

APPLICATION FOR PROGRAMMING PIMA INTRUDER ALARM SYSTEMS & PRODUCTS



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Dear Installer/Technician,

This guide contains the required information for installing and running PIMA's device programming application, Comax. Comax is used for programming the following PIMA intruder alarm systems, devices & modules:

- 1) Hunter-Pro Series 832/896/8144 and other Hunter systems;
- 2) Captain 6/8;
- 3) GSM-200 cellular transmitter;
- 4) net4pro & net4pro-i Ethernet cards;
- 5) SAT-5/8/9/N modules;
- 6) TRV-100/TRU-100 long range radio transmitters;
- 7) PRG-22/896 programmers;

Comax is a Windows[®] based software that connects to PIMA alarm systems and accessories locally or remotely, for uploading & downloading parameters, programming & monitoring.

Connecting the Comax requires a modem (PSTN or GSM), or the LCL-11A converter and the DPR-33/44 or DPU adapters.

Version 3.16 Updates

- GUI: added navigation tree, full line checking and more;
- Added: support in Ethernet communication;
- Added: support in SAT-N communicator;
- Added: drop-down menu for modems initialization string;
- Added: support in DPU (USB adapter);
- Added: export the account properties to Microsoft Excel[®] (printing from the application has been disabled);
- Added: export/import customer accounts;
- Added support in Samba cellular modem;

MAIN FEATURES

Features

- Program all PIMA panels (locally or remotely), radio transmitters and panel programmers;
- Uploading and downloading parameters;
- Display the system status & log;
- Arm & disarm remotely, including partitions;
- Multiple users with various authorization levels;
- Easily shared over LAN;
- Customers' parameters are saved in a file. The file is automatically backed up in every log-off of any user;
- Compare uploaded parameters to customer's saved parameters;
- Callback option;

Requirements

Hardware

- PC¹, CD drive and 9-pin² D-type serial port (RS-232)³;
- 10 MB free hard disk space;
- LCL-11A adapter for local programming;
- DPR-33/44 adapter for transmitters programming;
- TC-3 Technician cable; LCD keypad⁴ (optional for local programming);
- PIMA custom modem P/N 5200010 (for remote programming);

Operating System

Windows[©] XP through Windows 7.

-
1. Pentium II 450 MHz or higher; a display adapter with 2MB memory.
 2. 25-pin to 9-pin adaptor (not included) can be used where a 9-pin socket is not available.
 3. A "Serial-to-USB" adapter is available for purchase.
 4. The keypad version is displayed when connecting it to power.

INSTALLATION

Before installation

- 1) Close all running applications.
- 2) Make sure your Windows OS version is supported.

During the installation some Windows system files may need to be updated; you will be prompted to approve it. In such a case, you may have to reboot your PC before proceeding with installation.

Installing the full version

- 1) Insert the Comax CD into the CD drive and wait for the welcome screen to appear (see next figure). If the window does not appear, double-click the file "setup.exe" located in the CD.

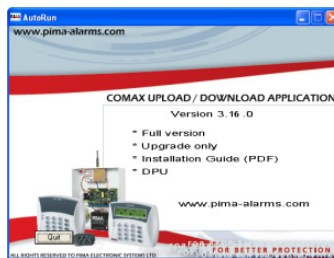


Figure 1. Welcome screen

- 2) Click "Full Version", read the message in the next screen, then click OK.
- 3) Click the installation button. The default installation directory is "C:\Program Files\Comax". If you want to install Comax in a different directory, click "Change Directory" and choose a different destination.



If you choose to install Comax not in its default directory, in any software upgrade in the future you will have to manually set the path to the Comax.

- 4) Installation ends with the message: "Comax Setup was Completed Successfully".



When installation is finished, you might get an error message when trying to create a desktop shortcut to the Comax. Options would be "Abort/Ignore/ Cancel". Click "Ignore" and manually create the shortcut if you wish¹.

1 See how here: <http://www.microsoft.com/windowsxp/using/setup/learnmore/tips/shortcut.msp>

Windows Vista/7 installation

In Windows Vista/7, Comax must be run under Administrator authorizations. To do so:

- 5) Right-click the Comax shortcut icon on the desktop (or the file Comax.exe) and select 'Advanced'.
- 6) In the pop-up window, check 'Run as administrator' and click OK.

Installing the Upgrade version


To install only upgrade files, follow the next steps. When working over LAN, all the workstations must be upgraded.

- 1) If open, close the Comax application and insert the Comax CD to your CD player. If Comax is in use over LAN:
 - a) Make sure all other workstations close the application too.
 - b) Copy the accounts file (CMR file) to the station you are upgrading.
- 2) Click "Upgrade Only" in the welcome screen or double-click the file "Comax Upgrade.exe", located in the folder "Upgrade" on the CD.
- 3) Click 'Start'. If the Comax was installed in a different directory, locate the Comax folder and then click 'Start'.
- 4) Wait for the message "the Comax was successfully upgraded" to appear and click OK.
- 5) If your version is already updated to the latest version, the next message is displayed: "You already have the latest version. No update is required".



Note that the Comax temporarily keeps the old CMR file as a backup.

SETTING UP USERS & CODES

To run Comax, either click **Start → All Programs → Comax → Comax**, or double-click the Comax icon  on your desktop.

The configuration screen is displayed upon first time the Comax is running or when logging-in with the supervisor code.

- 1) Set the upload and download codes, which MUST be identical¹. The codes are Hexa numbers, up to 6 characters each².

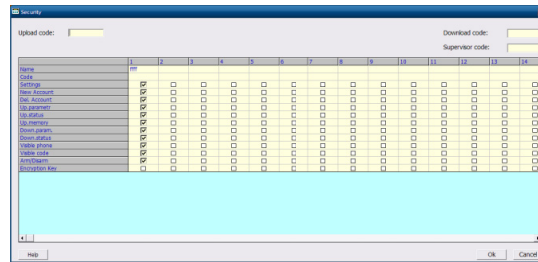


Figure 2. Users and privileges window

- 2) Enter 6 characters alphanumeric code (password) of the administrator.
- 3) Set the application users and privileges according to the next table. Both the Name and the Code are alphanumeric. The name can have up to 20 characters; the Code up to 6.

Parameter	The user can...
Settings	Change the settings
New Account	Add new account
Del. Account	Delete account
Up. parameter	Upload parameters
Up. status	Upload online status
Up. memory	Upload the memory log
Down. param.	Download parameters
Down. status	Download time & date
Visible Phone	View and edit telephone numbers
Visible Code	View and edit codes
Arm/Disarm	Arm & disarm the connected panel
Encryption Key	View and edit the net4pro/net4pro-i, GSM-200 encryption keys



- In order for the Comax to run, at least one user must be set.
- Up to 27 users with different privileges for each can be set.

- 4) Click OK to save (or Cancel to discard changes).
- 5) In the login screen that pops up, enter a user password (no need to enter a username) and click OK.

1 For more information, see the Glossary on page 36.

2 0-9, A-F.

THE INTERFACE

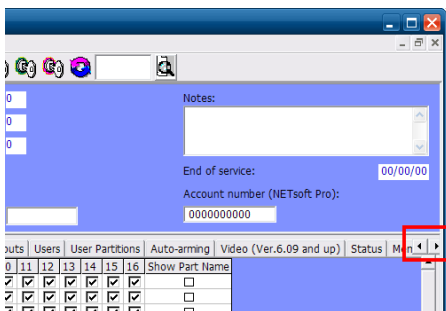


Optimal resolution is 1024X768. Lower resolution might cause some information to be hidden, especially help info.

Tabs and navigation tree

The Comax interface is based on tabs, each for a certain system or device. Starting version 3.12.0 a navigation tree was added to make navigation easier.

