HUNTER-PRO SERIES

MODELS 832, 896, 8144

8-144 ZONES

CAPTAIN 8

8-16 ZONES

INTRUDER ALARM SYSTEMS

INSTALLATION GUIDE

FOR BETTER PROTECTION

Table of Contents

Default Codes

Master: 5555

Installer: 1234

1. INTRODUCTION

This guide provides the installation, wiring and programming instructions for PIMA's intruder alarm systems, Hunter-Pro Series 832, 896 & 8144, and Captain-8.

Both control panels are secured against radio-frequency (RF) interferences and electro-magnetic interferences (EMI).

1.1 The Hunter-Pro Series models

	Hunter-Pro		
Feature	**832**	**896**	**8144**
Zones (8 basic)	32	96	144
Users	32	96	144
Partitions	16	16	16
Wireless zones	24	32	32
Key fobs	24	24	24
Memory total of which non-volatile	500 250	500 250	999 512

1.2 Comparison between the Hunter-Pro 896 & Captain 8

Feature	**Captain 8**	**Hunter-Pro**
Zones (using expanders; onboard: 8)	16	96
Zone doubling (of the onboard zones)	√	√
Keypads	8	8
Partitions	4	16
EXP-PRO	-	√
I/O-8N/PS	1	11
I/O-16/PS	-	5
Outputs of which onboard	12 3	58 7
OUT-1000	-	√
I/O-R	1	4
I/O-WN Wireless zones Key fobs	√ 8 24	√ 32 24
Users	30	96
RFiD tags	30	96
VVR devices	1	4
Events Log of which non-volatile	160 128	500 250

1.3 Safety instructions

The Hunter-Pro 832/896/8144 and Captain 8 alarm systems have been registered in accordance with EN60950 and its rules. EN60950 requires us to advise you the following information:

- Hazards of fire and electric shock exist in this alarm system. To reduce the risk of fire or electric shock, do not expose this alarm system to rain or moisture. Pay attention: Telephone cords could be a good conductor for lightings energy.
- 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 230VAC/110VAC, 50/60Hz, protected by anti-electric shock breaker. 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. Pay attention: do not install low voltage wires near any AC power wires. They should be installed separately.
- Connect the AC transformer output to the terminal block on the control panel as marked.
- Connect the AC line cord to line power terminals as marked (GND; N; L).

1.4 Technical Specs

	Hunter-Pro 832/896/8144	**Captain 8**
Input voltage	14VAC/2A	
Battery	12VDC, Up to 7.5 Ah	
Operating temperatures (°C)	Control panel: -10 ~ +50 LCD keypad: 0 ~ +50 LED keypad: -10 ~ +50	
Protection	• Single or double EOL resistor circuits • Continuous battery & telephone line monitoring • DC sirens EOL resistor protection	
Humidity	75% (non-condensed)	
PCB outputs	• Relay: NO/NC 1A • Open collector: 4, 100mA max • Bell/Siren outputs: 2 with separate thermal fuses protection	• Open collector: 2, 100mA max • Bell/Siren outputs: 1 • Serial output: RS-232
Communication Channels	• PSTN: Telephone interface and communicator • GSM: GSM-200 transmitter • SMS: SMS-100 module (via PSTN) • Ethernet: net4pro TCP/IP module • Radio: TRV/TRU-100: long range VHF/UHF transmitters	

1.5 Power consumption

Module	Details
Hunter-Pro PCB	12VDC 80mA rms
Captain 8 PCB	12VDC 50mA rms
LCD keypad	12VDC 20mA rms
LCD keypad illuminating	12VDC 110mA rms
I/O-8N	12VDC 70mA rms
I/O-16N	12VDC 80mA rms
I/O-R	12VDC 130mA rms
EXP-Universal	12VDC 10mA rms
net4pro	12VDC 100mA rms
net4pro-i	12VDC 70mA rms
OUT-1000	12VDC 15mA rms
IO-WN	13VDC 100mA rms
GSM-200	13.8VDC 250mA rms
MIC-200	12VDC 5mA rms
TRU/TRV	13.8VDC 10mA rms
VU-20N/U	12VDC 45mA rms
RXN-400/410	13.8VDC 15-20mA rms
SMS-100	13.8VDC 20mA rms
OUT-1000	12VDC 15mA rms
VVR	12VDC 360mA rms

1.6 Signs in this guide

	Warning
	Note
☞	Press briefly
☟	Press and hold a key until confirmation beep is sounded

2. HUNTER-PRO SERIES

The Hunter-Pro Series has 3 models: 832 for 8-32 zones, 896 for 8-96 zones, and 8144 for 8-144 zones.

The series is easy-to-use, hybrid and uses multi-communication channels. It offers complete panel integration with full-data channels such as: GSM/GPRS, SMS, TCP/IP, PSTN and Long-range radio.

2.1 Main Features

- Hybrid system with expandable 32/96/144 zones, 24/32 of which could be wireless (using the I/O-WN expander);
- Up to 16 partitions;
- Up to 8 monitored keypads;
- Onboard zone doubling (to 16);
- SMS alerts and messages (using the SMS-100 or GSM-200 modules);
- Full remote control over the telephone, including the outputs;
- Supervised wireless detectors;
- Comprehensive zone tests;
- Several displaying options;
- Communication channels: PSTN, Radio, GSM/GPRS and Ethernet;
- Support in split and double reporting;
- Burglary setup prevention measures;
- Continuous battery and telephone line tests;
- Reducing reoccurring reports: a fault occurring more than 5 times an hour will not be reported any more, unless the system is meanwhile armed or disarmed;

2.2 The PCB

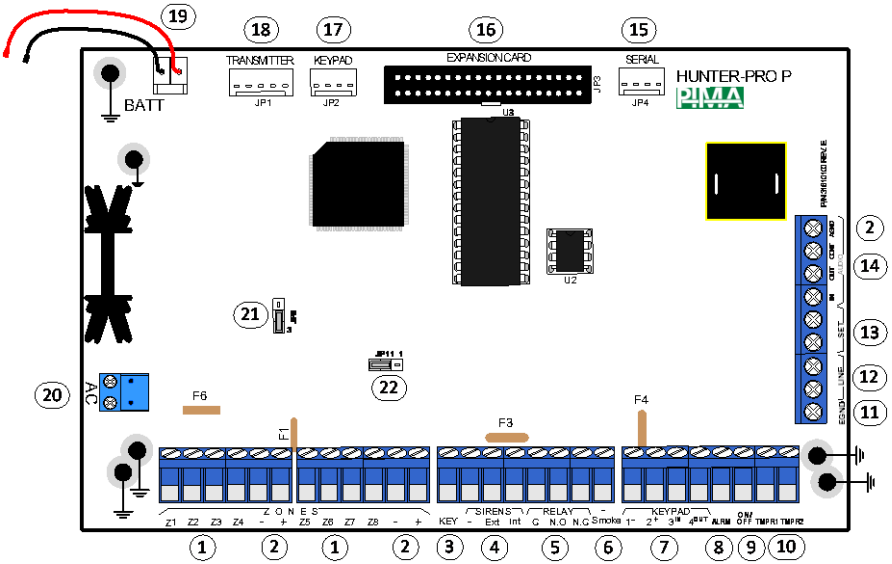


Diagram 1. The Hunter-Pro Series PCB

2.2.1 Terminals, connectors, jumpers & fuses

No.	Terminal	Description/Connected accessories
1	ZONES Z1-Z8	• 8 inputs for dry contact detectors. • All loops can have one or two EOL (End-Of-Line) resistors.
2	(+V)/(-)/AGND	• "+": Detectors' 12VDC power supply • "-"/AGND: Common
3	KEY	Input for Momentary or ON/OFF key switches and remote controls
4	SIRENS Ext., Int.	• Outputs for external and internal Sirens/horns. • The terminals are protected by automatic thermal fuses, F2, F3
5	RELAY	Output for triggering gates, spotlights, etc.
6	Smoke	• Fire, Smoke & Anti-Mask detectors' reset output. • To manually reset: [*]
7	KEYPAD	• Input/output for keypads & expanders (BUS). • The terminals are: ▪ '+'/'-': 13.8 VDC power supply; F4 thermal fuse protects the terminals. ▪ IN/OUT: Data

No.	Terminal	Description/Connected accessories
8	ALRM	• Transistor output. • By default, the output is switched to (-) when an alarm is set off.
9	ON/OFF	• Transistor output • By default, the output is switched to (-) when the system is armed.
10	TMPR1/2	• Tamper switches • TMPR 2 can serve as a zone #9. See section 3.7.1
11	EGND	• Earth ground terminal. Can be used in areas of severe electrical activity (abnormal levels of lightning or electrical discharge). • When using PIMA's integrated transformer, earth ground is not required. Only when using external transformer and lightning conditions are severe, the EGND terminal can be used. • Connect the terminal to earth grounds, such as metal cold water pipe or AC power outlet ground.
12	LINE	Phone line input
13	SET	Answering machine, fax and telephone sets output
14	AUDIO IN, OUT, CONT	Input for the MIC-200 microphone, VU-20U[1] voice module, GSM-200 cellular module & SMS-100 module.
15	SERIAL	Input for the VVR video reporter, net4pro network card, FSK radio transmitters and "Smart Home" systems.
16	Expansion Cards	Connector for the OUT-1000 & EXP-PRO UNIV local expansion cards
17	KEYPAD	Connector for Technician keypad
18	TRANSMITTER	Connector for the GSM-200 cellular module, the TRV/TRU-100 radio transmitters and the SMS-100 module. ▪ The GSM-200 and the SMS-100 modules cannot be installed together! ▪ To connect a radio transmitter together with the GSM-200, use a special cable (P/N 3411058).
19	Backup battery	• Detachable connector for a rechargeable lead-acid battery. • The contacts are: Red: (+); Black (-) • See the next section for jump-starting with a battery. **Inverting the battery wires will damage the PCB!**
20	AC	Detachable connector for AC transformer
21	JP6	Sirens' power source jumper - unregulated or battery
22	JP11	EOL resistor loops jumper. See section 3.7

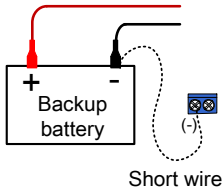
1 Only one of the two devices can be connected at a time.

2.2.1.1 Current limit thermal fuses

- F1: Detectors (750mA);
- F2, F3: Siren #1 and #2 (0.9A);
- F4: Keypads (750mA);
- F7: Battery charger protection (200mA);
- F5: PCB and battery high current Thermo-fuse (5A/250VAC) protection;
- F6: PCB AC short Thermo-fuse (3.15A/250V) protection.

2.3 Battery jump-start

- Starting PCB version 3610100 Rev. E., during AC fault, if the backup Battery's voltage drops under 8V, the control panel disconnects it to prevent full battery discharge. This feature extends the battery life cycle.
- Because of this, the control panel cannot be powered up using only the battery, and must be connected to AC voltage first.
- When AC voltage is not available, do the following:
  a) Connect the control panel to the Battery.
  b) Momentarily connect the Battery's (-) terminal to the control panel's (-) terminal.
  c) The control panel will now power up.



3. CONNECTING AND WIRING

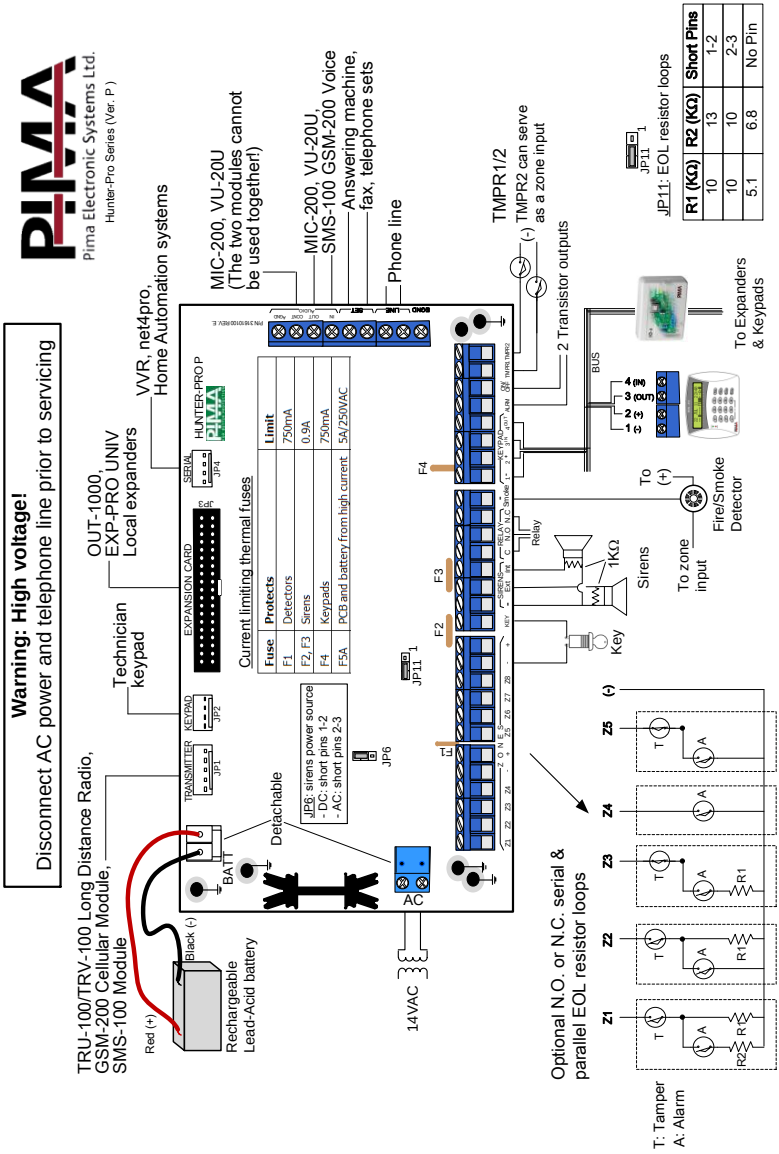


Diagram 2. Hunter-Pro wiring diagram

3.1 Connecting zones

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

IMPORTANT! Disconnect all power supply before installation!

3.1.1 Zone basic wiring connections

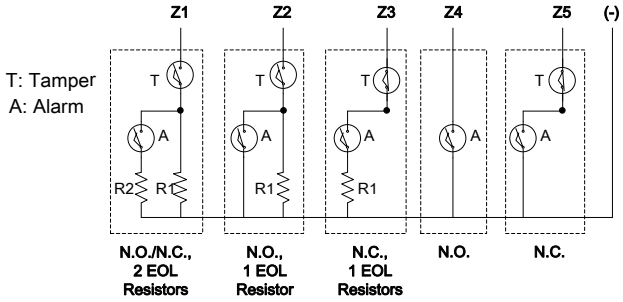


Diagram 3. Zone wiring options

- The zone type, N.O. or N.C., is set in the "Zone Type" screen (see section 7.4.1).

3.1.2 Single EOL resistor loops

- To set the zone as an EOL resistor loop, refer to the "Zone Type" screen, parameter "E" (see section 7.4.1).
- Make sure parameter "2" in the "KEY 5: General Parameters" first screen, is set to "-" (see section 7.8).

3.1.3 2-EOL resistor loop

1. Set the zone as an EOL loop, refer to the "Zone Type" screen, parameter "E" (see section 7.4.1)
2. To set the EOL loops as 2-resistor loops (globally), refer to the "KEY 5: General Parameters" first screen, parameter "2" (see section 7.8).

3.2 Zone expanders wiring

- The following is a brief scan of the zone and outputs expansion options. A detailed installation description is found further on.

Expander	Description
EXP-PRO UNIV	Local 8 zone card; The zones are always given the numbers 9-16. See more on section 3.2.3. It is connected to the panel's "Expansion Card" connector.
I/O-8N	Remote 8 zone expander with an onboard relay; It is connected to the panel over the BUS wires.

Expander	Description
I/O-16	Remote 16 zone expander with an onboard relay; It is connected to the panel over the BUS wires.
I/O-WN	24 (in Hunter-Pro 832)/32 (in Hunter-Pro 896/8144) zone wireless expander; It also supports 24 key fobs.
I/O-R	Remote 8 relay expander; see more on page 16.

3.2.1 Zone numbering

- Hardwire zones come before wireless zones.
- Local expanders come before any other expander.
- The expanders are numbered in ascending order, according to their ID number.

3.2.2 Total number of expanders in Hunter-Pro Series

	832	896	8144
I/O-8N	3 (2)*	11 (10)*	16 (15)*
I/O-16	1	5	8

* In the parenthesis: the number of expanders if EXP-PRO UNIV is installed.

3.2.3 Setting the expander's ID

- Each card must have a unique ID.
- The ID is set by a dip-switch on its PCB. The next figure demonstrates the ID options.
- Two cards cannot have the same ID.
- To program the number of expansion cards, refer to section 7.3.2.
- The IDs must be set successively. I/O-16 takes 2 consecutive IDs, e.g., if the ID is set to 3, the next available ID is 5 and not 4. See the next example table.

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

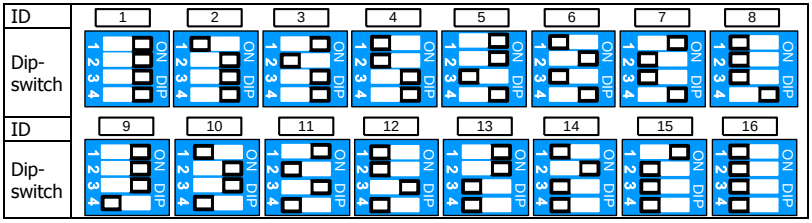


Diagram 4. Expander's Dip-Switch numbering options

3.2.3.1 Examples for expanders and zone numbering

Expander	+ EXP-PRO UNIV	No EXP-PRO UNIV
I/O-8N (8 z.)	Zones #17-24	Zones #9-16
Two I/O-8N (16 z.)	Zones #17-32	Zones #9-24
Two I/O-16 (32 z.)	Zones #17-48	Zones #9-40

3.2.4 I/O-8N: remote 8 zone expander

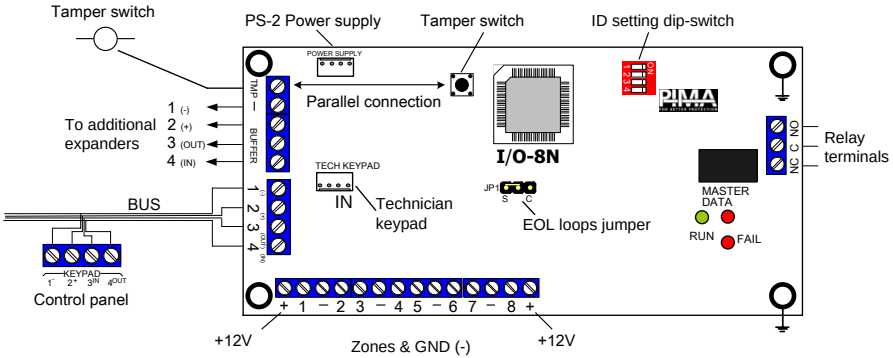


Diagram 5. I/O-8N zone expander

3.2.4.1 I/O-8N & 16 LEDs

LED	Status	Description
RUN (GREEN)	ON	Power ON
	OFF	Power fault
MASTER DATA (RED)	Flashes	Normal mode (DATA transfer)
	ON	Comm. disconnection
	OFF	Comm. short
FAIL (RED)	Flashes once every second	DATA error
	Flashes 2 times every second	Comm. fault (check the keypad's display)
	Flashes 3 times every second	The module is not configured in the control panel

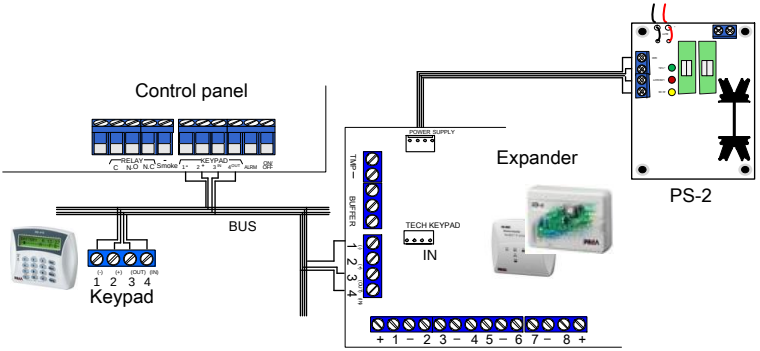


Diagram 6. Wiring diagram of a zone expander with the PS-2 power supply

3.2.5 I/O-16: remote 16 zone expander

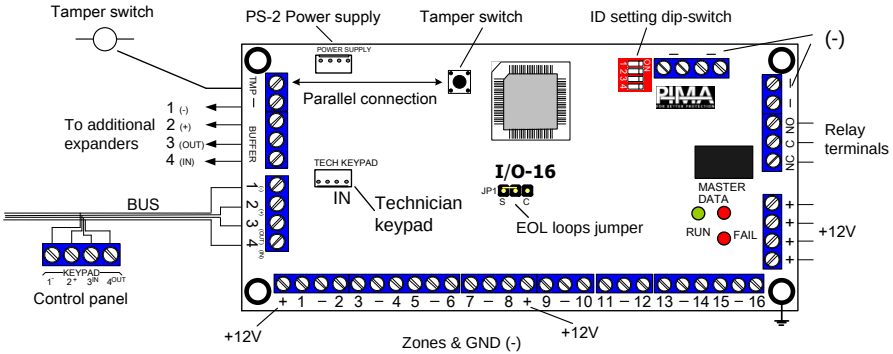


Diagram 7. I/O-16 zone expander

3.2.6 I/O-R: remote 8 relay expander

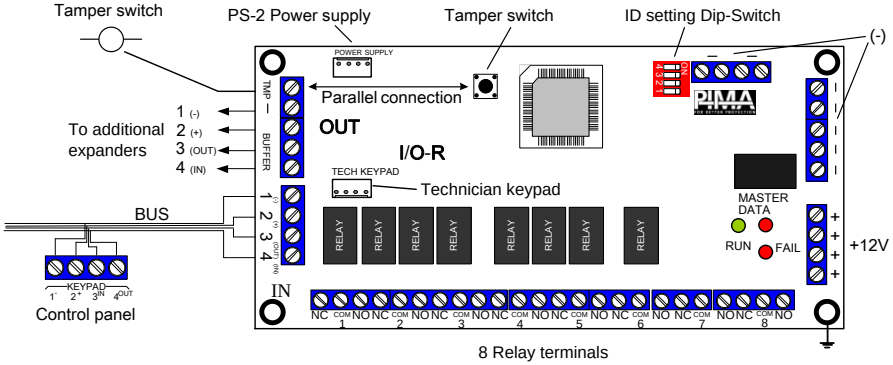


Diagram 8. I/O-R relay expander

3.2.7 Connecting expanders & keypads over the BUS

- To connect expanders & keypads over the BUS:
  - The expanders are connected as described in the next figure: the input wires are connected to the BUS terminals and the output to the BUFFER ones.
  - The BUS length should not exceed 500m. Since the expanders connect over a buffer, this does not affect the length of each serial loop.

