

CAPTAIN 6

6-ZONE INTRUDER ALARM SYSTEM



INSTALLATION GUIDE

System ver. 6.XX

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Default system codes:

Master: 5555

Technician: 1234

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1. INTRODUCTION

This guide provides the installation, wiring and programming instructions for PIMA's CAPTAIN 6 intruder alarm system.

The CAPTAIN 6 has many features that fits customer's individual needs, and yet it remains easy to install and simple to program and use, both by the end-user and the Technician.

CAPTAIN 6 is secured against Radio-Frequency (RF) and Electro-Magnetic Interferences (EMI).

Information on programming user codes and other end user parameters can be found in the CAPTAIN 6 User Guide.

1.1 Safety Instructions

Your CAPTAIN 6 Alarm System has been registered in accordance with EN60950 and its rules. EN 60950 requires us to advise you the following information:

1. In this alarm system hazards of fire and electric shock exist. To reduce the risk of fire or electric shock, do not expose this alarm system to rain or moisture. Pay attention: Telephone cords could be a good conductor for lightings energy.
2. Do not open the door of the alarm system. Dangerous high voltages are present inside of the enclosure. Refer servicing to qualified personnel only.
3. This alarm system should be used with AC 230V/110V, 50/60Hz, protected by anti-electric shock breaker. To prevent electric shocks and fire hazards, do NOT use any other power source.
4. Do not spill liquid of any kind onto the unit. If liquid is accidentally spilled onto the unit, immediately consult a qualified service.
5. Install this product in a protected location where no one can trip over any line or power cord. Protect cords from damage or abrasion.
6. Disconnect all sources of power supply before proceeding with the installation.
7. Do not install low voltage wires near AC power wires; they should be separated.
8. **Use only standard AC transformer.**
9. Connect the AC transformer output to the terminal block on the control panel as marked.
10. Connect the AC line cord to the terminals as marked (GND; N; L).

1.2 Version 6.10 updates

- Added feature: battery jump-start. See section 1.8.
- New PCB version C with the following major changes:
 1. The siren type jumpers have been cancelled.
 2. A new EGND (earth ground) terminal for connecting grounding was added.
 3. The AC & battery terminals are now detachable.

1.3 Power consumption

Module	Details
LCD keypad	12VDC 20mA rms
LCD keypad illuminating	12VDC 110mA 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

1.4 Signs in this guide



Warning



Note



Press briefly



Press and hold a key until a confirmation beep is sounded

1.5 Main features

- ◆ 6 alarm zones;
- ◆ Up to 2 partitions;
- ◆ Up to 4 Monitoring Station telephone numbers and 3 owner's;
- ◆ Various ways for arming and disarming: keypad, key switch, remote control auto-arming;
- ◆ 3 keypad types: LCD screen (RXN-400/410), LED (RX-6/406), graphic (RXN-700);
- ◆ 2 operating modes: Full and partial ("Home");
- ◆ System operations are fully logged, part in a non-volatile memory ;
- ◆ Various codes: Master, 8 Users, Short;
- ◆ User Code #8 can serve for Duress alarm;
- ◆ Temporary zone bypassing;
- ◆ "Chime" monitoring mode per zone;
- ◆ Built-in PSTN dialer and optional long-range radio and cellular communication;

1.6 The LCD Keypad

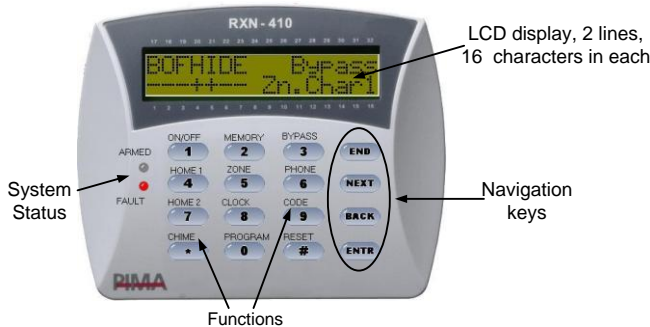


Diagram 1. LCD keypad keys and screen

- The CAPTAIN 6 is fully controlled by the LCD keypads.
- The keypads number buttons are used for accessing the user and technician menus and for programming.
- The 4 buttons on the right are used mostly for programming and menu navigation.
- The LCD screen is made of 2 character lines.

1.7 The Control panel

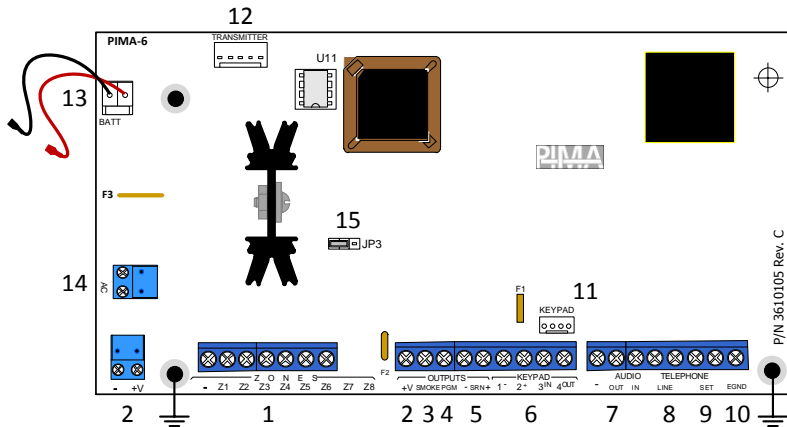




Diagram 2. CAPTAIN 6 PCB

No.	Terminal/ Connector	Description
1	Z1-Z6	6 inputs for dry contact detectors & (-) terminal
2	(+)/(-)	Power supply for PIR/ultrasonic/etc., detectors
3	SMOKE	<ul style="list-style-type: none">• Output for resetting Smoke & Fire detectors• The output is temporarily disconnected when triggered. See section 5.3.

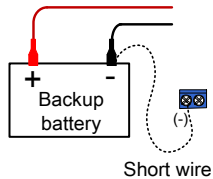
No.	Terminal/ Connector	Description
4	PGM	<ul style="list-style-type: none"> Auxiliary output. When triggered, it can be disconnected or switched to GND. See sections 5.4.3, 5.4.4.1. The output can be used to trigger the MIC-200 microphone and the VU-20N voice module.
5	SRN +/-	<ul style="list-style-type: none"> Siren Output 2 sirens can be connected to this output in parallel. See section 2.5
6	KEYPAD	<ul style="list-style-type: none"> Terminals for connecting the system BUS. The terminals are: <ul style="list-style-type: none"> (+V)/ (-): power supply IN/OUT: DATA Up to 6 keypads can be connected to the system All PIMA LED keypads can be connected to the system <p> Do not connect anything but keypads to the keypad power supply!</p>
7	AUDIO (-) /IN/OUT	Terminals for connecting the MIC-200 microphone and the VU-20 voice module. See sections 2.7, 2.7.2, 5.1.3.
8	TELEPHONE LINE	Line-in terminals
9	TELEPHONE SET	Line-out terminals for connecting phone sets, fax, etc.
10	EGND	<ul style="list-style-type: none"> 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
11	KEYPAD	A Molex connector for quick connection of the technician keypad
12	Transmitter	A connector to the TRV/TRU-100 long range radio transmitters and the GSM-200 cellular module
13	Backup Battery cables	<ul style="list-style-type: none"> RED cable: (+) BLACK cable: (-) <p> Inverting the battery contacts can damage the PCB</p>
14	AC	<ul style="list-style-type: none"> 14-16 VAC Voltage input The cross-section area of the AC cable must be at least 0.75mm²
15	JP3	EOL resistor loops jumper. See section 2.9

1.7.1 Current limit thermal fuses

Fuse	Details
F1	0.9A, siren power supply
F2	750mA, Keypads and detectors power supply
F3	Battery