Depending on your screen, you may notice that not all the tabs are displayed constantly and you must use the scrolling buttons to the right of the tabs, to display them. See the next screenshot.



The main window

The Comax can be navigated both by the mouse and the keyboard. As in any Microsoft Windows menu, all menus are accessible by pressing the 'Alt' key, then using the arrow keys to reach the desired sub-menu and then click Enter.

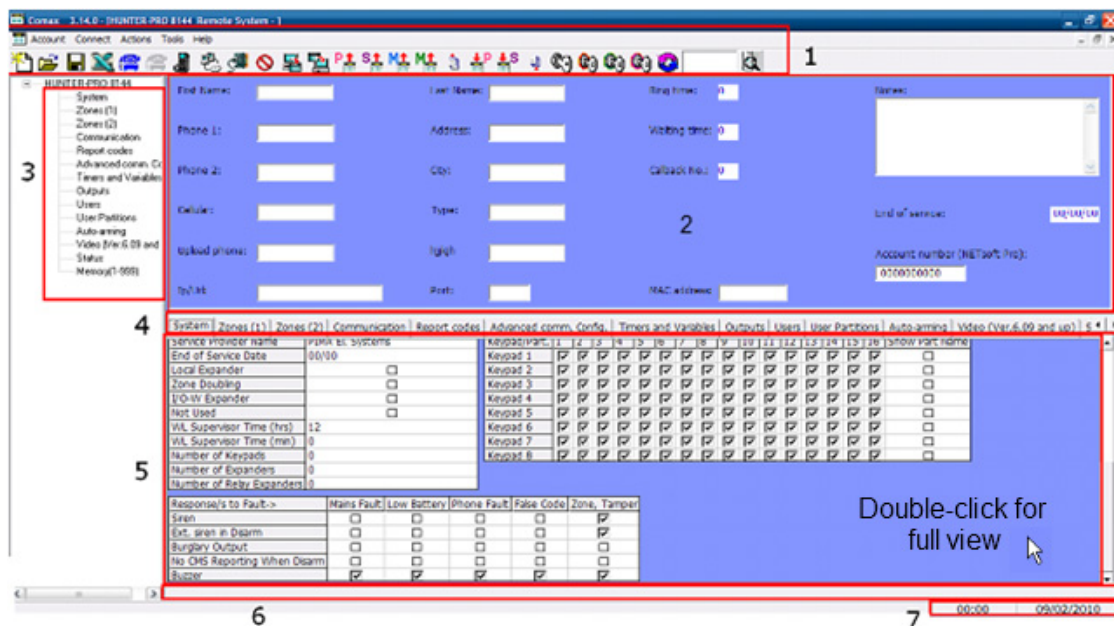


Figure 3. The Comax interface

The Comax main window is divided into 7 areas:

- 1) The menu and the icons toolbar;
- 2) The user account fields;
- 3) The navigation tree;
- 4) The configuration tabs;
- 5) The system/module parameters;
- 6) Help text;
- 7) Connection timer and date;






























Double-click the bottom pane to view it in full screen. Double-click again to display the upper pane.

The next paragraphs describe each area.

The icons toolbar

The toolbar includes the following icons:

Icon	Command	Details
	New	Open a new customer account.
	Open	Open an account from the customers' file.
	Save	Save the account to the customers' file.
	Export to Excel	Export the account to Microsoft Excel [®] file.
	Dial	Via the modem.
	Dial with line snapping	In use in some panels.
	GSM Dial	Via the GSM modem.
	Network Connection	Via Ethernet/GPRS.
	Connect Locally	Using LCL-11A.
	Disconnect	Disconnect the session.
	Direct Write	Direct download to PRGs, SATs and TRVs.
	Direct Read	Direct upload from the PRGs, SATs and TRVs..
	Upload Parameters	Remote/local upload.
	Upload Status	Upload the panel's status.

Icon	Command	Details
	Upload Memory	Upload the panel's memory (first batch).
	Upload Memory	Upload the panel's memory (second batch).
	Upload selected fields	Available only in Hunter-Pro series & Captain 8.
	Download Parameters	Remote/local download.
	Download Status	Download the parameters in the Status tab & Captain 8.
	Download selected fields	Available only in Hunter-Pro series.
	Disarm the Panel	 After disarming, the panel disconnects the call.
	Arm the Panel	Full arming.
	Partially Disarm the Panel	Disarm selected partitions (select in the Status tab).
	Partially Arm the Panel	Arm selected partitions (select in the Status tab).
	Delete Alarms	Delete alarm reports (available only in some systems).
	Search text	Type the text and press the button, or Enter.

Shortcut Keys

The Comax menus are directly accessible by holding the 'Ctrl' key and pressing a letter key:

Account	
New	Ctrl + N
Open	Ctrl + O
Save	Ctrl + S
Verify	Ctrl + F
Export to Excel	Ctrl + P
Connect	
Dial	Ctrl + D
Over the network	Ctrl + I
Locally	Ctrl + L
Disconnect	Ctrl + Q

Commands	
Upload Selected	Shift+D
Download Selected	Shift+C
Direct write 'Program 1'	F12
Direct read 'Program 1'	F11
Help	F1

The user account fields

Field	Value + Char.
First Name	Alphanumeric, up to 20
Last Name	Alphanumeric, up to 20
Contact Phone1	Numeric, up to 20
Contact Phone2	Numeric, up to 20
Contact Cellular	Numeric, up to 20
Upload Phone	Numeric, up to 20
IP/URL	Alphanumeric, up to 47
Port	Numeric, up to 5
Address	Alphanumeric, up to 20
City	Alphanumeric, up to 20
Type	Alphanumeric, list select
User Field	Alphanumeric (custom)
Note	Free text, up to 255 characters
End of Service	Date (DD/MM/YY).
Ring time	Numeric: in '2 rings line snapping', the no. of seconds for the panel not to pick up a call; advised is 10-15 sec.
Waiting time	Numeric: in '2 rings line snapping', the timeout between the first and second calls; (advised 10-15 sec.)
Callback no.	Numeric: which telephone no. is set as a callback no. If there are several callback numbers, this field sets which of the numbers shall be used. Note that the first no. is 0.
MAC Number	Hexa numbers, 6 characters; the net4pro's last 6 digits of the MAC number.

The navigation tree

The navigation tree is a feature added to resolve the multiple tab displaying limitation. It is enabled by selecting Tools -> Navigation tree from the menu.

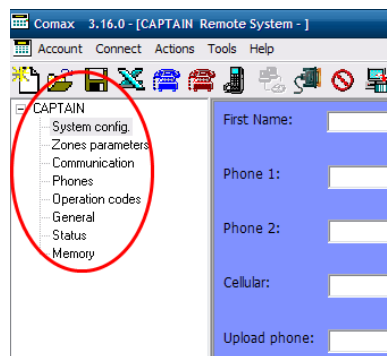


Figure 4. The navigation tree

The configuration Tabs

The system configuration tabs are located in the lower half of the screen, below the account fields. These tabs contain all the parameters for programming the panels and they differ according to the panel. They include System, Zones, Communication, Radio Transmitter, Outputs, Users, Status, Memory and more.

The system/module parameters

This pane contains the parameters for programming or reading parameters to/from the alarm systems and the other PIMA accessories. Orientation is easy because the tabs (and parameters off course) for each device match its programming menu (where there are).

The status bar help text

Clicking a parameter displays (at the bottom of the screen) its help text.

Connection timer and date

The timer displays the elapsed time of the connection session. Depending on the panel, the time limit for the connection is 10-50 minutes; after that, Comax disconnects the session.

THE SETTINGS WINDOW

Click Tools → Settings. The 6 tabs in the Settings window are: General, Modem, GSM Modem, Local, Direct & Network. These tabs are used to configure the Comax and its communication channels.