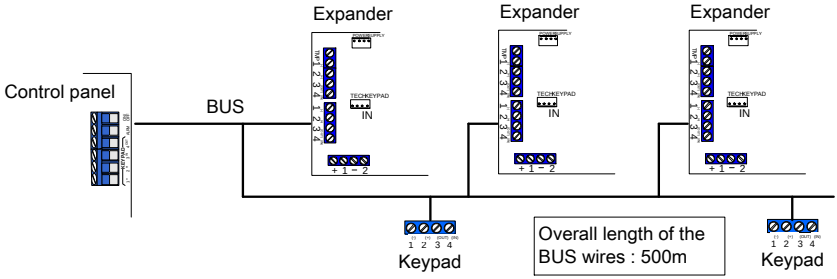


Diagram 9. Expanders & keypads connected over the BUS

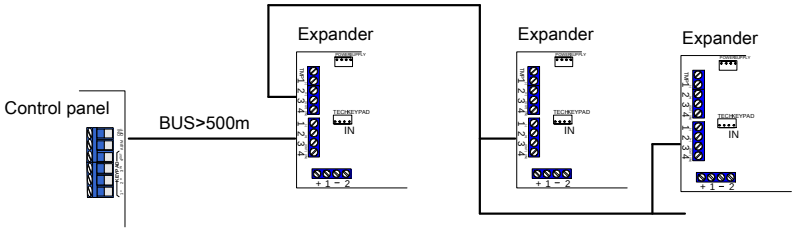


Diagram 10. Connections with a BUS longer than 500m

3.2.8 I/O-WN

- The I/O-WN is an integrated wireless module for adding wireless zones. See section 3.2.8 for more details.
- It connects to the panel over the BUS wires.

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

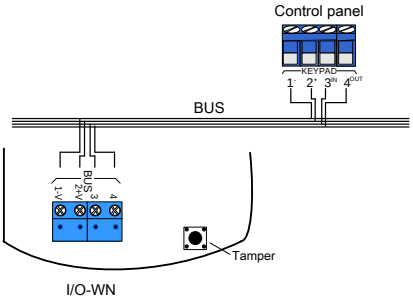


Diagram 11. I/O-WN wiring

For further information on the I/O-WN, refer to its installation guide (P/N 4410208)

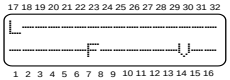
3.2.8.1 I/O-WN LEDs

LED	Indication	Status	
RUN (Green)	Operation and voltage supply	**On**	OK
		Off	Voltage supply fault
		Flashes	card voltage fault
DATA (Red)	Communication	**On**	Communication fault
		Off	Communication wires short
		Flashes	OK
RX (Red)	Reception	**Off**	No reception
		Flashes	OK
VALID (Green)	Registering a wireless component	**Off**	Signal has not been acquired
		Flashes	Signal has been acquired
FAIL (Red)	The control panel	**Flashing once**	Valid frame is not received from the panel
		2 Long Flashes	ACK is not received from the panel
		3 Long Flashes	The expander is not programmed
		4 Long Flashes	General/Fatal error. Occurs when no transmission is received for one minute

3.2.8.2 Wireless Faults Display

In PIMA "Fast" displaying mode

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



Zone	Letter	Fault
7	F	Wireless zone; detector's tamper is open
14	V	Supervision
17	L	Low battery

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

3.2.8.3 In "Scan Open Zones" displaying mode

- The following are example for the wireless receiver faults:

Display	Fault
2 JUL 07 13:10 Wireless Unit	Communication fault with the I/O-WN receiver
1 JUL 07 03:00 W/L Unit Tamper	I/O-WN's tamper is opened
5 JUN 07 14:20 FL: Zone 14	Tamper open, zone #14
5 JUN 07 14:25 LB: Zone 19	Low Battery, zone #19
7 OCT 07 16:32 SU: Zone 35	No supervision signal, zone #35
W/L Recvr. fail ENTER/NEXT/END	The "W/L Receiver Failure" appears when trying to program the I/O-WN although the receiver is not programmed in "System Installation" (see section).

3.2.9 Zone doubling

- The 8 onboard zone terminals can be used to connect 8 additional zones, to include 16 zones in total, without using any expansion card.
- Zone doubling can only be used if no expander is in connected.
- For the system to distinguish between every 2 zones, 2 different resistors (10k and 5.1k) must be installed for each couple.
- Z1 terminal will be used for zones #1 and #9 inputs, Z2 terminal for zones #2 and #10, Z3 for zones #3 and #11, etc.

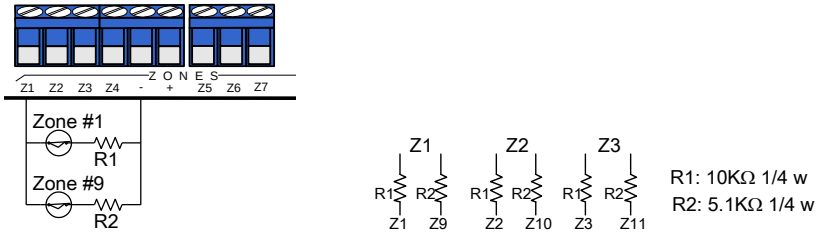


Diagram 12. Zone doubling wiring scheme

3.2.10 Local 8 zone expander EXP-PRO UNIV

1. Install the card inside the system case, above the PCB, using the 2 supplied screws.
2. Connect the supplied flat cable between the EXP-PRO UNIV and PCB's "Expansion Card" socket (see the following figure).
3. To configure the EXP-PRO UNIV, refer to section 7.3.2.

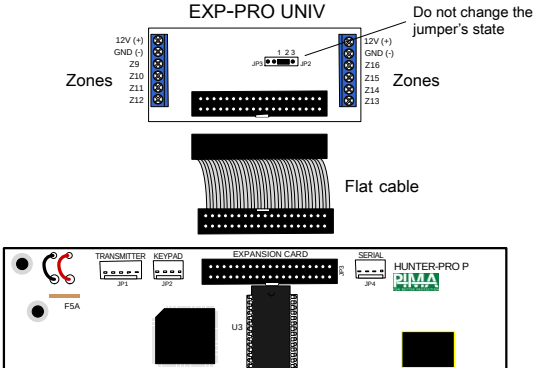


Diagram 13. Connecting the EXP-PRO UNIV

3.3 KEY input and Key zones

- The KEY terminal is an input for key switches and key fobs.
- Connect the switch/key fob between the KEY terminal and GND (-).
- Starting system version 6.23, three new zone types were added - "KeySw Arm" for full arming, "KeySw Home 1" for arming to "Home 1" mode and "KeySw Home 2" for arming to "Home 2" mode. These zone types preserve most of the KEY input functions. See details ahead.
- As any zone type, the Key types can be allocated per partition, i.e., arm per partition.
- The KEY terminal and the KeySw zones can be triggered by momentary or two state (toggle) keys. The default programming is momentary. See section 7.8.

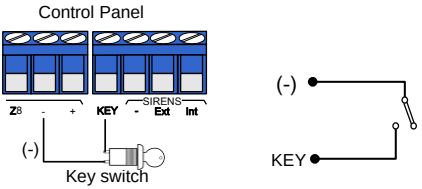


Diagram 14. Key switch wiring

3.3.1 KeySw zone types features

- The Key Switch zone types can only be used for arming and only with a key switch/fob;
- The Key Switch zone types have no other zone response but arming;
- Key Switch zones can be hardwired (include. zone doubling) or wireless;
- Triggering Key Switch zones cannot be indicated by the keypad chime;
- Tested (soaked) Key zones do report to the Central Monitoring Station when triggered;
- Subject to the user settings, Key zones can be bypassed by users;
- Key zones can be set as N.O. or N.C. and have EOL resistor loops;

- Only monitored keypads display the exit delay countdown, when arming via a Key Switch zone;
- SMS messages reporting on arming via a Key Switch zone, do not contain the zone name;
- The log displays only the first 8 characters of Key Switch zones' names;
- Key Switch zones cannot trigger any output type;
- "Automatic zone bypassing" is not affected when arming via Key Switch zones;
- Zone sensitivity or responses do not affect Key Switch zones;

3.4 Sirens wiring

- Use either DC or AC sirens. The two types cannot be connected simultaneously!
- Activating the external siren always activates the internal one.

3.4.1 AC Siren

- This is usually a horn or 8Ω speaker, driven by the control panel's built in oscillator.
- AC sirens only can produce two different tones. See section 7.4.2.
- Connect the siren between the Ext. or Int. terminals and GND (-).
- In "General Parameters", set "D - DC Siren" to "-" (see section 7.8.1). This will set the siren as AC.

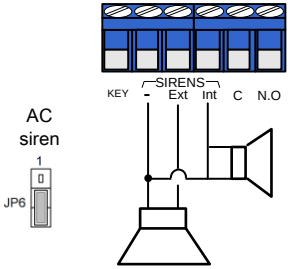


Diagram 15. AC siren wiring

3.4.2 DC Siren

- This can be a bell or any other high current device with internal oscillator. The control panel supplies 1.1A for activation only.
- Connect the siren between the Ext. or Int. terminals and GND (-).
- In "General Parameters", make sure "D - DC Siren" is set to "+" (see section 7.8.1). This will set the siren as DC.
- To monitor DC sirens and eliminate noises, use 1kΩ EOL transistors. For programming, see section 7.8. +

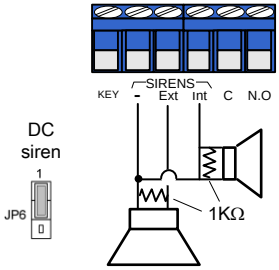


Diagram 16. DC siren wiring

- The following table that describes the sirens installation options:

Opt.	Siren Type	JP6 pins	Parameter 'D' in "General Parameters", menu (#5)
1	DC	1-2	Set to "+"
2	AC	2-3	Set to "-"

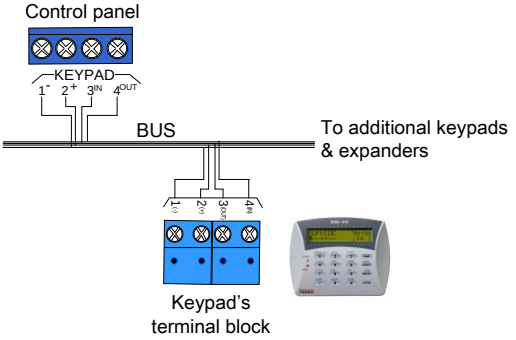
3.5 RELAY

- Relays can be activated when the alarm is set off or a fault occurs, or when a relay code is entered (refer to the Hunter-Pro Series User manual) via one of the keypads or by telephone.
- To program the relay trip time, refer to section 7.7.2.

3.6 KEYPAD wiring

- Together with the zone expanders, keypads are wired through the BUS wire braid. The BUS (+) wire must be separated from all other (+) wires, e.g., the zones' (+)!
- Up to 8 keypads can be connected to the Hunter-Pro system ,supervised or not.

3.6.1 RXN-400 & RXN-410 LCD Keypads (Incl. RFID)



Keypad	Control Panel
1 -	1 -
2 +	2 +
3 OUT	3 IN
4 IN	4 OUT

Diagram 17. LCD keypads wiring

3.6.2 Setting the keypad's ID

1) Open the keypad's back cover;
2) Short JP1's pins 1 & 2; the message onscreen should say: "Enter new ID: X".
3) Enter the new ID - 1 to 8;
4) Short JP1's pins 2 & 3;
5) Repeat the process for the other keypads. Note, that each supervised keypad must have a unique ID and that the IDs must be set in ascending order.
6) If keypad supervision is not required, the keypads' IDs should be set to zero.

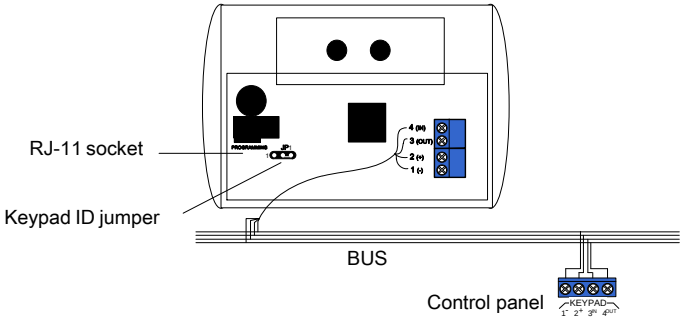


Diagram 18. LCD keypad PCB

3.7 TMPR1/TMPR2 wiring

- Connect tamper switches between the TMPR1/TMPR2 terminals and ground (-).
- TMPR1 input is connected to the control panel case's tamper switch.
- TMPR2 input can serve as additional zone (#9).
- To program the TMPR inputs with EOL loops, refer to section 7.8.1.

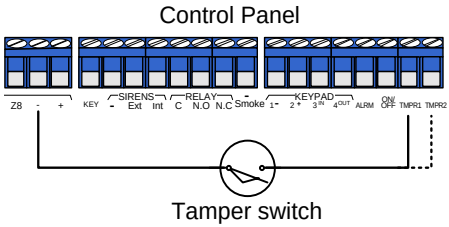


Diagram 19. Tamper switches wiring

3.7.1 TMPR2 input as additional zone input

- This feature can only be used if no expander is connected to the panel.
- This feature is set in "General Parameters" (see "First Screen", on page 67).

3.8 Telephone LINE/SET wiring

- Connect the telephone line directly to the LINE terminals. This will give the control panel priority when initiating a phone call.
- Connect telephone sets, answering machine, etc., to the SET terminals. When the control panel initiates a phone call (or receives one), these terminals are disconnected.

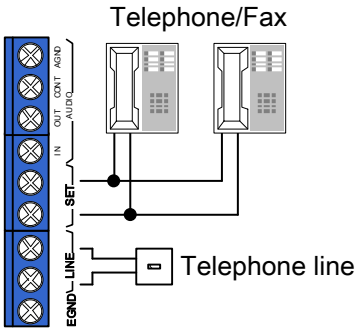


Diagram 20. Telephone wiring

3.9 AUDIO wiring

3.9.1 MIC-200 microphone

- Connect the MIC-200 to the AUDIO terminals as follows. See the next figure.

MIC-200	Control panel
CON	AUDIO CONT
OUT	AUDIO IN
(-)/(+)	(-)/(+)

- The AUDIO output polarity should be set to '+' (see section 7.10.4).
- MIC-200 is supplied without wires.

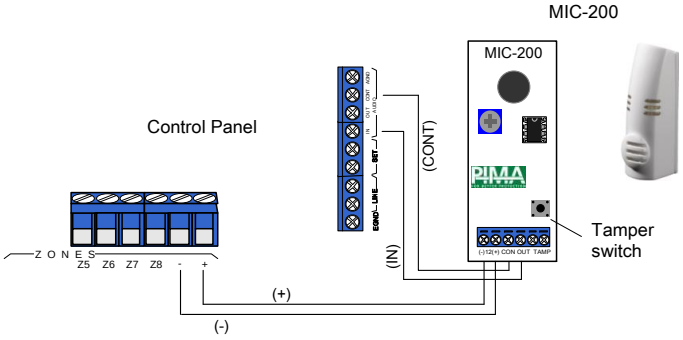


Diagram 21. MIC-200 wiring

3.9.2 VU-20U Voice Message module

3.9.2.1 Single message programming

- To use the VU-20U for a single message:
  3. Connect the Green wire (M1) to any output (including in zone expanders) that is set to be triggered by the 'Audio device' output type; any zone that is set to trigger the 'Audio device' output type, when violated, will trigger the VU-20U.
  4. Connect the +/- wires to the zones' AUX power source on the control panel.
  5. Connect the Blue wire to the AUDIO IN terminal.

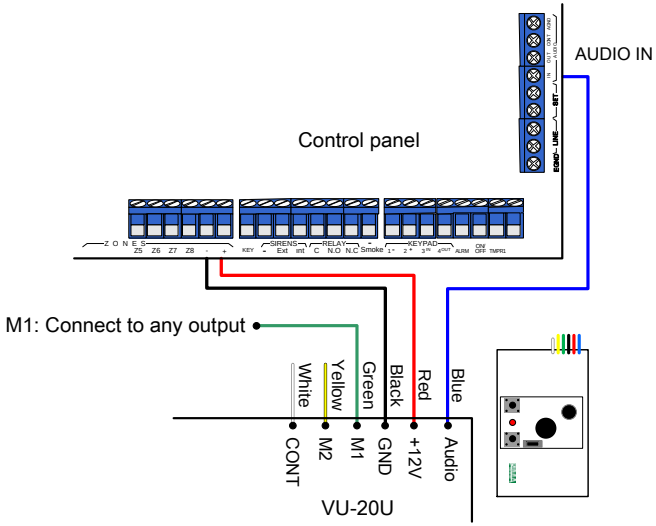
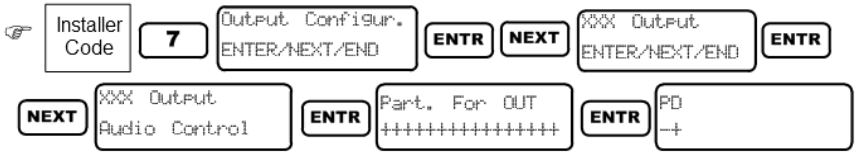


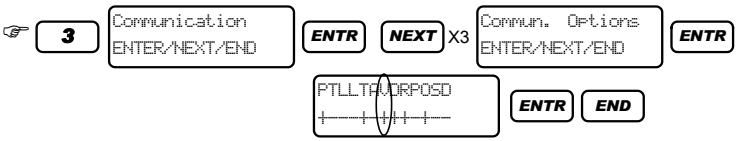
Diagram 22. VU-20U single message wiring

- To set a single message:
  1. First, choose the triggering output and set its polarity to negative.



  2. "Audio Control" should be the default output type for the VU-20U. You can change it by pressing [NEXT] and select another one.
  3. In "Part. For Out", set to "+" the partition/s should trigger the VU-20U. All other partitions must be set to "-".
  4. The polarity of the output should be set to '-' (under 'P').
  5. Set the zone type/s to trigger the audio device when violated.

6. In the responses menu, set "M" to "+". Repeat that step in any other required zone type.
7. Set the panel to sound the voice massage, when it calls to report the end user: in the "Communication Options" menu, set "V" to "+".



3.9.2.2 Two messages programming

- To use the VU-20U for two message, the panel must be set for two partitions: each partition will trigger a different message. See section 7.4.5 for instructions.
  1. Connect the Green wire to the AUDIO CONT terminal or to one of the outputs (including outputs in the zone expanders).
  2. Connect the Yellow wire to another output.
  3. Connect the +/- wires to the zones power source on the control panel.
  4. Connect the Blue wire to the AUDIO IN terminal.

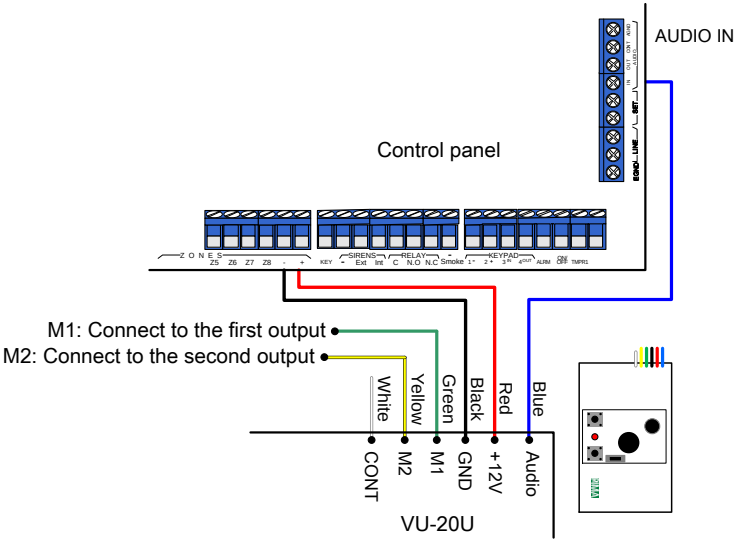


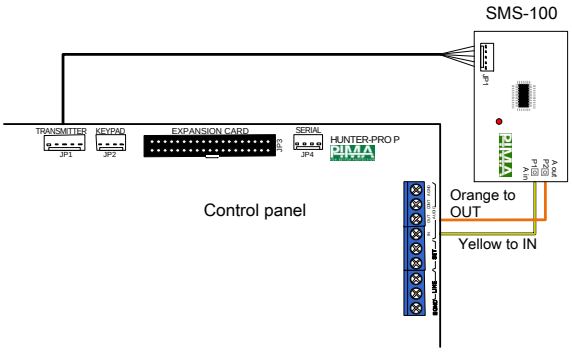
Diagram 23. VU-20U two message wiring

- To set the messages:
  1. Select the triggering outputs and set their polarity to negative. See the first step in the previous section.
  2. In "Part. For Out", for each output set which partition/s should trigger the VU-20U. You must set different partitions for each output.
  3. Proceed with the rest of the programming steps in section 3.9.2.1, for each output.

When connecting GSM-200 and VU-20N/U together, a 5.1kΩ resistor must be connected between the AUDIO IN terminal and GND (-)

3.9.3 SMS-100

- To connect the SMS-100 module to the control panel, see the next image and table.



SMS-100	Control Panel
P1-Yellow	AUDIO IN
P2-Orange	AUDIO OUT

Diagram 24. SMS-100 wiring diagram

3.9.4 GSM-200 cellular module

- The GSM-200 cellular module can serve both as a main or backup channel.
- The module can be used for reporting the end user.
- It connects integrally at the control panel case.
- See the warning in the VU-20U section (3.9.2.2).

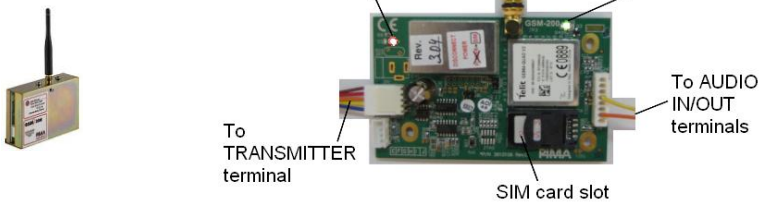
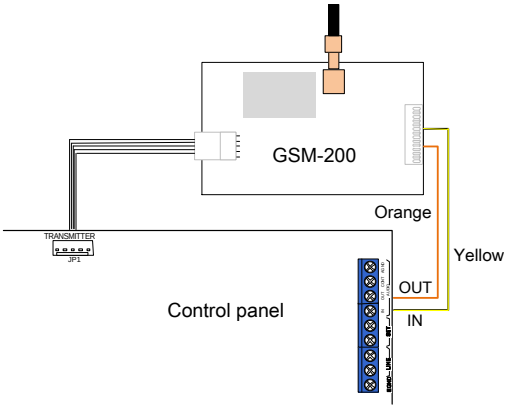


Diagram 25. The GSM-200 PCB



GSM-200	AUDIO
Yellow	IN
Orange	OUT

Diagram 26. GSM-200 wiring diagram

3.9.4.1 Prevent RF interferences

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

3.9.5 VVR: Video Verification module

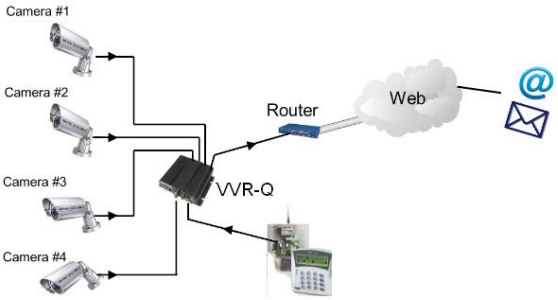


Diagram 27. VVR architecture

- The VVR module enables the end user to receive short video clip, every time an alarm is set off in his/her premises. The clips can be used for verification only.
- The video clips are received via an email message.
- The clips are shoot by cameras that are triggered by the control panel, when an alarm is set off, and then sent by the VVR directly to the end user.
- The VVR is connected to the control panel in serial, via the SERIAL connector, and can also be connected to non-PIMA panels in parallel.

