RONAN

Series X11CA/X16PDM
Computer Annunciators/ Programmable Digital Monitors

Configuration Software
User's Manual

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Rev #	Description	Date	Editor	Proj mgr	Eng mgr	QA
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1.1	Changed the title from'Common Alarm Annunciator System' to 'Computer Annunciators'. Software was upgraded from v2.0 to v2.0.50: ECO# 11774	2/24/03	NL	VJ	RH	AG
1.2	Title was changed:Added X16PDM: Sec 4.5. User has to save the configuration into CFG file to make a report ECO#11786	3/4/03	NL	VJ	RH	AG
1.3	Grammar: p21, added a noun ECO: 11823	3/13/03	NL	VJ	RH	AG

1. Overview

The Configuration Software runs on a host computer to make it easy for an operator to program and test the X11CA/X16PDM alarm modules.

A basic system consists of three devices: a host computer, X11CA-IM, and X11CA/X16PDM chassis. The serial port of the host computer is connected to the port 2 (P2) of X11CA Interface Module via RS232 serial connection, and the port2 (P2) of the X11CA-IM is connected to the X11CA/X16PDM port via RS484 serial connection.

An X11CA/X16PDM system can have up to 255 modules, and each module must have a unique address set on its J9 switch. However, the maximum number of modules that can be configured by the Configuration Software is 225 at this time.

The X11CA-IM has a switch to set its mode as either PRGM(*Program)* or *Run*. When the switch is set to *Program* mode, the Configuration Software bypasses the X11CA-IM to program and test the module properties in the X11CA/X16PDM chassis. In *Run* mode, the X11CA-IM takes full control of the X11CA/X16PDM Annunciator modules.

For the hardware settings of the X11CA-IM and the X11CA/X16PDM Annunciator system, refer to the documents, *Series X11CA Hardware Manual* or *Series X16PDM Hardware Manual* and *X11CA-IM Master Modules.*

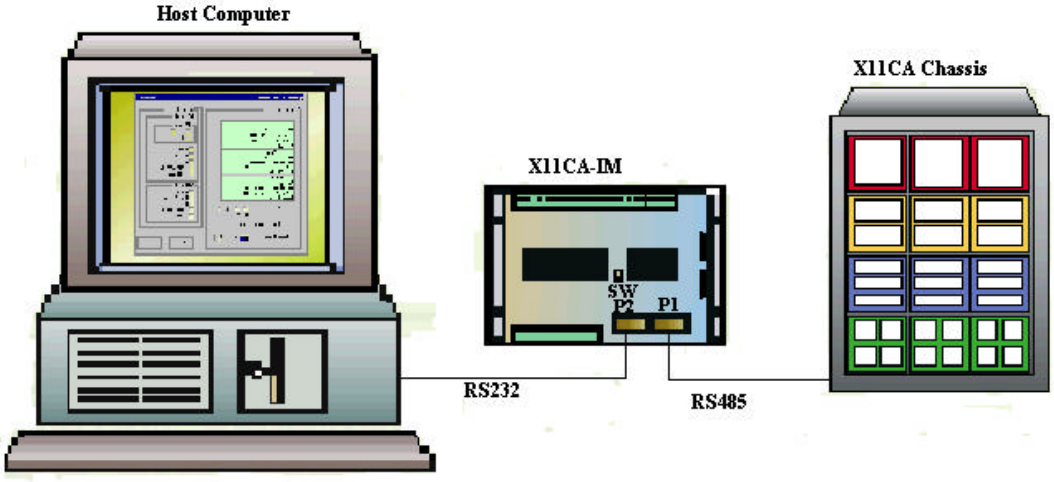


Figure 1-1 X11CA System

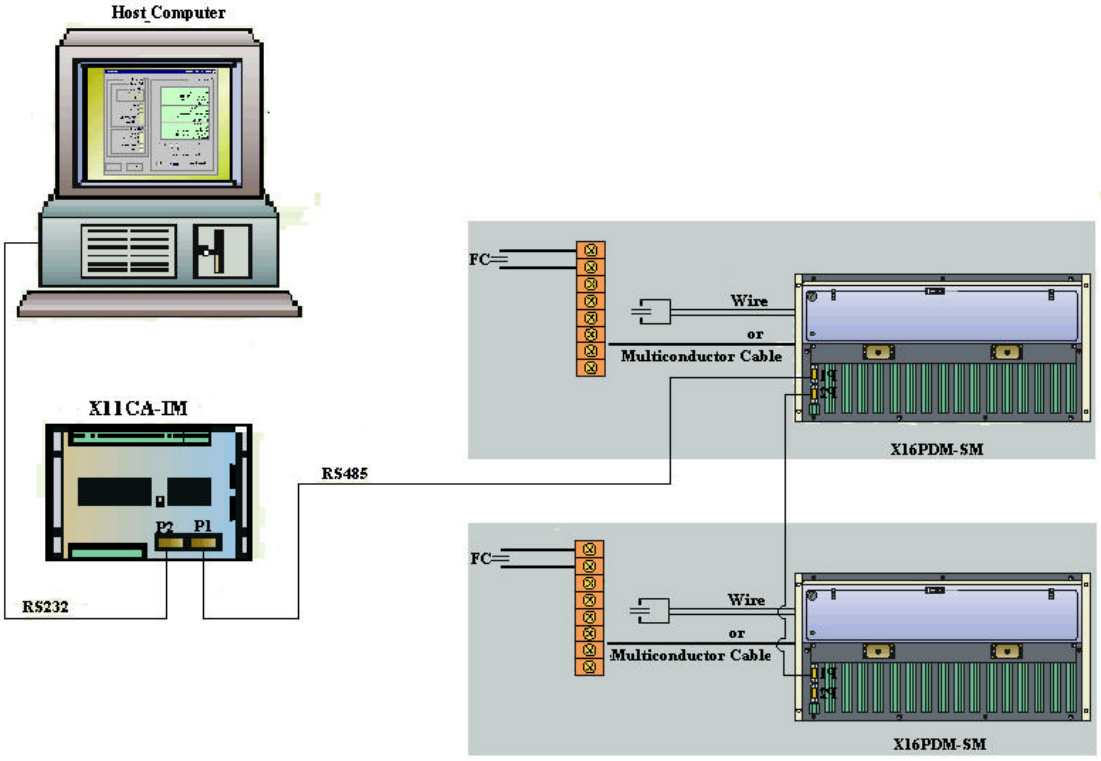


Figure 1-2 X16PDM System

1.1 Abbreviations

AUX	: Auxiliary Relay
CTA /CA	: Common Trouble Alarm
FC	: Field Contact
GF	: General Function
H1	: Horn 1
H2	: Horn 2
IP	: Internet Protocol
NC	: Not Connected
PDM	: Programmable Digital Monitors
TCP	: Transport Control Protocol
TO	: Transistor Output

1.2 Revision History

Revision 1.0	: First approved and released document
Revision 1.1	: Updated due to software update from V2.0 to V2.0.50: ECO# 11774
Revision 1.2	: Title includes X16PDM:Added X16PDM: Sec 4.5. user has to save the configuration into CFG file to make a report ECO#11786
Revision 1.3	: Corrected grammar ECO#11823

1.3 References

QA400	: Design Control
QA4000	: Design Development Quality Assurance Plan
QA4500	: Project Archive
X11CA-3000	: X11CA-IM Master Modules
X11CA-3002 Or X16PDM-100-IOM Purchase Order	: X11CA Hardware Manual for X11CA system or X16PDM Hardware Manual for 16PDM system

2. Requirements

The following is a list of system requirements for installing and running the Configuration Software.

? Windows 95/98/NT/XP Operating System
? The most recent firmware of unit 16 on the X11CA-IM: checksum
? The most recent firmware of unit 2 on each module (part number: X11-1047PL-1 R1): X11CAV1.0 19200.HEX

3. Software Installation and Un-installation

3.1 Installing the Configuration Software Software

1) Turn on the power to the computer.
2) Close all the other running programs.
3) Insert the Installation CD into the CD driver.
4) Double-click on the *My Computer icon* on the desktop.
5) Double-click on the CD ROM drive that has the installation disk.
6) Double-click on the *X11CA 2 50.EXE* zip file. On the *EasyZip Self-Extractor* window, click on the *Start* button.

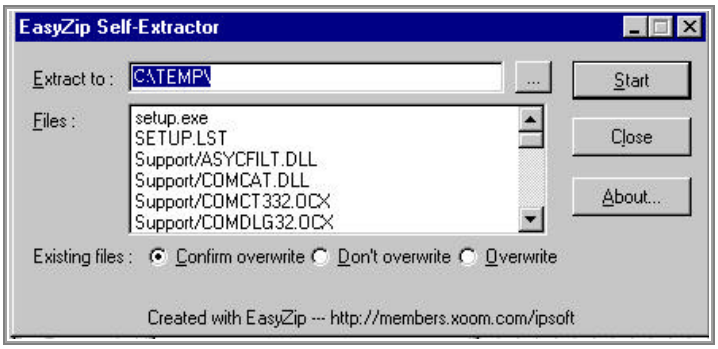


Figure 3-1 Extraction of the Installation File

When the *Finished* window opens, click on the OK button.

Figure 3-2 Finished Extraction

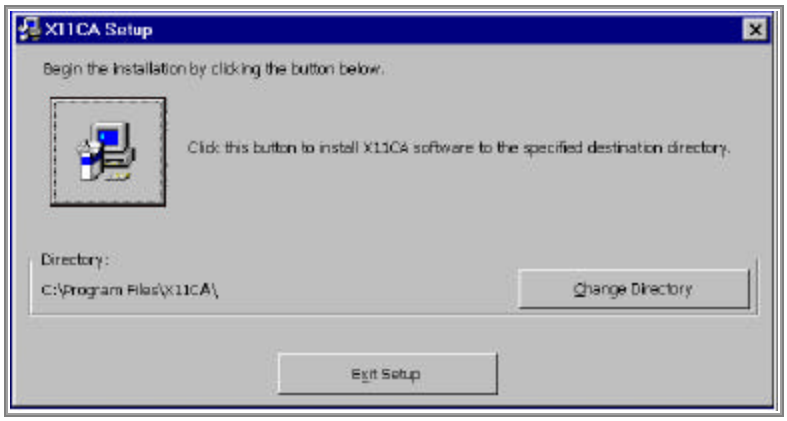
When the *X11CA Setup* window displays, click on the *OK* button.