1.8 Battery jump-start

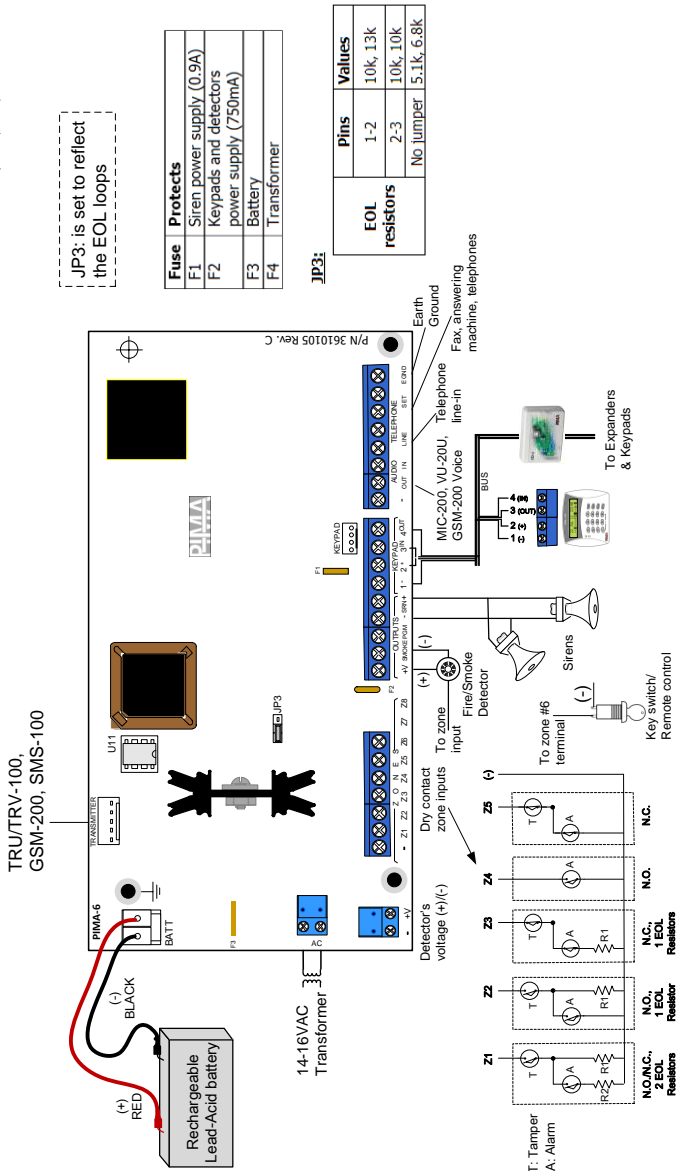
- Starting PCB version 3610105 Rev. B., during AC fault, if the backup Battery's voltage drops under 8V, the control panel disconnects it to prevent full battery discharge. This feature extends the battery life cycle.
- Because of this, the control panel cannot be powered up using only the battery, and must be connected to AC voltage first.
- When AC voltage is not available, you can power up the panel by following the next steps:
 - Connect the control panel to the Battery.
 - Briefly short the Battery's (-) terminal to the control panel's (-) terminal. See the diagram.
 - The control panel will now power up.



2. CONNECTING AND WIRING



Warning. High voltage!
Disconnect AC power and telephone line prior to servicing



JP3: is set to reflect the EOL loops

Fuse	Protects
F1	Siren power supply (0.9A)
F2	Keypads and detectors power supply (750mA)
F3	Battery
F4	Transformer

JP3:

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

Diagram 3. CAPTAIN 6 wiring diagram

2.1 The system's BUS

- The system's BUS is made of 4 wires: 2 for Power - (+)/(-) and 2 for DATA - (IN)/(OUT).
- The BUS uses PIMA proprietary protocol.
- The overall length of the BUS cannot exceed 500 meters. Call PIMA support when a longer distance is required.

2.2 Z1-Z6 zones and power

2.2.1 Common zone wiring

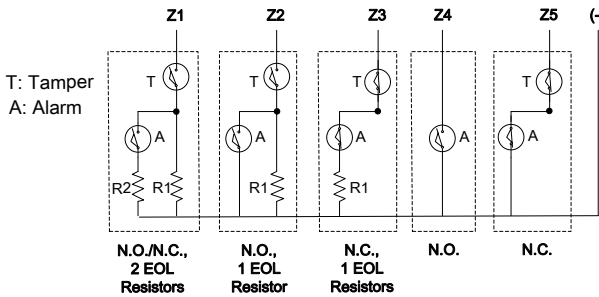




Diagram 4. Optional zone wiring

2.2.2 EOL resistor loops

- To set a zone as an EOL resistor loop, see the "Zone Characteristics" menu, section 5.1.2.
- Set the number of EOL resistors (one or two) per system, in the "Config. 5" menu. See section 5.4.4.1.

2.3 SMOKE output

- Connect smoke or fire detector's power between this terminal and (+).
- When the alarm is set off, the output is disconnected for a minute to reset the detector.

- To manually reset the output,  

2.4 PGM output

- Connect devices that require a trigger to operate, between this terminal and (+).
- Can also be used for indicating on alarms and faults with lamps, vocal modules, etc.

2.5 SIREN output

- You can connect DC siren or Horn to the SRN (+)/(-) terminals. See the next diagram.
- The siren's type is determined by the siren tone, which is programmable. See section 5.3.
- A second siren can be connected in parallel. See the next diagram.

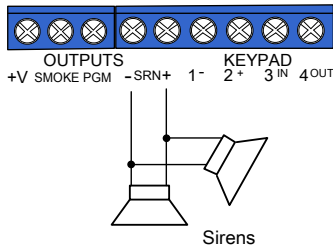
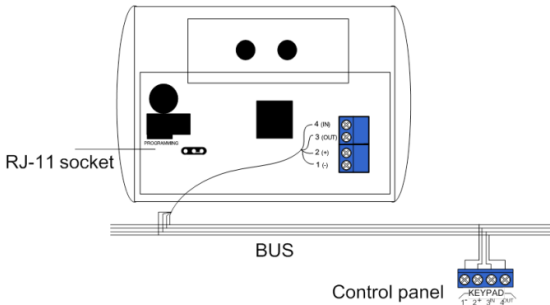


Diagram 5. Siren wiring

2.6 KEYPAD

- Keypads are connected to the control panel’s KEYPAD terminals over the BUS. See the next figure and table.



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

Diagram 6. Keypad wiring



- The keypads power should only be used for keypads and expanders.
- The BUS wires should not be passed too close to telephone wires.

2.7 AUDIO

2.7.1 MIC-200

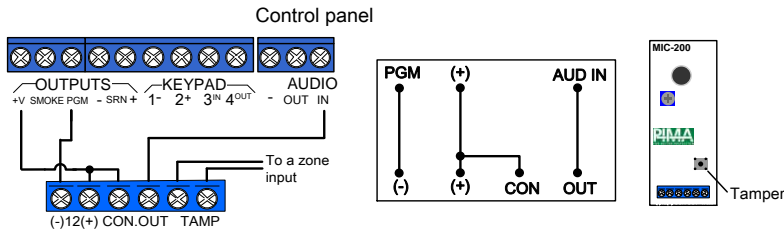


Diagram 7. MIC-200 wiring diagram

- The MIC-200 is a microphone that is used for listen-in, when the alarm is set off.
- To program a zone to activate the MIC-200, follow the next steps:

- In the "Zone responses" screen (see section 5.1.2), go to the zone that should activate the MIC-200 and set "G" (PGM) to "+". This will set the zone to trigger the PGM output, to which the MIC-200 is connected, when the zone is triggered.
- In the "Config 3" (see section 5.4.3) set "G" (delayed PGM) to "+"¹. This will delay the triggering of the PGM output, so the dialer can call the subscriber first.

2.7.2 VU-20(U)

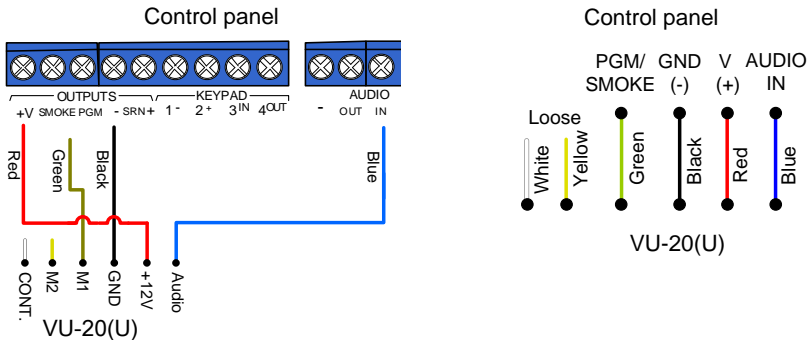


Diagram 8. VU-20(U) wiring diagram. The Yellow & white wires are not in use!

- The VU-20(U) is a voice module that can play a recorded message over the phone, when the alarm is set off.
- The message is played instead of the synthesized siren sound and can contain, for example, the zone name where the alarm was set off.
- The trigger to the voice module can come from either the SMOKE or PGM outputs.
- To program a zone to trigger the VU-20U, follow the next steps:
 - In the "Zone responses" screen (see section 5.1.2), go to the zone that should trigger the VU-20U and set "G-PGM" or "F-Fire" to "+", so the zone will trigger the PGM/SMOKE output, to which the VU-20N will be connected, when the zone is triggered.
 - If the module will be triggered by the PGM output, in the "Config 3" screen, set "V-Voice unit" and "G-delayed PGM" to "+" (see section 5.4.3).
 - If the module will be triggered by the SMOKE output, in the "Config 5" screen, set "S-delayed SMOKE" to "+" (see section 5.4.5).
 - This will cause the control panel to play the recorded messages and to delay the triggering of the output.

¹ You cannot program a delay for the PGM output and the SMOKE output together. In such a case, the system ignores the SMOKE delay.

2.7.2.1 Recording a message

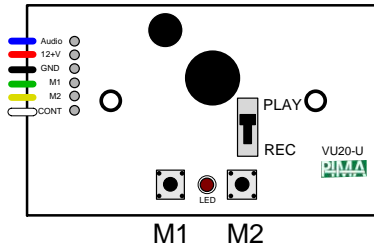


Diagram 9. VU-20(U) module

1. Switch the module's REC/PLAY button to the REC position (down).
11. Press and hold the M1 or M2 buttons (the red LED should illuminate) wait one second (for the recording to start) and record your message. Speak up loudly and clear, 20 cm away from the module. The message should not exceed 20 seconds.
12. When you finish recording, release the button and switch the REC/PLAY button back to "PLAY".
13. Test your recording by triggering an alarm.