- As many as 4 VVR units with 4 cameras in each, can be connected to the Hunter-Pro Series.
- The VVR and the cameras can be operated based on partition system, in which zones that are violated, trigger the camera that is allocated to the same partition they are allocated to.
- The VVR is programmed via a separate Video menu (see section 7.15). For complete instructions on the VVR, see its installation guide (P/N 4410302).

3.9.6 VKD4net

- The VKD4net is a software/hardware solution that enables the end user to connect and fully control his/her alarm system.
- It is made of PIMA's net4pro-i network card and a syncing component, on the control panel side, and a virtual keypad application that is installed on a remote computer.
- The use of the VKD4net requires either a static (fixed) IP address on both the control panel and the remote PC, or a URL supplied by a DDNS service. In both ways, the routers must be set to enable port forwarding.

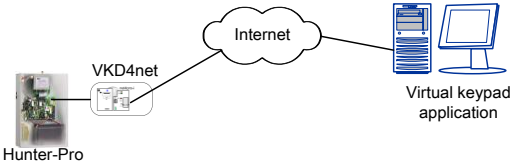


Diagram 28. VKD4net connection diagram

3.9.7 TRV-100/TRU-100 long range radio transmitters

- The TRV/TRU-100 transmitters can use 2 frequencies.

3.9.8 Mounting Guidelines

- Following these guidelines will minimize RF interferences:
  - Do not mount the Panel close to a metal wall or ceiling.
  - Make sure you leave enough space between the metal box and the ceiling for the antenna.
  - Install the antenna at a distance from the Control Panel's wiring.
  - Mount the antenna after you complete all other installations.
  - Make sure the antenna is not folded and is vertical.
  - Close the control panel's metal case when performing transmission tests.

3.9.9 Connecting the transmitter

1. Mount the Hunter-Pro Series metal box on a stable surface or wall.
2. Fasten the transmitter's 4 screws at the base to the system's box. Make sure the screws are tightened, or the transmission range might 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 lable).
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.)

3.9.9.1 To use only the second frequency

- Connect one end of the 2-pin cable to the transmitter's F2 Molex socket
- Connect the other end to the control panel, depending on the desired transmitter operation:
  1. To constantly use the second frequency, connect it to (-);
  2. To dedicate a channel to an event type (e.g. Burglary alarms will be reported via channel #1; all others via channel #2), use different outputs to trigger the transmitter. Program these outputs in the "Outputs" menu (see page 69).

3.9.9.2 Programming the transmitter's channels

- Programming the transmitter's channels is done via the Comax upload/download application. See its user guide for details.

Figure 1. TRV-100 transmitter

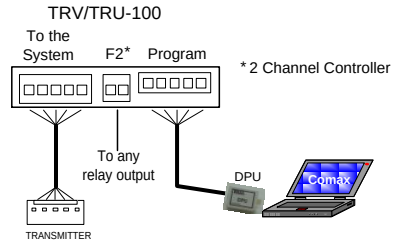


Diagram 29. TRV/TRU-100 Connections

3.10 Backup battery

- The control panel is backed up by a rechargeable 12V Lead-Acid battery.
- The battery is tested continuously. When a test fails, it triggers various responses according to the programming. See section 7.8.3 for details.
- To protect the battery from deep discharging, in case of an AC fault, if the battery voltage reaches 10.5v, the panel reports to the Central Monitoring Station. 30 minutes later a "Keypad Not Connected" error is displayed and the panel becomes idle until power is restored.
- When power is restored, the panel reports it within 15 minutes.
- See section 2.3 for battery startup instructions.

3.11 AC power

- Connect a 16V AC transformer to the AC terminals.
- Using an Ohm meter, check for continuity between the grounding holes on the PCB, and the outlet grounding. The resistance must not exceed 1 Ohm.

1. **A current limiting device, such as circuit breaker or fuse, must be connected in serial with the power cord.**
2. **The PCB must be grounded to earth.**
3. **The panel cannot be activated without AC power. See section 2.3.**

4. CAPTAIN 8

- Captain 8 is a new 8-16 zone improved model of PIMA Captain intruder alarm system.
- The new model has a User and Installer interfaces the same as in the Hunter-Pro Series.
- The Captain 8 PCB includes Serial socket.

4.1 Characters & Features

1. Eight onboard zones that can be expanded to 16 by either:
   a. Using zone doubling (see section 3.2.9);
   b. Using the I/O-WN wireless zone expander;
   c. Using the I/O-8N zone expander;
2. Users: 30;
3. Partitions: 4;
4. Supports serial RS-232 communication;
5. Supports supervising 8 addressable keypads;
6. Supports the I/O-WN wireless expander;
7. Supports the SMS-100;
8. Supports the net4pro;
9. Supports RFID tags (via a special keypad);
10. Supports the I/O-R relay expander;
11. Includes PSTN DC monitoring;

4.2 The PCB

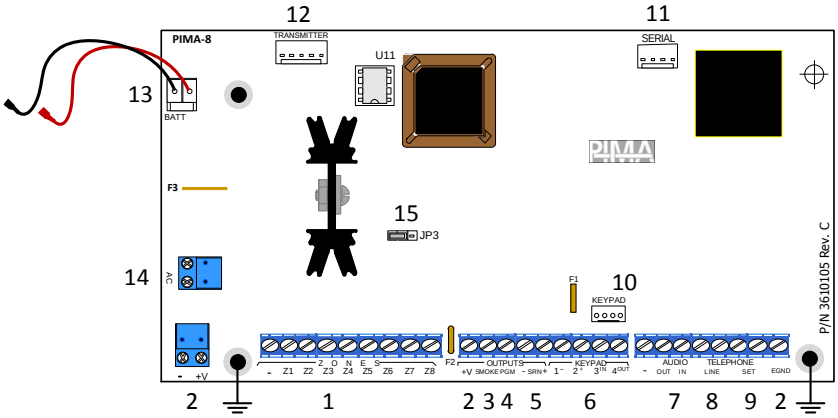


Diagram 30. Captain 8 PCB

4.2.1 Terminals and connectors

No.	Terminal	Description/Connected accessories
1	Z1-Z8	• 8 input terminals for dry contact detectors. • The zone loops can have 1 or 2 EOL (End-Of-Line) resistors. • See Section 7.8.1 for setting the number of the EOLs.
2	(+V)/(-)	Zones power supply
3	SMOKE	Fire, smoke & anti-mask detectors
4	PGM	• An auxiliary output that can set to either be disconnected or switched to GND, when an alarm is set off. • The MIC-200 microphone & the VU-20N/U voice module can be connected to this output.
5	SRN	• Connect up to 2 sirens (with or without an internal driver) in parallel. • F1 thermal fuse protects this output.
6	KEYPAD	Power and Data terminals for connecting keypads & expanders (BUS). The terminals are: • '+'/'-': 13.8 VDC power supply; thermal fuse F4 protects the terminals; • IN/OUT: Data.
7	AUDIO IN, OUT, (-)	MIC-200 microphone, VU-20U voice module ▪ Only one of the two modules can be connected at a time.
8	TELEPHONE LINE	Telephone line
9	TELEPHONE SET	Answering machine, fax and telephone sets
10	KEYPAD	Technician keypad
11	SERIAL	RS-232 terminal; is used for connecting the VVR, net4pro
12	TRANSMITTER	GSM-200 cellular, TRV/TRU-100 radio transmitters and SMS-100 modules. ▪ The GSM-200 and the SMS-100 cannot be installed together! ▪ To connect a radio transmitter together with the GSM-200, use a special cable (P/N 3411058).
13	Backup battery cables	Rechargeable lead-acid battery. The contacts are: Red: Positive; Black: Negative. See section 2.3 for battery jump-start. **Inverting the battery wires will damage the PCB!**
14	AC	Transformer input
15	JP3 jumper	Is set according to the EOL circuits (see page 23)

4.2.1.1 Fuses

Fuse	Protects the…
F1	Siren power supply (0.9A)
F2	Keypads and detectors power supply (750mA)
F3	Battery

4.3 Connecting and Wiring

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

IMPORTANT! Disconnect all power supply before installation!

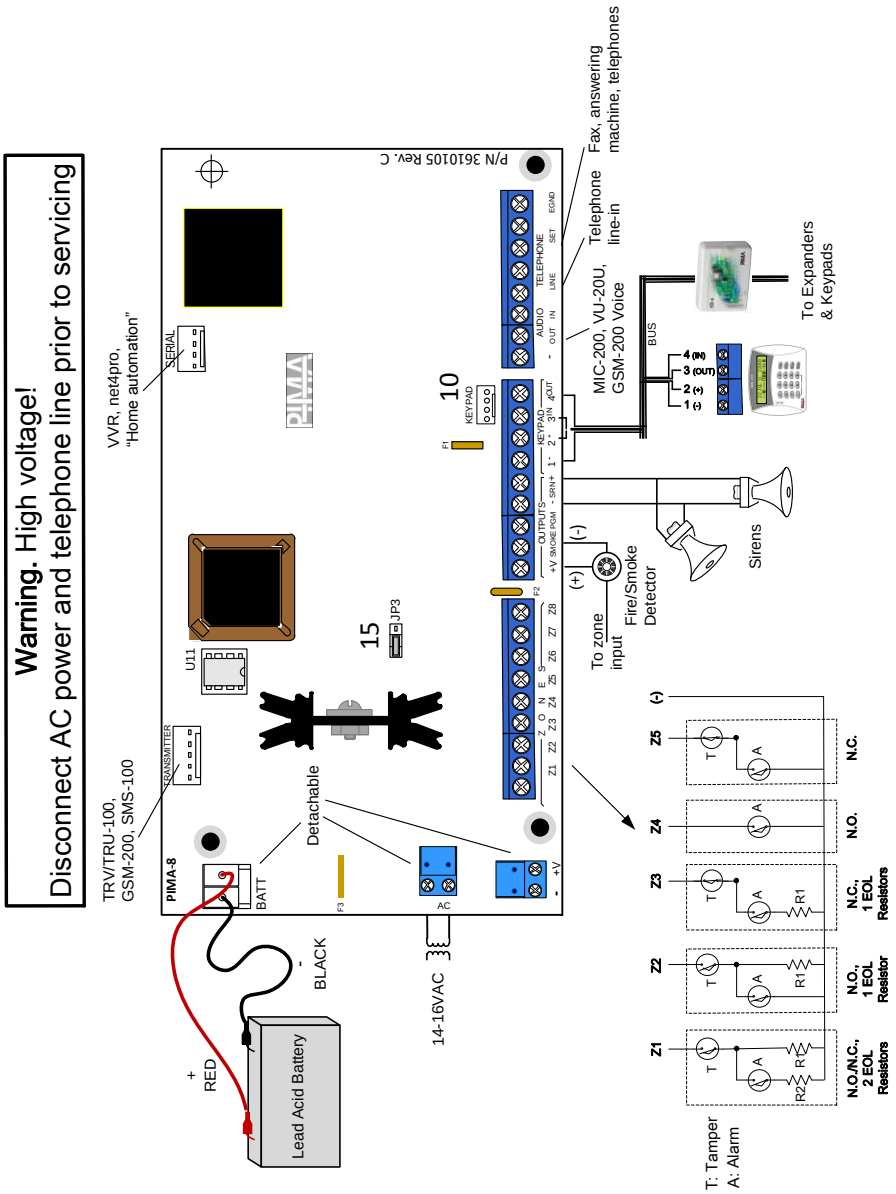


Diagram 31. Captain 8 wiring diagram

4.3.1 Zone Wiring

- See section 3.

4.3.2 Key zones and key fobs

- See section 3.3 for full details.

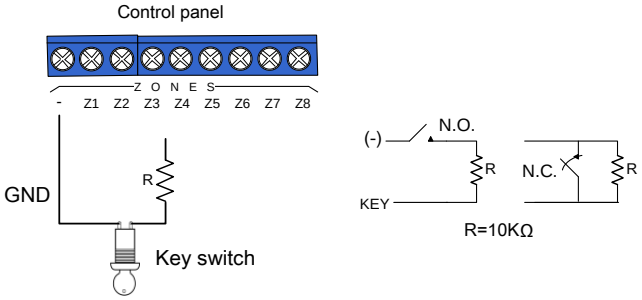


Diagram 32. Key wiring

4.3.3 JP3 jumper

- The JP3 jumper is set according to the EOL resistor loops.

	Values	Short pins
EOL resistors	10k, 13k	1-2
	10k, 10k	2-3
	5.1k, 6.8k	No jumper

4.3.4 Siren wiring

4.3.4.1 Speaker/Horn

- Connect the siren to the SRN (-) and (+) terminals, as seen in the next diagram.

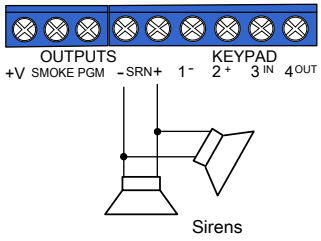


Diagram 33. Horn (speaker siren)

4.3.5 Keypad wiring

- See section 3.6.

4.3.6 Telephone LINE SET wiring

- Connect the pair of wires coming from the telephone line to the LINE connection terminals.

- Connect a telephone set/Fax/Answering machine to the SET terminals

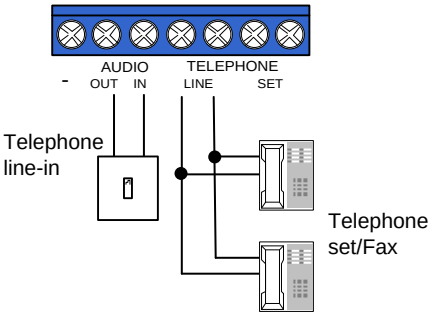


Diagram 34. Telephone Wiring

4.3.7 MIC-200 Microphone

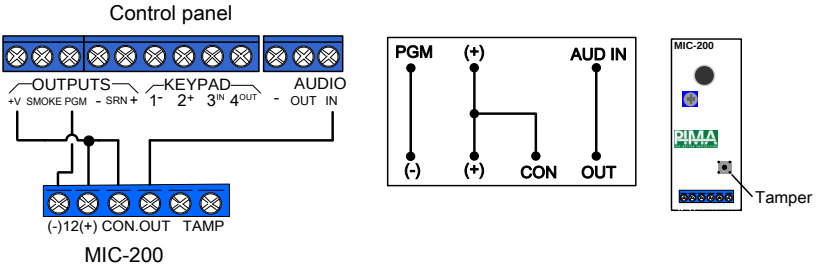


Diagram 35. MIC-200 Wiring

1. Connect the MIC-200 according to the diagram: CON and (+) to the control panel's (+); GND (-) to the PGM or SMOKE terminals; OUT to AUD IN.
2. In the "Zone Responses" menu (see page 47), set (+) under 'M- Activate Audio', in every zone type (burglary, panic, etc.) that should trigger the microphone.
3. Set the polarity of the selected output/s to "-".
4. Set "Audio Device" in "Communication Options" to "+".
5. The PGM/SMOKE outputs should be linked to the "Audio Control" output type (see page 69 and onwards).

4.3.8 VU-20N/U Voice Message module

4.3.8.1 Single message programming

- To trigger the VU-20N/U, the zone must be linked to the 'Audio device' output type, which will trigger the PGM or SMOKE outputs.

1. Navigate to the PGM or SMOKE outputs (menu #7) and link the 'Audio control' output type to it.
2. ☞ [ENTR] twice to Polarity and mark '-' under 'P'.
3. Navigate to 'Zone responses' (menu #2), pick the Zone Type that will trigger the VU-20N/U 'Message 1' and mark '+' under 'M - Activate Audio'.

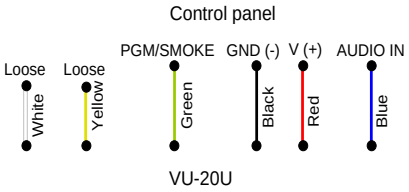


Diagram 36. Single message

4. Make sure the output triggering time of 'Audio device' is the default 60 seconds (menu #4).
5. Navigate to 'Communication options' (menu #3) and mark '+' under 'V - Voice unit'.

4.3.8.2 Programming the VU-20N/U for two messages

- To use the two messages option in the VU-20N/U, you need to set two zones from 2 partitions to trigger the audio device, and to connect it to the Smoke output and the PGM output.

1. Navigate to 'Zone responses' (menu #2), select the zone types that should trigger the VU-20N/U and set 'M - Activate Audio' to '+' in each.
2. Set PGM and Smoke output types to "Audio Control".
3. Check the polarities of these two outputs are set to "-".
4. Make sure the output triggering time of 'Audio device' is the default 60 seconds.
5. Make sure to use zones on different partitions to trigger the VU-20N/U.

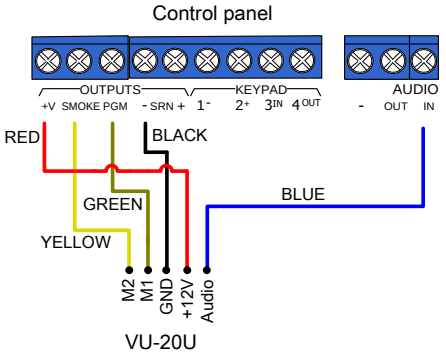


Diagram 37. VU-20N/U connection diagrams for two messages

4.3.9 GSM-200 Cellular transmitter

1. Connect the YELLOW wire to AUDIO IN.
2. Connect the ORANGE wire to AUDIO OUT.

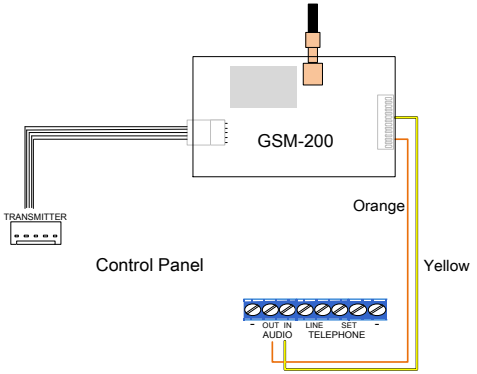


Diagram 38. GSM-200 connection diagram

4.3.9.1 Connecting VU-20N/U with GSM-200 Cellular Transmitter

- To connect VU-20N/U together with GSM-200, connect a 5.1 kΩ resistor to the AUDIO IN terminal.

4.3.10 Backup Battery

- See section 3.10.

4.3.11 AC Power

- See section 3.11.

5. TEXT & PROGRAMMING KEYS

- Each keypad key is used for entering letters, digits and other characters.

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

6. PROGRAMMING METHODS

- There are 3 ways to program the system:
  1. Locally, with the PIMA Fast Programmer PRG-896.
  2. Locally or remotely (via telephone or the GSM-200 data channel), using COMAX.
  3. Via an LCD keypad.

6.1 The PRG-896 programmer

- The PRG-896 is a memory card used for saving parameter sets for fast download and quick installation.
- The sets are uploaded with the Comax application.
- The PRG-896 can save up to 4/7 different presets.
- It connects to LCD keypads only.
- For download instructions, see section 7.11.3.

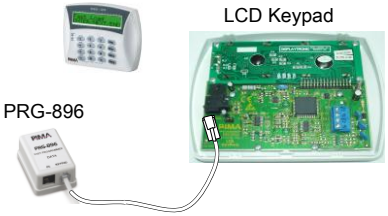


Diagram 39. Connecting PRG-896 to the LCD Keypad

6.2 Programming locally using the COMAX

- Connect the PC/laptop with the COMAX upload/download application to an LCD keypad or expander, using LCL-11A adaptor.
- Use a Serial-to-USB adaptor to connect to USB sockets.

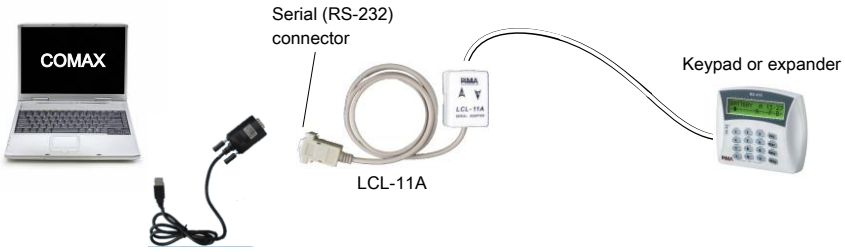


Diagram 40. Connecting COMAX via LCL-11A to a keypad

6.3 Programming remotely using the COMAX

- Both the Hunter-Pro Series and Captain 8 systems can be programmed remotely by any PC/laptop, using the COMAX upload/download application.
- Refer to the COMAX user guide for detailed information.

6.4 Programming via an LCD keypad - the menus

- PIMA alarm systems have two menus: User menu and Installer menu:
  - The User menu is used to program parameters such as time, date and user codes.
  - The Installer menu contains all the technical and the reporting parameters.
- Both menus are accessed using single key presses, a key per menu. The User's menus are those printed above the keypad's keys.

6.4.1 Parameter sets

- In PIMA programming method, many parameters are displayed as single screen sets (e.g., "MS1 Options"), where each letter or digit stands for a parameter.
- In these sets, (+) signifies the parameter is enabled; (-) signifies the parameter is disabled
- To change the parameter, move the cursor (▒) to the right or left, using the [NEXT]/[BACK] keys and ☞ [#].

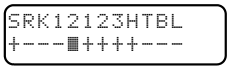
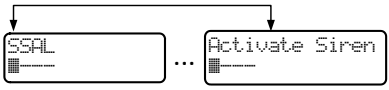


Diagram 41. A parameter set screen

- When cursor (▒) moves to the next letter/digit, a short description of the parameter is displayed for 3 seconds. To re-display it, ☞ [BACK/NEXT] again.

For example,



6.4.2 The default Codes

- The factory default codes are:

  Master Code: 5555

  Installer Code: 1234

6.5 The User menu

- To access the User menu, enter the Master code or a User code.
- The Master code is a super User code with all access authorizations, including changing the Master code itself.
- The User code is given per user and its access authorizations are set separately per user.

6.5.1 The options when entering a user code

- Entering a user code can lead to one of two: immediate arming/disarming the panel (toggle mode), or just entering the user menu.
- A global parameter in the "General Parameters" menu ("M": User code->User menu. See section 7.8.1) sets these two options to all the users.

- A user can control several partitions using its code.
- A user (code) cannot be used for changing the Master code.

6.6 Express programming menu

- To make programming as easy and quick as possible, the Hunter-Pro Series has a special menu, made of a sequence of screens with all the necessary parameters for a common installation.
- To enter this menu: ☞ [Installer menu] ☞ [*]; ☞ [ENTR] to save.
- Following is a table with the Express Programming screens. ☞[Enter] to save and continue to the next parameter.