7) Double-click on the SETUP icon  . The installation program will load installation files. Follow the instructions on the installation CD. When the *X11CA Setup* window displays, click on the *OK* button.
8) The next window will display the destination directory where the software will be loaded.

If you want to change the directory, click on the *Change Directory* button to select a destination directory as shown in *Figure 3-3*

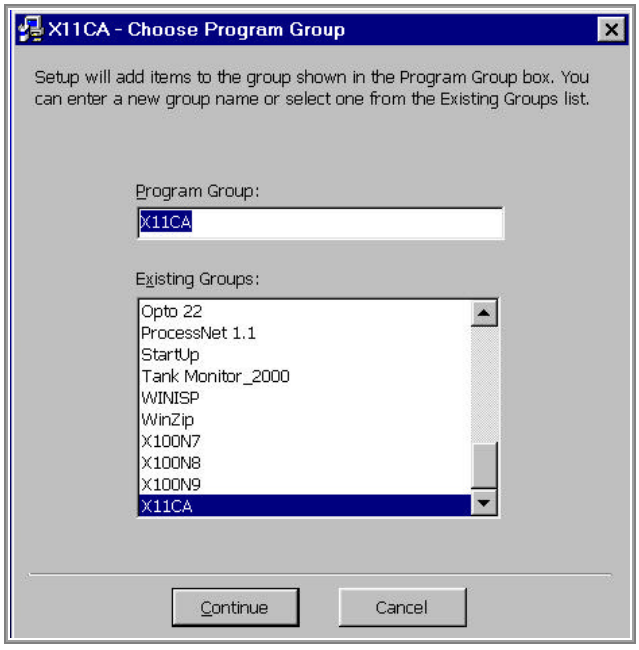
When you are ready to continue the installation, click on the installation icon button  in the middle of the window to continue the installation. If you do not want the installation at this time, click on the *Exit Setup* button at the bottom of the window to stop the installation.

Figure 3-3 X11CA Setup Window



9) The next window is the *X11CA Choose Program Group* window (*Figure 3-4*) where you can set the program name to be displayed in the *Programs* menu. The default name is 'X11CA', but you can either set a new name or choose one from the list of the program names. Press the *Continue* button to continue with the installation.

Figure 3-4. X11CA-Choose Program Group



10) The installation program will install the software. When the *X11CA Setup* is completed successfully, click on the *OK* button.

3.2 Uninstalling the Configuration Software Software

1) Left-click on the *Start* button on the desktop.
2) Select the *Settings*.
3) Select the *Control Panel*.
4) Double click on the *Add/Remove Programs* icon.
5) Left-click on the program group name (Example, X11CA) in the list box.
6) Left-click on the *Add/Remove* button.
7) Follow the instructions on the screen.

4. Configuration Software Operation

The main function of the Configuration Software is easy configuration and testing of the alarm modules in the X11CA/X16PDM chassis. This function involves two types of modules: physical module and logical module.

A physical module is an alarm module in the X11CA/X16PDM chassis. Each physical module has a micro-controller, firmware and a unique system address.

A logical module is a module created dynamically by Configuration Software on the host computer. Because each logical module is configured for its corresponding physical module, its address must be same as its physical module. The logical modules and their properties exist only in the Configuration Software environment where they were created. Therefore, it is better to save them into a CFG file(*.cfg file) before you exit out of the Configuration Software environment.

However, logical modules do not have any affect on physical modules until properties of the logical modules are programmed into their physical modules.

When you request programming a module, the Configuration Software checks your password. After authentication, it sends the logical module properties to the target physical module via X11CA-IM. The micro-controller on the target module saves the properties in its firmware.

When you request retrieving from a physical module, the Configuration Software requests the target physical module to send its properties. After receiving the address and module properties from the physical module via X11CA-IM, it places the properties into the logical module buffer with the matching address.

Once the properties are programmed into the physical module firmware, you can test the properties of the physical modules by setting the logical module into *Run* mode, and then clicking the push buttons on the Main window of the Configuration Software.

To pass control over the physical modules and other devices from Configuration Software to X11CA-IM, set the switch on X11CA-IM to run mode.

Example: Figure 4-1 (Module1:3 channels, Module2:4 channels)

Figure 4-1 shows a X11CA system with two physical modules. Each physical module has a unique address. The first module has three channels and the second module has four channels.

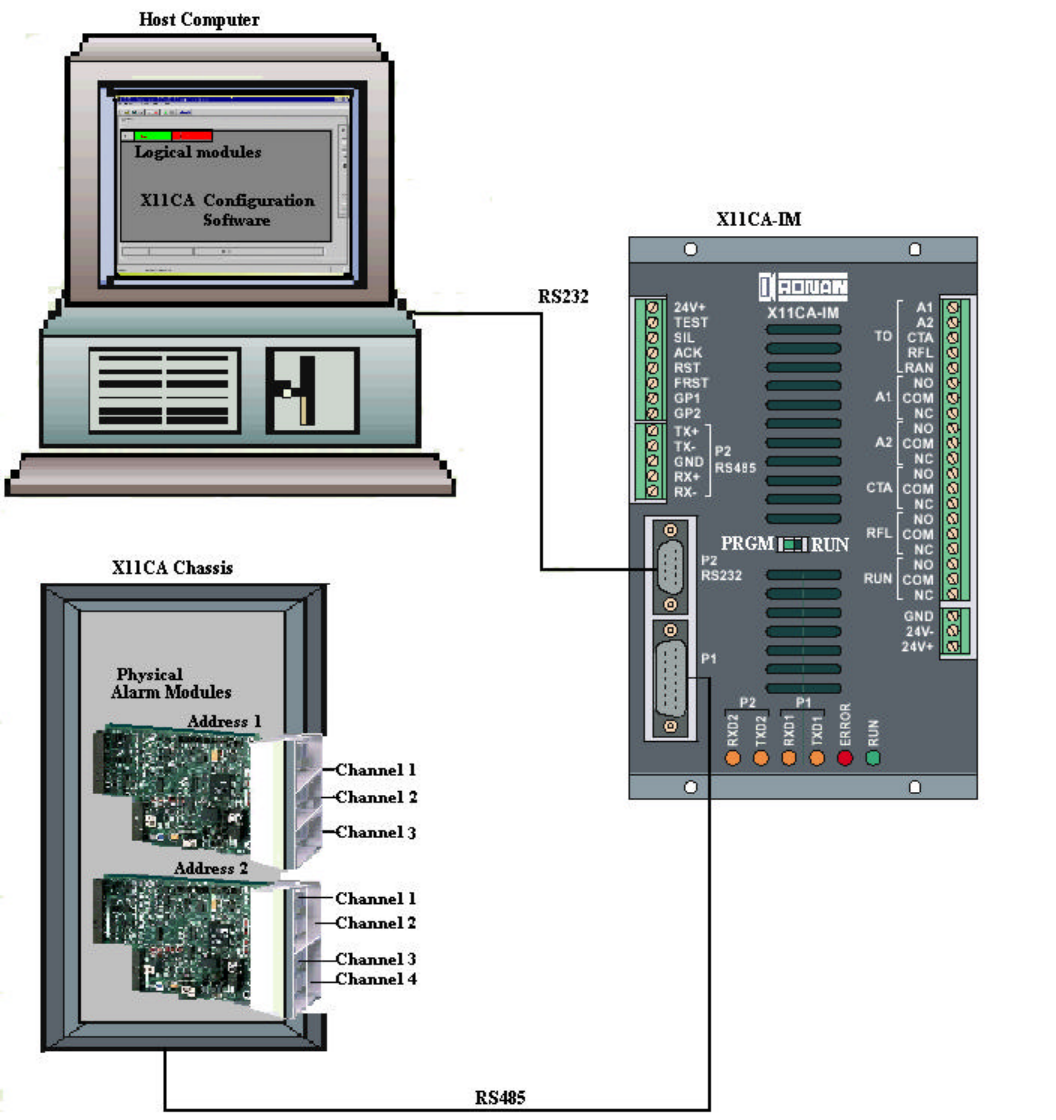


Figure 4-1 System Setup

This example will continue throughout this document. When you see an example that starts with icon, you will know that it is the continuation of the example with the same system set up as Fig 4-1.

4.1 Loading the Configuration Program

1. Click on the *Start* button.
2. Select *Programs*.
3. Click on the program name you have selected during the installation process.

The following example shows the program name as X11CA.

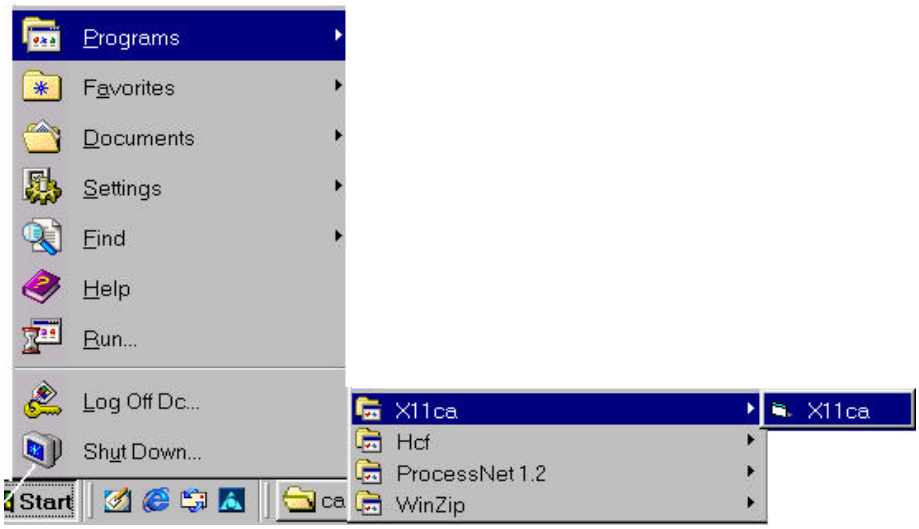


Figure 4-2. Starting Configuration Software

4.2 The Main Window

After the software is loaded, the Main window opens. It consists of five main areas: Title Bar, Tool Bar, Menu Bar, System-Display area, and Status area.