General

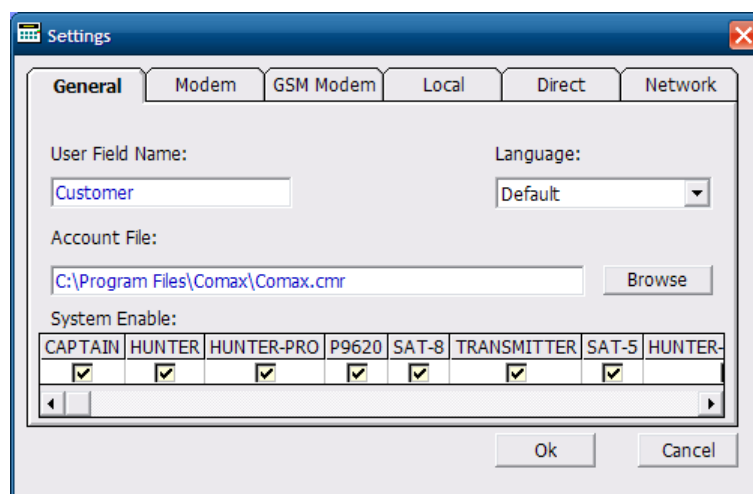


Figure 5. The settings window

The General tab has 4 parameters: User Field Name, Language, Account File and System Enable.

User Field Name

The text in this field appears in the customer information area, in the main screen. It is also used as a password when importing/exporting accounts and is searchable.

Language

The Comax installation language. Additional languages are available from PIMA.

System Enable

Check the system/s you want the Comax to configure. The systems that are checked (i.e. HUNTER-PRO) become available.

Account File

The name and path to the customers file. The Comax keeps the customers accounts in a file called Comax.cmr. By default, this file is located in the Comax folder (C:\Program Files\Comax) but can be relocated. See the next sub-section.

Running Comax over LAN

The Comax can run over a Local Area Network (LAN) with all the users sharing the same customers file. To enable it, follow these steps:

- 1) Move the 'Comax.cmr' file (located in C:\Program Files\Comax) to a shared folder in the network (or share your folder over the LAN). Make sure this folder is accessible with read/write privileges to all the users.
- 2) In the 'General' tab (in the 'Settings' window), under 'Account File', click 'Browse' and point to the new location.
- 3) Click 'Open'. The Comax can now be shared by all the users.

Modem

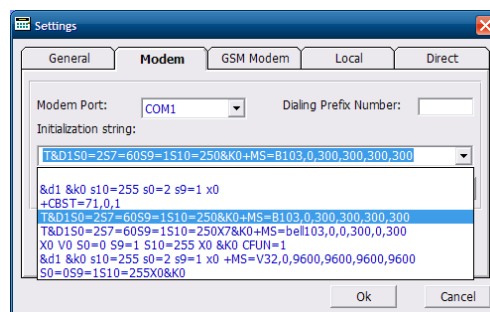


Figure 6. The initialization string drop-down list

The modem tab refers to PIMA's PSTN modem¹.

- 1) Choose the Modem Port from the drop-down menu.

¹ For connection instruction, see page 22

- 2) If required, set the dialing prefix number.
- 3) Verify that the initialization string is the same as printed on the back of the modem.



To initialize the modem every time the Comax runs, check "Init at Startup". If not checked, the modem is initialized only when using it.

- 4) Connect the modem. For instructions, see page 23.
- 5) Click the Modem Test button. The test result is displayed after a few seconds.
- 6) Wait for the message "Modem setting is successful". If the test fails the message is: "Modem is not responding".
- 7) If the MODEM COM port is busy the error message is "Error in the modem port". In this case, check the port number, the initialization string and that no other application is using the modem port.
- 8) Click OK.

Calling a cellular number using the PSTN Modem

To call through the GSM-200 DATA channel using the PSTN modem:

- 1) Check the PSTN modem checkbox.
- 2) Use the following initialization string: `&D1 &K0 s10=255 s0=2 S9=1 X0`
- 3) Click OK.

GSM Modem



- **This section is applicable only for the Hunter-Pro 832/896/8144 ver. 2.0 & up**
- **The panel can only communicate with the GSM-200 (version 1.14 and up) via the DATA channel.**

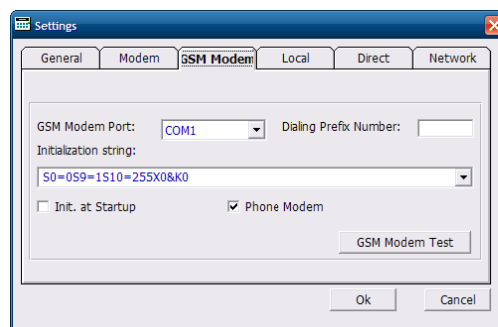


Figure 7. GSM modem configuration tab

- 1) Choose the GSM Modem Port from the drop-down menu.
- 2) The supported GSM modem is Siemens TC35T. The Initialization String field should be left blank.
- 3) Connect the modem. For instructions, see page 23.
- 4) Click the Modem Test button. The test result is displayed after a few seconds.

- 5) Verify that the test passes OK (see paragraph #6 in the previous section). If the MODEM test fails or if the MODEM COM port is wrong, check the port number, the initialization string, and that no other application or TSR¹ is using the MODEM port.
- 6) Click OK.

Local (Connection)

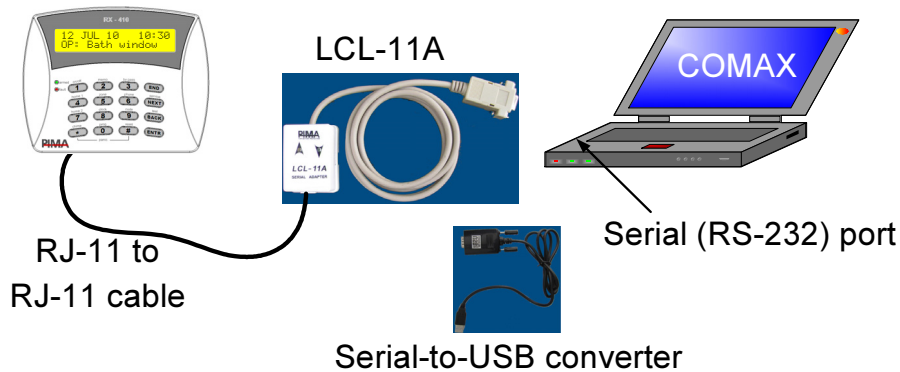


Figure 8. Local connection

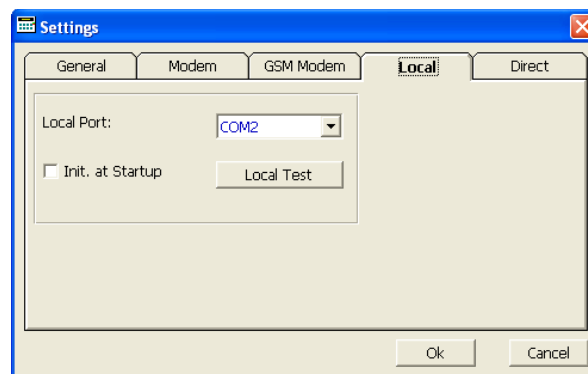


Figure 9. The Local tab

To connect the Comax locally to the alarm system, you need the LCL-11A converter. The LCL-11A has RJ-11 connector on one side and D-type serial on the other. The RJ-11 connector connects to any keypad (internally)¹; the D-type connector connects to the PC's serial output. A serial-to-USB converter can be used for connecting to a USB socket.