2.7.3 Connecting the GSM-200

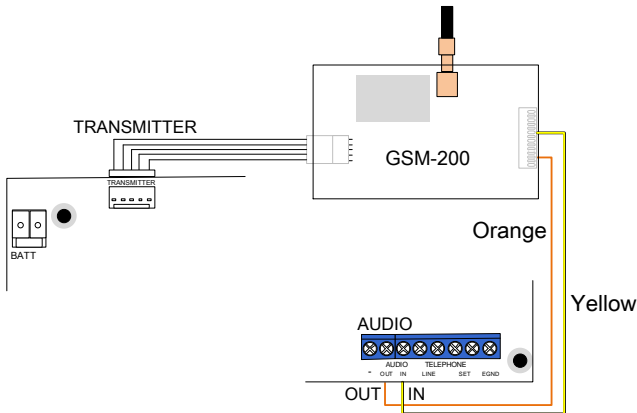


Diagram 10. GSM-200 wiring

- The GSM-200 is PIMA's cellular module.
- To connect GSM-200:
 - Connect the GSM-200 YELLOW wire to AUDIO IN;
 - Connect the ORANGE wire to AUDIO OUT;
 - Connect the serial wire braid between the module and the TRANSMITTER terminal on the control panel.

2.7.4 TELEPHONE

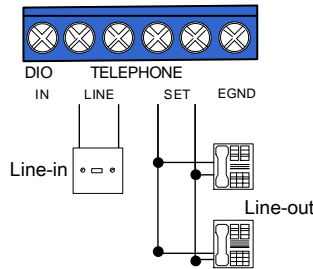


Diagram 11. Telephone wiring

- Connect the telephone line wires TELEPHONE LINE terminals.
- Use the SET terminals to connect other telephone sets, fax or answering machine to the SET terminals.
- This setup enables the control panel to disconnect the SET terminals and make a phone call, when an alarm is set off or a fault occurs.

2.7.4.1 The system dialer

- The CAPTAIN 6 includes a dialer for calling the Monitoring Station and the end user, via PSTN or GSM networks.
- The dialer first calls the Monitoring Station (if you are a subscriber), then the end user; each number is called twice and a synthesized alarm or voice message (if a VU-20 voice unit is in use) is sounded.
- The dialer terminates the calling cycle in the following circumstances:
 - The system is disarmed;
 - All calls were completed (2 calls per number).

2.8 TRANSMITTER

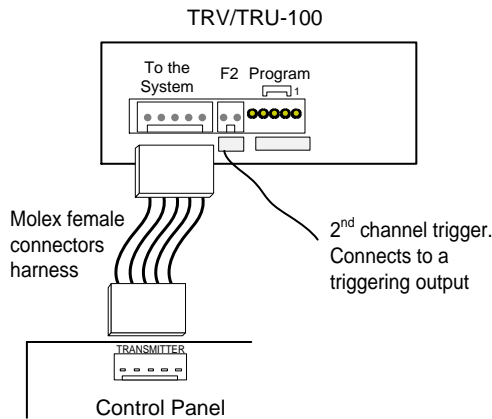




Diagram 12. Radio transmitter wiring


- The TRANSMITTER terminal is used for connecting (one by one) PIMA’s TRV/TRU-100 long-range radio transmitters, The GSM-200 cellular module and the SMS-100 module.
- To use the radio transmitters, connect them between the “To the system” terminals and the control panel’s TRANSMITTER socket.
- To use the second channel², connect the wire to a triggering output, e.g., PGM.

2.9 JP3: EOL resistor jumper


- Set the JP3 jumper, according to the EOL resistor loops. See the next table.

Resistors (KΩ)	Short pins
10, 13 (default)	
10, 10	
5.1, 6.8	No jumper

2.10 AC

- The cross-section area of the AC wires must be at least 0.75mm².
 - The hole through which the main cable passes must have either a grommet or bushing.
 - The wires must be tied together with a cable tie. The flammability of the cable tie must be UL 94 V-2 or better.
 - Connect the wires to the AC terminals of the transformer housing.
 - Check the continuity between the PCB grounding holes and the grounding of the premises. The resistance must be less than 1Ω.
- 
 - **The AC voltage must be supplied from a transformer (2A/16VAC). Do not connect the control panel to a direct power source!**
 - **The system should be connected to an automatic circuit breaker.**
 - **If Earth Grounding is required, connect it to the EGND terminal on the PCB. See section 1.7.**

2.11 BATTERY

- Connect a rechargeable Lid-acid 12V battery.
- The charging voltage is 13.8VDC.
- The system performs a load test in the following:
 - Every time it is armed;
 - Every 4 hours;
 - Upon connecting to power;
 - The battery’s voltage is checked every 3 minutes;
- To manually test the battery - 
- If the test fails, the system will respond as programmed in the “System responses” screen - sounding the siren, calling the Monitoring Station, etc. See section 5.1.3.

² The second channel must be in the same range (VHF or UHF)

2.12 Zone #6 as key zone

- Zone #6 can be used for connecting dry contact key switch, remote control, etc.
- Connect the accessories between zone #6 input and a (-) terminal.
- Program zone #6 as "Normally Open" (see section 5.4.3).
- IF you connect a key, set it as momentary or latch type (see section 5.4.3).
- For better protection, it is recommended to connect a 10K Ω EOL resistor in serial to the key/remote control.

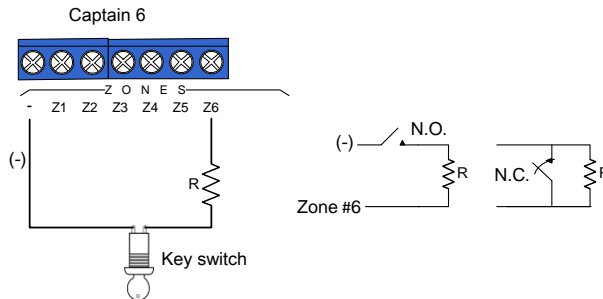


Diagram 13. Key switch wiring

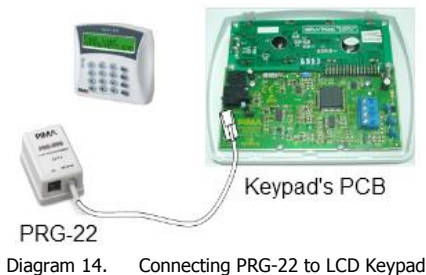
3. PROGRAMMING OPTIONS

There are 3 ways to program the system:

1. Locally, with the PIMA Fast programmer PRG-22. The programmer can store up to 4 predefined parameter sets.
14. Locally or remotely (via telephone or the GSM-200 DATA channel), using PIMA's COMAX Upload/Download application.
15. Via an LCD keypad.

3.1 Via the PRG-22

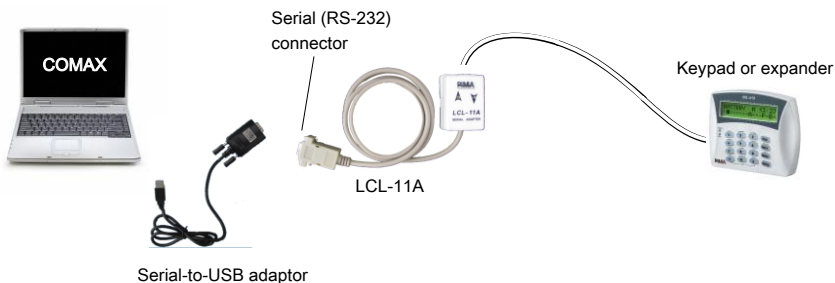
- The PRG-22 is a memory card used for storing parameter sets for fast downloading and quick installation.
- The sets are uploaded by the COMAX application.
- The PRG-22 can store up to 4 different presets.
- It connects to LCD keypads only. Do not connect the PRG-22 to a LED keypad. It may damage the programmer.
- For downloading instructions, see section 5.8.2.



3.2 Via the COMAX

3.2.1 Locally

- Connect the PC/laptop with the COMAX upload/download application to an LCD keypad, using the LCL-11A adaptor. See the diagram.
- If required, use a Serial-to-USB adaptor to connect the LCL-11A to a USB socket.
- In the keypad, enter the Master code and press ENTR ("Are you sure?")->NEXT->ENTER.
- Start downloading data via the Comax.



3.2.2 Remotely

- The CAPTAIN 6 can be programmed remotely, via the telephone, using the COMAX.
- Refer to the COMAX guide for information.

3.2.3 Via an LCD Keypad



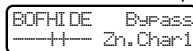
Diagram 16. LCD screen

- The most common way to program the CAPTAIN 6 is via an LCD keypad.
- The system has two menus: User and Technician, each with its own screens:
 - The User menu is used to program parameters such as time, date and user codes. To access it, enter the MASTER code.
 - The Technician menu contains all the technical and the reporting parameters.
- In both the User and Technician menus, the various screens are accessed by pressing the number keys. Some menus have sub-menus.
- Press **NEXT** / **BACK** to scroll between the number menus and between parameters.
- Press **ENTR** to access the menu, and again, to access sub-menus and store parameters.
- Press **END** to discard changes and exit the menus.