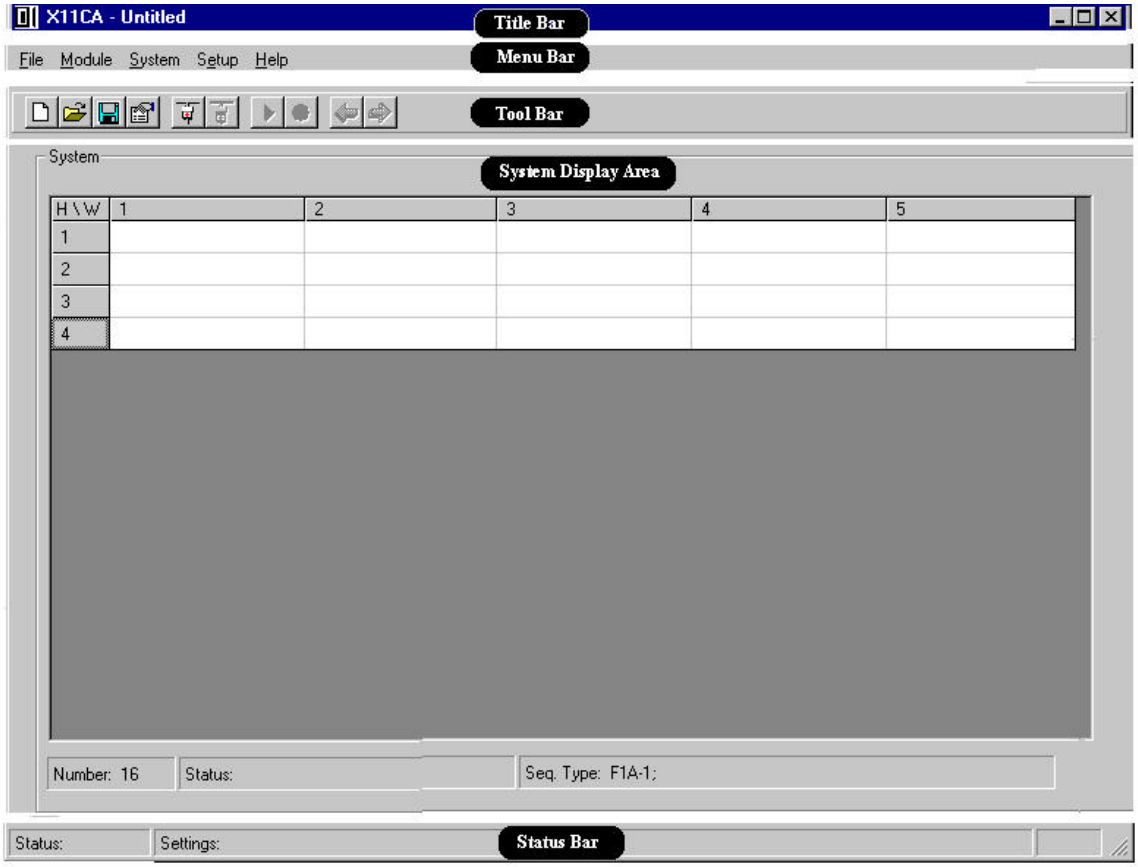


Figure 4-3 Main Window

4.2.1 The Title Bar

The first line at the top of the Main window is the Title area. It displays two names: the Configuration Software name and the configuration file name.

Example: The title bar on *Figure 4-3* shows that the name of the program is 'X11CA' and the configuration file name is 'untitled'.

4.2.2 The Menu Bar

The second line from the top of the Main window is the Menu area. It has five menus and each menu has its own submenus. *Figure 4-4* shows the menus in bold characters and submenus in plain characters.

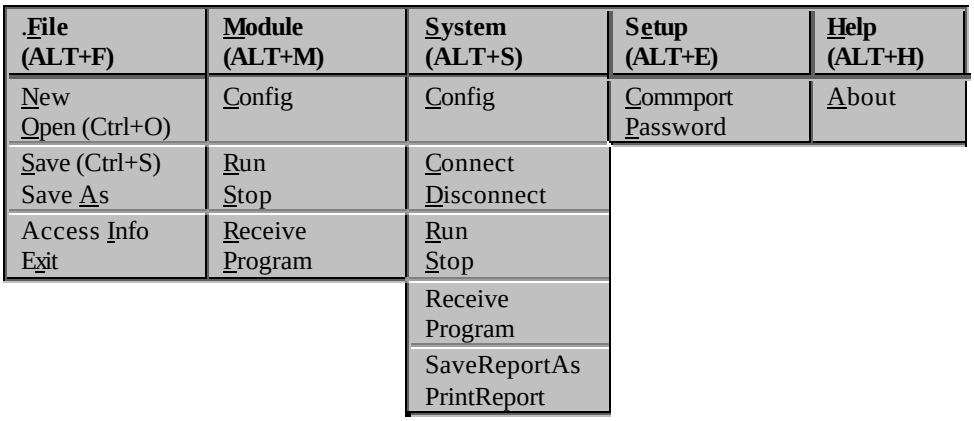


Figure 4-4. Menu Bar

File (ALT+F) menu

Submenus	Description
New	Opens a new configuration file with default settings.
Open	Displays a list of files to choose from. When a configuration file opens, logical modules are set up with the properties saved in the file.
Save	Saves the current system and module properties into the currently configuration file.
Save As	Saves current system and module properties into a user-specified file.
Acess Info	Displays information of the current configuration file. ▪ Path and name of the file ▪ Date and time it was created ▪ Date and time it was last accessed ▪ Date and time it was last modified (See *Figure 4-29 File Access Info Window.)*
Exit	Closes Configuration software to return to the desktop.

Table 4-1 File Menu and Its Submenus

Module (ALT+M) menu

Module menu applies to a single module. Before clicking on the Module menu, click once in a logical module cell on the Main window to select it.

The following is a list of submenus and the results of pressing them.

Submenus	Description
Config	Opens Module Properties window. (See *Figure 4-14. Module Properties Window.)*
Run	The highlighted logical module cell on the Main window that has communication with its physical module becomes green and displays 'Run' message. (See *Figure* 4-33. Modules in Run Mode.) If connection to the physical modules is active, the physical module is ready to be tested. The logical module that fails to establish communication with its physical module displays the message, 'NoComm' displays on its white cell.
Stop	The highlighted logical module cell on the Main window displays '*Stop*' message over the red background. (See *Figure 4-34 Modules in Stop Mode.)* If connection to the physical modules is active, its physical module is ready for programming or for sending a copy of its properties to its logical module. The logical module that fails to establish communication with its physical module displays the message, 'NoComm' displays on its white cell.
Receive	If connected and the highlighted logical module is in *Stop* mode, it receives properties from its physical module. The logical module that fails to establish communication with its physical module displays the message, 'NoComm' displays on its white cell.
Program	If connected, and the highlighted logical module is in *Stop* mode, an authorized user can program properties of a logical module into its physical module. The logical module that fails to establish communication with its physical module displays the message, 'NoComm' displays on its white cell.

Table 4-2 Module Menu and Its Submenus

SYSTEM (ALT+S) menu

Unlike the Module menu, the System menu applies to all the modules in the system.

Submenu	Description
Config	Opens Module Properties window. (See *Figure 4-14. Module Properties Window.)* This function is same as the *Config* submenu of *Module* menu.
Connect	Makes connection between the logical modules and the physical modules.
Disconnect	Disconnects from the physical modules.
Run	Each logical module cell on the Main window that has communication with its physical module becomes green and displays 'Run' message. (See *Figure* 4-33. Modules in Run Mode.) If connection to the physical modules is active, the physical module is ready to be tested. The logical module that fails to establish communication with its physical module displays the message, 'NoComm' displays on its white cell.
Stop	Each logical module cell on the Main window displays '*Stop*' message over the red background. (See *Figure 4-34 Modules in Stop Mode.)* If connection to the physical modules is active, its physical module is ready for programming or for sending a copy of its properties to its logical module. The logical module that fails to establish communication with its physical module displays the message, 'NoComm' displays on its white cell.
Receive	If connected, the logical modules that are in *Stop* mode receive copies of properties from their physical modules. The logical module that fails to establish communication with its physical module displays the message, 'NoComm' displays on its white cell.
Program	If connected, and the logical modules are in *Stop* mode, an authorized user can program properties of the logical modules into their corresponding physical modules. The logical module that fails to establish communication with its physical module displays the message, 'NoComm' displays on its white cell.
SaveReportAs	Opens a *Save As* window where the system report file name can be changed.
PrintReport	Sends the content of currently open report file to the default printer.

Table 4-3 System Submenu

SETUP (ALT+E) menu

Submenu	Description
CommPort	Opens *Setup* window where you can set up the communication port and its baud rate. (See *Figure 4-9 Communication Port Window.)*
Password	Opens *Set Password* window where you can change the password for programming the micro-controllers. (See *Figure 4-40. Set Password Window.)*

Table 4-4 Setup Submenu

HELP (ALT+H) menu

Submenu	Description
About	Opens *About X11CA* window that displays the information about the software, such as the version number.

