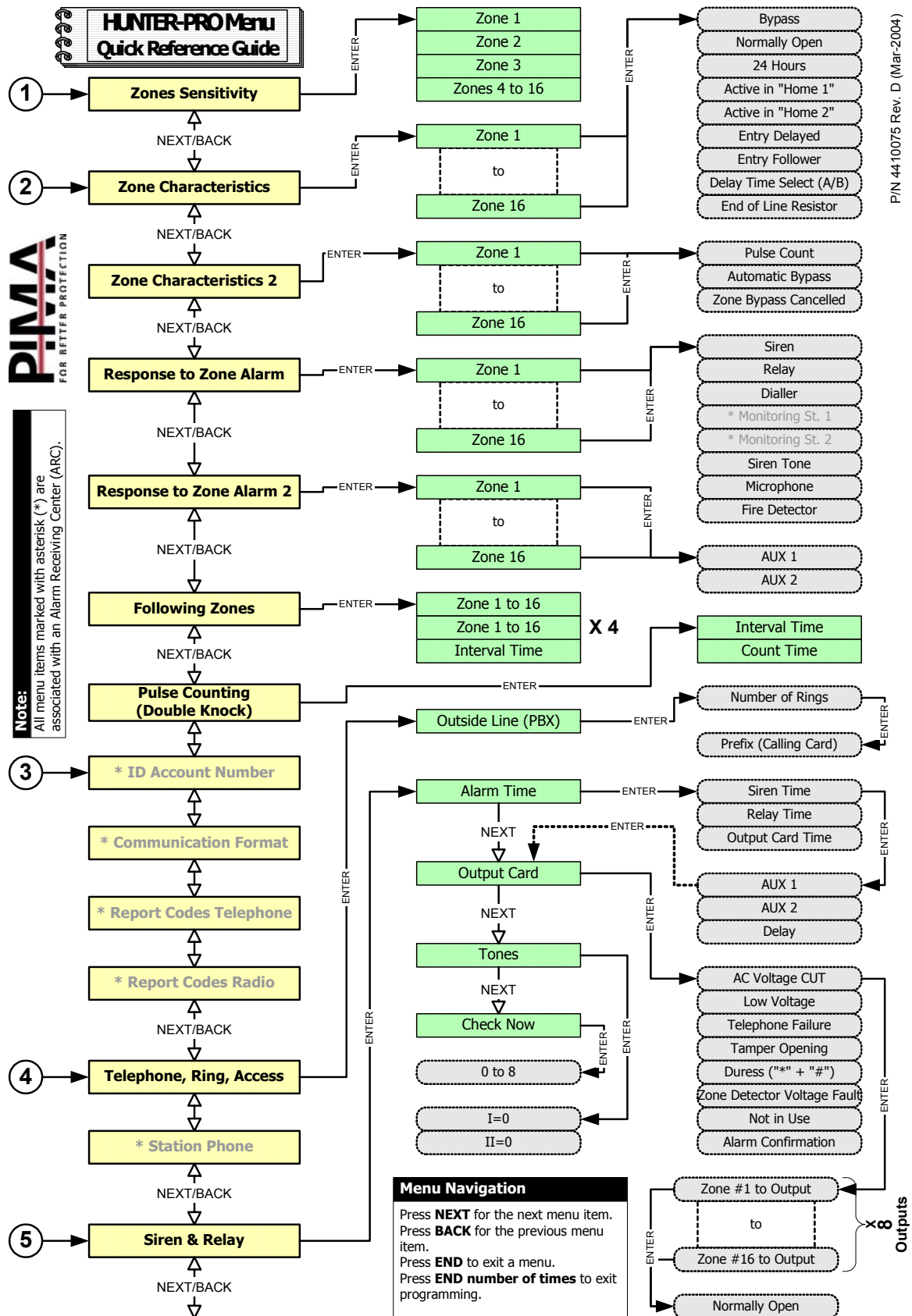
RATE(PPS)	ACK	ERROR CONTROL	I.D. EVENT	A	B	NAME
10	1400	DOUBLE ROUND	3 - 1	93	15	ADEMCO SLOW
			3 - 2	92	15	
			4 - 1	93	143	
			4 - 2	92	143	
10	1400	CHECK SUM	3 - 1	93	79	
			3 - 2	92	79	
			4 - 1	93	207	
			4 - 2	92	207	
10	2300	DOUBLE ROUND	3 - 1	93	31	
			3 - 2	92	31	
			4 - 1	93	159	
			4 - 2	92	159	
10	2300	CHECK SUM	3 - 1	93	95	
			3 - 2	92	95	
			4 - 1	93	223	
			4 - 2	92	223	
14	1400	DOUBLE ROUND	3 - 1	85	15	SILENT MODE
			3 - 2	84	15	
			4 - 1	85	143	
			4 - 2	84	143	
14	1400	CHECK SUM	3 - 1	85	79	
			3 - 2	84	79	
			4 - 1	85	207	
			4 - 2	84	207	
14	2300	DOUBLE ROUND	3 - 1	85	31	
			3 - 2	84	31	
			4 - 1	85	159	
			4 - 2	84	159	
14	2300	CHECK SUM	3 - 1	85	95	
			3 - 2	84	95	
			4 - 1	85	223	
			4 - 2	84	223	