Express menu	Details
Hour 00:00	Set the time
Day Month Year 01 01 09	Set the date
Priv.Phn 1<Del=# ..... Priv.Phn 4<Del=#	Set the 4 private dialer numbers. Use the asterisk key for '+', '*', '#', 'P' (one second pause).
Entry 1 2 Exit 20 20 60	Set the entry/exit delay
XMW ---	Set the expanders - local and wireless
Remote Expanders 0	Set the number of remote expanders
Acouont.No 1 Ph:0000 Rd:0000	Set phone and radio account ID #1
MS1 Protocol 0 230 T= 0	Set Central Monitoring Station #1 protocol
MS Phone 1<Del=# .... MS Phone 4<Del=#	Set the 4 phone numbers of the Central Station #1. Use the asterisk key for '+', '*', '#', 'P' (one second pause)
AA12PFDMOLTWIR ++++++++++-++1	Set Central Station #1 reports
Test Time:00:00 Interval:24 Hrs	Set the Central Station #1 test time and interval
Radio Tst. Inter Hrs:24 Min.s:0	Set Central Station #1 radio test interval
Installer Code xxxxxx (4-6)	Enter a new Installer code (4-6 digits). You must enter a code or cancel this step (☞ [END]).

7. PROGRAMMING THE SYSTEM

7.1 The Installer menu

- To enter the Installer menu: ☞ Installer code → Installer Menu / Choose 1,2..
- The Installer menu is made of 12 sub-menus, all accessed and programmed with the LCD keypad keys. The keys and sub-menus are:

Key	Functions	Page
[1]	System Installation	44
[2]	Zones	46
[3]	Communication	49
[4]	Timers	64
[5]	General Parameters	67
[6]	System Responses	68
[7]	Outputs Configurations	69
[8]	Full Programming, Local And Fast Download	74
[9]	Installer Code Change	74
[*]	Fast Programming	75
[0]	Tests	75
[#]	Video	80

7.1.1 Navigation keys

- [NEXT]/[BACK]: Forward/Backward. Press these keys to move between screens/options/ parameters;
- [ENTR]: Enter/select/confirm;
- [END]: End/Exit: return to the previous screen (or the main screen) without saving;
- [#]: Reset/Erase/Set the current parameter to "-" or "+" (toggle mode);

7.2 Enhanced Communication Menu

- The Installer menu has an enhanced communication menu with various parameters. By default, this menu is not visible, because most installations do not require changing the defaults for these parameters.
- To make the enhanced menu visible, either mark "+" under 'P' in the first "General Parameters" screen (see page 67) or enter the Communication menu (key #3) and press [*] for 2 seconds.

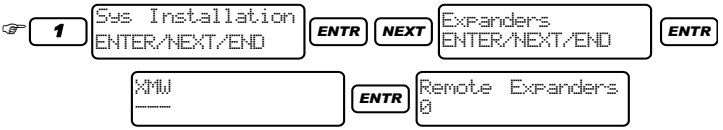
7.3 KEY 1: System Installation

7.3.1 Service Provider and End of Service Date

- Enter the system's service provider's details, such as name and telephone number. Pressing [NEXT] for 2 seconds when the system is disarmed, displays this screen.
- ☞ [ENTR] and enter the date in which the service contract ends. In that date, the following 2 messages appear onscreen[1] intermittently:

. ☞ [END] to cancel the message.

7.3.2 Expanders



7.3.2.1 Local

Par.	Name	Description
X	Local Expander **Not in use in Captain 8**	8 zone EXP-PRO UNIV expander is installed
M	Zone Doubling	Enable Zone Doubling of the 8 onboard zones
W	Wireless Expander	I/O-WN wireless receiver is installed

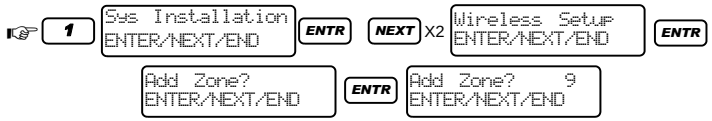
7.3.2.2 Remote Expanders

- Set the number of the remote expanders.
- The number (i.e. zone number) depends on the system model:
  - In Hunter-Pro 832: up to 24 zones (e.g. 3 I/O-8N);
  - In Hunter-Pro 896: up to 88 zones (e.g. 11 I/O-8N);
  - In Hunter-Pro 8144: up to 136 zones (e.g. 16 I/O-8N);
  - In Captain 8: up to 8 zones (single I/O-8N).

Entering a number over the capacity will result in an error.

[1] This message appears only if the "Service Provider" and the "End of Service Date" were both set.

7.3.3 The I/O-WN Wireless Expander



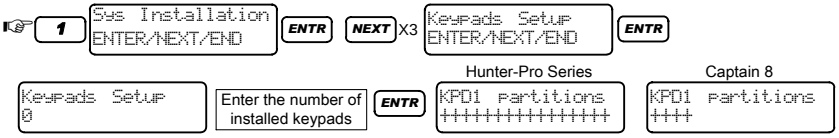
- To set the wireless expander parameters, first set the "Wireless Expander" parameter ("W" in the "Remote Expanders" menu. see the previous section) to "+".
- The first available zone is displayed (zone #9 is the first, if no expander is installed).
- ☞ [ENTR] Add Zone? / Activate Device
- Trigger the wireless device and wait for confirmation message: Device added / Press END.
- The number of wireless zones & accessories varies according to the system. See the table on page 5.

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

7.3.3.1 Deleting a wireless zone

7.3.3.2 Supervision interval for the wireless zones

7.3.4 Keypads

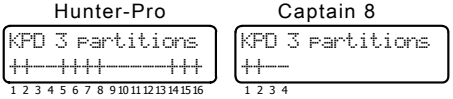


- Set the number of monitored (addressable) keypads (up to 8).
- The system supervises every keypad that carries an ID other than zero (1-8). The IDs should be given consecutively from #1.

If monitoring the keypads is not required, the number of keypads should be left zero.

7.3.5 Keypad Partitions

- When implementing partitions, each keypad can control several partitions, and have no control on others.
- The partitions' number is printed below the screen.
- Set to '+' the partitions that this keypad will control. In this example, keypad #3 controls partitions 1-2 ,5-8, 14-16 in Hunter-Pro, and 1-2 in Captain 8.

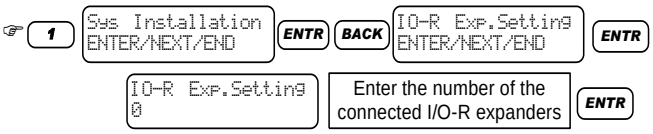


- To set a different keypad, enter a keypad ID or scroll up/down using [NEXT] and [BACK].
- ☞ [ENTR] to save and proceed to the next keypad or [END] to exit.

7.3.6 I/O-R Expander settings

Set the number of I/O-R relay expanders.

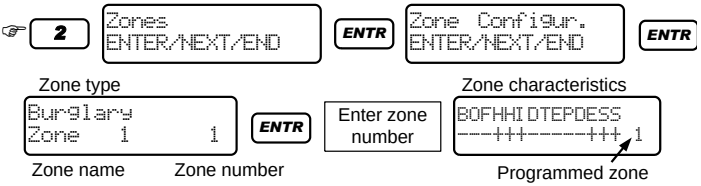
I/O-R cannot be used with Captain 8.



7.4 KEY 2: Zones

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

7.4.1 Zone Type

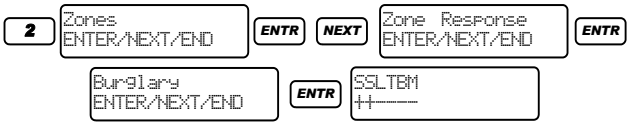


- The zone types are: Burglary, Panic, Fire, Duress/Hold-Up, Medical, Anti-Mask, Special Burglary 1, Special Burglary 2, Silent Panic, Special Fire, KeySw Arm, KeySw Home 1, KeySw Home 2.
- Enter a number (or scroll with [*]) to pick a zone.
- ☞ [NEXT] to choose a different zone type.

- The next table describes the zone characteristics:

Par.	Full Name	When setting to "+"...
B	Bypassed Permanently	The zone is permanently bypassed
0	Normally Open	The zone is set as N.O. zone
F	24 Hour Zone	The zone is armed around the clock, regardless of the system arming state
H	Active in 'Home 1'	The zone is armed in 'Home 1' mode
H	Active in 'Home 2'	The zone is armed in 'Home 2' mode
I	Entry Delay	Exit/Entry delayed zone
D	Zone Follower	This zone will not activate the alarm if opened during the Exit delay, as long as a delayed zone is still open.
T	Second Delay Time	Delayed zones will use the second delay time.
E	EOL Resistors	The zone is protected by EOLR circuit
P	Conditioned Zone	A zone that triggers the alarm only if another conditioned zone is violated too within the "Cond. Zone Time" (see page 66).
D	Double Knock	A zone that triggers the alarm only if 2 pulses occur within a predetermined period of time.
E	User Bypass	Zone bypassing by the users is enabled. A bypassed zone is reinstated automatically when the panel is disarmed.
S	Not in use	-
S	Not in use	-

7.4.2 Zone Responses



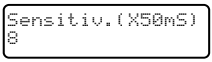
- The 6 parameters defining the zone responses are:

Par.	Description	When setting to "+"...
S	Activate Siren	Alarms from this zone will trigger the sirens
S	Ext. SRN in OFF	Alarms from this zone will trigger the external siren even when the system is disarmed (OFF)
L	No Daytime Central Station	No report is sent to the Central Station when the system is disarmed
T	Dif. Siren Tone	Different siren tone (not applicable for DC sirens)
B	Automatic Bypass	Repeating alarms prevention feature: the zone is automatically bypassed if it is triggered 3 times, while it is armed. The zone is reset automatically when the panel is disarmed.
M	Activate Audio	Alarms from this zone will activate the audio device[1] (VU-20N/U or MIC-200)

- ☞ [ENTR].

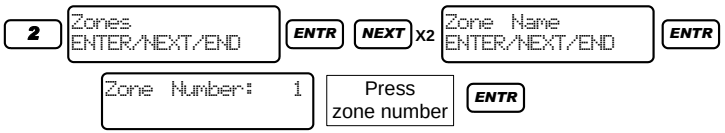
[1] Together with enabling "V" in "Communication" menu (see page 45), for VU-20N/U only.

7.4.3 Zone Sensitivity



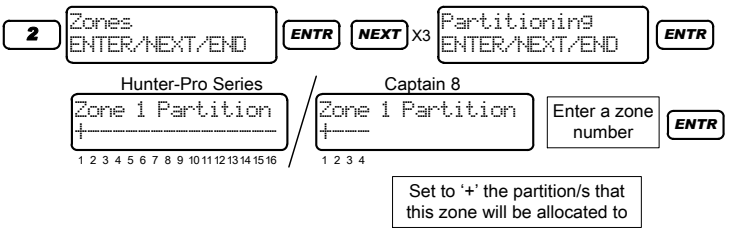
- Set the zone's sensitivity in milliseconds.
- Sensitivity is the time a zone must be open before it can trigger the alarm. The number entered is multiplied by 50. In the screen above, entering 8 means a sensitivity of 8 times 50, that is 400 milliseconds.

7.4.4 Zone Name



- Set the zone's name. A name can have up to 13 characters.
- Enter letters using the keypad keys, the same as in cellular phones. See page 38 for details.
- For example, to enter the words "REAR DOOR":
  1. ☞ [7] 3 times=R;
  2. ☞ [3] twice=E;
  3. ☞ [2] once=A;
  4. ☞ [7] 3 times=R;
  5. ☞ [0] once=Space;
  6. ☞ [3] once=D;
  7. ☞ [6] 3 times=O;
  8. ☞ [6] 3 times=O;
  9. ☞ [7] 3 times=R.

7.4.5 Setting the zone partitions



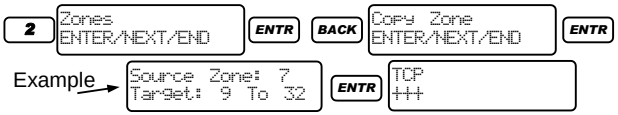
- For every zone, set the partition/s it is allocated to. When you set this or the keypads' partitions, it sets the system as a partitioned/split one.
- In the Hunter-Pro Series as much as 16 partitions can be set; in Captain 8, 4.
- Set to "+"the partition/s this keypad will be allocated to.
- For more details on partitions, refer to page 86 and onwards.

7.4.6 Partition's name

- Set the partitions' names. This name will appear on every of its allocated keypads.
- To enable the displaying of partitions' names, go to the User's "Display Type" menu and press [ENTR] in the "Show Part Name" option, as follows :

Partitions' names can only be displayed in monitored (addressable) keypads.

7.4.7 Copy zone characteristics



- Copy a zone characteristics into other zone/s. This feature is useful for installation. Once programming a single zone, you can save time and copy its characteristics to any the other zone.
- First, choose the "Source" zone, i.e., the zone from which the elements will be copied.
- Then, choose the "Target" zones, to which the elements will be copied.
- Then choose the elements to copy. Three elements can be copied: the zone's type, characteristics and partitions.
- In the above example, zone #7 three elements will be copied to zone #9-#32, so these zones will be the same as zone #7, but its location and name.

7.4.7.1 Copying options

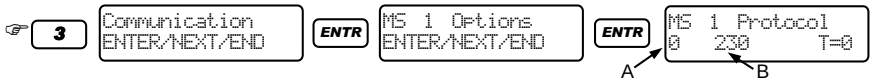
Par.	Set to "+" to:
T	Copy the zone type
C	Copy the zone characteristics
P	Copy the zone's partitions

- When copying finishes successfully, the next message is displayed: "Copying Finished. Press END". Press [END].

7.5 KEY 3: Communication Parameters

7.5.1 Monitoring Station #1 Options

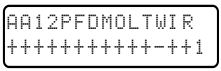
7.5.1.1 Protocol



- Set Monitoring Station #1 PSTN protocol and radio station no.
- The PSTN protocol is made of 2 numbers: "A" & "B", in the above image. These "A" & "B" numbers match the corresponding columns in the codes table, on page 93.
- The "T" number is the radio station number (given by the Monitoring Station).

1. Central Station #1 default PSTN format ("0 230") is ContactID©.
2. If a radio receiver is not installed, do not change the default value T=0.

7.5.1.2 Reports



- Set the events that will be reported to MS1:

Par.	Alarm/Event
A	Burglary
A	Anti-Mask
1	Special Burglary 1
2	Special Burglary 2
P	Panic
F	Fire
D	Duress/Hold-up
M	Medical
O	Arming/Disarming via remote phone call
L	Failures/Faults
T	System tests
W	Performing remote test: when the system is fully armed, in response to a sequence of 2 phone rings and a hang up, the panel reports a test event.
I	Technician code entered
R	Open/Close reports are sent only via the radio

- To save, ☞ [ENTR].

7.5.1.3 PSTN Test time and interval

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

- Set the daily time and interval for sending test events to the Monitoring Station.
- If the time is left 00:00, the system will send the tests according to the interval. The timer starts running when pressing the [ENTR] key
- For example, if the test time is set to 07:00 and the interval to 3 Hrs, test events will be sent every 3 hours and everyday at 07:00. If the time is 00:00 and the interval is set to 168 (hours), then the reports will be sent every 168 hours (once a week).
- ☞ [ENTR].

7.5.1.4 Radio test interval

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

- Set the radio test interval. See the previous sub-section for how-to. The daily time of the radio is the same as the PSTN one.
- ☞ [ENTR].

7.5.1.5 Account ID addition

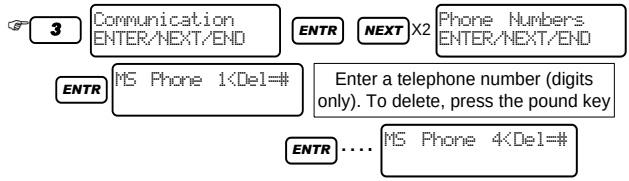
- To use 6 digits account numbers, set here the first 2 (tens of thousands).
- The 2 digits will be added to all the partitions.

7.5.2 Account numbers

- Set the PSTN ("Ph") and Radio ("Rd") account numbers.
- In Hunter-Pro Series, 16 accounts (one per partition) can be set for the PSTN line, and 16 for the radio. In Captain 8, there can only be 4 accounts (for each partition) for each.

- If the system is not using partitions or there is no need for different account ID for each partition, set only the first account ID.
- If no account ID is set, no report will be sent to the Monitoring Station.

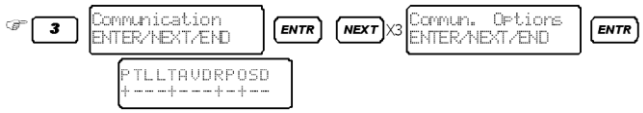
7.5.3 The Monitoring Station telephone numbers



- Set Monitoring Station #1 up to 4 telephone numbers.
- If the system reports to 2 Monitoring Stations ("Double report"), phone numbers #1 & #2 will be those of the first station; #3 & #4 are the second's.
- ☞ [ENTR]

- If the Central Monitoring Station does not answer a call from phone #1, the panel tries to dial the other numbers.
- Up to 8 dialing attempts are being performed at all.

7.5.4 Communication Options



Par.	Onscreen	When setting to '+'...
P	Connected T.Line	The panel is connected to a phone line
T	No Dia. tone chck	The panel dials without checking for a dial tone first (usuful when the line is not clear).
L	Line Test in ON	• When the panel is armed to full mode, it checks the dial tone every 60 seconds. • Because the panel continuously tests the telephone line DC voltage, it is recommended to use this feature only when necessary.
L	Line Test in OFF	• When the panel is disarmed, it checks for the dial tone every 60 seconds. • Because the panel continuously tests the telephone line DC voltage, it is recommended to use this feature only when necessary.
T	Tone Dial	• Set to "+" for Tone (DTMF) dialing; • Set to "-" for Pulse dialing;
A	Answer. Machine	• Answering machine or fax are connected to the panel's phone line. • The panel snaps incoming calls, following a sequence of 2 phone rings, a hang-up, 10 seconds pause and a ring.
V	Voice Unit	VU-20N/U voice unit is connected to the system.

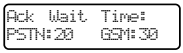
Par.	Onscreen	When setting to '+'...
D	Download Disable	• Remote download is disabled by default (set to "+"); • To enable it, set the parameter to "-"[1]. • In the first time remote programming is required, the end user must confirm it, by entering the Master code (in the keypad) and pressing [Enter] twice. This enables accessing the panel remotely for 2 minutes.
R	Rem. Disarm Disab	Remote disarming by touchtone telephone is disabled. **Not applicable in Captain 8.**
P	Pre Alarm Report	The system reports when the Entry Delay starts.
O	Tst Rprt in OFF	Test reports are sent also when the system is disarmed.
S	Split Account No.	• Split account is in use: reports from Account #1 (i.e. Partition #1) are reported to Central Monitoring Station #1; reports from Account #2 (i.e. Partition #2) are reported to Central Monitoring Station #2. • The other accounts are ignored. Use this option only when different account IDs are required for double report. If so, it is impossible to assign different account ID per partition.
D	Disarm after Al.	If the system is disarmed immediately after alarm, both events are reported.

☞ [ENTR]

7.5.4.1 Number of Rings

- Set the number of rings before the panel picks up a call (this does not affect the GSM-200)
- ☞ [ENTR]
- To manually answer a call: ☞[Master code] ☞ [ENTR] twice.

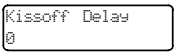
7.5.4.2 ACK Waiting Time



- Set the ACK time (the time that the panel waits for Central Monitoring Station handshake signal) for the PSTN and GSM channels.
- If the ACK is not received, a communication error is displayed.
- Different waiting times can be set for the PSTN and GSM modules. The max. waiting time for both is 60 sec.
- ☞ [ENTR]

1 If the Comax does not call within 2 minutes, the parameter is reset to '+' [disabled].

7.5.4.3 Kissoff Delay



- Set the time for the panel to wait for a closing ACK. This feature is useful for GSM communication faults.
- The delay is in milliseconds and the number is multiplied by 250. For example, setting the delay to 7 means a delay of 7X250=1750ms.
- ☞ [ENTR]

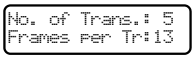
7.5.4.4 External Line

- Set a dialing access number (up to 2 digits) if the panel is connected to a switchboard or phone system.
- Press the asterisk key for the next characters: P for a short delay, '+', '#', '*'.
- ☞ [ENTR]

7.5.4.5 PSTN prefix

- Set up to 12 prefix digits.
- The panel first dials the external line number, then the PSTN prefix, then the phone number.
- ☞ [ENTR]

7.5.4.6 Radio transmission parameters



Par.	Description
Number of trans.	• Set the number of the radio re-transmissions. • The interval between the transmissions is 10 seconds and is fixed.
Frames per Tr.	Set the number of frames per transmission.

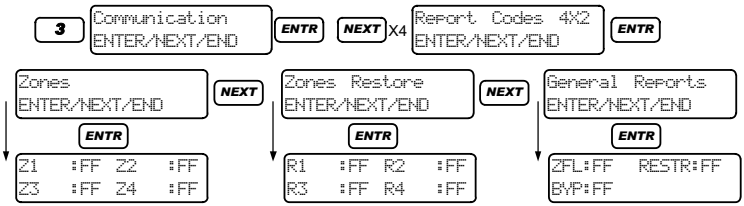
☞ [ENTR].

7.5.4.7 Communication channels

- Set to "+" the panel's main reporting channel: PSTN, GSM or IP.
- If the panel cannot report via the main channel, it tries in any way to report via the other two, while continuing to try via the first one, until it succeeds.

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

7.5.5 4X2 format reporting codes



7.5.5.1 Zones

- The reporting codes are hexadecimal numbers (0-9, A-F).
- The restore code is displayed as "RX".
- The default ContactID© or PAF & NPAF code for all the zones is "FF".
- To report a ContactID© code different than the default one, the default code needs to be converted to Hexa. To do so:
  - Subtract 100 from the ContactID event number.
  - Convert the result to hexadecimal number.
  - For example, "High Temperature" is ContactID event #158; 158 less 100 is 58; converted to Hexa. is 3A.
- Press [NEXT] to advance, [BACK] to move back, [*] for letters, the digits keys, [ENTR] to save and proceed to the next screen.

When using the ContactID® protocol, the Restore code and the Alarm code must match each other.

7.5.5.2 The codes table

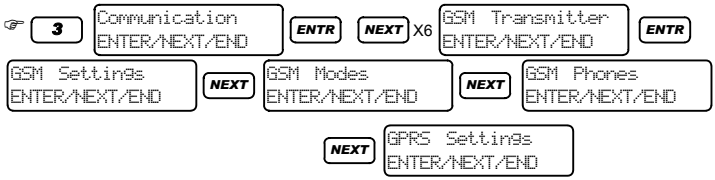
- The PSTN report codes (4x2) menu and the following radio menu have 3 sub-menus: Zones, Zones' restore and General Reports.
- To set a code: Use [NEXT] and [BACK] to move between zones, [*] to pick letters and the keypad keys to pick digits, [ENTR] to the move to the next screen.

Code	Details
Z1, Z2,	Alarm from zone #1, #2, etc.
R1, R2,	Restore from zones #1, #2, etc. The report is sent at the end of the siren time or when the system is disarmed immediately after alarm.
ZFL + RESTR	Zone fault in EOL zone + restore
BYP	Zone bypassing
TM1, TM2 + RESTR	TMPR 1/TMPR 2 were opened + Restore
AC + RESTR	AC failure + restore
LB + RESTR	Low battery + restore
PF + RESTR	Power failure: PCB voltage lower than 9V + Restore; indicates AC failure and low battery.
PHN + RESTR	Phone line failure + restore
PNC	Panic code
ICODE	Incorrect code

Code	Details
FUS + RESTR	Fail-unsafe: detectors' voltage fault + restore
ARM	Arming
DISAR	Disarming
TST	System test (manually, automatically, or "wake-up").