Figure 4-5 About Submenu

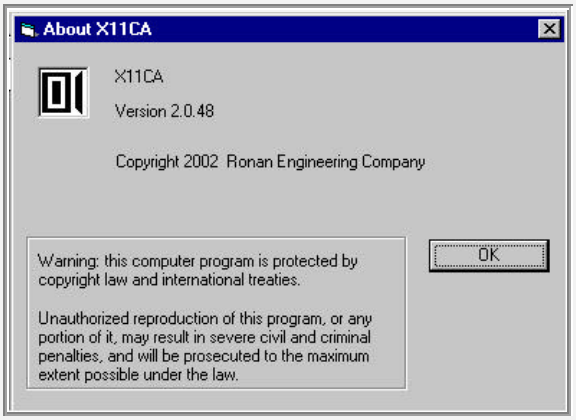


Table 4-5 Help Submenu

4.2.3 The Tool Bar

The third line from the top of the Main window is the tool bar.

Figure 4-6 Icons

If you place the cursor underneath each icon, its name will display under the icon.

Name	Description
New	Opens a new configuration file. Pressing this button also resets the Configuration Software.
Open	Opens a window that has a list of existing files to be selected from.
Save	Saves the current properties into the currently open configuration file.
Properties	Opens a Module Properties window of the selected logical module. See *Figure 4-14. Module Properties Window.*
Connect	Makes connection between logical modules and their corresponding physical alarm modules. The logical module that failed to establish communication with its physical module displays 'NoComm' message in its cell.
Disconnect	Disconnects logical modules from their physical alarm modules.
Run	Same as the Run submenu of System menu.
Stop	Same as the Stop submenu of System menu.
Program	Same as the Program submenu of the Module menu.
Receive	Same as the Receive submenu of the Module menu

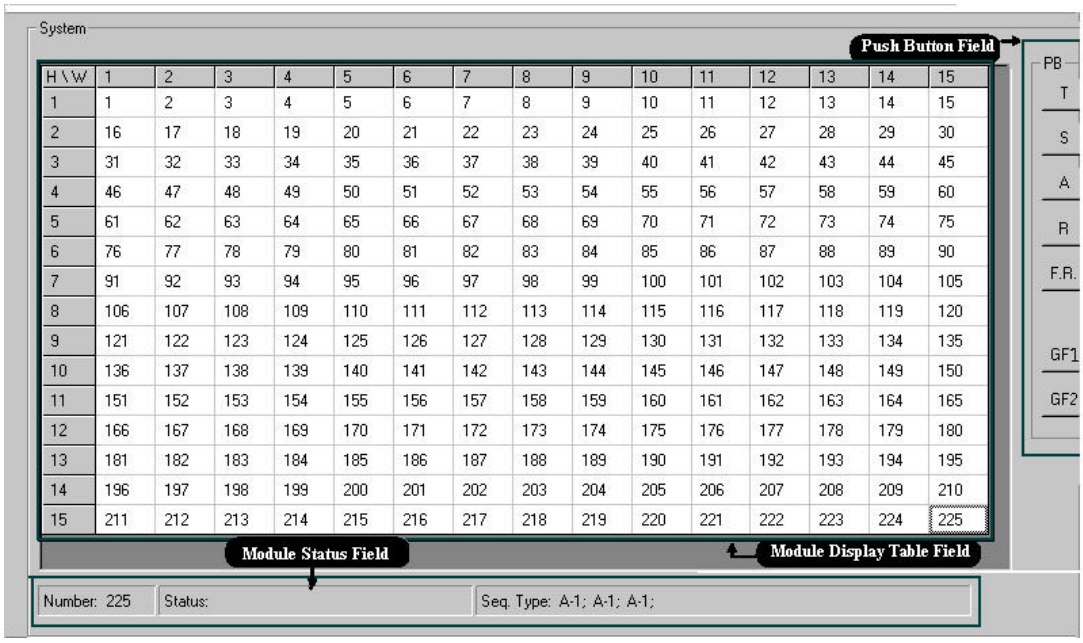
Table 4-6 Tool Bar

4.2.4 System Display Field

The System Display area is composed of three fields.

- Module Display table field
- Module Status field
- Push Button Field

Example: Figure 4-7 System Display Field shows System Display area with 225 logical modules. The number in each cell is its logical module addresses. When the logical module cell number 225 is selected, its module number, its status, and sequence types of its channels display on the Module Status area.



H \ W	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
2	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
3	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
4	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
5	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
6	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
7	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
8	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
9	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135
10	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150
11	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165
12	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
13	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195
14	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210
15	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225

Figure 4-7 System Display Field

1) Module Display Table Area

Each cell on the table represents a logical module with a unique address that is same as its physical address. A status message of the logical module, such as *No Comm.*, *Run*, *Stop*, *Erased* or *Programmed*, can be displayed in the cell.

The following table has descriptions of each message.

Messages	Descriptions
NoComm	There is no communication between the logical module and its physical module. The alarm board could be either missing or inactive, or the connection is bad.
Run	Connection between the logical module and its physical module is active, and the physical module is ready for testing.
Stop	Configuration Software stopped simulating the field contact inputs onto the physical module.
Erased	Firmware of the physical module was cleared.
Programmed	Saving properties of the logical module into its physical alarm module was completed.

If a cell is clicked once, the selected module cell is highlighted, and its module number, its status, and sequence types of its channels display on the Module Status area.

If it is double clicked, it opens its Module Properties window where you can view or modify properties of the logical module

2) Module Status Area

This area displays following information for a selected module.

	Descriptions
Number	The address of the logical module.
Status	The status of communication between each logical module and its physical module, such as *Run, Stop, Ready, Receiving, Erasing, Verifying or Programming,* Run : The physical module is ready to be tested. Stop : The physical module is ready to be programmed or send copy of its properties to its logical module. Ready : The logical module is ready for the next action. Receiving : The logical module is receiving data from the physical module. Erasing : Properties of the physical module are being ceared. Programming : The logical module is in the process of copying its properties to the physical alarm module. Verifying : Configuration Software is checking if the data in the physical module is same as the one in its logical module.
Seq Type	Sequence types of the logical module channels.

Table 4-7 Module Status Area

3) Push Button Area

This area is not visible until the *Connect* function is activated. Once activated, it displays seven push buttons for testing the operations and lamp display functions: Test, Acknowledge, Reset, Silence, F.R, GF1 and GF2. These buttons are used to test physical alarm module properties. How to test the modules are covered *in Section 4.11Testing Alarm Modules* .

Figure 4-8. Push Button Field

PB	Buttons
T	Test
S	Silence
A	Acknowledge
R	Reset
F.R.	First Out Reset
GF1	General Function 1
GF2	General Function 2

4.2.5 Status Bar

Status	
Settings	This area displays the communication port settings, such as baud rate, parity, data bits, and stop bit.

Table 4-8. Status Bar

4.3 Configuring Communication Properties

In order for the Configuration Software to communicate with physical alarm modules, speed and port of the host computer must be set up.

4.3.1 Setting the Communication Port

The communication port is set on the *Setup* window. The data format is eight data bits, none parity and one stop bit.

1) Click on the *Setup* menu and then the *Comport* submenu to open the *Setup* window.

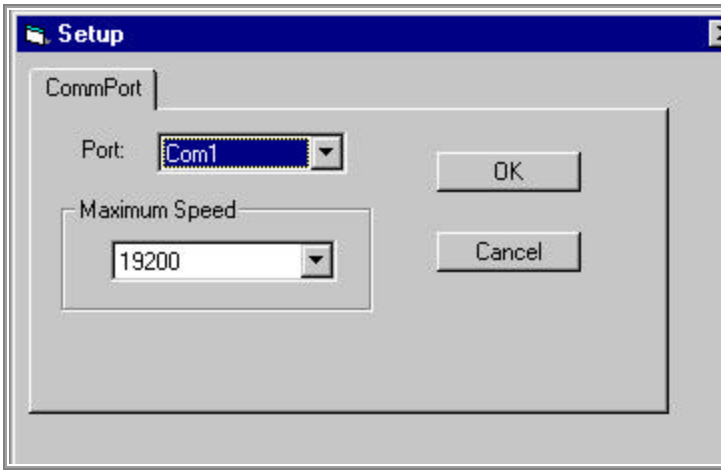


Figure 4-9
Communication Port
Window

2) The following table shows available options and default values of each category on the *Comport* window. Select the settings appropriately.

	Default Values	Other values
Port	Com1	Com2, Com3, … Com 16
Max Speed	19200	8800, 38400, 56000, 57600, 115200, 128000, 256000 NOTE: Currently two baud rates are available for X11CA-IM operation: 19200 and 38400.

Table 4-9 Default values of the COM ports

3) Press the *OK* button to save the settings of the communication port.

4.4 Setting System and Module Properties for Logical Modules

As long as the logical modules are not in the *Run* mode, their system and module properties can be set in one of the following three ways.

1) If you want to set up new properties, click on the *File* menu and then the *New* submenu. When the new file opens, it resets the Configuration Software. It will inactivate any connections made, and close current configuration file. To configure new properties, go to *Section 4.4.1.Setting System Properties* and then *Section 4.4.2 Properties for a Module*.

2) To retrieve properties from a previously saved *.cfg file, go to *Section 4.4.7 Retrieving Properties from a Configuration File.*

3) To retrieve physical module properties to the logical modules, *Section 4.4.1.Setting System Properties, Section 4.6 Connecting to Physical Alarm Modules,* and then *Section 4.4.7 Retrieving Properties from a Configuration File.*

Before you start configuring the system and module properties, it is better to get all the information.