3.2.4 Parameters bar

- In some screens, multiple parameters appear as an options bar.
- The parameters, represented by letters, are either marked with "+", i.e. are enabled, or

marked with "-", i.e. are disabled. For example:



- A short description of the parameter is displayed briefly on the right side, as the cursor is moved. In the previous example, the parameters are zone #1 characters and the current parameter is Bypass.
- Press **NEXT** / **BACK** to scroll between the parameters on the same screen.
- Press **#** (toggle mode) to set as "+" (enable) or "-" (disable).
- To save and move the cursor to the next parameter, press **ENTR**
- In the zone characters screens, press a number between 1-6 to display the desired zone, or press ***** to display the next zone without saving.

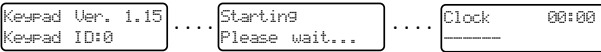
3.2.5 Default factory codes

CAPTAIN 6 factory default codes are as follows:

Master: 5555 Technician: 1234

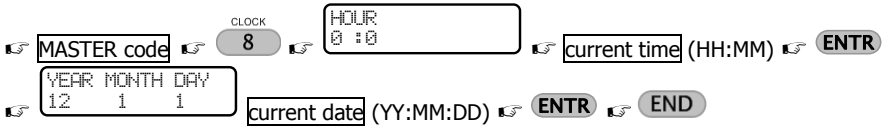
3.3 Initializing the keypad




- Upon connecting the keypad to power a long tone is sounded, followed by the next

initialization screens: 

- The first screen displays the keypad version and ID.
- The third is the system's main screen. It shows the hour and the zones' status indicators.
- The word "Clock" and the flashing hour indicate that the time is not set and that it should be (see section 3.4). Because of that, the RED Fault LED will be flashing. Other faults, if exist, will also be displayed.

3.4 Setting date & time



- The system time must be accurately set for the system to log the events and report them with a time stamp.
- Use  /  to correct data, or press  and start again.

4. THE TECHNICIAN MENU

- To access the Technician menu: **Technician code** - **OR** -

MASTER code SERVICE **NEXT** **Technician code**

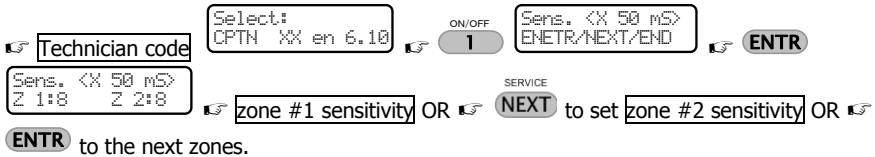
- The following is a table with the keypad's keys and their function.

Key	Function	Page
<small>ON/OFF</small> 1	Zone sensitivity	22
<small>MEMO.</small> 2	Zone characteristics	22
<small>BYPASS</small> 3	Zone responses	23
<small>SERVICE</small> NEXT	Zone name	23
<small>HOME 1</small> 4	Subscriber ID	24
<small>SERVICE</small> NEXT	GSM Unit	26
<small>ZONE</small> 5	Report codes (PSTN)	27
<small>SERVICE</small> NEXT	Report codes (Radio)	27
<small>PHONES</small> 6	Monitoring Station phone numbers	28
<small>SERVICE</small> NEXT	Phone line	28
<small>HOME 2</small> 7	Siren and SMOKE outputs	28
<small>CLOCK</small> 8	System configuration (6 screens)	29
	ENTR Config. 1	29
	ENTR Config. 2	29
	ENTR Config. 3	30
	ENTR Config. 4	30
	ENTR Config. 5	31
<small>CODES</small> 9	Config. 6	32
	System responses	32
<small>CHIME</small> *	Delay times	34
<small>SERVICE</small> NEXT	User partitions	34
<small>PROG.</small> 0	Technician code	35
<small>RESET</small> #	System defaults	35
<small>SERVICE</small> NEXT	Fast load (1-4)	35

5. PROGRAMMING THE SYSTEM

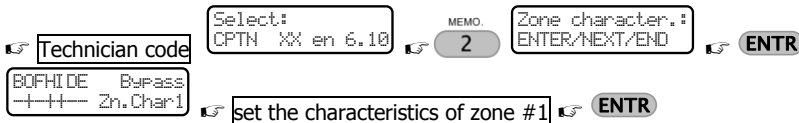
5.1 Zones

5.1.1 Zone sensitivity



- Zone sensitivity is the time in milliseconds a zone must be triggered, before it can trigger the alarm. If the zone is opened for a shorter time, the control panel ignores that.
- Zone sensitivity is set per zone.
- The sensitivity is set in a number that is multiplied by 50. For example, entering "8" means a sensitivity of 8 times 50, that is 400 milliseconds (0.4 seconds).
- The minimum triggering time is 50 milliseconds and the maximum is 12,500 (12.5 seconds). In the values that can be set, the minimum is "1" and the maximum is "250".
- The zone sensitivity is set in increments of 50 milliseconds (0.05 seconds).

5.1.2 Zone characteristics

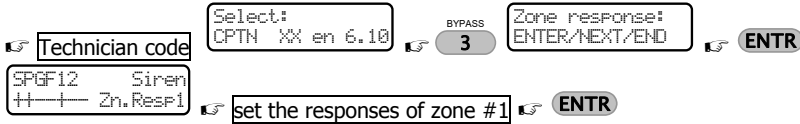


- Set the characteristics of each zone: delay, N.O./N.C., etc.
- The first screen is zone #1 screen. You can enter any other zone number and program its characteristics. (See how in section 3.2.3).
- To confirm and progress to the next zone, **ENTR**
- The characteristics are set per zone independently.
- To progress to the next zone without saving, **CHIME ***
- The following is a description of the zone characteristics:

Par.	Onscreen	Characteristic description
B	Bypass	The zone is permanently bypassed and will not trigger the alarm at any time, if violated.
O	N.O.	"Normally Open" zone
F	24 Hours	24-hour zone. The zone will trigger the alarm at any time, if violated, regardless of system state: Armed, Disarmed, or Home
H	Active in "Home" mode	The zone will be armed when the "Home" mode is armed.

Par.	Onscreen	Characteristic description
I	Entry delay	Triggering this zone will be delayed to the extent of the Exit or Entry delay, before it triggers the alarm.
D	Entry follower	If triggered, as long as any delayed (Entry & Exit) zone is open, this zone will not trigger the alarm.
E	End-Of-Line	This zone is connected over EOL resistor loop.

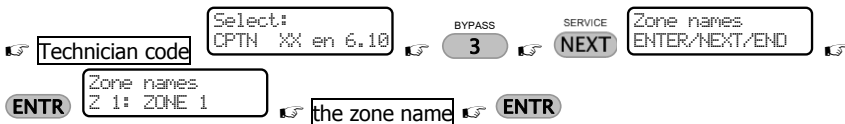
5.1.3 Zone responses



- Set the responses of each zone when it is violated.
- The first screen is zone #1 screen. You can enter any other zone number and program its responses. (See how in section 3.2.3).
- To confirm and progress to the next zone, **ENTR**.
- The responses are set per zone independently.
- To progress to the next zone without saving, **CHIME ***.
- If both partitions #1 and #2 are active, the programmed zone will be triggered only when both partitions are armed.
- The following table describes the zone responses:

Par.	Onscreen	Response description
S	Siren	Trigger the siren/s
P	Communic.	Report the Monitoring Station and the end user over the phone (PSTN and/or GSM or the Radio).
G	PGM	Trigger the PGM output
F	Fire	Trigger the SMOKE output. The GND connection of the output will be disconnected for one minute.
1	Partition #1	"+": allocate the zone to partition #1
2	Partition #2	"+": allocate the zone to partition #2

5.1.4 Zone name



- A zone name can have up to 8 characters.
- See section 10 for instructions on how to enter text in CAPTAIN 6.

5.2 Monitoring Station communication parameters

Technician code	Select: CPTN XX en 6.10	HOME 1 4	Subscriber I.D ENTER/NEXT/END	ENTR
Subscriber I.D Ph:0 Rad:0	ENTR	Db1Ref. or Part. Ph:0 Rad:0	ENTR	Station Format: 0 0 <T=0
Ack Time(sec) 20 Radio Trans. 5	ENTR	Kissoff Delay 0	ENTR	Frames in Tr. 13
Auto test hour 0 :0	ENTR	Auto test time 0 hr. 0 min	ENTR	GSM Unit ENTER/NEXT/END
GERTP GSM Exists 	ENTR	GSM Pre Number	ENTR	END

5.2.1 PSTN & Radio subscriber IDs, Double Report

Technician code	Select: CPTN XX en 6.10	HOME 1 4	Subscriber I.D ENTER/NEXT/END	ENTR
Subscriber I.D Ph:0 Rad:0	ENTR	"Ph" - set the PSTN subscriber ID for Monitoring Station #1/Partition		

SERVICE #1	NEXT	"Rad" - set the Radio subscriber ID	ENTR	Db1Ref. or Part. Ph:0 Rad:0	END
---------------	------	-------------------------------------	------	--------------------------------	-----

to exit

-OR-

set the same parameters for Monitoring Station #2 ("Double Report") or Partition #2	ENTR
---	------

- In CAPTAIN 6, you can program a separate subscriber ID for the PSTN and the Radio reports.
- A subscriber ID can have up to 4 digits.
- The "Double Report/Partition" screen enables you to program a second ID if the control panel reports to a second Central Monitoring Station, or if Partition #2 is in use. The options of using the second IDs are listed in the next table.