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

7.5.6 GSM Transmitter



The following menus are available only if the "Enhanced Menu" is displayed. See page 67 for details.

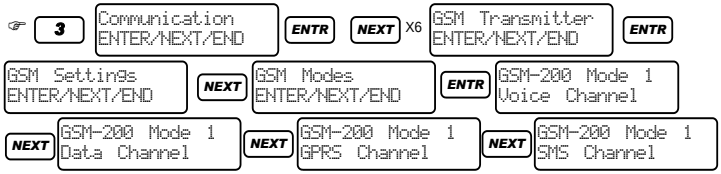
- Configure the GSM-200 cellular transmitter.
- To display the GSM-200 version (and the SMS-100 one), press [ENTR] in the main screen, until it is displayed.

The GSM-200 and the SMS-100 modules cannot be connected to the same panel.

7.5.6.1 GSM Settings

Par.	Name	Set to "+" to indicate that...
G	GSM TX Installed	The GSM-200 is connected
R	Use Radio ID Account	The radio acount ID will be used for the GSM-200 reports
T	Auto Test Report	In addition to sending via the phone, auto test reports will be sent via the GSM-200.
Y	GPRS Encryption	The information sent via the GSM-200 will be encrypted and sent via the GPRS mode
S	SMS Backup	When the GSM-200 fails to report via the GPRS, the panel sends the report via the first GSM phone number: "+": as an SMS message; "-": via the voice channel.

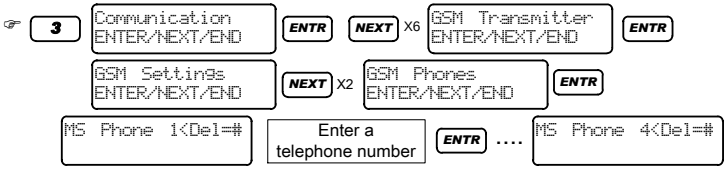
7.5.6.2 GSM Modes



- The GSM-200 has 2 operation modes, for 2 Monitoring Stations: Mode #1 for Monitoring Station #1, and Mode #2 for Monitoring Station #2.
- Each mode has 4 channels: Voice, Data, GPRS or SMS.
- To set Mode #2, press [ENTR] in the selected Channel screen.
- The Data channel can be used for the Comax application. To do so, the GSM-200 SIM card must support 2 phone numbers.
- If both Monitoring Stations use the GPRS, than Mode #2 will be used to report to Monitoring Station #2.

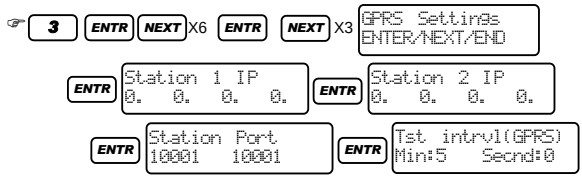
The DATA channel is not in use; make sure not to select it.

7.5.6.3 GSM Phones



- Set the Monitoring Stations' up to 4 GSM phone numbers.
- When "Split account number" is enabled (see section 7.5.4), phone numbers #1 & #2 will be Monitoring Station #1 numbers; phone numbers #3, #4 will be Monitoring Station #2 numbers.

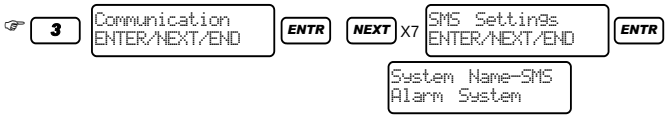
7.5.6.4 GPRS Settings



- Set the GPRS parameters for the Monitoring Stations.
- The parameters are the IP no., port number and test interval.

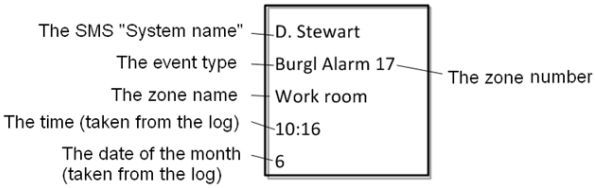
- GSM-200 version 1.14 supports remote upload via the GPRS channel and does not support SMS reports. Version 1.13 supports SMS reports and does not support remote upload via the GPRS. Versions 1.15 and up support both.
- When the GSM-200 is accessed using a URL, its address should be set in the net4pro card.
- To display the GSM-200 version (or the SMS-100, if installed), in the main screen, press [ENTR] until it is displayed. The display will show both the transmitter and the system version.

7.5.7 SMS Settings



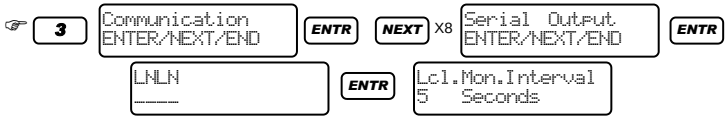
- Set a name to identify the system in the SMS reports.
- The name can be the customer's name or any other. "Alarm System" is the default.

A demo cell phone SMS message



- The details in the SMS message are all taken from the system log, i.e., they are a textual version of the report to the Monitoring Station
- In this figure, the time and date indicate when the event was registered in the log, and not when it was texted.
- See more SMS definitions in section 7.6.3.

7.5.8 The SERIAL output



- Set how the Monitoring Station connects to the panel's SERIAL output and what protocol it uses.
- The connection can be locally, using RS-232 cable, or remotely, via PIMA's net4pro card.
- The protocols in use can be Home Automation or PIMA proprietary protocol.

Home Automation systems are not supported in Captain 8.

Par.	Name	Set to "+" when...
L	Home Automat. 1	Monitoring station #1 uses Home automation or Building Management protocol
N	Network MS (1)	Monitoring station #1 uses PIMA's proprietary protocol
L	Home Automat. 2	Monitoring station #2 uses Home automation or Building Management protocol
N	Network MS (2)	Monitoring station #2 uses PIMA's proprietary protocol

7.5.8.1 Example A for using the SERIAL output

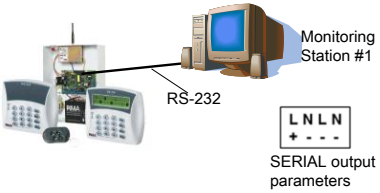


Diagram 42. Serial output - example A

- In this example, Monitoring Station #1 is installed locally and connects directly to the panel's SERIAL terminal, over serial RS-232 cable

7.5.8.2 Example B for using the SERIAL output

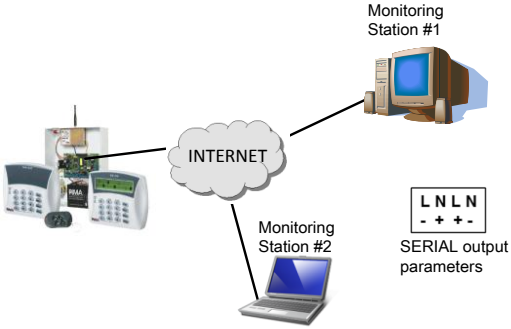


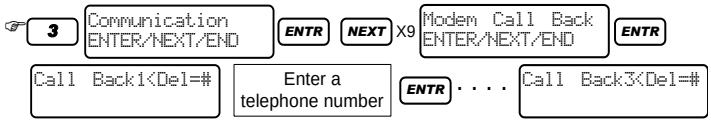
Diagram 43. Serial output - example B

- In this example, both Monitoring Stations #1 & #2 can be located locally (over LAN) or remotely (over WAN).
- According to the SERIAL output parameters, reports to Monitoring Station #1 are sent in PIMA's proprietary protocol (PID); reports to Monitoring Station #2 (IP #2) are sent in Building Management/Home Automation protocol.
- By default, both IPs are forwarded to port #10001.
- If the Monitoring Station's management application supports receiving events via 2 different ports with the same IP, both Monitoring Stations can be installed on the very same PC/laptop.

7.5.8.3 Local monitoring interval

- Set an interval to test reports for the local Monitoring Station.

7.5.9 Modem Call Back



- Set the modem callback phone numbers.
- Up to 3 numbers can be programmed.
- These numbers are used by the Comax upload/download application.

When call back #1 is set, in any attempt to call the panel, it will disconnect the call and call that number. This is yet another step to protect the system from unauthorized access.

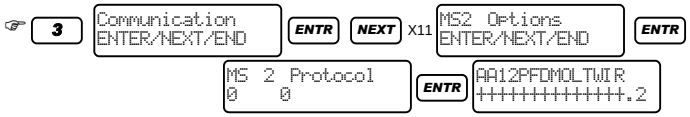
7.5.10 The Private (end user) dialer

- Set which events will be reported to the end user via the phone.
- At least one number must be set (in the User menu).
- The next table lists which events will be reported:

Par.	Event
A	All alarms
A	Anti-mask alarms
1	Special Burglary 1 alarms
2	Special Burglary 2 alarms
P	Panic alarms
F	Fire alarms
D	Duress alarms
M	Medical alarms

Par.	Event
O	Open/Close (SMS only): report by SMS when the panel is armed/disarmed by codes other than user code - Master, Short, door, etc.
L	Failures

7.5.11 Monitoring Station #2 Options



- Monitoring Station #2 options are the same as Monitoring Station #1 options. See page 50.

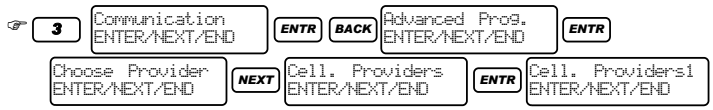
7.5.11.1 Protocol

- Set Monitoring Station #2 PSTN protocol. Setting this protocol indicates the panel to report in "Double Report" mode.
- To disable "Double Reporting", set the protocol to (0 0).
- To report to 2 monitoring stations under 2 different accounts, in the "Communication Options" menu (see page 52), set "S" ("Split Subscriber") to "+". In this case, reports to Monitoring Station #1 will be sent under the first account, and to Monitoring Station #2 under the second.

7.5.11.2 Reports

- Set the events that will be reported to Central Monitoring Station #2. All parameters are similar to those of Monitoring Station #1 (see page 50), accept for the radio ("R"): reporting to Monitoring Station #2 via the radio is not available.

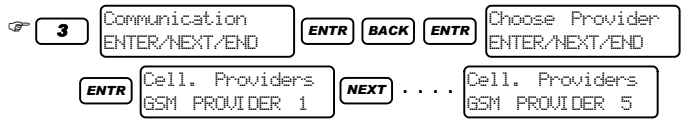
7.6 The Advanced programming menu



- The advanced programming menu contains the programming of the cellular providers, the SMS settings and the network settings.
- This menu is not visible by default. To enable it, see page 43.

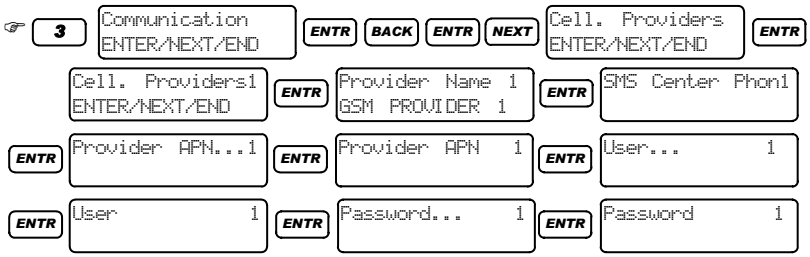
- Advanced programming requires professional knowledge in communication protocols.
- Beware not to change the default parameters, unless you first consulted with the cellular provider.

7.6.1 Choosing the cellular provider



- Choose the cellular provider. This will conjunct with the provider's parameters on the next menu.
- Up to 5 providers can be used. The panel may be pre-programmed with some local providers.
- The information should be provided by the cellular provider.

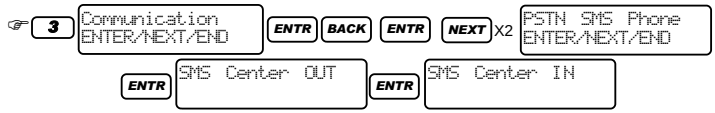
7.6.2 The provider's settings



Screen	Information to enter
Provider Name 1	Free text
SMS center phone 1	SMS center telephone #1. Enter a number only if the number is different from the one on the SIM card.
Provider APN…1	The provider's APN (Access Point Name). If the text is longer than 16 characters, press [ENTR] and continue to the next screen.
Provider APN…1	Continue from previous screen
User… 1	Enter the username for the service. If the text is longer than 16 characters, press [ENTR] and continue to the next screen.
User 1	Continue from previous screen
Password… 1	Enter the password for the service. If the text is longer than 16 characters, press [ENTR] and continue to the next screen
Password 1	Continue from previous screen

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

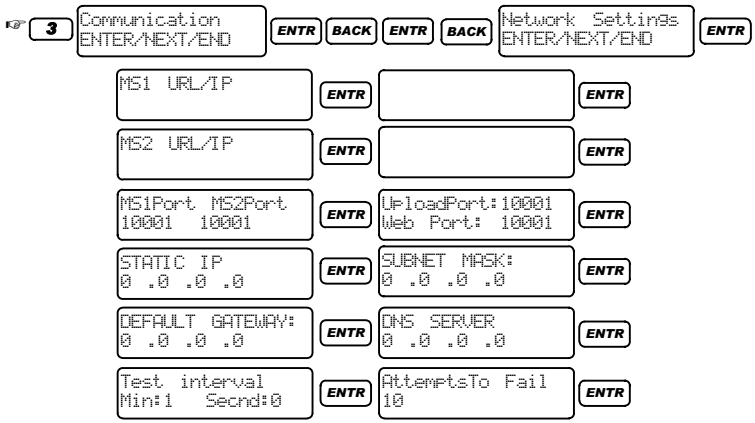
7.6.3 The PSTN SMS center phones



Set the details for the SMS-100 PSTN module.

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

7.6.4 Network settings



- Set the parameters for the IP communication.
- The IP number can be static (fixed) or dynamic (DHCP): to use static IP, fill in the address in the "STATIC IP" screen; in the next screens; to use a dynamic ip, leave the "STATIC IP" address of 0.0.0.0.
- Filling MS1 & 2 URL/IP and Port is mandatory, when using static or dynamic IP.

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

Screen	Data
URL/IP	• Enter either the Monitoring Station's IP address (e.g. 145.185.2.18. See the example after this table) or URL (e.g. www.cmsaddress.com). • If the text is longer than 16 characters, press [ENTR] and continue in the next (blank) screen. • Up to 47 characters, including spaces, can be used.
Station port	MS1 & MS2 NETsoft/PIMAnet port numbers.
Upload port	The net4pro communication port.
Web port	For future use.
Static IP	The net4pro IP address.
Default gateway	The router address.
DNS server	To manually set a DNS server address.
Test Interval	Enter time in minutes and seconds.
Attempts to Fail	No. of attempts (up to 250) to contact the Central Monitoring Station, before "comm. error" is reported. Applicable from version 6.11.

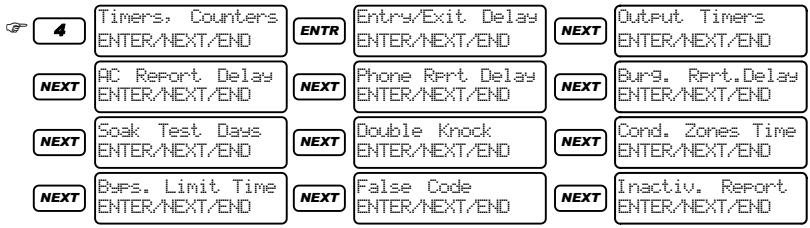
Examples:

Entering the IP address 145.85.24.8:

1. To enter a number, press the matching keypad key few times (4 in most keys). See the table in section 5.
2. To enter a dot, press [1].

Entering the URL address www.myvendor.com/customers/mypremises:

7.7 KEY 4: Timers, Counters

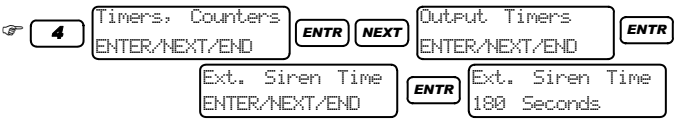


- Set the panel's timers.
- Press [ENTR] in each screen to set the timer.

7.7.1 Entry/Exit delays

- Set the entry delays #1 and #2 and the exit delay, in seconds (max. 250).
- Press [NEXT] to set the next delay.
- To use entry delay #2, refer to section 7.4.1, parameter "T".

7.7.2 Output types and other timers



- Set the timers of the output types. Because output types trigger the PCB outputs, some of these timers also set the physical output's tripping time.
- The timer options are listed in the next table:

Time (in sec.)	The output type is active...
0	Until the panel is disarmed
1-9998	For this time
9999	For as long as the trigger is active, e.g., a relay that is triggered by the phone (line) failure output type, will stay triggered as long as the line is faulty.

- The following table lists the output types (see more in section 0) and their default timers.

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

* The time span that a physical output, triggered by phone (only in Hunter-pro Series), remains so.

** A timer that starts running when all the zones are closed. It can be used for energy saving, by turning off (using a Relay) the light, for example, when the premises is not occupied anymore.

7.7.3 Ac report delay

- Set the time (in minutes, max. 250) to delay AC failure reports.
- The default is 15 min.

7.7.4 Phone report delay

- Set the time (in minutes) to delay reporting on telephone line faults.
- If the parameter "No Dia. tone chck" (section 7.5.4) is disabled, this parameter is negligible.
- If the line is usually clear, leave the delay time as zero.

7.7.5 Burglary report delay

- Set the time (in seconds. The default is zero) to delay reporting on violation of 24-hour zones, if occurred during the entry delay. The sirens will be sounding in anyway.
- This delay is valid to all the burglary alarm types.
- If the panel is disarmed while the timer is still running, the report will not be sent at all.

7.7.6 Soak test days

- Set the number of days (max. 7) a zone can be in soak (testing) mode (see section 7.14.4).
- When the test is over, the zone is automatically reinstated.
- If set to "0", the zone is automatically reinstated at midnight of the same day.

In PIMA display mode, the letter "T" indicates the zone is in test mode.

7.7.7 Double knock

- "Double Knock" is a feature for reducing false alarms: a "Double Knock" zone will signal the control panel only if tripped twice within the time span, set in this screen.
- There is no limit to the number of "Double knock" zones.
- If a "Double Knock" zone is tripped continuously and the "Double knock" time span is over, an alarm is set off.

7.7.8 Conditioned zones time

- Set the time span (in seconds) for conditioned (cross) zones to set off the alarm, only if 2 of them are tripped within the time span, set in this screen.

7.7.9 Bypass limit time

- To prevent burglary setup, set a time limit (in minutes, max. 250) for a user to bypass a zone, before arming the panel.
- When the time is over, the zone is automatically reinstated.

7.7.10 False code

- Set the number of allowed keystrokes (default is 24, min. 10, max. 250), when trying to enter a code. When the number is exceeded, the system reports the Monitoring Station and responds according to the "System Responses" (see page 69 and onwards).

7.7.11 Inactivity report

- Set a number of days (250 max, default is zero) that if the panel has not been armed within, the Monitoring Station is being reported.

7.8 KEY 5: General Parameters

☞ [5] | Gen. Parameters
ENTER/NEXT/END | [ENTR]

- The "General Parameters" are displayed in 3 consecutive screens.

7.8.1 First screen

Par.	Name	When setting to '+'...
K	State Key Switch	(+) Toggle (ON/OFF) key; (-) Momentary key
D	DC Siren	(+) DC sirens are in use (-) Speaker/Horn sirens are in use
1	TAMPER 1 Connec.[1]	TMPR #1 input is monitored
E	TAMPER 1 – EOL[1]	TMPR #1 input is monitored for EOL resistor loop
2	TAMPER 2 Connec.[1]	(+) TMPR #2 input is active (-) TMPR #2 input serves as zone #9
E	TAMPER 2 – EOL[1]	TMPR #2 input is monitored for EOL resistor loop
K	Key-> Home State	Triggering the onboard KEY input, arms the panel to "HOME 1" mode
A	Automatic-> HOME	Automatic arming arms the panel to "HOME 1" mode
B	Byps. Zone in Au.	Open zones are bypassed, when auto-arming. Nevertheless, a bypassed zone that is tripped, does trigger the alarm.
2	2 EOL Resistors	All EOL loops have 2 resistors. The resistors' value is set by the onboard jumper JP11.
S	Siren beep in ARM	The external siren beeps once when arming the panel, and twice, when disarming it with a key switch or remote control. See also parameter "O" in the next screen.
M	User Code-> Menu	(+) Entering a User code displays the user menu; (-) Entering a User code arms/disarms the panel (toggle mode);
P	Enhanced Menu	The enhanced communication screens are visible
Z	Not in use	-
T	Byps. Tmpr. in Arm	Tamper alerts and faults are ignored when arming the panel
F	Byps. Fail in Arm	Faults are ignored when arming the panel

☞ [ENTR] to save and proceed to the second screen.

[1] Not in use in Captain 8.

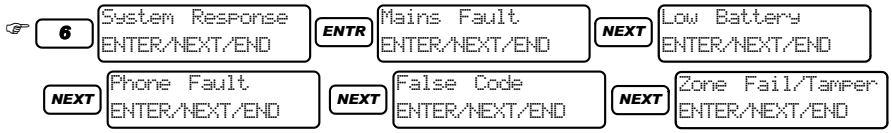
7.8.2 Second screen

Par.	Name	When setting to '+'...
C	Light KP continu	The keypads continuously illuminate (weakly)
L	Light KP in Alrm	The keypads illuminate during alarms
D	Light KP in Dely	The keypads illuminate during the entry/exit delays
S	Buzzer In Alarm	The Keypads sound the buzzer during alarms
F	Enable Fast Arm	Arming using single long key press is enabled. ▪ [1] - to arm to full mode; ▪ [4] - to arm to "HOME 1" mode; ▪ [7] - to arm to "HOME 2" mode.
1	Cancel HOME1 Del	The entry delay is cancelled when arming to "HOME 1" mode
2	Cancel HOME2 Del	The entry delay is cancelled when arming to "HOME 2" mode
Z	Disp. Alrm in ON	When the panel is armed, the keypads do display tripped zones. Recommended for control rooms.
E	EN-50131	Not in use
R	Retrigger Opn.Zn	Zones that are tripped beyond the siren time, will be re-triggered again and again, until they are not tripped anymore or the panel is disarmed. See also parameter "B" in section 7.4.2.
P	Disp. Armed Part	• (+): Armed partitions will be displayed in the "Scan Open Zones" display mode. • (-): To momentarily display armed partitions (in the "Scan Open Zones" mode only), press the [#] key.
F	Final door	The exit delay terminates upon closing the final delayed zone
C	Full remote cont	• (+): Full remote control is enabled; • (-): Partial remote control is enabled. See section 8. **Remote control is not available in Captain 8**
J	Report W/L Jamm.	Wireless jamming is reported
A	Part. AutoArming	Arming partitions by auto arming is enabled
O	Beep in disarm	The sirens beep twice when disarming the panel by a keypad

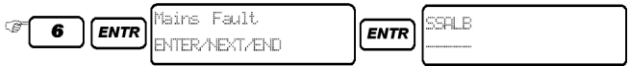
7.8.3 Third screen

Par.	Name	When setting to '+'...
S	DC sirens EOL	DC sirens (only) are connected over EOL resistor loops: • When the panel is disarmed: monitoring cut; • When the panel is armed: monitoring short.
K	Not in use	-

7.9 KEY 6: System Responses



- Set the responses to the following: mains fault, low battery, phone line fault, false code and zone failure/tampering.