- The number of physical modules.
- The number of channels for each module.
- The test type. (Refer to *Section 4.4.1 Setting System Properties*.)
- The type of horns. (Refer to *Section 4.4.1 Setting System Properties*.)
- The signal that Common Trouble Alarm follows. (Refer to *Section 4.4.1 Setting System Properties*.)
- The signal that the serial data output follows. (Refer to *Section 4.4.1 Setting System Properties*.)
- Inhibit signals for the Global Function tests for each module if there is any. (Refer to *Section 4.4.2.1 Setting the Common Signals Field.)*
- The sequence type of each channel. (Refer to *Section 4.5.2.1 Setting Channel Properties.)*
- Field Contact time delay. (Refer to *Section 4.5.2.1 Setting Channel Properties.)*
- The signal that will trigger Auxiliary Relay Output each channel. (Refer to *Section 4.5.2.1 Setting Channel Properties.)*
- The signal that will trigger Transistor Output follows for each channel. (Refer to *Section 4.5.2.1 Setting Channel Properties.)*
- Whether or not Auxiliary Relay Output is normally energized. (Refer to *Section 4.5.2.1 Setting Channel Properties.)*
- Whether or not Transistor Output is normally energized. . (Refer to *Section 4.5.2.1 Setting Channel Properties.)*

4.4.1 Setting System Properties

When the Configuration Software opens, the *System* display area will show the Module table in the default setting, which is one logical module at the cell position [1,1].

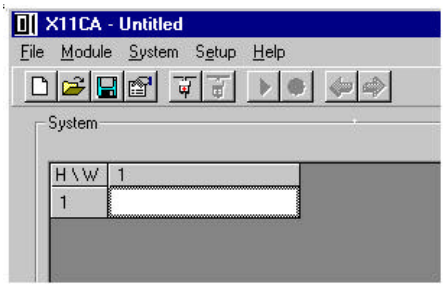


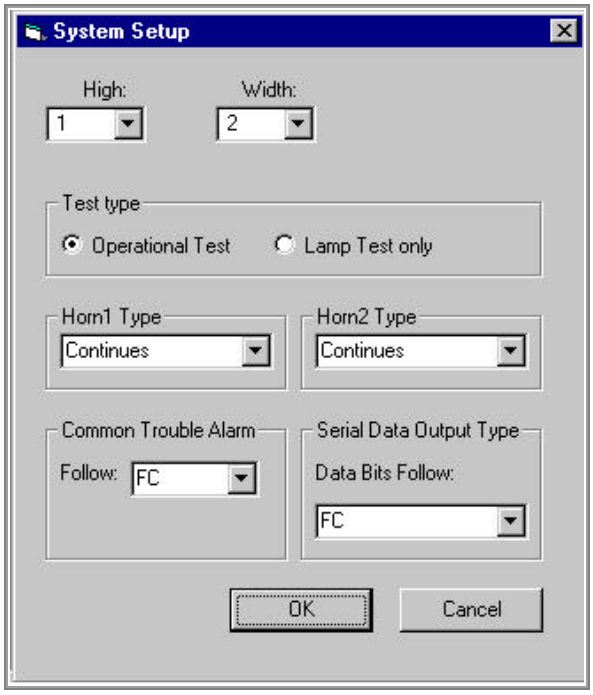
Figure 4-10 Logical Module 1

If there are multiple physical modules in the chassis, the table has to be expanded. If you are not sure how many modules you have, check the purchase order.

Follow the instructions below to set up the Module Display area.

1) Click on the *System* menu, and then *Config* to open the *Setup System* window. (Or press <Alt+S> and then <C> key).
2) When the *Setup System* window opens, it will display two boxes: *Width* and *High.*

Figure 4-11 Default Setting of the System Setup Window



Width
The number of columns on the table.

High

The number of rows on the table.

NOTE:
The total number of cells (=Width * High) on the table should be same as or larger than the total number of the physical alarm modules in the chassis. The address of the first module is always1.

Example: If you have three alarm modules, you can set the width to 1 and the high to 3, or the width to 3 and the high to 1.

Test Types

This function is for testing the properties of physical alarm modules. For testing see *Section 4.11Testing Alarm Modules* .

There are two types of testing depending on the switch setting on the X11CA-IM.

- When the switch on the X11CA-IM is on *PRGM* side, use the push buttons on the right side of the Main window in the Configuration Software environment.
- When the switch on the X11CA-IM is on *RUN* side, use the test buttons attached to the X11CA-IM.

Choose from the following two options.

Test Types	Description
Operational Test	Tests lamplight and sequence of each channel.
Lamp Test only	Tests lamplight of each channel only.

Table 4-10 Test Type

For Configuration Software test procedure, see *Section 4.11 Testing Alarm Modules.*

Horn1& Horn2 SilenceType

There are four silence types for each horn.

NOTE:
This function will be available in the Configuration Software environment in the future. At present, it is enabled only when the X11CA-IM is in RUN mode.

Horn Types	Description
Continuous	Horn sounds continuously until it is silenced
AutoSilence 5 sec	Horn sounds for 5 seconds and then drops out automatically.
AutoSilence 30 sec	Horn sounds for 30 seconds and then drops out automatically.
AutoSilence 1 min	Horn sounds for 1 minute and then drops out automatically.
AutoSilence 30 min	Horn sounds for 30 minute and then drops out automatically.

Table 4-11 Horn Types

Common Alarms Follow

Select a signal that will trigger Common Alarms on X11CA-IM when X11CA-IM is in RUN mode. The event process depends on the sequence type of each channel.

Example: The following table is based on the A-1 sequence type in X11CA-IM environment. The sequence chart is available on the CD provided.

Common Alarms Follow	Description
No CTA (No Common Trouble Alarm)	CTA signals become unavailable.
FC (Field Contact)	If the Field Contact input is normally not energized: ▪ Normally CTA (NO) is OFF. ▪ When the Field Contact goes into an alarm condition, CTA turns ON. ▪ When the Field Contact returns to normal, CTA turns OFF. If the Field Contact input is normally energized ▪ Normally CTA is ON. ▪ When the Field Contact goes into an alarm condition, CTA turns OFF. ▪ When the Field Contact returns to normal, CTA turns ON
ACK (Acknowledge)	If the Field Contact input is normally not energized: ▪ Normally CTA (NO) is OFF. ▪ When the Field Contact goes into an alarm condition,

	CTA (NO) turns ON. ▪ When the acknowledge button connected to the X11CA-IM is pressed, CTA turns OFF. ▪ When the Field Contact returns to normal, there is no CTA signal. If the Field Contact input is normally energized ▪ When the Field Contact goes into alarm condition, CTA turns OFF. ▪ When the acknowledge button connected to the X11CA-IM is pressed, CTA turns ON ▪ When Field Contact returns to normal, there is no CTA signal
ALARM (Alarm Simulator)	If the Field Contact input is normally not energized: ▪ Normally CTA (NO) is OFF. ▪ When the Field Contact goes into alarm condition, the lamp flashes fast and CTA turns ON. ▪ The lamp is ON and CTA stay active until the acknowledge button connected to the X11CA-IM is pressed. CTA turns OFF. If the Field Contact input is normally energized: ▪ Normally CTA is ON. ▪ When the Field Contact goes into alarm condition, the lamp turns OFF and CTA turns OFF. ▪ The lamp is OFF and CTA stay inactive until the acknowledge button connected to the X11CA-IM is pressed. Then CTA turns OFF.
HORN	If the Field Contact input is normally not energized: ▪ Normally CTA (NO) is OFF. ▪ When the Field Contact goes into alarm condition, the audio display and CTA turn ON. ▪ When the Silence button connected to the X11CA-IM is pressed, the audio display and CTA turn OFF. If the Field Contact input is normally energized: ▪ Normally CTA is ON. ▪ When the Field Contact goes into alarm condition, the lamp turns OFF and CTA turns OFF. ▪ When the Silence button connected to the X11CA-IM is pressed, the audio display and CTA turn ON.

Table 4-12 Signals CTA Follows

Serial Data Output Type: Data output follow

Serial Data Output is the signal that is transmitted from TXD (transmittal data line) of the Port 2 on the X11CA-IM when X11CA-IM is in RUN mode.

Example: The following table is based on the A-1 sequence type running in the X11CA-IM environment. The sequence chart is available on the CD provided.

Data Output Follow	Description
FC (Field Contact)	If the Field Contact input is normally not energized: ▪ When the Field Contact goes into alarm condition, the output signal is energized. ▪ When the Field Contact returns to normal condition, the output signal becomes de-energized. If the Field Contact input is normally energized ▪ When the Field Contact is in alarm condition, the output signal becomes de-energized. ▪ When the Field Contact returns to normal condition, the output signal becomes energized
ACK (Acknowledge)	If the Field Contact input is normally not energized: ▪ When the Field Contact goes into alarm condition, the output signal becomes energized. ▪ When the alarm is acknowledged, the output signal becomes de-energized. If the Field Contact input is normally energized ▪ When the Field Contact goes into alarm condition, the output signal becomes de-energized. ▪ When the alarm is acknowledged, the output signal becomes energized.
ALARM (Alarm Simulator)	If the Field Contact input is normally not energized: ▪ When the Field Contact goes into alarm condition, the lamp turns ON and, the output signal becomes energized. ▪ The lamp and the data output signal stay active until the alarm is acknowledged. After that, the alarms return to normal and then reset. If the Field Contact input is normally energized: ▪ When the Field Contact goes into alarm condition, the lamplights turn OFF and, the output signal becomes de-energized. ▪ The lamp and the data output signal stay inactive

	until the alarm is acknowledged. After that, the alarms return to normal and then reset.