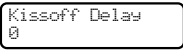





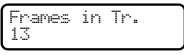

- **I.D=0 is as if no subscriber number is programmed**
- **The largest subscriber number for the PIMA format is 8000.**


5.2.2 Station format, ACK, Kissoff delay

Technician code	Select: CPTN XX en 6.10	HOME 1 4	Subscriber I.D ENTER/NEXT/END	ENTR X3
Station Format: 0 0 <T=0	ENTR	the PSTN format ³ ("0 0") and Radio station number ("T")		
Ack Time(sec) 20 Radio Trans. 5	ENTR	set the ACK waiting time (in seconds) and the Radio re-transmission		

³ To use ContactID, set the format to "0 230".

number  **ENTR**    set the waiting for Kissoff delay (in 250ms increments)

per number)  **ENTR**    set the number of frames per radio transmission

(min 1, max 13, recommended 10 - 13)  **ENTR**

5.2.2.1 Station format

- The Central Monitoring Station format in CAPTAIN 6 is set by 3 numbers: 2 for the PSTN format and one for the Radio station number.
- "0 230" is Ademco® ContactID protocol. See the full format list in "Appendix B", from page 43.
- The "T" parameter in this screen stands for the Radio station number, given by the Monitoring Station.

5.2.2.2 ACK waiting time & Radio re-transmissions

- Set the ACK waiting time. Minimum waiting time: 20 seconds. Maximum: 60.
- The ACK is a signal sent from the Monitoring Station, indicating that the recipient is ready to receive data.
- Set the number of the long-range Radio re-transmissions per event. The default (and minimum) number is 5. The duration between the transmissions is 10 seconds, and cannot be changed.


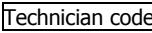

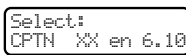





5.2.2.3 Kissoff delay


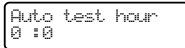


- Set the delay time for the Kissoff tone, i.e., the tone that indicates data has been received in the Monitoring Station. If the tone is not received, the panel will report again.
- The delay is set in 250msec increments. For example, setting the delay to 8 means, $8 \times 250 = 2000 \text{ msec}$ (2 sec.).


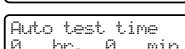


5.2.2.4 Frames per transmission

- Set the number of frames per Radio transmission (min 1, max 13, recommended 10 - 13).

5.2.3 Automatic communication tests

         **ENTR** X7

   set the daily time for sending test reports in HH:MM format  **ENTR**

   set an interval for sending test reports in HH:MM format  **ENTR**

- Set the daily time for the alarm system to perform an automatic communication test with the Monitoring Station.
- The time is set in HH:MM format and is valid for the Radio tests as well.
- If the phone test fails, a report is generated.

⁴ The delay between the transmissions is 10 sec. and is not programmable.

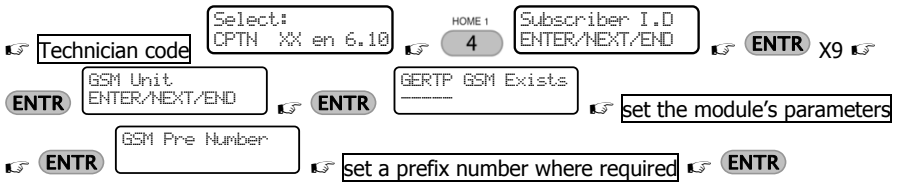
5.2.3.1 Auto test interval

- Set an interval for the alarm system to perform automatic communication tests with the Monitoring Station.
- The time is set in HH:MM format, i.e., every X hours and Y minutes.



You can set an interval as well as daily tests.

5.2.4 GSM-200 cellular module



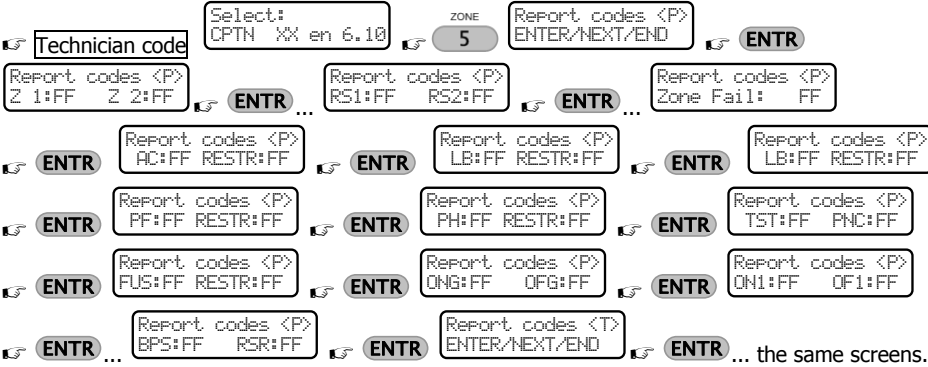
- By default, the GSM module uses the same account ID as the PSTN channel.
- For information on how to install the GSM-200, turn to the GSM-200 Installation guide.
- The GSM-200 parameters are:



Par.	Onscreen	When settings to "+/-"...
G	GSM Exist	The GSM-200 is installed
E	Open Rep. Imd	<ul style="list-style-type: none"> "+": Arming/Disarming reports will be sent via the GSM module after one PSTN failure "-": Arming/Disarming reports will be sent via the GSM module only after 4 successive PSTN failures <p>Regardless of parameter "E", when the alarm system fails to report via the PSTN channel, the events are immediately transmitted via the GSM one, until the PSTN channel is reinstated.</p>
R	Radio Account	<ul style="list-style-type: none"> "+": The GSM reports will be sent with the Radio account I.D. "-": The GSM reports will be sent with the PSTN account I.D.
T	Automatic Test	Automatic test reports will be sent via the GSM module too
P	Parallel (report)	All PSTN reports will be sent via the GSM module too




5.2.4.1 GSM pre number

Set a pre number (prefix) if the GSM module dials over a switchboard or phone system, or as an area code.

5.2.5 Reporting codes




- Set the telephone <P> and Radio <T> reporting codes. The codes are the same.
- The default "FF" codes are to be used with the following formats: ContactID, PAF, NPAF. All other formats require specific other than "FF" codes.
- A code is made of one or two digits. Each digit can take on the values 0 through 15, whereby the values of 10 through 15 are represented by the letters A-F as follows: A-10, B-11, C-12, D-13, E-14, F-15.
- These values are entered using the  key, as follows:
 1. To obtain a digit between 0-9, press the corresponding key.
 16. To obtain a letter between A-F, press the  key until the desired letter is obtained.
- The default codes are as follows:

Code	Report
Z1, Z2... Z6	Alarm generated in zones 1 - 6.
RS1, RS2... RS6	Restore report for zones 1 - 6. The report is sent at the end of the siren time, or when the system is disarmed immediately after alarm.
Zone Fail	Zone fail
AC/RESTR	AC fault/Restore
LB/RESTR	Low battery/Restore
PF/RESTR	Low PCB voltage (less than 9V)/Restore
	 This code usually indicates that the battery is low and must be replaced immediately.
PH/RESTR	Telephone fault/ Restore
TST	Test report (automatic/manual)
PNC	Panic code pressed  + 
FUS/RESTR	Zone power fault/Restore
ONG/OFG	System was armed/disarmed with a code other than a user code
ON1-8 OFF1-8	System was armed/disarmed using user code 1-8
BPS/RST	System was armed with bypassed zones

5.2.1 Central Monitoring Station telephones, rings

☞ Technician code	Select: CPTN XX en 6.10	PHONES 6	Station Phone: ENTER/NEXT/END	☞ ENTR
☞ Telephone 1:	☞ enter the first number	ENTR	☞ enter the other numbers	ENTR
☞ PRE-NUMBER:	☞ set a prefix if necessary	ENTR	☞ Phone line: ENTER/NEXT/END	ENTR
☞ No. of rings : 10	☞ set the rings number	ENTR		

- Set up to 4 telephone numbers of the Central Monitoring Station.
- The dialer attempts to call the numbers in the order as programmed, 2 trials per number, 8 altogether. If all trials fail, a communication fault report is generated and the Red FAULT Led will be flashing.
- When dialing through a switchboard, press  after the access digit (e.g. 8) for a 1 second delay.

5.2.1.1 Pre-number

- Set a pre-number (prefix) if necessary.
- Setting a pre number increases the number of digits available for the Monitoring Station telephone numbers from 16 to 22.

5.2.1.2 Number of rings

- The number of rings before the control panel pick up a call is set for the COMAX upload/download software.
- Usually, there is no need to change the default number of rings (10).