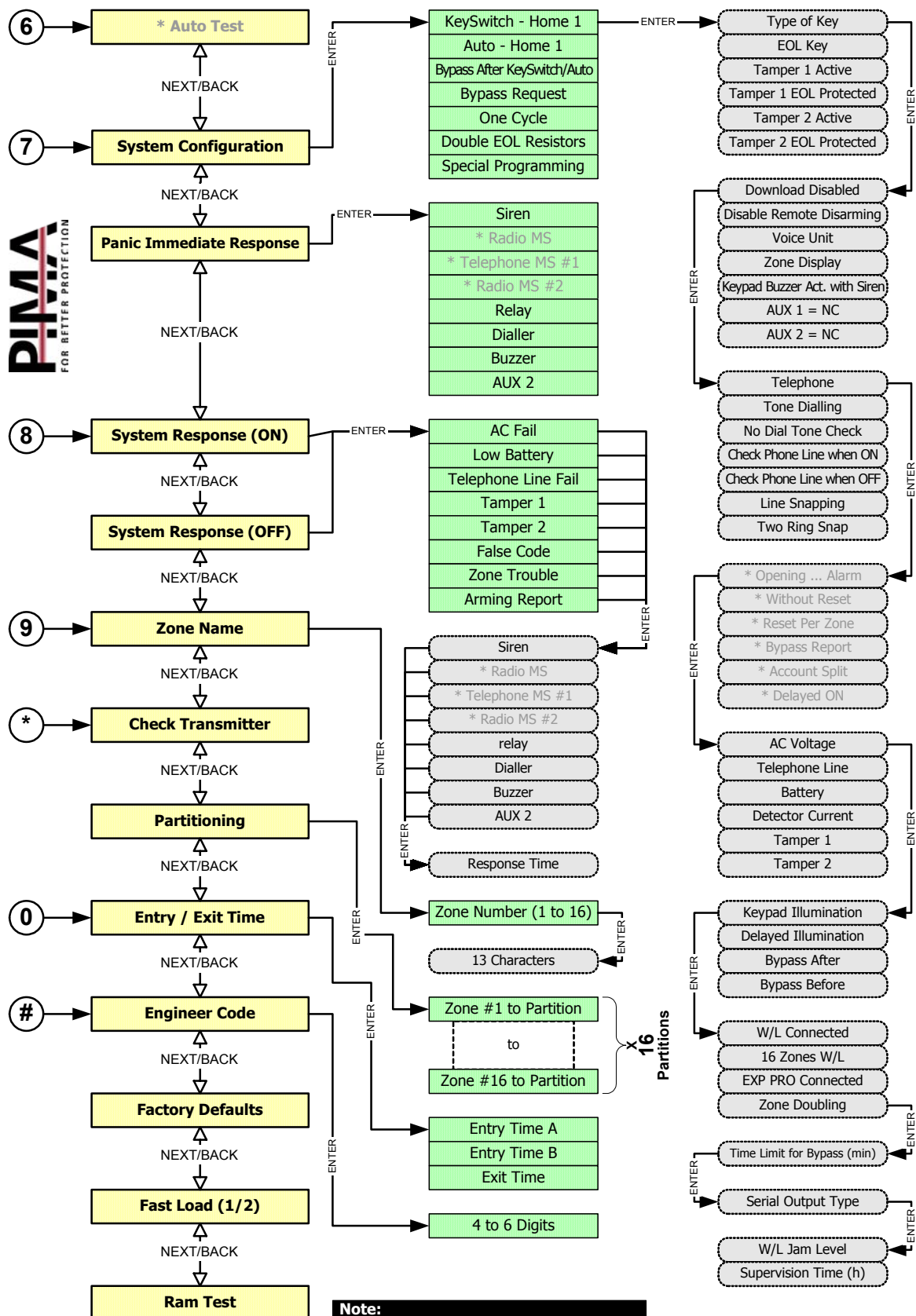
RATE(PPS)	ACK	ERROR CONTROL	I.D. EVENT	A	B	NAME
20	1400	DOUBLE ROUND	3 - 1	47	15	FRANKLIN
			3 - 2	46	15	
			4 - 1	47	143	
			4 - 2	46	143	
20	1400	CHECK SUM	3 - 1	47	79	
			3 - 2	46	79	
			4 - 1	47	207	
			4 - 2	46	207	
20	2300	DOUBLE ROUND	3 - 1	47	31	
			3 - 2	46	31	
			4 - 1	47	159	
			4 - 2	46	159	
20	2300	CHECK SUM	3 - 1	173	95	UNIVERSAL HIGH-SPEED
			3 - 2	172	95	
			4 - 1	173	223	
			4 - 2	172	223	
40	1400	DOUBLE ROUND	3 - 1	135	15	RADIONICS
			3 - 2	134	15	
			4 - 1	135	143	
			4 - 2	134	143	
40	1400	CHECK SUM	3 - 1	135	79	
			3 - 2	134	79	
			4 - 1	135	207	
			4 - 2	134	207	
40	2300	DOUBLE ROUND	3 - 1	135	31	
			3 - 2	134	31	
			4 - 1	135	159	
			4 - 2	134	159	
40	2300	CHECK SUM	3 - 1	135	95	
			3 - 2	134	95	
			4 - 1	135	223	
			4 - 2	134	223	

DTMF Formats

I.D. EVENT	A	B	I.D. EVENT	ERROR CONTROL	ACK	RATE (PPS)
	225	14	3 - 1			
	254	14	3 - 2			
	225	142	4 - 1			
	254	142	4 - 2			
	255	78	3 - 1	CHECK SUM	1400	
	254	78	3 - 2			
	255	206	4 - 1			
	254	206	4 - 2			
	255	30	3 - 1	DOUBLE ROUND	2300	
	254	30	3 - 2			
	255	158	4 - 1			
	254	158	4 - 2			
	255	94	3 - 1	CHECK SUM	2300	
	254	94	3 - 2			
	255	222	4 - 1			
	254	222	4 - 2			
	0	5		PAF	1400	
	0	21			2300	
	0	230	-----	CONTACT ID		

Appendix D: HUNTER-PRO Quick Reference Guide





Note:
All menu items marked with asterisk (*) are associated with an Alarm Receiving Center (ARC).