Configure the local connection parameters:

- 1) Set the Local Port to the port number you have connected the LCL-11A to (e.g., COM1).
- 2) To initiate the local programming when starting Comax, check "Init. at Startup".

¹ To connect to a LED keypad, first connect it to an LCD keypad.

- 3) Click the Local Test button. the test result is displayed after a few seconds.
- 4) Verify that the test ends OK with the message "Local port setting is successful". If the test fails, the message would be "Error in the local port". Check that the port number is correct and that no other application is using the port.



The Local Test only checks for conflicts with the port settings in Windows. A successful test message only indicates that the port is available. There is no indication that the LCL-11A is connected or that the selected port number is the correct one.

- 5) Click OK.

Direct (Connection)

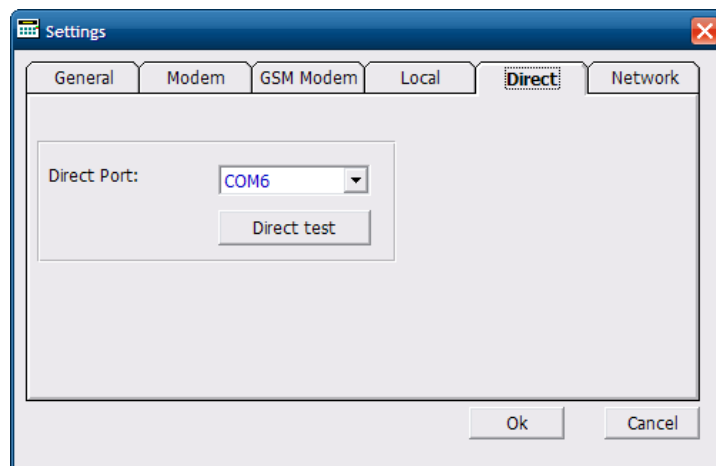


Figure 10. Direct port settings

To program the fast programmers PRG-22/896, the TRV-100/TRU-100 radio transmitters and the SAT-8/9/5/N modules you will need either the DPR-33/44 25-pin connectors, or the DPU USB converter.

- 1) From the drop-down menu, select an LPT port for the DPR-33/44 or a COM port for the DPU converter (see page 28).
- 2) Click OK.

Network

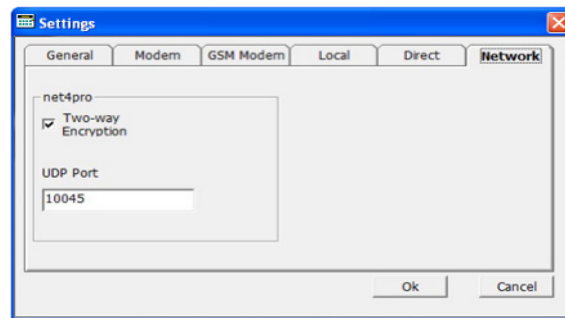


Figure 11. net4pro's encryption mode and listening port

The Network tab refers to the net4pro network card. It has 2 parameters: two-way encryption and UDP port.

The communication via the net4pro is encrypted. The one-way and two-way encryption modes refer to the levels of security: the two-way mode adds a second level of security to the communication but requires knowledge in network communication.

In one-way encryption, any TCP/IP connection request with the UDP port and the net4pro encryption key will be accepted and connection will be established.

In two-way encryption mode, the Comax first verifies the connection request with the control panel and only if verified, connection is established.

To use the net4pro you will need to:

- 1) Set the net4pro's UDP port in the Communication menu (#3), under 'Advanced Communication'/ 'Upload port'. The port number here is not related to the remote PC port.
- 2) Configure the router to port forward the communication to both the UDP and TCP same number ports.

To use two-way encryption:


In the remote PC side:

- 1) Set any UDP port between 1024 and 40000. This is a listening port and you should make sure it is available and open it in the firewall.
- 2) Configure the router to port forward the communication to that UDP port.

CUSTOMERS ACCOUNTS & THE CUSTOMERS FILE

The account is the subscriber record that holds all the details on its alarm systems and their parameters. Account is also where the other devices' parameters are kept. Each account can have only one system/device: a customer with some devices must have some accounts.

Opening a new account

- 1) Click  or select Account → New from the Menu.
- 2) Select the account's panel¹ and click OK.



An account can only be applied to a single panel.

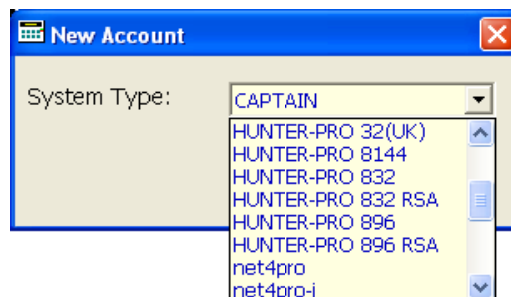



Figure 12. Selecting the panel/module

Opening an account from the accounts file

To open an account, click  or select Account → Open. The account is opened either by double clicking it or by selecting it and then clicking OK.

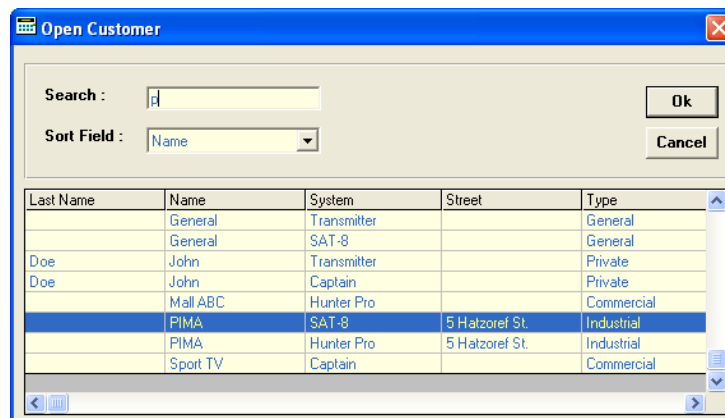


Figure 13. Opening a customer account

The table can be sorted by any of the field names, and can be searched by the product name or any other parameter in the table.

¹ To program the PRG-22/896, select the control panel it is intended to program.

The Customers File (database)

The Customers (CMR) file is where all the customers' accounts are kept with their system parameters and accessories. To run the Comax over Local Area Network (LAN) - see page 14.



There can only be one device per account; if a customer has more than one device, a new account must to be created for each device.



Unlocking a locked account

When a user opens an account file, it becomes locked to all the other users - they can only view the file but cannot save any change into it, for as long as it is locked. They can, however, save the file under a different name ('Save as').

If, for any reason, the PC shuts down or freezes, the account may remain locked. To unlock it, all other users must logout the Comax, then choose "Tools → Unlock Accounts" from the menu.

Account commands

As mentioned before, the Comax keeps a database (the CMR file) of all the accounts settings. Several commands are used with the accounts file:

Command	Description
Sort	The list is sorted according to the field selected in the Sort Field.
Search	The search is made on the sorted field
Save as new account	When a customer account is modified, either it can be saved by replacing the existing account or it can be saved as a new account.  Comax does not check for duplicate accounts.
Save and replace	To save and replace an account, click  or select Account → Save.
Save as new account	To save as a new account, select Customer → Save as New.
Delete	To delete a customer account from the database, open it and select Account → Delete.

Backing-up the customers file

The Comax regularly backs-up the customers CMR file. The file is saved in the Comax directory under the name "comax3.x.x.cmr" (3.x.x: the Comax version).

Import/export accounts

To import/export accounts from the CMR customers file, make sure the next fields in the account settings are filled:

- A) The customer's first & last name;
- B) The User field;

Export account

- 1) If open, close any other customer file.
- 2) From the Account menu, select 'Export account'.