5.3 The SIREN and SMOKE outputs

☞ Technician code	Select: CPTN XX en 6.10	HOME 2 7	Siren & Smoke ENTER/NEXT/END	☞ ENTR
☞ Alarm time [sec] 240	☞ set the SIREN output tripping time (in sec.)	ENTR		
☞ Smoke time [sec] 60	☞ set the SMOKE output disconnection time in sec.)	ENTR		
☞ Alarm tone: 0	☞ set the siren tone (0-10)	ENTR		

- Set the SIREN and SMOKE outputs timers.
- The SMOKE output timer is the time the output is disconnected for the detector to be reset.
- The siren's tones 0-9 are various tones for DC sirens.
- Set to tone #10 when using a self-driven siren. The control panel disconnects the voltage to the SIREN output in alarm.

5.4 System configuration

- The System configuration is a set of 8 consecutive screens that includes various parameters for configuring the CAPTAIN 6 alarm system.

5.4.1 Config 1

- See section 3.2.4 for programming instructions of the parameters bar.

Par.	Onscreen	When setting to "+"
P	Phone	The control panel is connected to telephone line.
P	TrgTst-P	While the system is armed, the control panel will send a TEST report by the phone, in response to 2 phone rings.
T	TrgTst-T	While the system is armed, the control panel will send a TEST report by the Radio, in response to 2 phone rings.
P	AutTst-P	The system will send a periodic TEST report by the phone. See section 5.2.3.1
T	AutTst-T	The system will send a periodic TEST report by the Radio. See section 5.2.3.1
B	AutoBYpS	A zone that triggers the alarm 3 consecutive times will automatically be bypassed until the system is disarmed.

5.4.2 Config 2

- See section 3.2.4 for programming instructions of the parameters bar.

Par.	Onscreen	When setting to "+"
T	DialTnBp	<ul style="list-style-type: none"> The system will not wait for a dial tone before dialing. This is useful for "noisy" telephone lines
D	Delayed On	<ul style="list-style-type: none"> Arming the system will be delayed until a confirmation message is received from the Monitoring Station The message "Message received" will then be displayed on the LCD keypads
Z	Zone Disp	<ul style="list-style-type: none"> While the system is armed, LCD keypads will display the zone status LED keypads display open zones regardless of the system state
B	BZR-ALARM	The keypad's Chime will sound beeps when the alarm is triggered
R	RST BY ZN	<ul style="list-style-type: none"> "+": The control panel will report "restore" when the zone is closed. "-": The control panel will send Restore report after siren time ends. <div> <p>Do not enable this parameter when using the PAF format</p> </div>

Par.	Onscreen	When setting to "+"
T	Tone Dial	<ul style="list-style-type: none"> "+" The control panel will use tone dialing "-" The control panel will use pulse dialing

5.4.3 Config 3

X3:

- See section 3.2.4 for programming instructions of the parameters bar.

Par.	Onscreen	When setting to "+"
S	Not in use	-
D	Dnld. Disa	<ul style="list-style-type: none"> Remote access via the Comax is disabled by default (the parameter is set to "+") To enable it: <ol style="list-style-type: none"> Set the parameter to "-". On the first time remote access is required, when calling the system, the end user must enter the MASTER code and press the ENTR key twice. This procedure is valid for 4 minutes only. After that, if access has not been established and is still required, it must be repeated.
V	VoiceUnit	<ul style="list-style-type: none"> A VU-20N/U voice module is connected to the system. Instead of sounding the synthesized alarm tone when calling the customer, a recorded message will be played. In addition to enabling this parameter, set to "+" "G - Del. PGM" in this screen and "G - PGM" in the "Zone responses" screen (see section 5.1.3).
K	Zone6=key	Zone #6 is set as KEY switch input.
K	Key=State	<ul style="list-style-type: none"> "+": The KEY switch is set as 2-state key (ON/OFF, toggle). "-": The KEY switch is set as momentary/wireless remote key.
G	Del. PGM	<ul style="list-style-type: none"> Delayed PGM: the PGM output will be switched to "-" only after the system completes dialing, so that the voice module recorded message will not be played before the call is answered.

5.4.4 Config 4

X4:

- See section 3.2.4 for programming instructions of the parameters bar.

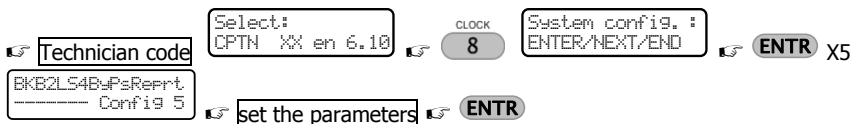
Par.	Onscreen	When setting to "+"
L	Line Check	The system will perform periodic dial tone checks when it is armed ⁵
L	Chk in off	The system will perform periodic dial tone checks when it is disarmed
D	Dbl rept	"Double report" parameter. See the following section
A	Reprt all	"Double report" parameter. See the following section
S	Smke inv.	<ul style="list-style-type: none"> The smoke output will normally be disconnected, and switched to GND when the alarm is set off. To set the output's trip time, see section 5.3.
S	2 rng snp	<ul style="list-style-type: none"> 2-ring line snapping ("Answering machine override") is enabled. The process of calling the control panel is as follows: <ol style="list-style-type: none"> Call the system, wait for 2 rings and hang up; Wait 10 seconds; Call the system again; The system will pick up the call immediately.

5.4.4.1 Double report parameters (D/A)

- The next table describes to two "Double report" parameters taken from the "Config 4" previous screen.
- When "Double report" is enabled, telephone numbers #1 & #2 of the Monitoring Station will be of station #1, and numbers #3 and #4 will be of station #2 (see section 5.2.1).

D	A	Description
-	-	No "Double report"
+	-	"Double report" as follows: <ol style="list-style-type: none"> All events are reported to Monitoring Station #1; Monitoring Station #2 is reported only on arming, disarming, faults and tests.
+	+	"Double report" is fully enabled: all events are reported to Monitoring Station #1 & #2

5.4.5 Config 5



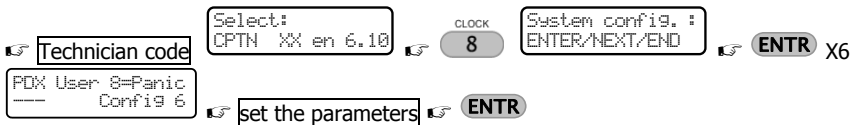
- See section 3.2.4 for programming instructions of the parameters bar.

Par.	Onscreen	When setting to "+"
B	ByPsReprt	Bypassing a zone will be reported to the Monitoring Station
K	RX130Kbrd	The RX-130 keypad is in use. This keypad cannot be used together with the RXN-406 or the RX-6 LED keypads.
B	ByPsRqest	The system cannot be armed if any zone is open, including "Delayed" and "Entry Followers" zones.
2	EOL 2 Res	All EOL resistor loops have 2 resistors and can indicate on cut and short.

⁵ Regardless of this parameter and the next one, the control panel checks the line voltage every time it is armed and disarmed, and once every 24 hours.

Par.	Onscreen	When setting to "+"
L	Listen-in	<ul style="list-style-type: none"> A MIC-200 microphone is connected to the control panel. The microphone will be triggered via the PGM or SMOKE outputs (see section 5.3). This feature can be triggered only in the ContactID® protocol. The trigger for the listen-in is 3 minutes long.
S	Del.Smoke	SMOKE output delay. See section 5.3
4	RXN-406	The RXN-406 or RX-6 keypads are in use. Neither one of these keypads cannot be used together with the RX-130 LED keypad.

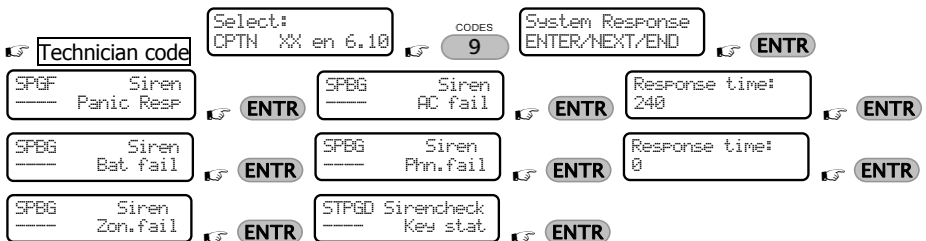
5.4.6 Config 6



- See section 3.2.4 for programming instructions of the parameters bar.

Par.	Onscreen	When setting to "+"
P	8=Panics	Entering User code #8 will send a PANIC alarm
D	Arm.Dis.fail	The system cannot be armed with AC, low battery or phone fault
X	Not Used	-

5.5 System responses



- Set the responses to some system events and faults.
- Each parameter screen has 4 or 5 parameters, each one stands for a potential response to the event that is displayed on the same screen, e.g., "zone fault".
- In the response time screens, set a delay for the control panel to report the on event. A zero time is no delay.

5.5.1 PANIC alarm response

- See section 3.2.4 for programming instructions of the parameters bar.