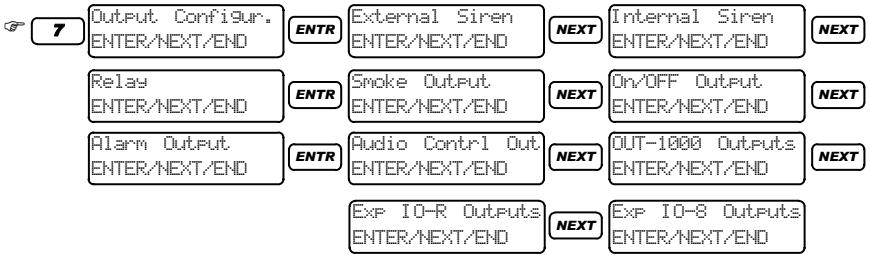


Par.	Response	Set to "+" to...
S	Activate Siren	• The panel is armed: trigger the sirens • The panel is disarmed: trigger the internal siren only
S	Ext. SRN in OFF	Trigger the external siren also when the panel is disarmed
A	Act. Burgl Output	Trigger the "Burglary" output type (see section 7.10.1)
L	No daytime CMS	Disable reporting to the Monitoring Station when the panel is disarmed
B	Activate Buzzer	Activate the keypad buzzer

7.10 KEY 7: Outputs Configuration

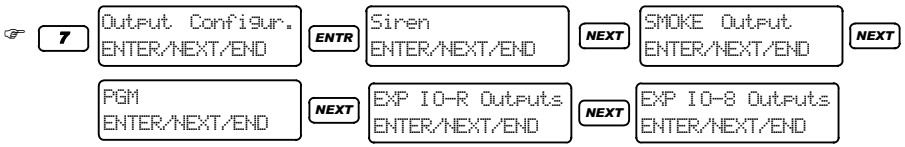
- Configure the control panel and the expanders' outputs, i.e., set which output type will trigger every output (see page 85 on outputs and output types).
- Outputs can be triggered per partition.

In Hunter-Pro Series



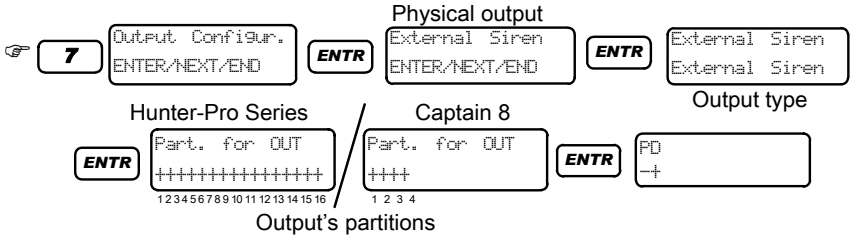
- The Hunter-pro series PCB has 7 outputs: SIRENS Ext. & Int., SMOKE, RELAY, ON/OFF, ALARM, AUDIO CONT.
- The other screens are those of the OUT-1000 local zone expander, the I/O-8N remote zone expander and the I/O-R relay expander.

In Captain 8



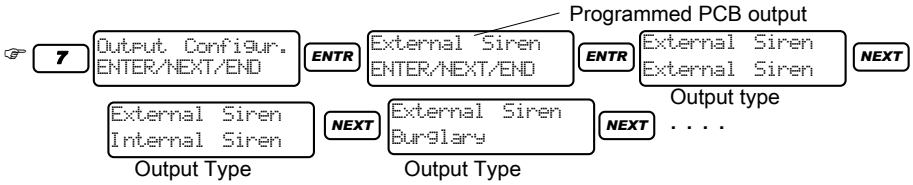
- The Captain 8 PCB has 3 outputs: Siren, Smoke & PGM.
- The other screens are those of the I/O-8N remote zone expander and the I/O-R relay expander.

7.10.1 Configuring a physical output



- The process of programming an output is as follows (see the next sections for instructions):
  1. Select an output ☞ [ENTR]
  2. Select an output type using [NEXT]/[BACK] ☞ [ENTR]
  3. Set the output's partition/s using [NEXT]/[BACK] and [#] ☞ [ENTR]
  4. Set the output's polarity ☞ [ENTR]

7.10.2 The output types



- The output types are functions that are triggered by alarms and faults, and trigger in turn the physical outputs. See section 9.1.
- A physical output can be triggered by only a single output type, whereas a single output type can trigger as much as all the physical outputs.
- Following, is a table of the output types and their functions:

Press [NEXT]	Output type	What triggers it?
-	External Siren	Alarm in a zone that is set to trigger the external siren (in the "Zone Responses"; see section 7.4.2).  By default, all the zone types are set to trigger the external siren. To globally change this, see page 69.
X1	Internal Siren	Alarm in a zone that is set to trigger the internal siren (in the "Zone Responses"; see section 7.4.2).  **Not in use in Captain 8.**
X2	Burglary	Alarm in a "Burglary" zone
X3	Anti-Mask	Alarm in an "Anti-Mask" zone
X4	Special Burglary 1	Alarm in a "Special Burglary 1" zone
X5	Special Burglary 2	Alarm in a "Special Burglary 2" zone
X6	Burglary - All Types	Alarm in "Burglary", "Special Burglary 1" or "Special Burglary 2" zones
X7	Fire	Alarm in a "Fire" zone
X8	Special Fire	Alarm in a "Special Fire" zone
X9	Panic	Alarm in a "Panic" zone, or entering the "Panic" keystroke combination [*]+[#] in one of the keypads.
X10	Silent Panic	Alarm in a "Silent Panic" zone
X11	Hold-Up (Duress)	Alarm in a "Hold-Up (Duress)" zone, or when the "Duress" code is entered
X12	Medical	Alarm in a "Medical" zone
X13	Alarms - All Types	Any alarm
X14	Audio Control	Alarm in a zone that is set to trigger an audio module: the MIC-200 or VU-20N/U (in the "Zone Responses"; see section 7.4.2).
X15	Zone Open	Violating any zone (regardless of the panel status)
X16	Zone Bypassed	Bypassing any zone
X17	Smoke Detector Power	Resetting a smoke/fire detector
X18	Tamper	Opening a tamper switch connected via TMPR1/TMPR2 terminals
X19	Zone tamper/fail	Opening a tamper switch connected via a zone terminal, or a zone failure.
X20	Buzzer	The keypad buzzer is activated
X21	Armed	The panel is armed
X22	Installer Program	The Installer code is entered
X23	General Fault	AC, low battery or phone line fault
X24	Mains Fault	AC fault
X25	Low Battery	Low battery fault
X26	Phone Fault	Phone line fault
X27	GSM Fault	GSM fault
X28	Communication Fault	Communication fault

Press [NEXT]	Output type	What triggers it?
X29	Not In Use	-
X30	Door Code	The Door code is entered
X31	Wireless Remote	The [*] button in a remote control is pressed
X32	Test	Performing a test
X33	Not In Use	-
X34	Not In Use	-
X35	Remote Control	Activating an output remotely **Not in use in Captain 8.**
X36	Not In Use	-
X37	Station ACK	• This output type is triggered upon receiving an ACK from the Monitoring Station • The assigned output is triggered for 20 sec. (not programmable)
X38	Chime follower	• A "Chime" zone is opened • Can be used for a secondary indication, e.g., loud speaker, another buzzer, etc.
[BACK]	net4pro Comm FLT	• The net4pro card fails to communicate with the Monitoring station (including retries) • The assigned output is triggered for 5 sec. (not programmable)

7.10.3 Output's partitions

- Allocate this output to partition/s, i.e., set which partitions would be enabled to trigger this output.

7.10.4 Polarity and activation in disarm

- Set the polarity of the output and whether they are active when the panel is disarmed.

Par.	Name	When setting to "+"
P	Polarity <+=Pos.	(+): constantly tripped; disconnects when triggered (-): tripped when triggered
D	Active in Disarm	(+): active when the panel is disarmed; (-): not active when the panel is disarmed; can be used for external siren output, for example.

7.10.5 'Ext. Siren' and 'Int. Siren' Outputs

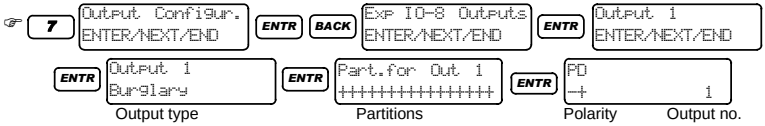
The "Int. Siren" output is not in use in Captain 8

- Onboard outputs that supply high current and can trigger speaker/horn sirens.
- The "Ext. Siren" output cannot be triggered without triggering the "Int. Siren" output. As a result, the sirens can be activated in one of 2 options:

- Triggering both the internal and the external sirens;
- Triggering the internal siren only;

It is recommended to use the "External Siren" output type to trigger the "Ext. Siren" output and the "Internal Siren" output type to trigger the "Int. Siren" output.

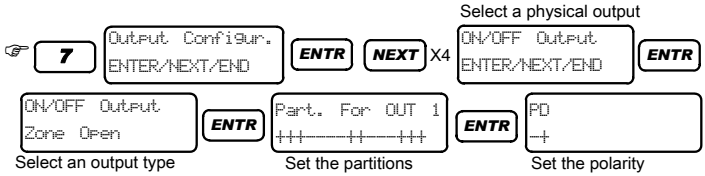
7.10.6 Expanders' Outputs



- Configure the OUT-1000 (8-output), I/O-R 8-Relay and I/O-8N 8-Zone expansion cards' outputs.
- See the screen captures on section 7.10.

7.10.7 Examples for Programming the Outputs

1. ON/OFF output (only in Hunter-Pro Series):

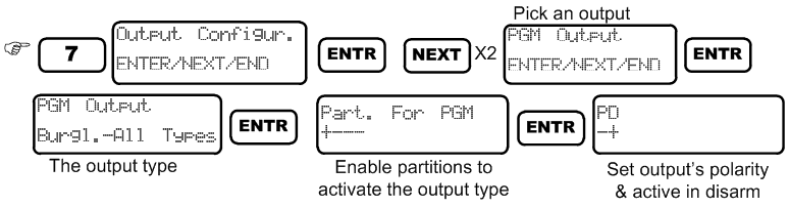


The procedure is as follows:

a) Select the ON/OFF (physical) output.
b) Set what output type will trigger this output. In this example, it is the default "Zone open" output type, so every time a zone is opened, the ON/OFF output is triggered.
c) Set which partition/s can trigger this output.
d) Set the polarity of this output.

2. PGM output (only in Captain 8):

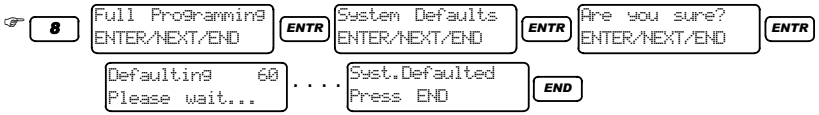
Set 'Burgl. -All Types' output type to trigger the PGM output, so any burglary alarm will trigger this output:



7.11 KEY 8: Full Programming

7.11.1 System Defaults

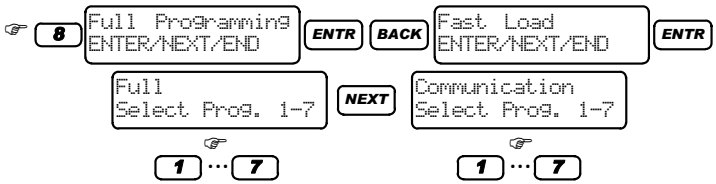
- Initialize the system to factory defaults.
- After pressing the [ENTER] a countdown starts.
- ☞ [END] when the process is over.



7.11.2 Local Download

- "Local Download" is used for uploading/downloading by the Comax application. See section 6.2 and the COMAX user guide for more details.
- Pressing [ENTR] puts the panel on standby, waiting to receive data.
- Immediately press the "Local" icon in the Comax.
- Wait until "Connected" message is displayed in the Comax status bar and a beep is sounded. You can now start uploading/downloading.

7.11.3 Fast Load



- "Fast Load" is used with the PRG-896 fast programmer, for uploading presets to the panel and downloading the current panel configuration.
- The fast programmer has 2 downloading options:
  1. Download any of the 7 preset programs (parameters).
  2. Download only the communication parameters.
- Use the DPU adaptor to connect the PRG-896 to the PC with the Comax application.

7.12 KEY 9: Enter/change the Installer code

- Set/change the Installer code.

The default Installer code must be replaced immediately after installation!

- The code can have up 4 - 6 digits.
- A code that starts with zero cannot be reset to default (1234), in case of power loss. This is a security measure. If this happens, contact your dealer.

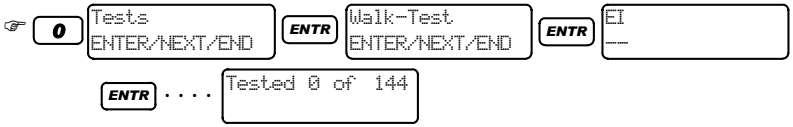
7.13 KEY * (asterisk): Express programming

- For details, refer to the Express programming menu, on page 42.

7.14 KEY 0 (zero): Tests

- The "Tests" menu has sub-menus for testing the system's hardwired and wireless zones, the outputs, and the communication.

7.14.1 Walk-Test



- Test the hardwired and wireless zones. During the test:
  1. The number of tested zones (out of the overall number of zones) is displayed.
  2. The keypad buzzer indicates when a tested zone is opened. To indicate by the sirens too, set to "+":

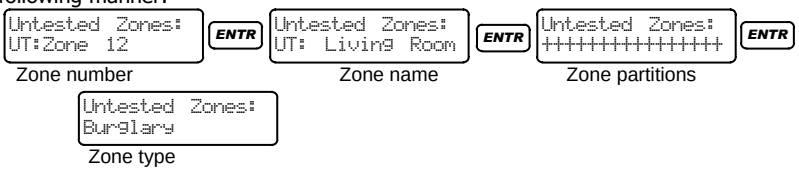
a. "E", for the external siren; the internal siren will be activated too.

b. "I", for the internal siren only.

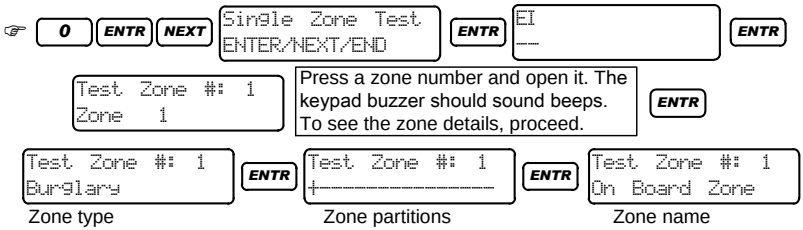
Parameter 'I' is not in use in Captain 8

3. The memory log keeps a record of the test including its results.

- When the tests are over, ☞ [ENTR]. If all zones were successfully tested the massage "All zones tested" is displayed. If not, the zones that were not tested are displayed, in the following manner:

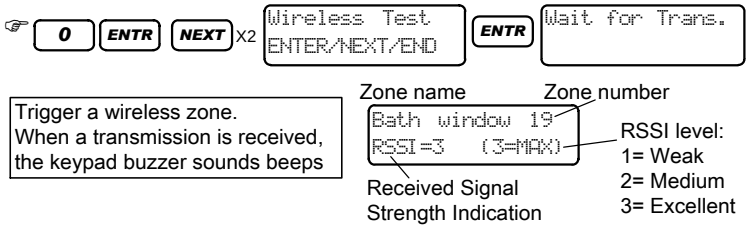


7.14.2 Single Zone Test



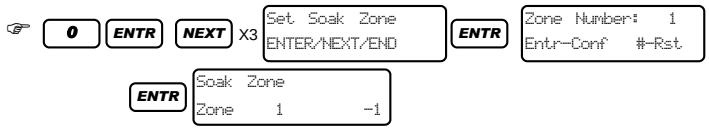
- To test a single zone, hardwired or wireless:
  - Set the "E"/"I" parameters. See the previous section.
  - Press the desired zone number. The first 8 zones are the onboard outputs and are named so.

7.14.3 Wireless Test



- To test a wireless zone, trigger it.
- The detector's reception level (RSSI) is displayed. The level is also indicated by the speed of the keypad beeps: the faster the beeps – the stronger the reception.

7.14.4 Set the Soak zones

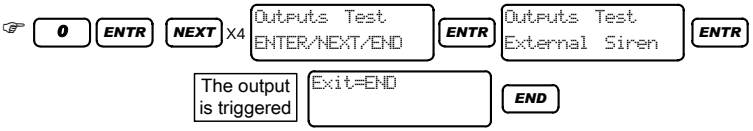


- A zone in which false alarms occur, can be tested by setting it as a Soak zone.
- Alarms from a soaked zone neither trigger the sirens, nor are they reported to the Monitoring Station. However, they are logged.
- A soak test can last up to 7 days. To set the number of soak days, refer to page 66.
- When the soak test time is over, the zone is automatically reinstated.
- To manually reinstate a soaked zone, press [#] in the "Zone Number: X" screen.

7.14.5 Outputs Test

- Test the panel's and the expander's outputs, by directly triggering them.
- Pressing [ENTR] in of the any output test screens, trips the output for 10 seconds.
- Pressing [END] stops the test.
- Triggering the outputs directly enables to distinguish between connection and programming faults: an unresponsive output that is tested OK, indicates a possible programming error.

7.14.5.1 In Hunter-Pro Series

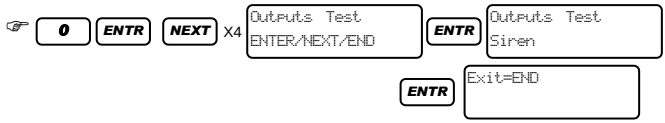


- These are the outputs test screens by their order. From the "Outputs Test" screen:

Press	Output	Details
[ENTR]	External Siren	Onboard output
[ENTR] [NEXT]	Internal Siren	Onboard output
[ENTR] [NEXT] X2	RELAY	Onboard output
[ENTR] [NEXT] X3	SMOKE Output	Onboard output
[ENTR] [NEXT] X4	On/OFF Output	Onboard output
[ENTR] [NEXT] X5	ALARM Output	Onboard output
[ENTR] [NEXT] X6	Audio Contrl Out	Onboard output
[ENTR] [NEXT] X7	OUT-1000 Outputs	The OUT-1000 has 8 transistor outputs: ☞ [ENTR], select an output (☞ [Next]/[Back]) and ☞ [ENTR] to trigger it.
[ENTR] [NEXT] X8	Exp IO-R Outputs	The I/O-R has 8 relay outputs: ☞ [ENTR], select an output (☞ [Next]/[Back]) and ☞ [ENTR] to trigger it.

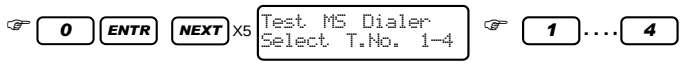
Press	Output	Details
[ENTR] [BACK]	Exp IO-8 Outputs	The I/O-8N has 1 relay output. Each output screen relates to the corresponding expander: ☞ [ENTR], select an output (☞ [Next]/[Back]) and ☞ [ENTR] to trigger it.

7.14.5.2 In Captain 8



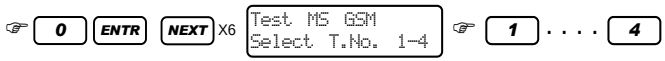
Key Presses	Output	Details
[ENTR]	SIREN	Onboard output
[ENTR] [NEXT]	SMOKE	Onboard output
[ENTR] [NEXT] X2	PGM	Onboard output
[ENTR] [NEXT] X3	I/O-R Relays	The I/O-R has 8 relay outputs: ☞ [ENTR], select an output (☞ [Next]/[Back]) and ☞ [ENTR] to trigger it.
[ENTR] [NEXT] X4	I/O-8N Output	The I/O-8N has 1 relay output. Each output screen relates to the corresponding expander: ☞ [ENTR], select an output (☞ [Next]/[Back]) and ☞ [ENTR] to trigger it.

7.14.6 The Monitoring Station's PSTN dialer test



- Test the Monitoring Station's PSTN phone numbers (see section 7.5.3): ☞ [1] to dial to #1; ☞ [2] to dial to #2, and so on.
- Pressing a number that is not set results in an error message: "Check Phone Num. Press END". After pressing [END] the "Phone Numbers" menu, where the MS numbers are set, is automatically displayed.
- The error "Set Pn. Connect. Press END" is displayed, if the "Connected T. Line" parameter ("P") in the "Communication Options" menu is disabled (set as "-". See section 7.5.4). After pressing [END] the "Communication Options" menu is automatically displayed.

7.14.7 The Monitoring Station's GSM test

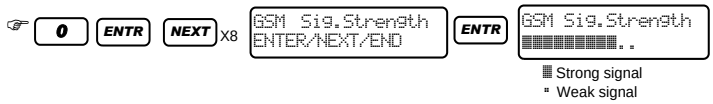


- Test the Central Station's GSM numbers. The test is similar to the previous PSTN test.

7.14.8 The Monitoring Station's Radio test

- Test the communication to the Monitoring Station via the long range radio transmitters. Pressing [ENTR] triggers a test report.
- An ACK cannot be received from the Central Station in this test.

7.14.9 GSM signal strength

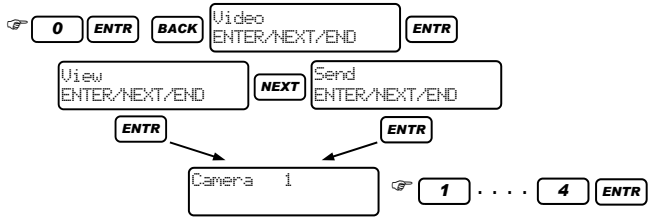


- Check the GSM signal strength. The signal is indicated by squares, as in a cell phone: if the reception is indicated by less than 8 squares, the GSM module needs to be relocated.

7.14.10 Network statistics

- See the LAN and GPRS transmission and reception statistics.
- The top line displays the LAN/PIMAnet (a PIMA Monitoring Station decoder) information, and the bottom the GSM-200 GPRS channel.
- The numbers refer to the sent and received packets.
- The communication is OK, when the "T" and "R" values in each line are equal or almost equal.
- To reset the numbers, ☞ [*].

7.14.11 Video test



- Test the video cameras. In both menus, "View" & "Send", pressing a key (and [ENTR]) triggers the corresponded camera.
- In the "View" menu, the camera's stream can be watched using a monitor or via the VVR's (Video Verification Reporter) application (see the VVR Installation guide, P/N 4410302).
- In the "Send" menu, a video clip of the triggered camera is sent via an email.
- In both menus, click a camera number.

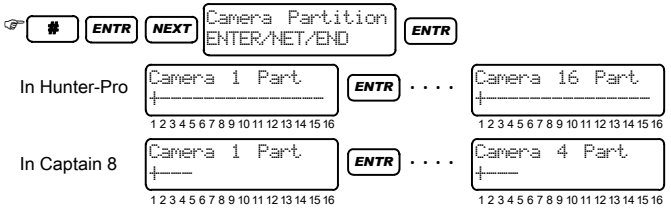
7.15 KEY #: Video

- Configure PIMA's Video Verification Reporter, the VVR.
- This menu includes 3 sub-menus: Video settings, Camera partition and Modes & Privacy.