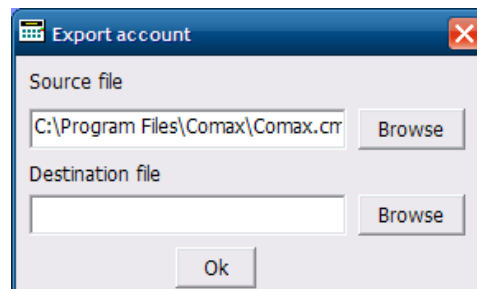


Figure 14. Export account window

- 3) If you use a CMR source file other than the default one, or the one currently being used, click Browse and select it.
- 4) Browse to select the destination file. The filename should be made from the customer's fields, as follows:
[First name]space[Last name].cmr; for example: "Jane Conor.cmr".
Any fail to follow this structure will result with the error "Illegal destination file name". A file can only contain a single customer.

Import account

- 1) If open, close any other customer file.
- 2) From the Account menu, select 'Import account'.

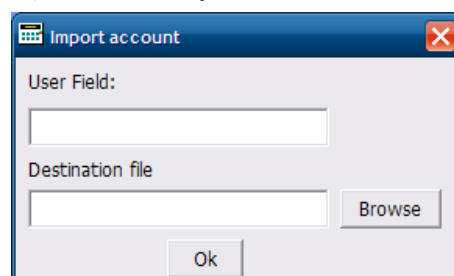


Figure 15. Import account window

- 3) Enter the desired User Field text (precaution measure).

- 4) Browse to the CMR file and select it. The account file should be opened.
 - 5) Select Account/Save (or Ctrl+S) to save the account in the current CMR file.
 - **As a precaution measure, the Admin code on both the current CMR file and the imported file should match. If not, the error message "You are not allowed to Import that file" is displayed.**
- ⚠
- **The Comax version on both files should match too, or the log records may be damaged.**
 - **The user field text should be identical to the one in the exported file.**

Text search

To search for text, type it in the search box and press Enter, or press the search button. The search results are displayed as follows (see the next screen capture):

- 1) In the current tab, if founded, the text is colored in red and the tab in blue; in the navigation tree, the branch is colored in red;
- 2) In all other tabs, you must click the tab to search it; if founded, the text the tab and the tree branch are colored like is described in the previous paragraph.

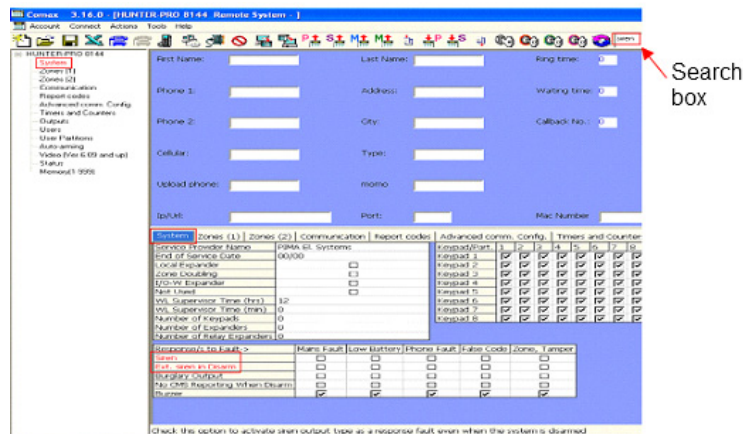


Figure 16. Text search results

CONNECTING & PROGRAMMING

The Comax can be connected to PIMA control panels locally, using the LCL-11A adapter, or remotely, via Ethernet, PSTN and GSM modem (DATA). The devices are all connected and programmed locally.

Control panels

Locally, using the LCL-11A adapter

To connect the Comax PC to the control panel you will need the LCL-11A serial adapter¹; it has a phone cable with RJ-11 plugs on one side, and RS-232 cable with 9 pin D-type connector on the other. Serial-to-USB converter can be used to connect the serial cable via a USB port.

To connect a PC using the LCL-11A adapter:

- 1) Connect the D-type connector to the PC's serial port, or use a Serial-to-USB converter and connect it to a USB port.
- 2) Use the phone cable and connect it to an LCD keypad's matching socket, located on its PCB (remove the keypad's back cover) **-OR-**
- 3) Use RJ-11 to Molex cable and connect it to the Technician Keypad terminal on the control panel's PCB.



LCL-11A can only connect to LCD keypads. To connect it to a LED keypad, either temporarily replace the LED keypad with an LCD one, or use TC-3 cable to connect the two keypads.

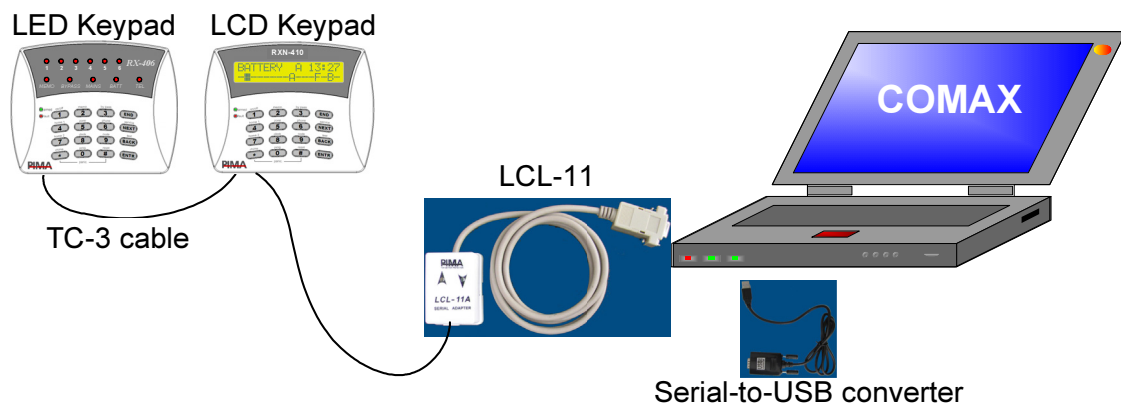



Figure 17. Connecting LED keypad through LCD one

- 4) Open or create a new account for the control panel you want to connect to.
- 5) In the keypad, go to the Local connection menu (see the panel's Installation guide for instructions). For example, in Hunter-Pro Series press:
Technician code → 8 → Enter → Next (Local Download) → Enter;

¹ See Figure 8 on page 16.

- 6) Immediately click  in Comax or press Ctrl+L. If you don't press within 10 seconds, the process needs to be repeated.
- 7) Wait for the "Connected" message in the status bar.
- 8) The Comax is now connected to the control panel and you can start downloading or uploading parameters.

Remotely using PIMA modem

To connect the Comax using PIMA modem (P/N 5200010):

- 1) Connect the modem to the PC with Comax, using the serial cable (see the next figure), or use a Serial-to-USB converter and connect it to a USB port.
- 2) Connect the phone cable between the modem and the wall jack¹.

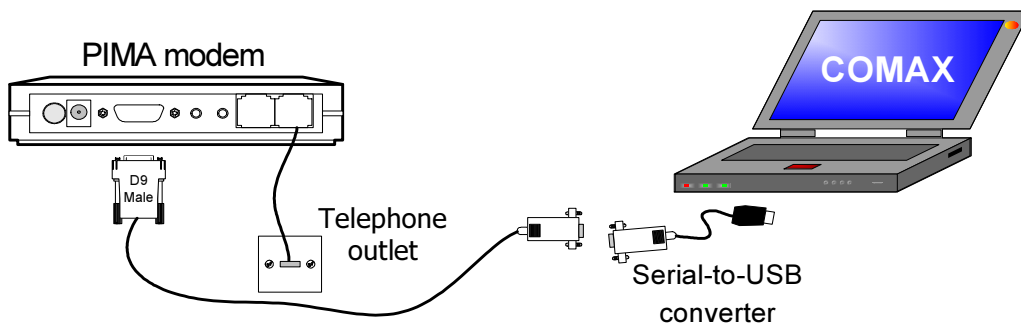



Figure 18. Modem connections


- 3) Connect the AC adapter to the modem and to the AC outlet. Make sure the adapter is suitable to your voltage range.
- 4) Turn the modem on by clicking the ON/OFF button. The PWR LED should lit
- 5) Open or create a new account for the control panel you want to connect to.
- 6) Click the blue dial icon . Verify that the phone number is correct.
- 7) Click OK. The Status bar will display the communication process.
- 8) Wait for the "Modem Connected" message in the status bar.