Par.	Onscreen	When setting to "+"
S	Siren	The siren will be triggered
P	Communic.	The alarm will be reported to the Monitoring Station and the end user via the phone, and to the Monitoring Station via the Radio too.
G	PGM	The PGM output will be triggered
F	FIRE	The SMOKE output will be triggered

5.5.2 AC failure response

- See section 3.2.4 for programming instructions of the parameters bar.

Par.	Onscreen	When setting to "+"
S	Siren	The siren will be triggered
P	Communic.	The alarm will be reported to the Monitoring Station and the end user via the phone, and to the Monitoring Station via the Radio too.
B	Buzzer	keypad buzzer activated
G	PGM	The PGM output will be triggered

5.5.2.1 Response delay time

- Set the AC failure report delay time in minutes (up to 250).

5.5.3 Battery failure response

- See section 3.2.4 for programming instructions of the parameters bar.

Par.	Onscreen	When setting to "+"
S	Siren	The siren will be triggered
P	Communic.	The alarm will be reported to the Monitoring Station and the end user via the phone, and to the Monitoring Station via the Radio too.
B	Buzzer	The keypad chime will be activated
G	PGM	The PGM output will be triggered

5.5.4 Phone line failure response

- See section 3.2.4 for programming instructions of the parameters bar.

Par.	Onscreen	When setting to "+"
S	Siren	The siren will be triggered
P	Communic.	The alarm will be reported to the Monitoring Station and the end user via the phone, and to the Monitoring Station via the Radio too.
B	Buzzer	The keypad chime will be activated
G	PGM	The PGM output will be triggered

5.5.4.1 Response delay time

- Set the phone line failure report delay time in minutes (up to 250).

5.5.5 Zone fail response

- Zone fail can occur only in EOL resistor loop zones.
- See section 3.2.4 for programming instructions of the parameters bar.

Par.	Onscreen	When setting to "+"
S	Siren	The siren will be triggered
P	Communic.	The alarm will be reported to the Monitoring Station and the end user via the phone, and to the Monitoring Station via the Radio too.
B	Buzzer	The keypad chime will be activated
G	PGM	The PGM output will be triggered

5.5.6 The response to arming/disarming by a key switch

- See section 3.2.4 for programming instructions of the parameters bar.

Par.	Onscreen	When setting to "+"
S	SirenCheck	The siren will indicate by sounding a beep
T	Cntr. Tx	The event will be reported to Monitoring Station by the Radio
P	Cntr. Ph	The event will be reported to Monitoring Station by the phone
G	PGM	The PGM output will be triggered

5.6 The Entry/Exit delay times

Technician code

Select:
CPTN XX en 6.10

CHIME
*

Delay times:
ENTER/NEXT/END

ENTR

Ent. delay time:
20

set the entry delay in seconds (max. 250)

ENTR

Exit delay time:
60

set the exit delay in seconds (max. 250)

ENTR

- The exit and entry delays refer to the delayed zones, set in the "Zone characteristics" screen (see section 5.1.2).
- A delayed zone will not sound the alarm if triggered within the delay time.

5.6.1 User partitions

Technician code

Select:
CPTN XX en 6.10

CHIME
*

Delay times:
ENTER/NEXT/END

ENTR X3

User Partitions
ENTER/NEXT/END

Users for Part 1
++++++
1 2 3 4 5 6 7 8

allocate (set to "+") users 1-8 to



partition #1

ENTR

Users for Part 2
++++++
1 2 3 4 5 6 7 8

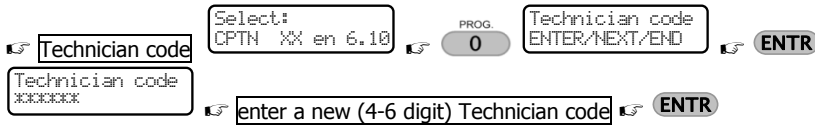
allocate (set to "+") users 1-8 to partition #2

ENTR

- In this screen you assign users to partitions #1 and #2.
- See section 3.2.4 for programming instructions of the partitions bar.
- A partition is made of several zones.
- Using partition allows the end user to arm part of the premises, while other parts are not. In this way, only the armed zones will trigger the alarm when violated; the other zones can be occupied at the same time.
- There can be up to 2 partitions in CAPTAIN 6.
- A user can arm/disarm only the partition it is allocated to (but can be allocated to both partitions).
 - **When one of the partitions is armed, entering the Master code and pressing  will arm the other partition.**
 - **When both partitions are armed, entering the Master code and pressing  will disarm them both.**



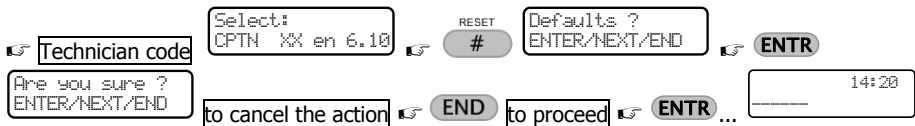
5.7 The Technician code



- The technician code is displayed with asterisk and cannot be revealed otherwise.
- If the code is lost, disconnect the control panel from any power for 10 seconds and then re-connect it. For 30 seconds only, the system default codes (Master - 5555, Technician - 1234) will be active.
- If the lost code begins with zero, it cannot be defaulted and you should contact your vendor.

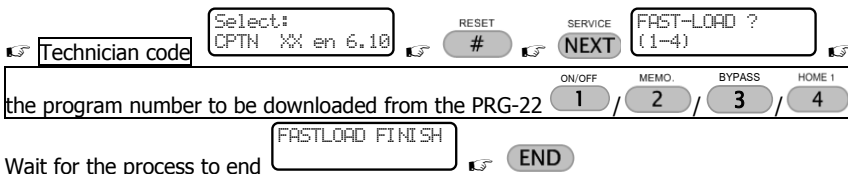
5.8 Defaulting the system & fast loading

5.8.1 Defaulting the system



- The CAPTAIN 6 allows restoring of all system parameters to their factory defaults.
- Defaulting erases all previous programming: memory, user codes, zone names, etc.
- See "Appendix – Default system parameters" on page 40 for the factory defaults.

5.8.2 Fast parameter loading



Wait for the process to end

- This screen is used for downloading parameters to the control panel via the PRG-22 programmer.
- The parameters are uploaded to the programmer by the COMAX upload/download software.
- To start the downloading, connect the PRG-22 programmer to an LCD keypad. See section 3.1 for instructions.

6. TROUBLESHOOTING

- When a fault occurs, the Red "FAULT" LED flashes, the Chime sounds beeps and a short description of the fault is displayed.
- The following are the faults and their troubleshooting:

Fault	Description & troubleshooting
Clock	<ul style="list-style-type: none"> • Appears after power up. • Set the time. See section 3.4.
KEYBOARD NOT CONNECTED	<ul style="list-style-type: none"> • Keypad-control panel communication error. Check/do the following: <ol style="list-style-type: none"> 1. The "KEYPAD OUT" wire is connected; 20. The Keypad's voltage supply is not lower than 13V. If it is, verify that no more than 8 keypads are connected to the panel;
Battery	<ul style="list-style-type: none"> • Indicates low battery power and appears after battery test and after a prolonged AC failure. • Wait 24 hours for the battery to recharge. • If the fault persists, replace the battery.
Low DC	<ul style="list-style-type: none"> • Low DC supply to the PCB (<9V). Occurs after a prolonged AC failure and before the batter is disconnected to protect it from discharging. • Resume AC power. • Replace battery if necessary.
DC FUSE	Detectors power failure
AC Line	<ul style="list-style-type: none"> • AC power failure. • Check the AC fuse (F4).
Trouble	<ul style="list-style-type: none"> • EOL loop zone failure (short or cut). • The letter "F" will be displayed above the troubled zone number.
Communic.	<ul style="list-style-type: none"> • Monitoring Station-control panel communication error. Check the following: <ol style="list-style-type: none"> 1. The telephone line is properly connected; 21. A correct telephone number is programmed for the Monitoring Station. See section 5.2.1; 22. The programmed Format is the same as the Monitoring Station one. See section 5.2.2.1; 23. The dial method - pulse or tone. See section 5.2.1; 24. A prefix is programmed if required. See section 5.2.1.1.
Phone	<ul style="list-style-type: none"> • Phone line failure • This fault occurs if there was no dial tone the last time the system checked it. • When the system is disarmed, unless the line is re-checked (parameter "Chk in off" in the "Config 4" screen is enabled. See section 5.4.4), it will continue to be displayed even after the line returns, until the system is disarmed again.
GSM Unit	The GSM-200 module is either not connected or faulty

6.1 Other faults

6.1.1 Radio transmitter

- Check the following:
 1. Proper connection between the control panel and the transmitter;
 25. The Radio ID is set (is not zero). See section 5.2.1;
 26. The radio station number is correct; See parameter "T", in section 5.2.2;
 27. The Format is compatible with the one used in the Monitoring Station. See section 5.2.2.1.

6.1.2 Telephone

- Check the following:
 1. The telephone line is properly connected to the IN inputs on the terminal block.
 28. Correct telephone numbers have been entered.
 29. Correct dial method (pulse or tone).
 30. A prefix (usually 9) is programmed if the system works through a switchboard.