7.15.1 Settings

Par./Screen	Description
Video modules	Enter the number of VVR modules: • In Hunter-Pro 896/8144: up to 4 modules; • In Hunter-Pro 832: up to 2 modules; • In Captain 8: only 1 module.
Max. MMS per day	Set how many MMS messages could be sent per day?
E	Set whether the VVR will be triggered by opening a delayed zone, to record a clip[1]
X	Not in use

7.15.2 Camera partitions[2]



- Allocate the cameras to partition the same as zones are allocated to partitions, i.e., only the zones in these partitions could trigger that cameras.
- For each camera, press [ENTR] and set to "+" the allocated partitions.
- Using partitions makes privacy easier to implement.
- If partitions are already in use, it is better to allocate camera #1 to partition #1, camera #2 to partition #2 and so on.

---

[1] Requires an SD card (not supplies by PIMA)
[2] There are up to 16 partitions in Hunter-Pro Series and 4 in Captain 8

7.15.3 Modes & Privacy

- Configure the VVR's preferences for sending & recording the video clips.
- The parameters here also determine the privacy matter, i.e., the situations in which the VVR can be used, in refer to the system status.
- The parameters are set per camera, i.e., they refer only to the zones of the currently selected camera. Repeat the steps for every installed camera.
- The parameters are divided into 3 groups:
  - SN12: sending preferences;
  - RN12: recording preferences;
  - VN12: viewing preferences;

- **Sending a clip is always accompanied by recording it too.**
- **Therefore, when enabling (setting to "+") any of the sending parameters ("SN12"), DO NOT enable the matching parameter in the recording preferences ("RN12").**
- **For example, if "N" in "SN12" is set to "+", make sure "N" in "RN12" is set to "-".**

Par.	Name	Description
S	Send in disarm	When the panel is disarmed: the VVR is triggered and sends (and records) clips, when a 24-hour zone is opened .
N	Send in full arm	When the panel is fully armed: the VVR is triggered and sends (and records) clips, when any zone is opened.
1	Send in Home 1	When the panel is armed to "Home 1" or "Home 2" partial arming modes: the VVR is triggered and sends (and records) clips, when an armed zone is opened.
2	Send in Home 2	
R	Record in disarm	When the panel is disarmed: the VVR is triggered and records clips, when any zone is opened. This feature can serve as a DVR (Digital Video Recorder).
N	Record in full arm	When the panel is fully armed: the VVR is triggered and records clips, when any zone is opened.
1	Record in Home 1	When the panel is armed to "Home 1" or "Home 2" partial arming modes: the VVR is triggered and records clips, when an armed zone is opened.
2	Record in Home 2	
V	View in disarm	When the panel is disarmed: viewing the cameras is enabled. **Privacy should carefully be considered in this case**.
N	View in full arm	When the panel is fully armed: viewing the cameras is enabled.
1	View in Home 1	Viewing the cameras while the panel is armed to "Home 1" or "Home 2" partial arming modes is enabled.
2	View in Home 2	

8. REMOTE CONTROL VIA TOUCH-TONE TELEPHONE

The Captain 8 cannot be accessed remotely!

- The Hunter-Pro Series models can be remotely controlled via a touch-tone or cellular phone.
- A remote control call can be initiated both by calling the panel or receiving a call from the panel.
- The panel can be remotely controlled in one of 2 modes:
  - Basic mode: basic operations, including arming and disarming;
  - Full mode: including triggering the outputs.

8.1 Basic Mode

- The Basic mode is the default mode. It includes operations such as arming and disarming the panel to full and partial modes, and some more. To control the panel in basic mode:
  1. Dial the panel's telephone number (or pick a call from the panel);
  2. Wait for a confirmation tone: a long tone followed by 2 beeps;
  3. Dial the panel's Master code;
  4. Wait for a status tone:

     Continuous: The panel is disarmed;

     Beeps: The panel is armed;

     The panel does not respond to commands while sounding the confirmation tone. Therefore, it is important to wait until the confirmation tone is over before pressing any telephone key.

  5. To perform a command, dial a number according to the next table. The panel confirms receiving the command with 2 short beeps.

key	Command
⓪	Stop the external siren and the dialer
①	Arm the panel
②	Disarm the panel
④	Arm the panel to "Home 1" partial arming mode
⑤	Trip the onboard RELAY output
⑥	Stop tripping the onboard RELAY output
⑦	Arm the panel to "Home 2" partial arming mode
⑧	Listen in for one minute (available only with MIC-200). Press again as required, to extend listen in time in one minute.

- While the panel is engaged in a remote control call, the following message is displayed on all the keypads: "Other keypad in use".

- If no command is received for 60 seconds, the panel hangs up, but remains in standby mode and displays the "Other keypad in use" message for another 60 seconds, before returning to normal mode.

8.1.1 Example for Mode A call

Arming the panel

Dial the panel's phone number → the panel picks up the call → wait for the confirmation tone to end → dial the Master code → wait for command confirmation tone to end → dial [1].

8.2 Full Mode

- To enable the full mode, set to "+" parameter "C" ("Full Remote Ctrl") in the "General Parameters" menu (see section 7.8).
- To control the panel in full mode:
  1. Repeat steps 1-4 in the basic mode to contact the panel.
  2. To trigger an output, ☞ [*] and the corresponding command, as listed in the following tables.
  3. To deactivate an output, ☞ [#] and the corresponding command from the following tables

General Commands	
☞	**Command**
∗**00**	Deactivate the external siren and the dialer
∗**01**	Arm the panel
01	Disarm the panel
∗**04**	Arm to "Home 1"
∗**07**	Arm to "Home 2"
∗**08**	Start (and extend) listen in

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

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

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

Trigger relays on I/O-R expander 1				Trigger relays on I/O-R expander 2			
☞	**Relay**	☞	**Relay**	☞	**Relay**	☞	**Relay**
51	1	**55**	5	**59**	1	**63**	5
52	2	**56**	6	**60**	2	**64**	6
53	3	**57**	7	**61**	3	**65**	7
54	4	**58**	8	**62**	4	**66**	8

Trigger relays on I/O-R expander 3				Trigger relays on I/O-R expander 4			
☞	Relay	☞	Relay	☞	Relay	☞	Relay
67	1	**71**	5	**75**	1	**79**	5
68	2	**72**	6	**76**	2	**80**	6
69	3	**73**	7	**77**	3	**81**	7
70	4	**74**	8	**78**	4	**82**	8

Send system status reports via SMS to which end user phone			
☞	Phone	☞	Phone
91	1	**93**	3
92	2	**94**	4

8.2.1 Examples for Mode B

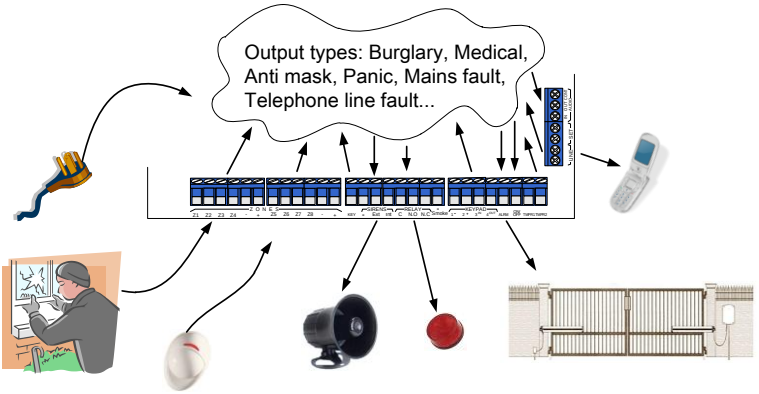
Trip the 'Ext. SIREN' output:
Dial the panel's phone number → the panel picks up the call → wait for the confirmation tone to end → dial the Master code → wait for command confirmation tone to end → ☞ ∗11

Deactivate relay#2 on I/O-R #2:
Dial the panel's phone number → the panel picks up the call → wait for the confirmation tone to end → dial the Master code → wait for command confirmation tone to end → ☞ #60

9. OTHER TOPICS

9.1 Physical outputs & output types

- In every intruder alarm system, alarms and faults are responded via outputs. The outputs are directly triggered when an event occurs.
- PIMA came with a new concept, called "Output Types"; these are the zone alarms, zone types and faults (and potentially any other event), that do trigger the outputs, but are much more flexible to use, because they are no longer allocated each to a single output. For example, smoke alarms, that naturally trigger the SMOKE output, can now trigger any output too.
- Another example: a Panic zone generates an alarm; "Panic" is both a zone type and an "Output type". The Panic output type can be allocated to any PCB output, as well as to a zone expander's output.
- While an "Output Type" can trigger as much as all the outputs, a physical output can be triggered by no more than one "Output type".
- There are over 30 "Output types" in the Hunter-Pro Series and Captain 8 systems. They are allocated to the physical outputs in the "Outputs configuration" menu. See section 7.10.2.



9.2 System model & PCB version

- The PCB/System model (832, 896 or 8144) is printed on a colored label on the PCB's EPROM, a different color to every model.
- The overall number of zones and users is determined by the model type so, for example, Hunter-Pro 896 cannot be expanded to more than 96 zones or users.

If the EPROM version and the system PCB version do not match, a "System Error" is displayed; for example, the Hunter-Pro 896 EPROM cannot be used with the Hunter-Pro 832 PCB: check that the EPROM's label color is the same as the PCBs' serial number.

9.3 Partitions

- A partition (or "sub-system") is an area made of several zones that can be armed, while other zones are not. In this way, only those zones that are part of the armed partition/s will activate the alarm when they are opened; zones outside those partitions can be occupied at the same time.
- There can be up to 16 partitions in Hunter-Pro Series and 4 in Captain 8.
- In addition to zone partitions, PIMA's systems provide keypad partitions as well: monitored (addressable) keypads can be assigned to partitions and control (or display information about) only zones that are part of these partitions.
- Using partitions the alarm system can be split to 8 separate sub-systems including sirens in Hunter-Pro systems and 4 in Captain 8.
- Users can be limited to some partitions, i.e., being enable to arm & disarm only some zones.

9.3.1 Examples

Example A: private premises, single keypad

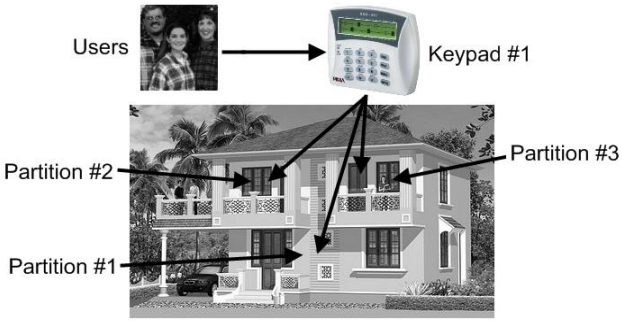


Diagram 44. Implementing partitions - Example A[1]

- In this example, a single keypad, Keypad #1, controls all 3 of the premises partitions; the users are all assigned to all 3 partitions and can therefore control them all.

A user can control several partitions using a single code.

[1] Published under 'Creative Commons' license (source: http://www.flickr.com/photos/axiomestates/3081558445/)

Example B: private premises, 3 keypads

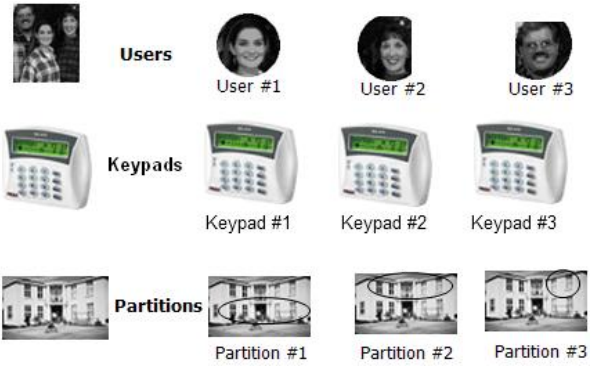


Diagram 45. Implementing partitions - Example B

- The system is divided into partitions, each controlled by a separate keypad. The users have authorization levels based on partition/s, e.g., user 12 can only control Partition #3 & #14.
- Every keypad displays the status of its assigned partitions only.

Example C: variable options[1]

Diagram 46. Implementing partitions - Example C

- In a 3 floors building, the first floor is defined as Partition #1, the second as Partition #2 and the third as Partition #3. There are 3 users and 3 keypads, with different authorization levels:
  - User #2 is authorized to use all three keypads;
  - User #4 is authorized to use only keypad #1, which controls and displays partition #2 only;

[1] Published under 'Creative Commons' license (source: http://awkwardfamilyphotos.com/wp-content/uploads/2009/07/shari-awkward-plaid-family-photo.jpg)

- Users #1 & #2 are authorized to use only Keypad #2 which controls and displays all 3 partitions;
- User #3 is authorized to use only keypad #3 which controls and displays partition #3 only;

Example D: office compound

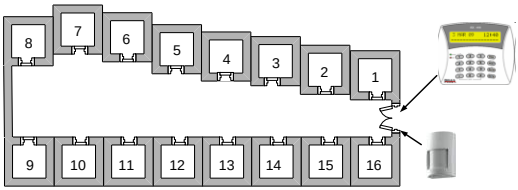


Diagram 47. Implementing partitions - Example D

- A compound is made of 16 offices; each is located in a separate room. Each room is assigned as a partition and can be controlled by different users, remote controls, key switches and RFID tags.
- The single keypad in this example will display the status of all partitions, though the users will only be able to control their authorized partition/s.
- A detector located at the entrance and allocated to all partitions protects the entrance, as soon as all partitions are armed. This detector will be disarmed as soon as the first partition is disarmed.

Example E: business installation

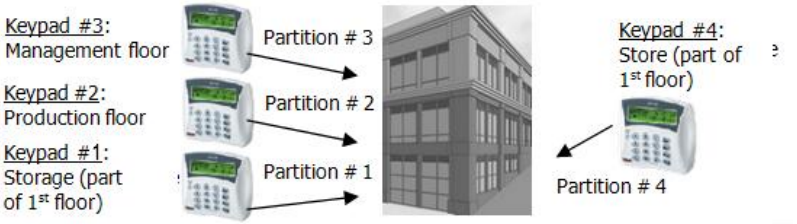


Diagram 48. Common application for partitions

- The headquarters of a company is divided into 4 departments: each has its own keypad, employees, working hours, etc. The employees (i.e. users) can have access only to their department/partition, or to several.

9.4 Tip: how to locate an expander's zone

- The "All Zones" display type gives detailed information on every zone and enables the installer to quickly locate it. It is set in the User menu.

10. TROUBLESHOOTING

10.1 Restoring the Master & Installer Codes

- Restoring the factory default codes can be done only during power up and therefore the panel must be disconnected from power first.
- After power up, you have only 30 seconds to enter the default code, or you must repeat the process.

Codes that start with zero cannot be restored. Contact your local dealer if this is the case.

1. Disconnect the panel from mains.
2. Disconnect the battery, wait 10 seconds and reconnect it.
3. Wait for "Clock Not Set" to be displayed.
4. ☞ 5555 (the factory default Master code) to enter the User menu.
5. ☞ [9] and enter the new Master code (4-6 digits). ☞ [ENTR].
6. ☞ [END] to the main screen.
7. ☞ 1234 (the default Installer code) to enter the installer menu.
8. ☞ [9] and enter a new Installer code (4-6 digits). ☞ [ENTR].
9. Connect to mains.
10. Set time & date.

10.2 Faults

10.2.1 As displayed in the LCD keypads

Fault	**Cause & action**
Clock Not Set	Power failure. Set time & date (User menu>Menu #8)
Low Battery	1. Check the battery fuse. 2. Allow 24 hours for recharging (after power failure) and check again. 3. If the message stays on, replace the battery.
Low Voltage	Low DC charge that mostly occurs after long mains power failure and battery discharge. Programming is disabled when this fault occurs. To repair: connect the panel to mains and check the battery.
Mains Fault	Check the AC fuse
Tamper 1[1]	Tamper switch #1 was opened
Tamper 2[1]	Tamper switch #2 was opened
Zone Fault	In hardwired zones, zone faults are displayed only when the zone loops are EOL resistor loops. The faults are cut, and short: in the "Scan open zones" display type: F - Cut, S - Short; in the "Fast zone display" mode: FL- Cut, SH- Short In wireless zones: detector's tamper is open

1 Not in use in Captain 8.

Fault	Cause & action
KEYPAD NOT CONNECTED	No communication between the keypad and the PCB. Check the following: 1. The wire between the "OUT" terminal on the PCB and the keypad. 2. Keypad's voltage supply is lower than 13V. Verify that no more than 8 keypads are connected to the panel. 3. Keypad fault - replace it 4. Panel PCB fault - replace it
Phone Line Fault	No dial tone. Disconnect any other phone/fax connected to it and check again. Tip: the panel tests the phone line constantly.
Keypad X Fault	1. Check the ID of this keypad. 2. Check the wiring of this keypad. 3. If the ID and wiring are OK, disconnect the keypad and connect it as close as possible (50 cm max.) to the panel. If the keypad is still out-of-order, consult your dealer.
Detec. Vol. Fault[1]	The detectors voltage wires are shortened
Expander X Fault	Expander's X communication or voltage fault
Expander X Tamper	Expander's X tamper switch is open
Keypad X Tamper	Keypad's X tamper switch is open
Other Keypad in use	Another keypad is being programmed, or a remote control session is being performed
GSM-200 faults	
GSM Unit Fault	Connection or module fault
GSM Comm. Fault	Communication fault with Monitoring Station #1
GSM Link Fault	Low reception or jamming
SIM Card Fault	No SIM card is inserted or SIM card fault
GSM Com. Fault 2	Communication fault with Monitoring Station #2
 For further information on GSM-200, refer to its installation guide	
Communication faults	
W/L Unit Tamper	The I/O-WN's tamper was opened or faulty.
 For further information on the I/O-WN's communication faults , refer to its installation guide.	
Check Keypad number	Keypad's ID does not match the programmed number of keypads (see section 7.3.4)
Central Station. Com. Fault	Incompatible protocol or phone line fault. Check the following: ▪ The phone wires ▪ In the "Communication options" menu, "P - Connected T.Line" is set to "+" (see section 7.5.4). ▪ At least one Monitoring Station phone number is set (see section 7.5.3) and the numbers are correct. ▪ The account ID of Monitoring Station #1 is not zero. ▪ The communication format is compatible with that of the Monitoring Station. ▪ A prefix is set, if required.
SMS Com. Failure	The provider's SMS center is unreachable
Install SMS Unit	Install the SMS-100 module
Network Fault	Communication failure between the panel and the PIMAnet
IO-R X Fault	-
IO-R X Tamper	I/O-R X tamper is open
IO-R X Voltage	I/O-R X low voltage
Wireless Jamming	-
IO-8 X Voltage	I/O-8 X low voltage
SV: zone name	Wireless supervision: a detector is not communicating with the panel
System Error	The EPROM version and the panel's software version do not match. Contact your dealer

Fault	Cause & action
Int. siren fault[1]	The internal siren's wires are cut/shortened
Ext. siren fault[1]	The external siren's wires are cut/shortened
Video 1 fault	No communication with video module #1 (only for serial connected modules)
Video 2 fault[1]	No communication with video module #2 (only for serial connected modules)
Video 3 fault[1]	No communication with video module #3 (only for serial connected modules)
Video 4 fault[1]	No communication with video module #4 (only for serial connected modules)
Video 1 power fault	Voltage fault in video module #1
Video 2 power fault[1]	Voltage fault in video module #2
Video 3 power fault[1]	Voltage fault in video module #3
Video 4 power fault[1]	Voltage fault in video module #4
net4pro fault	No communication with the net4pro

10.2.2 Online communication monitor

- To monitor the panel's communication process with the Monitoring Station: ☞ [6] for 2 seconds and enter the Installer code at any time the panel is communicating with the monitoring station. The whole process is displayed onscreen.

10.2.3 Radio fault

- Make sure that:

1. The radio transmitter is correctly connected.
2. The radio account number is not zero.
3. The Radio format is compatible with that of the Central Station.
4. The antenna is intact, not bended and is attached vertically.
5. If the antenna is installed away from the transmitter, check the cable.

10.2.4 Private dialer failure

- To test the dialer: arm the panel, open a zone and wait for a call. Do not disarm the panel before receiving the call, because disarming immediately after alarm stops the dialer.
- Make sure that:

1. The telephone wires are connected right.
2. At least one private telephone number is set and is correct.
3. In the "Communication options" menu, "P - Connected T.Line" is set to "+" (see section 7.5.4).
4. The parameters in the "Private Dialer" menu are set correctly (see section 7.5.10).
5. A prefix is set, if required.

10.2.5 Incoming phone call failure

- If the panel does not receive calls, make sure that:

1. In the "Communication options" menu, "P - Connected T.Line" is set to "+" (see section 7.5.4).
2. The number of rings reaches its limit (see section 7.5.4.1).
3. The telephone wires are connected right.

---

1 Not in use in Captain 8.

10.2.6 Auto-arming fault

- Make sure that:

1. The auto-arming start time is set correctly (see the Hunter-Pro Series User guide).
2. The system time is accurate.
3. In auto-arming per partition, the right partition is set.

10.2.7 Tripping a zone does not activate the alarm

- Make sure that:

1. The zone is not bypassed (temporarily, by the user, or permanently, by the technician).
2. The zone response is set to trigger the sirens (see section 7.9).
3. The zone is allocated only to one partition (see section 7.9).
4. The detectors are correctly installed and wired.
5. The zone sensitivity is correct (see section 7.9).
6. Zone conditioning time is correct (see section 7.9).
7. Zone double-knock time is correct (see section 7.9).
8. Zone is not programmed as soak zone (see section 7.14.4).