Table 4-13 Signals the Serial Data Output Follows

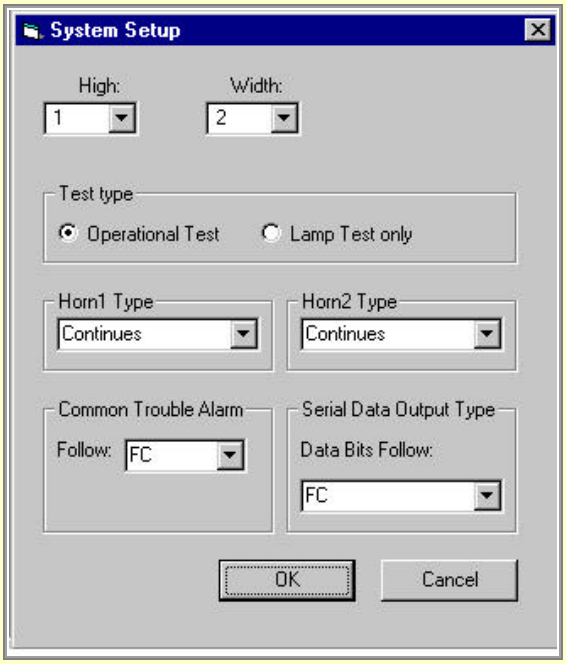
After setting System properties, click on the *OK* button.

Example: Figure 4-1 (Module1:3 channels, Module2:4 channels)

X11CA-IM Switch: PRGM

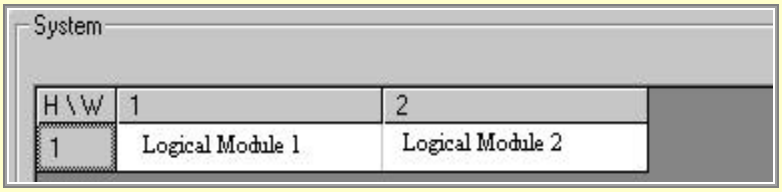
For example, you have two modules in the X11CA chassis, and the addresses of the modules are set to 1 and 2. You need to set up two cells in the table as shown in *Figure 4-12 Setting Up Two Modules.* Set the *Width* and the *High* to 2 and 1, respectively. Select the Operational Test type and leave the horn types alone. Set both the CTA triggering signal and Serial Output type to FC. Click on the *OK* button.

Figure 4-12 Setting Up Two Modules



The table contains two logical module cells; as shown in the *Figure 4-13 A Table with Two Logical* Modules.

Figure 4-13 A Table with Two Logical Modules



NOTE:

To adjust a cell size, position the cursor over the dividing line until the bi-directional arrow symbol (?) appears and then drag the cursor in the direction you want to stretch or shrink.

4.4.2 Setting Module Properties

Setting new module properties can be done on the *Module Properties* window.

There are two ways to open it.

1) Click on the *Module* menu, and then *Config*. (Or <Alt+M> and then <C>.)
2) Or double-click in each module cell of the *Module Display* window to set the properties.

The *Module Properties* window will show the default values of the module.

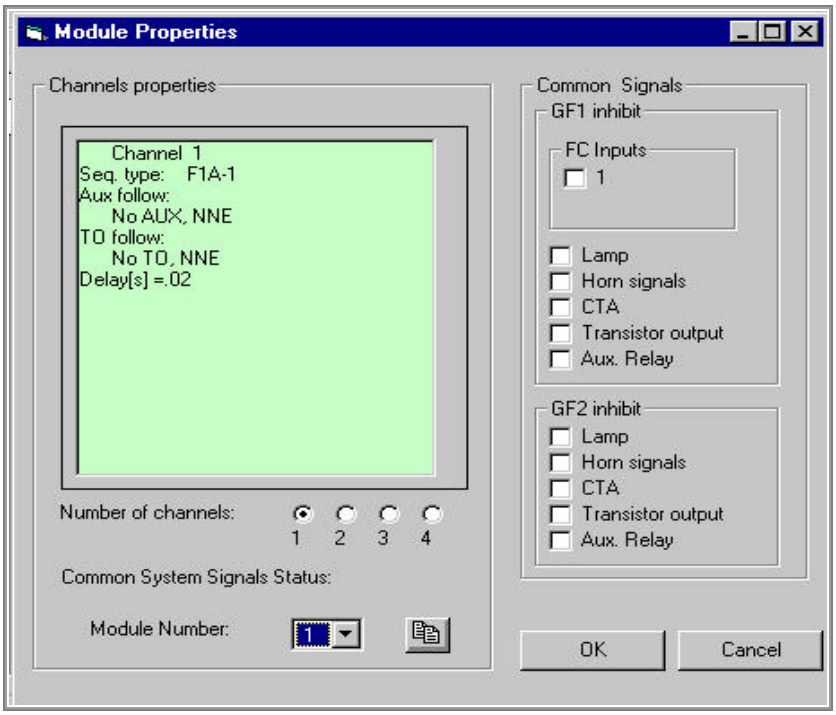


Figure 4-14. Module Properties Window

On the *Module Properties* window, there are two main fields: *Channels Properties* field and *Common Signals* field.

4.5.2.1 Setting Channel Properties

The *Channel Properties* field is on the left side of the *Module Properties* window. The list box at the top of the field displays the properties of each channel.

1) Changing the channel properties of the modules can be done in two ways.

   - Select a module number from the *Module Number* box to set the address of the module.
   - Select the number of channels for each module.

Example: Figure 4-1 (Module1:3 channels, Module2:4 channels)

X11CA-IM Switch: PRGM

Assume that the first module has 3 channels. Select 1 from the *Module Number* list box and 3 from the *Number of channels* radio boxes.

The channel properties box will contain three boxes that display the default property settings of the three channels.

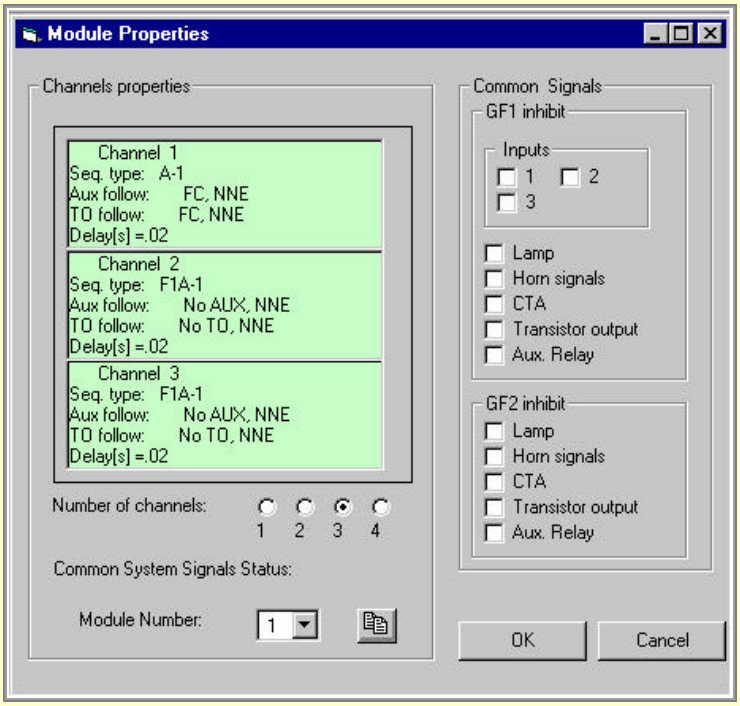


Figure 4-15 Default Values for a Module with 3 Channels

2) Left-click in the Channel 1 area of the *Channel Properties* box to open the *Channel: 1* window.

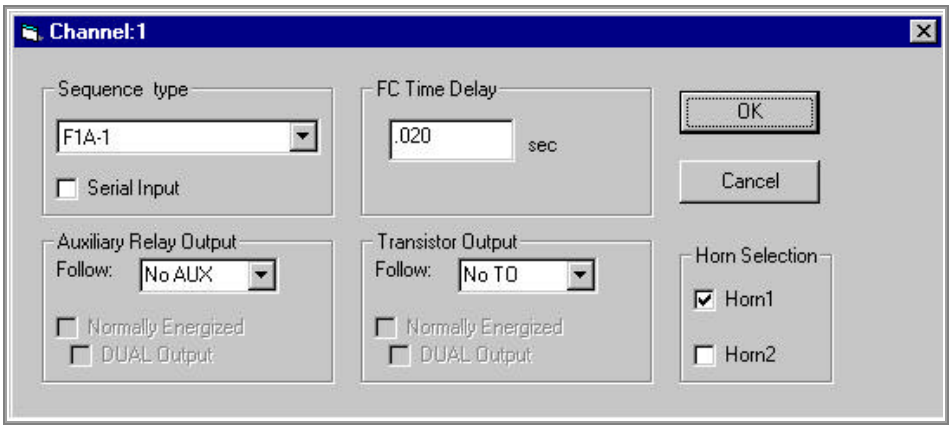


Figure 4-16. Channel Properties Window with Default Values

? *Sequence Type*

There are twelve sequence types to choose from. They are F1M-1, F1A-1, F2M-1, F2A-1, F3A-1 F3M-1, A-1, A-4, A-4-5-6, and M-1. Please refer to the Sequence charts *on the CD.*

If the *Serial Input* box is checked, the first-out sequence types, such as F1M-1, F1A-1, F2M-1, F2A-1, F3A-1 F3M-1 in the *Sequence Type* box become unavailable.

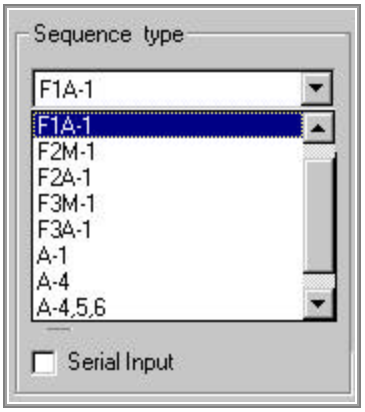


Figure 4-17 Sequence Types

? *Field Contact Time Delay*

Set the time period that an alarm module waits until it detects the response signal from the field device.

Figure 4-18 FC Field Time Delay

? *Auxiliary Relay Output Follow*

Choose the signal that will trigger the Auxiliary Relay Output signal from the X11CA-IM when the switch on the X11CA-IM is on *Run* side. The result depends on the sequence type of each channel.