6.2 Retrieving the Master code

When the Master code is not known, the following operations must be performed:

1. Disconnect AC voltage.
 2. Disconnect the battery.
 3. Wait several seconds, and re-connect the battery.
 4. Wait for the keypad to wake up.
 5. Immediately enter the factory default Master code (5555).
- After powering the control panel, it is enabled to access it with the factory codes for 30 seconds only. If you fail to do so, repeat the process.
 - An exception to that is when the code begins with zero - in this case contact your vendor).
6. Program a new Master code (menu #9). It is not possible to see the old code.
 7. Connect mains AC voltage



The control panel does not answer telephone calls

Check the following:

1. The telephone line is properly connected to the TELEPHONE IN terminals.
2. In "Config 1", the "P" parameter is set as "+".
3. The system is programmed to pick up after no more than 10 rings.
4. The "D" parameter in "Config 3" is set as "-".

Automatic arming is not functioning

Check the following:

1. Clock fault (clock is set to the correct time)
2. The Automatic arming feature is activated. See user's manual.

Activation of a zone does not cause an alarm

Check the following:

1. The Zone is not temporarily or permanently bypassed
2. The zone is programmed for the correct response (siren, relay, etc.)
3. Power supply is not low – AC or correct battery backup power supply
4. Detectors are installed correctly and not malfunctioning

7. PARTITIONS

CAPTAIN 6 can be configured into 2 partitions with the following settings:

1. Each zone and each user can be assigned to one of the 2 partitions or both.
2. Each partition can have a different subscriber (account) ID.
3. All keypads connected to the system show the same display, regardless their partition.

7.1 Additional information

- To assign zones to partitions: see section 5.1.3
- To program subscriber (account) ID: see section 5.2.1
- To assign users to partitions: see section 5.6.1
- See "CAPTAIN 6 User Guide for information on keypads display and partitions.

8. SUPPLEMENTARY PRODUCT

LCD Keypads

RXN-400 - Small LCD screen

RXN-410 - Large LCD screen

Communication Modules

GSM-200 - GSM/GPRS Transmitter

TRV-100 - VHF Radio Transmitter

TRU-100 - UHF Radio Transmitter

Voice Accessories

VU-20N/U - Dual Voice Message module

MIC-200 - Microphone

Led Keypads

RXN-6/406 – For 9 Zones

Special Keypads

Wireless Technician Keypad

Programming Modules

LCL-11A – Serial Interface

PRG-22– Fast Programmer

9. APPENDIX – DEFAULT SYSTEM PARAMETERS

9.1 System

System	CAPTAIN 6
--------	-----------

9.2 Configuration

Phone line is connected	+	Delayed PGM	-
Remote test by phone line	-	Checking phone line in ON state	-
Remote test by radio	-	Checking phone line in OFF state	-
Auto test by phone line	-	Double report	-
Auto test by radio	-	Report all	-
Auto bypass	+	Invert Smoke output	-
Bypass phone line checking	-	Line snapping by 2 rings	-
Delayed ON	-	Bypass report	-
Zones status is displayed in ON	-	RX-130 Keypad	-
Buzzer keypad with siren	-	Request bypass of delayed zones	-
Reset per zone	-	EOL by two resistors	-
Tone dialing	+	Listen IN	-
Phone line snapping (up to ver. 5.xx)	-	Delayed Smoke	-
Disable remote downloading	+	RX-406 Keypad	-
Voice recording unit	-	User 8 = Panic	-
Zone 6 is arming/disarming key	-	Disable Operation if failure	-
Non-spring key	-		

9.3 Responses

	Siren	Comm.	Buzzer	PGM	Smoke	PSTN reporting	Radio reporting	Beep Siren on Disarming
Panic	-	-		-	-			
AC fail	-	-	-	-				
Low Battery	-	-	-	-				
Phone line fail	-	-	-	-				
Zone fail	-	-	-	-				
System state	-			-		-	-	-

9.4 Zone characteristics

Feature/No.->	1	2	3	4	5	6
Name	ZONE 1	ZONE 2	ZONE 3	ZONE 4	ZONE 5	ZONE 6
Sensitivity	8	8	8	8	8	8
Bypassed	-	-	-	-	-	-
Normally Open	-	-	-	-	-	-
24 Hours	-	-	-	-	-	-
Home	+	+	+	+	+	+
Delayed	+	-	-	-	-	-
Follower	-	+	-	-	-	-
EOL loop	-	-	-	-	-	-
Responses						
SIREN output	+	+	+	+	+	+
Communication	+	+	+	+	+	+
PGM output	-	-	-	-	-	-
SMOKE output	-	-	-	-	-	-
Partitions						
Partition 1	+	+	+	+	+	+
Partition 2	-	-	-	-	-	-

9.5 Report format and default codes

Event	Code	Event	Code
Phone format	0	Test	FF
Phone format(Cont)	0	Panic	FF
Phone Account 1	0	Fuse fail	FF
Phone Account 2	0	Fuse restore	FF
Zone 1 alarm	FF	Arming (General)	FF
Zone 2 alarm	FF	Disarming (General)	FF
Zone 3 alarm	FF	Arming (User 1)	FF
Zone 4 alarm	FF	Disarming (User 1)	FF
Zone 5 alarm	FF	Arming (User 2)	FF
Zone 6 alarm	FF	Disarming (User 2)	FF
Zone 1 restore	FF	Arming (User 3)	FF
Zone 2 restore	FF	Disarming (User 3)	FF
Zone 3 restore	FF	Arming (User 4)	FF
Zone 4 restore	FF	Disarming (User 4)	FF
Zone 5 restore	FF	Arming (User 5)	FF
Zone 6 restore	FF	Disarming (User 5)	FF
Zone fail	FF	Arming(User 6)	FF
AC fail	FF	Disarming (User 6)	FF
AC restore	FF	Arming (User 7)	FF
Low Battery	FF	Disarming (User 7)	FF
Battery restore	FF	Arming (User 8)	FF
Power fail	FF	Disarming (User 8)	FF
Power restore	FF	Siren reset	FF
Phone fail	FF	Bypass	FF
Phone restore	FF	Fuse fail	FF
Zone 1 alarm	FF	Fuse restore	FF
Zone 2 alarm	FF	Arming (General)	FF
Zone 3 alarm	FF	Disarming (General)	FF
Zone 4 alarm	FF	Arming (User 1)	FF
Zone 5 alarm	FF	Disarming (User 1)	FF
Zone 6 alarm	FF	Arming (User 2)	FF

Event	Code	Event	Code
Zone 1 restore	FF	Disarming (User 2)	FF
Zone 2 restore	FF	Arming (User 3)	FF
Zone 3 restore	FF	Disarming (User 3)	FF
Zone 4 restore	FF	Arming (User 4)	FF
Zone 5 restore	FF	Disarming (User 4)	FF
Zone 6 restore	FF	Arming (User 5)	FF
Zone fail	FF	Disarming (User 5)	FF
AC fail	FF	Arming (User 6)	FF
AC restore	FF	Disarming (User 6)	FF
Low Battery	FF	Arming (User 7)	FF
Battery restore	FF	Disarming (User 7)	FF
Power fail	FF	Arming (User 8)	FF
Power restore	FF	Disarming (User 8)	FF
Phone fail	FF	Siren reset	FF
Phone restore	FF	Bypass	FF
Test	FF		
Panic	FF		

9.6 Users & partitions

Part/User->	1	2	3	4	5	6	7	8
Partition 1	+	+	+	+	+	+	+	+
Partition 2	+	+	+	+	+	+	+	+

9.7 Timers

AC fail	Phone fail	Auto-arming	Auto test	Auto test interval (hrs)	Auto test interval (min)
240	0	00:00	00:00	0	0

Entry delay	Exit delay	SIREN	Waiting for ACK	SMOKE
20	60	240	20	60

Siren Tone	0
------------	---

Rings number	10
--------------	----

9.8 Default codes

Master code:	5555	User Codes #1 to #8	-
Technician Code	1234	Short Code	-

10. APPENDIX B - FORMATS

10.1 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

10.2 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™				

11. APPENDIX C – ENTERING TEXT

- Entering text in the CAPTAIN 6 is done similar as in cellular phones: each key has letters and digits assigned to it. Pressing it repeatedly displays the desired letter or number.

- Press the ^{SERVICE}**NEXT** / ^{TEST}**BACK** keys to the next character.
- Following are the keys and their assigned characters.

Key	Keystrokes											
	1	2	3	4	5	6	7	8				
ON/OFF 1	.	,	?	!	1							
MEMO. 2	A	B	C	2								
BYPASS 3	D	E	F	3								
HOME 1 4	G	H	I	4								
ZONE 5	J	K	L	5								
PHONES 6	M	N	O	6								
HOME 2 7	P	Q	R	S	7							
CLOCK 8	T	U	V	8								
CODES 9	W	X	Y	Z	9							
PROG. 0	Space	Zero										
CHIME *	()	/	*	:	-	+	#				
RESET #	Enable/Disable											
END	Cancel/Return to previous screen without saving											
SERVICE NEXT	Next character											
TEST BACK	Previous character											
ENTR	Select/Save											

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