Using line snapping (if applicable)

Line snapping is supported only by some alarm systems. It is used when an answering machine or voice mail are connected to the phone line and may answer a call before the system does.

- 1) Make sure the modem is connected and works OK (see page 23).
- 2) Open or create a new account for the control panel you want to connect to.


¹ An adaptor (not included with the modem) might be needed to connect the phone cable to the wall outlet.

- 3) Click the red Dial icon  (make sure line snapping is enabled in the alarm system). Verify that the phone number is correct.
- 4) Click OK. The Status bar will display the communication process.
- 5) Wait for the "Modem Connected" message in the status bar.
- 6) The Comax is now connected to the control panel and you can start downloading or uploading parameters.

Using 2-ring line snapping

Dialing with 2-ring line snapping is used where answering machine is in use.


The parameters for this feature, Ring time & Waiting time, appear on the upper half of the screen, to the right.

- 1) Make sure the modem is connected and works OK (see page 23).
- 2) Open or create a new account for the control panel you want to connect to.
- 3) Enter the Ring time and Waiting time values. Start with 10 in each and increase if Line Snapping fails.
- 4) Click the blue Dial icon . Verify that the phone number is correct.
- 5) Click OK. The Status bar will display the communication process.
- 6) Wait for the "Modem Connected" message in the status bar.
- 7) The Comax is now connected to the control panel and you can start downloading or uploading parameters.

Callback

Callback call is used where a secure remote connection is required. The callback numbers in Hunter-Pro Series and Captain 8 are set in the Technician menu.

The callback numbers priorities field, Callback No., appears on the upper half of the screen, to the right.

- 1) Make sure the modem is connected and works OK (see page 23).
- 2) In the modem initialization string (Tools -> Settings -> Modem), verify that 'S0' is set to 2 (S0=2).
- 3) Open or create a new account for the control panel you want to connect to.
- 4) Set the callback number, i.e., to which of the numbers configured in the panel to call (#1 is the first no., #2 the second and so on).
- 5) Click the blue Dial icon .
- 6) Verify that the phone number is correct.
- 7) Click OK. The Status bar will display the communication process.
- 8) Wait for a callback verification message in the status bar and click OK.



Until OK is clicked, the Comax will not accept any incoming call.

- 9) Wait for the control panel to call back. A beep and the "Modem Connected" message in the status bar will indicate that connection has been established.



If you use both callback and line snapping, see the known issues section (page 34).


Using other modems

Other modems that support Bell 103/300 baud format may also be used, but are **NOT** supported by PIMA and can cause failures.

Over WAN/LAN

- 1) Open or create a new account for the control panel you want to connect to.
- 2) In the account fields, fill in the panel's IP or URL and the (upload) port¹.

Over LAN with more than one net4pro²

- 1) Open or create a new account for the control panel you want to connect to.
- 2) In the account fields, in the IP/URL field, fill in the broadcast IP (255.255.255.0 in most cases).
- 3) In the account fields, in the MAC field, fill in the last 6 digits of the net4pro's MAC address.
- 4) Press the 'Network Connect' icon  (press Ctrl+I).
- 5) Wait for the status message "Connected".

The Comax is now connected to the control panel and you can start downloading or uploading parameters.

Transmitters & modules

GSM-200 cellular transmitter

The Comax is used for programming the 2 encryption keys in the GSM-200. The transmitter connects with a special cable (PIMA P/N 3411078).

¹ Uploading is available in net4pro only up to ver. BL5 FW10 or for GPRS connection. To set the port in the Hunter-Pro panel: go to Technician menu->Communication->Advanced programming->Network settings. Otherwise, use any available port

² Supported only net4pro version 9.12 and up

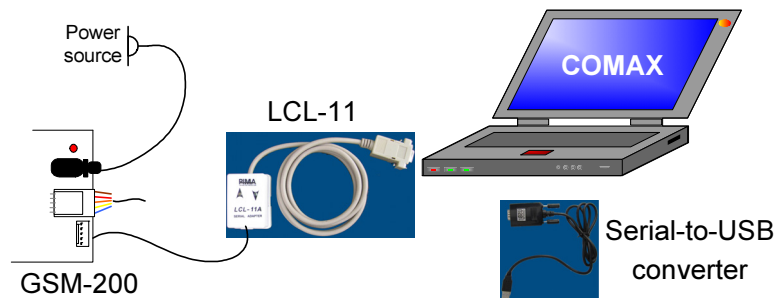




Figure 19. Connecting GSM-200

- 1) Click the New account icon  and select GSM-200.
- 2) Enter the 64 characters encryption keys.
- 3) Connect the PC with Comax to the GSM-200 using RJ-11-to-Molex cable (P/N 3411078). The GSM-200 must be connected to power when programming it.
- 4) In the Comax, press the "Connect locally" icon  and wait for the confirmation message "Connected". You can now program the GSM-200.
- 5) Select Actions->Download key 1 or 2 to download the encryption keys.

net4pro network card

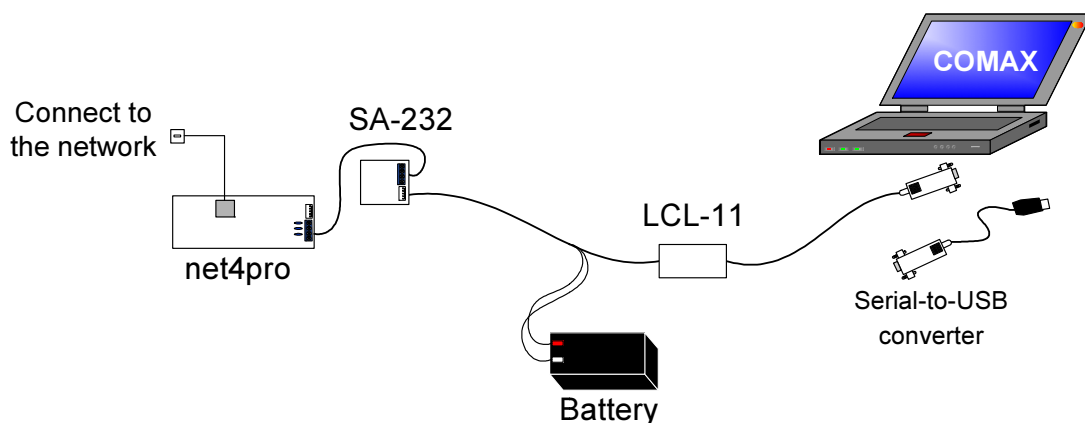




Figure 20. Connecting net4pro

- 6) To connect Comax to net4pro, you need to use a special RJ-11-to-Molex cable (P/N 3411079) with battery wires.




net4pro must be connected to the network for programming.