Figure 4-19 Auxiliary Relay Output

Example: The following is the sequence of A-1 type inX11CA-IM environment.

Signal to Trigger Auxiliary Relay Output	**Description**
No AUX **(No Auxiliary Relay Output)**	Auxiliary Relay output is not available.
FC **(Field Contact)**	If the Field Contact input is not normally energized: ▪ When the Field Contact goes into an alarm condition, auxiliary output becomes energized. ▪ When the Field Contact returns to normal condition, auxiliary output becomes de-energized. If the Field Contact input is normally energized ▪ When the Field Contact is in an alarm condition, auxiliary output becomes de-energized. ▪ When the Field Contact returns to normal condition, auxiliary output becomes energized.
ACK **(Acknowledge)**	If the Field Contact input is not normally energized: ▪ When the Field Contact goes into an alarm condition, the auxiliary output becomes energized. ▪ When the acknowledge button connected to

	the X11CA-IM is pressed, auxiliary output becomes de-energized. <u>If the Field Contact input is normally energized</u> ▪ When the Field Contact goes into alarm condition, auxiliary output becomes de-energized. ▪ When the alarm is acknowledged on the X11CA-IM, the auxiliary output becomes energized.
ALARM (Alarm Simulator)	<u>If the Field Contact input is not normally energized:</u> ▪ When the Field Contact goes into alarm condition, auxiliary output becomes energized. ▪ When the alarm is acknowledged, auxiliary output stays energized. ▪ When the alarm returns to normal, auxiliary output becomes de-energized. <u>If the Field Contact input is normally energized:</u> ▪ When the Field Contact goes into alarm condition, auxiliary output becomes de-energized. ▪ When the alarm is acknowledged, auxiliary output stays de-energized. ▪ When the alarm returns to normal, auxiliary output becomes energized.
HORN 1& 2	<u>If the Field Contact input is not normally energized:</u> ▪ When the Field Contact goes into alarm condition, the audio device becomes active. ▪ When the horn is silenced, the audio display goes OFF <u>If the Field Contact input is normally energized:</u> ▪ When the Field Contact goes into alarm condition, the audio device becomes inactive. ▪ When the horn is silenced, the audio display turns ON.

Table 4-14 Selection of Signals the Auxiliary Relay Output Follows

Normally Energized option for the relay output

When FC, ACK, ALARM or HORN is chosen for the relay-triggering signal, the *Normally Energized* check box becomes activated. By default, the relay output is set to Normally Not-Energized. When this box is checked, the state of an event gets reversed, so that it stays active in its normal state, but inactive in its alarm state. Check the Auxiliary board (Part NO: X11-1049) for jumper settings.

Dual Output option for the relay output

This option is available in the future. Once this option is activated, the Auxiliary A signal from the micro controller activates both the relays A and C, the Auxiliary B signal activates both the relays B and D.

? *TRANSISTOR OUTPUT*

Choose the signal that will trigger the Transistor Output signal from X11CA-IM. The outcome depends on the sequence type of each channel.

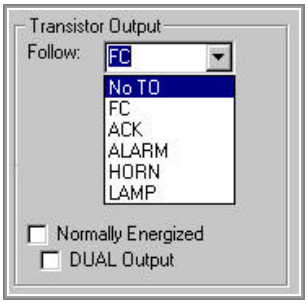


Figure 4-20 Transistor Output Follows

The following is the sequence of reaction for A-1 type.

Signal to Trigger Transistor Output	**Description**
No TO (No Transistor Output)	The signals are ignored and not displayed.
FC (Field Contact)	If the Field Contact input is not normally energized: ▪ When the Field Contact goes into an alarm condition, transistor output turns ON ▪ When the Field Contact returns to normal condition, transistor output turns OFF. If the input is normally energized

	▪ When the Field Contact is in an alarm condition, transistor output turns OFF. ▪ When the Field Contact returns to normal condition, transistor output turns ON.
ACK (Acknowledge)	<u>If the input is normally not energized:</u> ▪ When the Field Contact goes into an alarm condition, transistor output turns ON. ▪ When the alarm is acknowledged, transistor output turns OFF. <u>If the input is normally energized</u> ▪ When the Field Contact goes into alarm condition, transistor output turns OFF ▪ When the alarm is acknowledged, transistor output turns ON.
ALARM (Alarm Simulator)	<u>If the input is normally not energized:</u> ▪ When the Field Contact goes into alarm condition, transistor output turns ON. ▪ When the alarm is acknowledged, transistor output stays ON. ▪ When the alarm returns to normal, transistor output goes OFF. <u>If the input is normally energized:</u> ▪ When the Field Contact goes into alarm condition, transistor output turns OFF. ▪ When the alarm is acknowledged, transistor output stays OFF. ▪ When the alarm returns to normal, transistor output turns ON.
HORN 1& 2	<u>If the input is normally not energized:</u> ▪ When the Field Contact goes into alarm condition, the audio device becomes active. ▪ When the silence button connected to the X11CA-IM is pressed, the audio display turns OFF

	If the input is normally energized: ▪ When the Field Contact goes into alarm condition, the audio device becomes inactive. ▪ When the horn is silenced, the audio display turns ON.
LAMP ALARM	If the input is normally not energized: ▪ When the Field Contact goes into alarm condition, the lamp starts fast flashing. ▪ When the alarm is acknowledged, the lamp becomes steady ON. ▪ When the alarm returns to normal, the lamp goes OFF. If the input is normally energized: ▪ When the Field Contact goes into alarm condition, the lamp starts fast flashing. ▪ When the alarm is acknowledged, the lamp goes OFF. ▪ When the alarm returns to normal, the lamp goes ON.

Table 4-15 Selection of Signals Transistor Output follows

Normally Energized option for the transistor output

When FC, ACK, ALARM or HORN is chosen for the transistor output-triggering signal, the *Normally Energized* check box becomes activated. By default, the transistor output is set to Normally Not-Energized. When this box is checked, the state of an event gets reversed, so that it stays active in its normal state, but inactive in its alarm state.

Dual Output option for the transistor output

This option is available in the future. Once this option is activated, the Transistor A signal from the micro controller activates both the transistors A and C, the Transistor B signal activates both the transistors B and D.

? *HORN SELECTION*

Select the horns for the channel to run in the X11CA-IM environment.

Figure 4-21 Horn Selection

3) Select the options. Click on the *OK* button to save the settings of the module and return to the *Module Property* window.

Example: Figure 4-1 (Module1:3 channels, Module2:4 channels)

X11CA-IM Switch: PRGM

Set the properties of channel one for the first module. Select *FC* for both the relay and the transistor and un-check both the *Normally Energized* options as shown in *Figure 4-22*. Channel Properties Check in the *Serial Input* check box, and then select A-1 for the sequence type. Select *Horn1* and then click on the *OK* button to save the channel property settings of the module and return to the *Module Property* window.

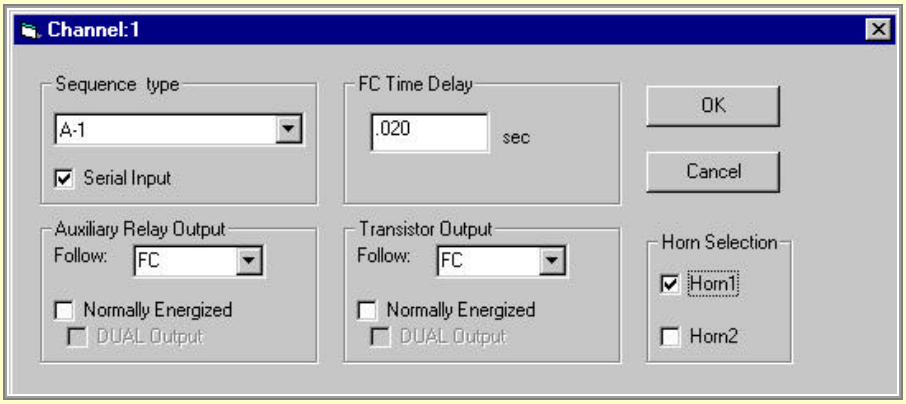


Figure 4-22. Channel Properties

4) Verify that the first channel property area on the *Module Properties* window displays the selected options.

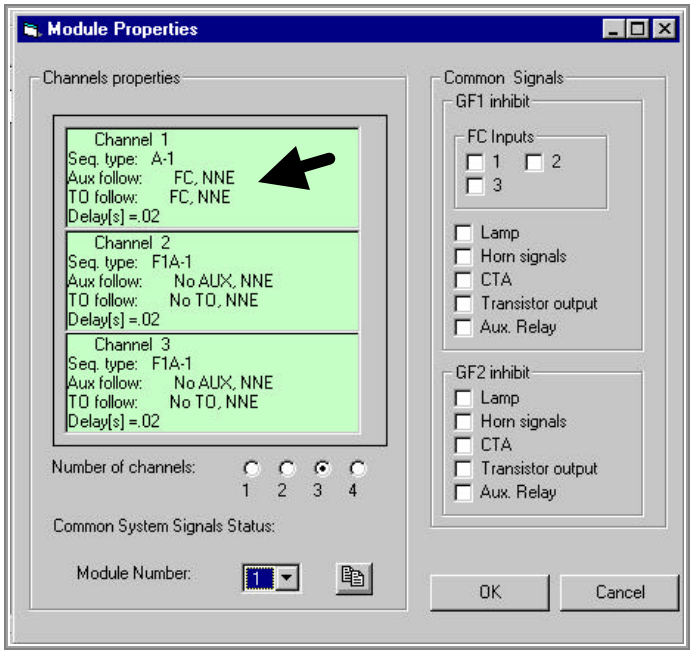


Figure 4-23 New Channel1Properties

5) The next step is to configure the other channel(s). There are two ways to configure the other channel(s).

   ? If the other channels have different configurations, repeat the above steps for each channel.
   ? If the other channels have the same configuration as the first one, simply right click in the first channel area to copy from. The settings of the other channels will become the same as the first one.