11. FORMATS & CODES

11.1 Pulse (4-2)

Format	Rate (pps)	ACK (Hz)	Error Control	A	B
Ademco Slow	10	1400	Double Round	163	129
			Checksum	163	193
		2300	Double Round	163	145
			Checksum	163	209
Silent Knight Fast	14	1400	Double Round	171	129
			Checksum	171	193
		2300	Double Round	171	145
			Checksum	171	209
Franklin	20	1400	Double Round	209	129
			Checksum	209	193
Franklin	20	2300	Double Round	209	145
			Checksum	209	209
Universal High-Speed	20	2300	Double Round	83	145
Universal High-Speed	20	2300	Checksum	83	209
Radionics	40	1400	Double Round	121	129
			Checksum	121	193
Radionics	40	2300	Double Round	121	145
			Checksum	121	209

11.2 DTMF (4-2)

Format	ACK (Hz)	Error Control	A	B
DTMF	1400	Double Round	1	130
		Checksum	1	194
	2300	Double Round	1	146
		Checksum	1	210
Contact ID			0	230
PAF™	1400		0	5
	2300		0	21
NPAF™			Call your dealer	
EPAF™				

12. SUPPLEMENTARY PRODUCTS

LCD Keypads

RXN-400 - Small LCD screen
RXN-410 - Large LCD screen
RXN-400 RFID – RXN-400 with RFID reader

Communication Modules

SMS-100 - SMS Generated Via PSTN
GSM-200 - GSM/GPRS Transmitter
net4pro - Network Interface Card
TRV-100 - VHF Radio Transmitter
TRU-100 - UHF Radio Transmitter

Wireless Accessories

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

Voice Accessories

VU-20N/U - Dual Voice Message module
MIC-200 - Microphone

Led Keypads

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

Special Keypads

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

System Expanders

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

Programming Modules

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

13. APPENDIX A: HUNTER-PRO SERIES FACTORY DEFAULTS

System Installation

Service Provider Name	PIMA El. Systems
End of Service Date	00/00
Local Expander	-
Zone Doubling	-
I/O-W Expander	-
WL Supervisor Time (hrs)	12
WL Supervisor Time (min)	0
Number of Keypads	0
Number of Expanders	0
Number of Relay Expanders	0

Keypad/Part.	1-16	Show Part Name
Keypad 1-8	+	-

Zone Settings

Zone	Zone Name	Zone Type	Bypass	N.O.	24 Hour	Home 1	Home 2	Entry Delay	Entry Follower	2nd Delay	E.O.L
01	Zone 1	Burglary	-	-	-	+	+	+	-	-	-
02, 03	Zone 2/3	Burglary	-	-	-	+	+	-	+	-	-
04-X	Zone 4-X	Burglary	-	-	-	+	+	-	-	-	-

Zone	Pair	D. Knock	Bypass Enabled	not used	not used	Chime	User Bypass	WL
01 - X	-	-	+	+	+	-	-	-

Zone Types & Responses

Type / Response	Sens.	Siren	Ext. Siren	No Daytime CMS	Different Siren Tone	Auto Bypass	Audio Device
Burglary	8	+	+	-	-	-	-
Panic (*+#)	8	+	+	-	-	-	-
Fire	8	+	+	-	-	-	-
Duress	8	-	-	-	-	-	-
Medical	8	+	+	-	-	-	-
Anti Mask	8	+	+	-	-	-	-
Special Burglary 1	8	+	+	-	-	-	-
Special Burglary 2	8	+	+	-	-	-	-
Silent Panic	8	-	-	-	-	-	-
Special Fire	8	+	+	-	+	-	-

Zone Partitioning

Part./Zones->	Partition Name	Zone 1-16
1-16	Partition 1	+

Communication

Tel. Line Connected	+		Disarm After Alarm	-
Bypass Dial Tone	-		Ext. Line Access	
Line Test In ON	-		Number of Rings	10
Line Test In OFF	-		Not Used	8
Tone Dialing	+		Wait Phone for Ack (sec)	20
Answering Machine	+		Kissoff delay	0
Voice Unit	-		Auto Test Time (HH:MM)	00:00
Dis. Download	+		Phone interval Test (hrs)	24
Dis. Remote Disarm	+		ID Account Addition	0
Pre-Alarm	-		Phone Primary	+
Test report in OFF	+		GSM Primary	-
Split Account Number	-		Net Primary	-

GSM-200 Settings + PIMAnet IP		
GSM-200 TX Installed	-	
Use Radio Account	-	
Auto Test	-	
GPRS Encryption	-	
SMS Backup	-	
Wait For Ack (sec)	30	
GSM First Mode (CMS 1)	Voice	
GSM Second Mode (CMS 2)	Voice	
GPRS Test Interval (min, sec)	5	0
Station 1 Port	10001	
Station 2 Port	10001	
GPRS Station 1 IP	000.000.000.000	
GPRS Station 2 IP	000.000.000.000	
Cellular Operator No.	1	

Report codes

Report/Station->	CMS 1	CMS 2	User Phones
Phone A Format	0	0	
Phone B Format	230	0	
Burglary	+	+	+
Anti Mask	+	+	+
Special Burglary 1	+	+	+
Special Burglary 2	+	+	+
Panic (*+#)	+	+	+
Fire	+	+	+
Duress	+	+	+
Medical	+	+	+
Open/Close by Phone	+	+	-
Failures	+	+	+
Periodic Tests	+	+	
Remote Test	-	-	
Enter. Installer Code	+	-	
Open/Close By Radio	+		

SMS System Name	Alarm System
SMS Outgoing Phone	-
SMS Incoming Call ID	-

Radio format	0
Re-transmit. No.	5
Number of Frames	13
Radio Test (hrs)	24
Radio Test (min)	0

No.	Alarms (Phone & Radio)	Restore (Phone & Radio)
All zones	FF	FF

Other report codes (Phone & Radio)				
Zone Failures (ZFL)	FF		Power Failure (PF)	FF
Zone Restore (RESTR)	FF		Power Restore (RESTR)	FF
Bypass (BYP)	FF		Phone Line Failure (PHN)	FF
Tamper 1 Opened (TM1)	FF		Phone Line Restore (RESTR)	FF
Tamper 1 Closed (RESTR)	FF		Fuse Failure (FUS)	FF
Tamper 2 Opened (TM2)	FF		Fuse Restore (RESTR)	FF
Tamper 2 Closed (RESTR)	FF		Panic (*+#) (PNC)	FF
AC Failure (AC)	FF		Invalid Code (ICODE)	FF
AC Restore (RESTR)	FF		Arming (ARM)	FF
Low Battery (LB)	FF		Disarming (DISARM)	FF
Battery Restore (RESTR)	FF		Test (TST)	FF

Advanced	
CMS 1 URL/IP	
CMS 1 Port	10001
CMS 2 URL/IP	
CMS 2 Port	10001
Upload Port	10001
net4pro Web Port	10001
net4pro IP	000.000.000.000
net4pro NetMask	000.000.000.000
net4pro Gateway	000.000.000.000
net4pro DNS	000.000.000.000

Serial Output	
Home Automat 1	-
Network MS 1	-
Home Automat 2	-
Network MS 2	-
Home automation supervision interval (sec.)	5

Attempts up to Fault (net4pro)	10

net4pro	Minutes	Seconds
net4pro Test Interval (min, sec)	1	0

Cellular Operator 1	
Name	-
APN	-
Username	-
Password	-
Cell. SMS Center	-
Cellular Operator 2	-
Name	-
APN	-
Username	-
Password	-
Cell. SMS Center	-

Cellular Operator 3 - 5	
Name	GSM PROVIDER X
APN	
Username	
Password	
Cell. SMS Center	

Timers

Entry Delay 1 (sec)	20		Internal Siren Time (sec)	240		Low Battery Time (sec)	9999
Entry Delay 2 (sec)	20		Burglary Time (sec)	240		Phone Fault Time (sec)	9999
Exit Delay (sec)	60		Anti Mask Time (sec)	240		Trouble (Zone) Time (sec)	9999
Soak Test Days	3		Special Burglary 1 Time (sec)	240		Zone Bypassed Time (sec)	9999
MAINS Fail Report Delay (min)	240		Special Burglary 2 Time (sec)	240		GSM Fail Time (sec)	9999
Phone Line Fail Report Delay (min)	3		Smoke Det. Power Time (sec)	240		Communication Fail Time (sec)	9999
Burglary Report Delay (sec)	0		Fire Time (sec)	240		RFID Activating Time (sec)	240
Double Knock (sec)	30		Special Fire Time (sec)	240		Door Code Time (sec)	5
Cond. Zones Time (sec)	30		Panic Time (*+#) (sec)	240		Wireless Remote Time <*> (sec)	5
Bypass Time Limit (min)	0		Silent Panic Time (sec)	240		Test Time (sec)	5
Invalid Code Count	24		Duress Time (sec)	240		Audio Control Time (sec)	60
Inactivity Days	0		Medical Time (sec)	240		Remote Control Time (sec)	60
Output Type Times:			Tamper Time (sec)	240		Zone Open Hold Time (min)	0
External Siren Time (sec)	240		MAINS Fail Time (sec)	9999			

Responses

Response/s to Fault->	Mains Fault	Low Battery	Phone Fault	False Code	Zone, Tamper
Siren	-	-	-	-	+
Ext. siren in Disarm	-	-	-	-	+
Burglary Output	-	-	-	-	-
No CMS Reporting when Disarmed	-	-	-	-	-
Buzzer	+	+	+	+	+

General Parameters

2 States Key	-		Kpd Light On Delay	-
DC - Siren	+		Buzzer Follows Siren	-
Tamper 1	+		Enable Quick Arming	-
Tamper 1 is E.O.L. Protected	-		Cancel Delays In Home 1	-
Tamper 2	+		Cancel Delays In Home 2	-
Tamper 2 is E.O.L Protected	-		Display Alarms In Armed State	+
Key to Home State	-		EN- 50131	-
Auto-arming to Home State	-		Repeating Alarms	-
Bypass Zones In Auto. Arming	-		Display Partitions Status	-
2 E.O.L Resistors	-		Final Door	-
Siren Beep On Arming	-		Full Remote Control	-
User Code Can Access Menu	-		Report Wireless Jamming	-
Enhanced Menu	-		Partitioned Auto-arming	-
Bypass Tamper in Arming	+		Beep Siren on Disarming (Ver.6.09 and up)	-
Bypass Fault in Arming	+		Siren Protection (ver. 6.09 and up)	-
Kpd Light Always ON	+		Not Used	-
Kpd Light On Alarm	-			

Outputs

Outputs	Output Type	Polarity	Active in Disa.	Part. 1	Part. 2-16
External Siren	External Siren	-	+	+	+
Internal Siren	Internal Siren	-	+	+	+
Relay	Door Code	-	+	+	+
Smoke	Smoke Det. Power	+	+	+	+
On/Off	Armed	-	+	+	+
Alarm	Alarm- all types	-	+	+	+
Audio Control	Audio Control	-	+	+	+

OUT-1000	Output Type	Polarity	Active in Disa.	Part. 1	Part. 2-16
OUT-1000 1	Fire	-	+	+	+
OUT-1000 2	Panic	-	+	+	+
OUT-1000 3	Duress	-	+	+	+
OUT-1000 4	Medical	-	+	+	+
OUT-1000 5	Tamper	-	+	+	+
OUT-1000 6	General Fault	-	+	+	+
OUT-1000 7	Mains Fault	-	+	+	+
OUT-1000 8	Low Battery	-	+	+	+

IO-R	Output Type	Polarity	Active in Disa.	Part 1	Part 2-16
IO-R 1-X	Burglary	-	+	+	+

IO-8 Expanders	Output Type	Polarity	Active in Disa.	Part 1	Part 2-16
Expander 1-X	Burglary	-	+	+	+

Users

User	Code	Name	Disarm. Start	Disarm. End	Codes	Telephones	Date & Time	View Log	Zone Bypassing	Any Keypad	Aut. Arm. Menu
1 - X		User 1 - X	00:00	23:59	+	+	+	+	+	-	+

User	SMS Open/Close	Remote Control User	Disarm RFID & Code (Ver.6.09 and up)	RFID	Part. / User	1	2-144
1 - X	-	-	-	-	1-16	+	+

Video

Operation\Camera	1	2	3	4	5	6	7	8
Send in Disarm	-	-	-	-	-	-	-	-
Send in Full Arm	+	+	+	+	+	+	+	+
Send in Home 1	-	-	-	-	-	-	-	-
Send in Home 2	-	-	-	-	-	-	-	-
Record in Disarm	-	-	-	-	-	-	-	-
Record in Full Arm	-	-	-	-	-	-	-	-
Record in Home 1	-	-	-	-	-	-	-	-
Record in Home2	-	-	-	-	-	-	-	-
View in Disarm	-	-	-	-	-	-	-	-
View in Full Arm	+	+	+	+	+	+	+	+
View in Home 1	-	-	-	-	-	-	-	-
View in Home 2	-	-	-	-	-	-	-	-

Number of Video Units (1-2)	0
MMS per Day	5
Entry Delay Recording	-
Not in Use	-

Part.\Camera	Cam. 1	Cam. 2	Cam. 3	Cam. 4	Cam. 5	Cam. 6	Cam. 7	C
Part. 1	+	-	-	-	+	-	-	
Part. 2	-	+	-	-	-	+	-	
Part. 3	-	-	+	-	-	-	+	
Part. 4	-	-	-	+	-	-	-	
Part. 5-16	-	-	-	-	-	-	-	

Part.\Camera	Cam. 9	Cam. 10	Cam. 11	Cam. 12	Cam. 13	Cam. 14	Cam. 15	Ca
Part. 1	+	-	-	-	+	-	-	
Part. 2	-	+	-	-	-	+	-	
Part. 3	-	-	+	-	-	-	+	
Part. 4	-	-	-	+	-	-	-	
Part. 5-16	-	-	-	-	-	-	-	

14. APPENDIX B: CAPTAIN 8 FACTORY DEFAULTS

System Installation

Service Provider Name	PIMA El. Systems
End of Service Date	00/00
Zone Doubling	-
I/O-W Expander	-
Not Used	-
WL Supervisor Time (hrs)	12
WL Supervisor Time (min)	0
Number of Keypads	0
Number of Expanders	0
Number of Relay Expanders	0

Keypad/Part.	1-4	Show Part Name
Keypad 1-8	+	-

Zones

Zone	Zone Name	Zone Type	Bypass	N.O.	24 Hour	Home 1	Home 2	Entry Delay	Entry Follower	2nd Delay	E.O.L
01	Zone 1	Burglary	-	-	-	+	+	+	-	-	-
02	Zone 2-3	Burglary	-	-	-	+	+	-	+	-	-
03-16	Zone 3-16	Burglary	-	-	-	+	+	-	-	-	-

Zone	Pair	D. Knock	Bypass Enabled	Chime	User Bypass	WL
01	-	-	+	-	-	-
02	-	-	+	-	-	-
03-16	-	-	+	-	-	-

Types & Responses

Type / Response	Sensitivity	Siren	Ext. Siren	No Daytime CMS	Different Siren Tone	Auto Bypass	Audio Device
Burglary	8	+	+	-	-	-	-
Panic (*+#)	8	+	+	-	-	-	-
Fire	8	+	+	-	-	-	-
Duress	8	-	-	-	-	-	-
Medical	8	+	+	-	-	-	-
Anti Mask	8	+	+	-	-	-	-
Special Burglary 1	8	+	+	-	-	-	-
Special Burglary 2	8	+	+	-	-	-	-
Silent Panic	8	-	-	-	-	-	-
Special Fire	8	+	+	-	+	-	-

Partitioning

Part./Zones->	Partition Name	1-16
1	Partition 1	+
2	Partition 2	-
3	Partition 3	-
4	Partition 4	-

Communication

Tel. Line Connected	+		Ext. Line Access	
Bypass Dial Tone	-		Number of Rings	10
Line Test In ON	-		Not Used	8
Line Test In OFF	-		Wait Phone for Ack (sec)	20
Tone Dialing	+		Kissoff delay	0
Answering Machine	+		Auto Test Time (HH:MM)	00:00
Voice Unit	-		Phone interval Test (hrs)	24
Dis. Download	+		ID Account Addition	0
Pre-Alarm	-		Phone Primary	+
Test report in OFF	+		GSM Primary	-
Split Account Number	-		Net Primary	-
Disarm After Alarm	-			

SMS System Name	Alarm System
SMS Outgoing Phone	-
SMS Incoming Call ID	-
Radio format	0
Re-transmit. No.	5
Number of Frames	13
Radio Test (hrs)	24
Radio Test (min)	0

GSM-200 Settings + PIMAnet IP		
GSM-200 TX Installed	-	
Use Radio Account	-	
Auto Test	-	
GPRS Encryption	-	

SMS Backup	-		
Wait For Ack (sec)	30		
GSM First Mode (CMS 1)	Voice		
GSM Second Mode (CMS 2)	Voice		
GPRS Test Interval (min, sec)	5	0	
Station 1 Port	10001		
Station 2 Port	10001		
GPRS Station 1 IP	000.000.000.000		
GPRS Station 2 IP	000.000.000.000		
Cellular Operator No.	1		
Report/Station->	CMS 1	CMS 2	User Phones
Phone A Format	0	0	
Phone B Format	230	0	

Other report codes (Phone & Radio)				
Zone Failures (ZFL)	FF		Power Failure (PF)	FF
Zone Restore (RESTR)	FF		Power Restore (RESTR)	FF
Bypass (BYP)	FF		Phone Line Failure (PHN)	FF
Tamper 1 Opened (TM1)	FF		Phone Line Restore (RESTR)	FF
Tamper 1 Closed (RESTR)	FF		Fuse Failure (FUS)	FF
Tamper 2 Opened (TM2)	FF		Fuse Restore (RESTR)	FF
Tamper 2 Closed (RESTR)	FF		Panic (*+#) (PNC)	FF
AC Failure (AC)	FF		Invalid Code (ICODE)	FF
AC Restore (RESTR)	FF		Arming (ARM)	FF
Low Battery (LB)	FF		Disarming (DISARM)	FF
Battery Restore (RESTR)	FF		Test (TST)	FF

Report codes

No.	Alarms (Phone & Radio)	Restore (Phone)
1	FF	FF

Dialer reports

Report	MS1	MS2	Private dialer
Burglary	+	+	+
Anti Mask	+	+	+
Special Burglary 1	+	+	+
Special Burglary 2	+	+	+
Panic (*+#)	+	+	+
Fire	+	+	+
Duress	+	+	+
Medical	+	+	+
Open/Close by Phone	+	+	-
Failures	+	+	+
Periodic Tests	+	+	
Remote Test	-	-	
Enter. Installer Code	+	-	
Open/Close By Radio	+		

Advanced

Advanced		
CMS 1 URL/IP		
CMS 1 Port	10001	
CMS 2 URL/IP		
CMS 2 Port	10001	
Upload Port	10001	
net4pro Web Port	10001	
net4pro IP	000.000.000.000	
net4pro NetMask	000.000.000.000	
net4pro Gateway	000.000.000.000	
net4pro DNS	000.000.000.000	

net4pro	Minutes	Seconds
net4pro Test Interval (min, sec)	1	0
Attempts up to Fault (net4pro)		
10		

Serial Output	
Network MS1	
Network MS2	

Cellular Operator 1	
Name	
APN	
Username	
Password	
Cell. SMS Center	
Cellular Operator 2	
Name	
APN	
Username	
Password	
Cell. SMS Center	
Cellular Operator 3-5	
Name	GSM PROVIDER 3-5
APN	
Username	
Password	
Cell. SMS Center	

Dialer reports

Burglary	+	+	+
Anti Mask	+	+	+
Special Burglary 1	+	+	+
Special Burglary 2	+	+	+
Panic (*+#)	+	+	+
Fire	+	+	+
Duress	+	+	+
Medical	+	+	+
Open/Close by Phone	+	+	-
Failures	+	+	+
Periodic Tests	+	+	
Remote Test	-	-	
Enter. Installer Code	+	-	
Open/Close By Radio	+		

Timers

Entry Delay 1 (sec)	20
Entry Delay 2 (sec)	20
Exit Delay (sec)	60
Soak Test Days	3
MAINS Fail Report Delay (min)	240
Phone Line Fail Report Delay (min)	3
Burglary Report Delay (sec)	0
Double Knock (sec)	30
Cond. Zones Time (sec)	30
Bypass Time Limit (min)	0
Invalid Code Count	24
Inactivity Days	0
Output Type Times:	
External Siren Time (sec)	240
Internal Siren Time (sec)	240
Burglary Time (sec)	240
Anti Mask Time (sec)	240
Special Burglary 1 Time (sec)	240
Special Burglary 2 Time (sec)	240
Smoke Det. Power Time (sec)	240

Fire Time (sec)	240
Special Fire Time (sec)	240
Panic Time (*+#) (sec)	240
Silent Panic Time (sec)	240
Duress Time (sec)	240
Medical Time (sec)	240
Tamper Time (sec)	240
MAINS Fail Time (sec)	9999
Low Battery Time (sec)	9999
Phone Fault Time (sec)	9999
Trouble (Zone) Time (sec)	9999
Zone Bypassed Time (sec)	9999
GSM Fail Time (sec)	9999
Communication Fail Time (sec)	9999
RFID Activating Time (sec)	240
Door Code Time (sec)	5
Wireless Remote Time <*> (sec)	5
Test Time (sec)	5
Audio Control Time (sec)	60
Zone Open Hold Time (min)	0

General Parameters

2 States Key	-		Kpd Light On Delay	-
DC - Siren	+		Buzzer Follows Siren	-
Key to Home State	-		Enable Quick Arming	-
Auto-arming to Home State	-		Cancel Delays In Home 1	-
Bypass Zones In Auto. Arming	-		Cancel Delays In Home 2	-
2 E.O.L Resistors	-		Display Alarms In Armed State	+
Siren Beep On Arming	-		EN- 50131	-
User Code Can Access Menu	-		Repeating Alarms	-
Enhanced Menu	-		Display Partitions Status	-
Zone #8 as key switch input	-		Final Door	-
Bypass Tamper in Arming	+		Report Wireless Jamming	-
Bypass Fault in Arming	+		Partitioned Auto-arming	-
Kpd Light Always ON	+		Beep Siren on Disarming	-
Kpd Light On Alarm	-			

Outputs

Outputs	Output Type	Polarity	Active in Disa.	Part. 1	Part. 2	Part. 3	Part. 4
Siren	External Siren	-	+	+	+	+	+
Smoke	Smoke Det. Power	+	+	+	+	+	+
PGM	Alarm- all types	-	+	+	+	+	+

IO-R	Output Type	Polarity	Active in Disa.	Part 1	Part 2	Part 3	Part 4
IO-R 1	Burglary	-	+	+	+	+	+
IO-R 2	Burglary	-	+	+	+	+	+
IO-R 3	Burglary	-	+	+	+	+	+
IO-R 4	Burglary	-	+	+	+	+	+
IO-R 5	Burglary	-	+	+	+	+	+
IO-R 6	Burglary	-	+	+	+	+	+
IO-R 7	Burglary	-	+	+	+	+	+
IO-R 8	Burglary	-	+	+	+	+	+

IO-8 Expanders	Output Type	Polarity	Active in Disa.	Part 1	Part 2	Part 3	Part 4
Expander 1	Burglary	-	+	+	+	+	+

System Responses

Response/s to Fault->	Mains Fault	Low Battery	Phone Fault	False Code	Zone, Tamper
Siren	-	-	-	-	+
Ext. siren in Disarm	-	-	-	-	+
Burglary Output	-	-	-	-	-
No CMS Reporting When Disarm	-	-	-	-	-
Buzzer	+	+	+	+	+

Users

User	Code	Name	Disarm. Start	Disarm. End	Codes	Telephones	Date & Time	View Log	Zone Bypassing	Any Keypad
1-30		User 1-30	00:00	23:59	+	+	+	+	+	-

User	Aut. Arm. Menu	SMS Open/Close	Disarm RFID & Code	RFID
1-30	+	-	-	-

Part. / User	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	...	30
01	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	...	+
02	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	...	+
03	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	...	+
04	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	...	+

Silent Time (min)	0
Partition 1 -4	+
Day	Auto-arming Hours
Sunday-Saturday	00:00

Video

Operation\Camera	1	2	3	4
Send in Disarm	-	-	-	-
Send in Full Arm	+	+	+	+
Send in Home 1	-	-	-	-
Send in Home 2	-	-	-	-
Record in Disarm	-	-	-	-
Record in Full Arm	-	-	-	-
Record in Home 1	-	-	-	-
Record in Home2	-	-	-	-
View in Disarm	-	-	-	-
View in Full Arm	+	+	+	+
View in Home 1	-	-	-	-

View in Home 2	-	-	-	-
Number of Video Units (0-1)	0			
MMS per Day	5			
Entry Delay Recording	-			
Part.\Camera	Cam. 1	Cam. 2	Cam. 3	Cam. 4
Part. 1	+	-	-	-
Part. 2	-	+	-	-
Part. 3	-	-	+	-
Part. 4	-	-	-	+

15. INDEX

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

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

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

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

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

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

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