- 7) Set the net4pro parameters.
- 8) In the Comax, press "Local Connection" and wait for the status bar to confirm with "Connected" and a beep.
- 9) Press the partial downloading icon  for downloading the network configuration and the download icon  for downloading the encryption keys.

net4pro-i

net4pro-i is also a PIMA network card. Comax is used for programming the encryption key and several other network parameters into it. To connect it:

- 1) Click the New account icon  and select net4pro-i.
- 2) Enter the parameters.
- 3) In the Comax, press "Local Connection".
- 4) After a message box appears, unplug the serial connector from the net4pro-i and reconnect it.
- 5) Wait for a confirmation message "Connected" and a beep.
- 6) Disconnect the net4pro-i.

TRV-100/TRU-100 & SAT-5/8/9/N

To connect the transmitters and modules you need:

- 1) DPU converter **-OR-**
- 2) DPR-44 connector.

Connecting using the DPU converter

The DPU is a PIMA all-in-one connector that enables the connection of the Comax to PIMA's PRG-22/896, SAT-N/5/8/9 and TRV-100/TRU-100 radio transmitters - via a USB interface.

It replaces the DPR-33/44 connectors.

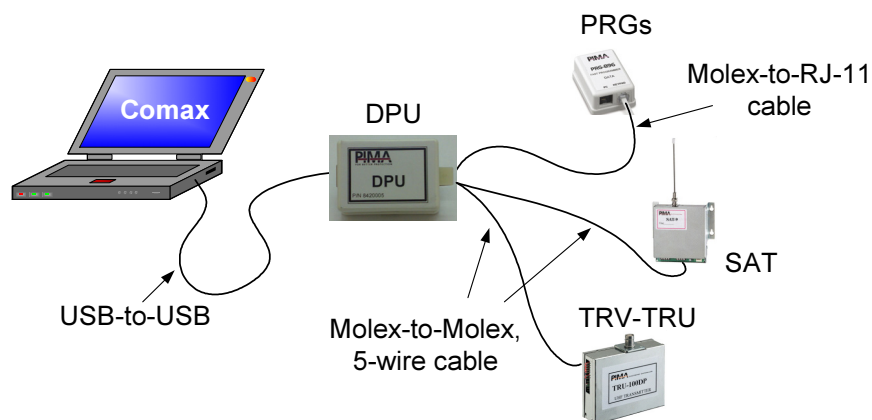


Figure 21. Connecting to PRG-22/896 using the DPU

On the PC side, the DPU connects with a USB cable; on the devices side, it connects with a 5-wire Molex-to-Molex cable for the radio transmitters and SATs, and Molex-to-RJ-11 for the PRGs.

To use the DPU:

- 1) Install the DPU (see the product guide P/N 4410327).

- 2) In the "Direct" tab (Tools→Settings) Select the DPU's COM port between #4 and #16 from the drop-down list. The 'Direct Test' button becomes available (not grayed).
- 3) Press the 'Direct Test' button. You should receive a message confirming that the test ended successfully; if not, an error message will be displayed.

Connecting using DPR-33 or DPR-44

- 1) DPR-44 is used for connecting the PC with Comax to the TRV-100/ TRU-100 long-range radio transmitters and the SAT-5/8/9/N transmitters. To connect the transmitter using the DPR-44, use a special RJ-11 to Molex 5-pin cable (P/N 3411029).

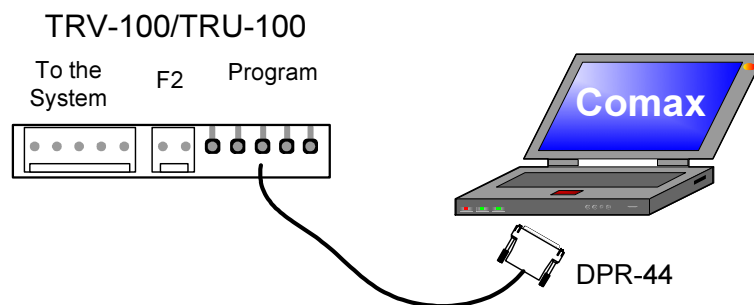


Figure 22. Connecting TRV-100 & TRU-100 using DPR-44

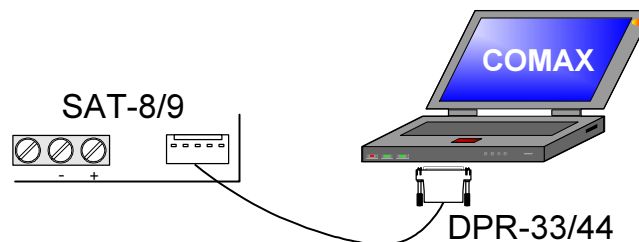


Figure 23. Connecting SAT-8/9 using DPR-33/44

- 2) To connect the Comax to the PRG-22/896 fast programmers you need the DPR-33 connector. It has a 25-pin D-type connector that connects to the parallel port (LPT) of a PC. Use RJ-11 to RJ-11 cable to connect it to the PRGs.

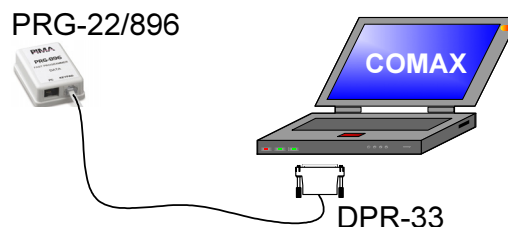




Figure 24. Connecting to PRG-22/896 using DPR-33

Writing and reading parameters

- 1) **Write:** click the direct Write icon  and select a program.
- 2) **Read:** click the direct Read icon  and select a program.

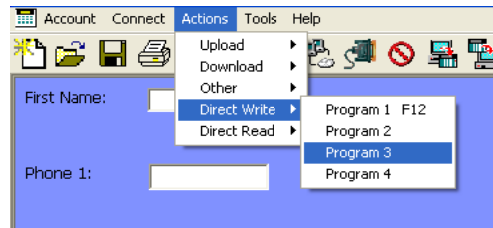


Figure 25. Direct Write/Read



- **To read from a device, its account must be opened onscreen.**
- **If the protection code is different from the transmitter code, only downloading is enabled.**

SAT-N

The SAT-N is a PSTN/GPRS/Ethernet communicator, which connects PIMA's Captain 6/8 intruder alarm systems and non-PIMA systems to PIMA's NETsoft and NETsoft Pro Alarm Over IP software, via cellular or TCP/IP networks.

The SAT-N has a Molex terminal for connecting to the Comax. It requires the DPU or the DPR-44 converters.

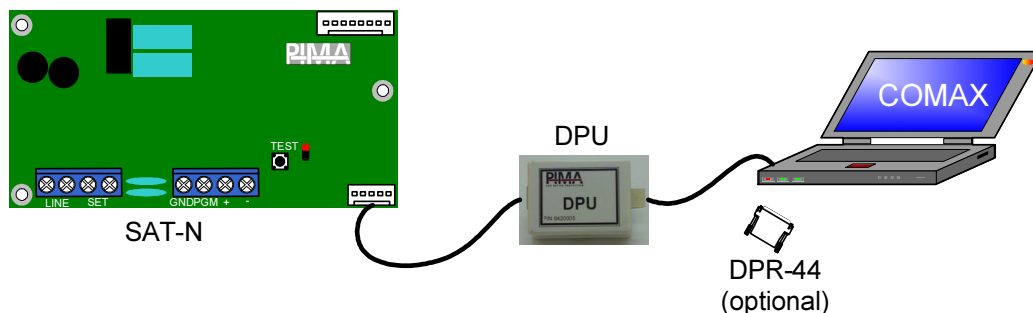


Figure 26. Connecting the SAT-N

UPLOADING & DOWNLOADING PARAMETERS

The parameters you can program with the Comax match those in the control panels and devices. They are grouped into tabs with respect to the menus in the panels.




- Since the Comax is an all-PIMA programming application, some parameters may not match the system or device you are programming. This is the case when the Comax includes parameters for newer system versions.
- For Downloading/Uploading only selected parameters, see page 31.

Downloading Parameters

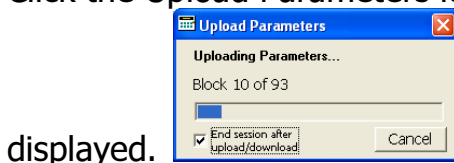


- **Always perform upload before downloading parameters.**
- **Make sure all the required fields are set.**
- **Parameters can be downloaded only when the alarm system is disarmed.**

- 1) Click the Download Parameters icon  in the Comax toolbar; a window showing the download process is displayed.
- 2) Wait until the process is finished.

Uploading Parameters

- 1) Click the Upload Parameters icon . A window showing the upload process is



displayed.

- 2) Wait until the process is finished.
- 3) Save Customer's account if necessary.
- 4) To disconnect the Comax automatically when uploading is finished (no need to wait), check the option "End Session after upload/download".



Downloading/Uploading Selected Parameters

You can choose (only with Hunter-Pro Series and Captain 8 systems) between uploading or downloading all the parameters, or selecting some only. To select parameters:

- 1) Click the selected parameters while holding the 'Ctrl' key. The parameter's field will be highlighted in green (see the next figure).
To select an entire table, click on its header. To select an entire page, click on its tab. To deselect any field/table/page click again.

System	Zones (1)	Zones (2)	Communication	Report codes	Advanced comm
Zone	Zone Name	Zone Type	Bypass	N.O.	24 Hou
01	Zone 1	Burglary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
02	Zone 2	Anti Mask	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
03	Zone 3	Burglary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
04	Zone 4	Burglary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
05	Zone 5	Spec. Burg. 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
06	Zone 6	Panic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
07	Zone 7	Burglary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
08	Zone 8	Burglary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
09	Zone 9	Burglary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	Zone 10	Burglary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Figure 27. Selecting multiple parameters

- 2) Click the download selected parameters icon  or the upload selected parameters icon .

Single-click mark/clear all


To mark/clear an entire line or column of check boxes, press SHIFT and click the line/column header. If the line/column contains both text and check boxes, this will effect only the latter.

Part./Zones->	Partition Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1	Partition 1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
2	Partition 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3	Partition 3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
4	Partition 4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

Figure 28. Un-checking an entire line in a single click

Online status update

There are two ways to update and display the status of the connected panel:

- 1) Click Upload status . The Comax is immediately updated.
- 2) Choose "Tools->Status Online" from the main menu. This will automatically update the Comax once a minute (provided that the status tab is displayed; only in Hunter-Pro Series).



In systems other than Hunter-Pro series and Captain 8, the status is updated only when connecting to the panel. To update again, disconnect the Comax and reconnect it.

Verifying Parameters with the Database File

The verification feature is used for detecting changes made in the alarm system, from the last time its parameters were uploaded. This can be a very useful feature for the technician in resolving some faults. To verify:

- 1) First, upload the parameters from the connected system.
- 2) Click Accounts → Verify.
- 3) Choose the customer's account and click OK.

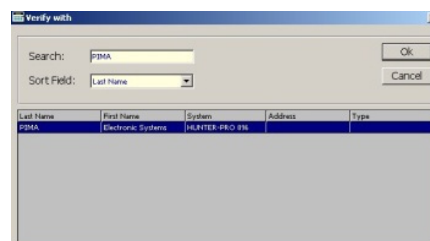


Figure 29. Verification screen

- 4) The Comax now compares the uploaded parameters with those stored in the customers file. If all parameters match, the message "Verification has finished."

All parameters match!" will be displayed. If not, the fields that do not match will be highlighted in red.

System	Zones (1)	Zones (2)	Communication	Report codes
Service Provider Name	PIMA El. Systems			
End of Service Date	00/00			
Local Expander	<input type="checkbox"/>			
Zone Doubling	<input type="checkbox"/>			
I/O-W Expander	<input type="checkbox"/>			
Not Used	<input type="checkbox"/>			
WL Supervisor Time (hrs)	12			
WL Supervisor Time (min)	0			
Number of Keypads	0			
Number of Expanders	0			

Figure 30. Verification result

- 5) To see the difference between the values, place the cursor on a highlighted field; the status bar will display the value as stored in the customers file.
- 6) To finish, click 'Ctrl' + 'F'.

GLOSSARY

Download Code: A security code that is saved in the panel every time data is downloaded with the Comax and the PRGs.

DPR-33/DPR-44: A direct programming adapters used to directly program E²PROM device. The DPR-33/DPR-44 is connected to the PC printer port (i.e., LPT1) and to the programmed device via a special cable:

- DPR-33: Used with RJ-11 4/4 to RJ-11 4/6 and for programming the PRG-22/896 (Fast Programmer).
- DPR-44: Used with RJ-11 4/6 to Molex cable and for programming transmitters/ SAT-8/SAT-9.

LCL-11A: A programming adapter used to locally connect and program a customer's control panel. The LCL-11A is connected to the PC serial port (i.e., COM1, COM2, etc.) and to the control panel via an LCD-type keypad (version 10 and up). When a customer does not have an LCD-type keypad or when his LCD-type keypad is of older version (before 10), a TC-3 Technician Cable can be used, connected to any of PIMA's LCD keypads or panels.

PRG-22/896: fast programmers that can store programs for different PIMA Control Panels. The number of programs that can be stored varies according to the type of the programmed control panel (e.g., CAPTAIN can have up to four programs where HUNTER-PRO can have only two).

Supervisor Code: The Supervisor code is used to enter the configuration screen, manage users and modify Upload & Download Codes.



A user cannot have the same password as a supervisor.

Upload Code: The Comax Upload Code is compared with the code stored in the customer's control panel when attempting to connect to it. Only if the Upload Code and the control panel stored code are identical, the Comax can connect and

program/read parameters. This is done to prevent unauthorized connection with the control panel.


TC-3: PIMA's technician cable connects between PIMA's control panels to any of PIMA's LCD keypads. The TC-3 has three adaptors (RJ-11, Terminal Connection, and Molex) that fit any of PIMA's control panels and keypads

Using the Upload and Download Codes: Normally, the Upload and Download codes should be identical. In the case a customer control panel's code needs to be changed, the Upload Code should be the customer's old code and the Download Code should be the new one.

KNOWN ISSUES



Callback & 'Dial & Snapping'

To enable both callback calls and 'Dial & Snapping', do the following:

- 1) In the modem initialization string (Tools -> Settings -> Modem), verify that 'S0' is set to 2 (**S0=2**).
- 2) Open or create a customer account matching the connected control panel type.
- 3) Click the red dial icon .
- 4) Verify that the phone number to dial to is correct.
- 5) Click OK. The status bar will display the status of the communication process.
- 6) After the remote control panel answers, a Callback Verification message is displayed.
- 7) Click OK.



Until OK is clicked, the Comax will not accept any incoming calls

- 8) Click the blue Dial icon  and click OK.
- 9) Wait 2-3 seconds and click the Disconnect icon .
- 10) Wait for the panel to call back.

Wrong code errors

When entering a wrong upload code, one of two messages can be displayed:

- 1) "Wrong handshake code";
- 2) "Connection time out";

Enter the correct code and proceed.

Uninstalling the Comax

- 1) In the Windows Control Panel, click **Add or Remove Programs**.
- 2) Locate the **Comax** in the installed programs list.
- 3) Click **Remove**.
- 4) Follow the instructions.
- 5) Delete the comax folder from your computer

Displaying non-Unicode languages

If you use non-Unicode language and the text appears garbled:

- 1) Go to Start-> Control panel->Regional and Language Options->Advanced->Language for non- Unicode programs.
- 2) From the drop-down menu, select your language and click OK.

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