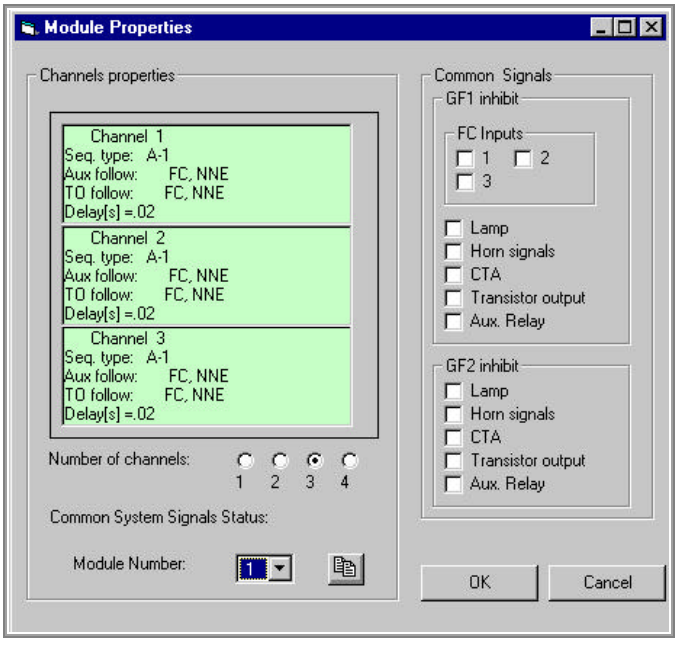


Figure 4-24 Channel Properties after the Copying from the First Channel

4.4.2.1 Setting the Common Signals Field

This field consists of two areas: GF1 Inhibit area and GF2 Inhibit area.

General Function (GF1) Inhibit
When any of the following signals is checked, Configuration Software ignores its signal while the *GF1* push button on the Main window is being pressed during the push button test time.

- *Field Contact Inputs*
- *Lamp*
- *Horn signals*
- *CTA* (Common Trouble Alarm)
- *Transistor output*
- *Aux. Relay*

General Function (GF2) Inhibit
When any of the following signals is checked, it does not display while the *GF2* push button is being pressed during the push button test time.

- *Lamp*
- *Horn signals*
- *CTA* (Common Trouble Alarm)
- *Transistor output*
- *Aux. Relay*

After setting up the module properties, press the *OK* button.

Results:

- Notice that the *Field Contact Input field* on the *Module Properties* window has three boxes; one for each channel for the module.
- If the first logical module cell on the Main window is not highlighted, click on it. It will display its module number, its status and the sequence types of channels on the Status bar of the Main window.

Figure 4-25 Status of the First Module on the Main Window

Example: Figure 4-1 (Module1:3 channels, Module2:4 channels)

X11CA-IM Switch: PRGM

Assume that the second module has four channels with F3M-1 as sequence type and all the other properties are same as the first module properties. Set the second logical module properties as shown in the figure below.

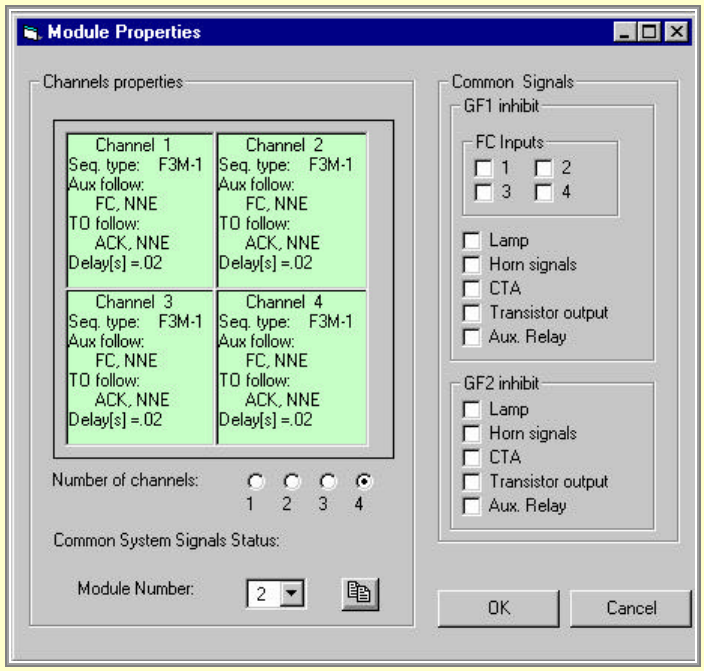


Figure 4-26 Properties of the Second Module with 4 Channels

On the Main window click in the second logical module cell, and verify that the sequence type of the second module displays on the Status bar.

Figure 4-27 Status of the Second Module displayed on the Main Window

4.4.3 Copying Properties from One Module to the Other Modules.

If all modules have the same properties, it is better to use the *Copy* icon . In the *Channel Properties* window, set the module number to the module number to be copied from. Configure the module property. Click on the *Copy* icon to copy from the module property to all the other modules at once.

4.4.4 Saving System and Module Properties

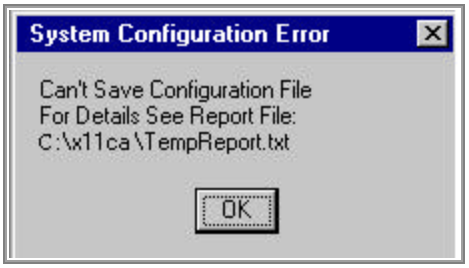
The current system properties and module properties can be saved into a file in two ways.

1) Click on the *File* menu and then *save* to save the currently open file. The default file name is *untitled* in the currently open directory.

2) To save the settings in a different file name, select the *File* menu and then *SaveAs* submenu.

NOTE:
If saving fails, the S*ystem Configuration Error* window opens to display the report file name that contains error descriptions.
If you want to change the report file name, see *Section 4.5.1 Creating a New Report File.*

Figure 4-28 System Configuration Error Window



Example: Figure 4-1 (Module1:3 channels, Module2:4 channels)

X11CA-IM Switch: PRGM

Open the *File* menu and then *Save As*, and then save the file name as *sample-config.cfg*.

4.4.5 Viewing File Access Information

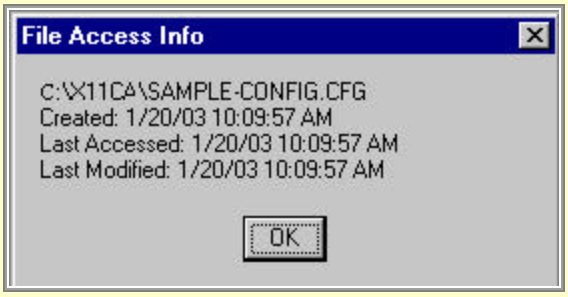
Once the configuration properties have been saved into a file, you can view them by clicking the *File* menu and then the *Access Info* submenu.

Example: Figure 4-1 (Module1:3 channels, Module2:4 channels)

X11CA-IM Switch: PRGM

Open the *File* menu and then *Access Info*. The *File Access Info* window will open to display information about the *sample-config.cfg* file.

Figure 4-29 File Access Info Window



4.4.6 Creating a New Configuration File

In order to create a new configuration file, click on the *File* menu and then *New* submenu. Opening a new file is like resetting the current Configuration Software environment. If there is any open file, it will be closed without saving any new modification made. If there is any active connection to the physical modules, it will be disconnected.

4.4.7 Retrieving Properties from a Configuration File

If the system and module properties have been saved into a file previously, they can be retrieved into the logical modules of the Configuration Software. If they have not been set yet, skip this section to go *to Section 4.4.1 Setting System Properties*.

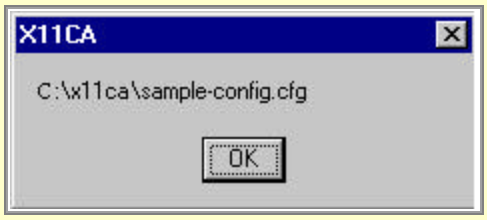
1) Click on the *File* menu and then *Open.*
2) Select a CFG file that was saved previously.

Example: Figure 4-1 (Module1:3 channels, Module2:4 channels)

X11CA-IM Switch: PRGM

Close all the open windows and then click on the *File* menu and then the *Exit* submenu to exit from Configuration Software. Run Configuration Software again. Click on the *File* menu and then the *Open* submenu to open the *sample-config.cfg file*. When the confirmation window opens, verify the file name it displays. Click on the *OK* button.

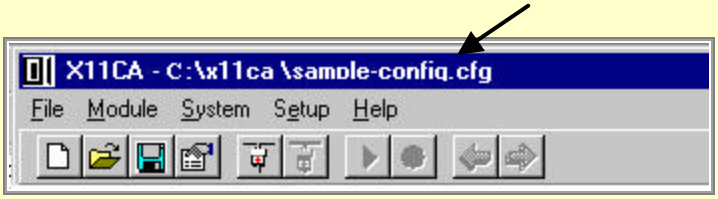
Figure 4-30 Confirming the File to Be Opened



Results:

? The Title bar of the Main window will display the current file name.

Figure 4-31 Title Bar after Retrieving a CFG file



- The Module Display Table area on the Main window will contain two logical module cells. Click in each module cell to verify that sequence types of channels display on the Module Status area.
- Double click in each module cell to verify that all module properties have been retrieved.

4.5 Setting a Print Report

Configuration Software Version 2.0.50 added a new function to generate and print a report. It is recommended to print the report after each retrieving or programming properties from or to the physical modules to verify that configuration of the physical module is correct. The default report file name is TempReport.txt, and it resides in the directory where X11CA.EXE file is.

The report prints the following information on a default printer.

1. File access information:

- Configuration file name.
- Date and time created.
- Last date and time the file was accessed.
- Last date and time the file was modified.

2. Global system properties.
3. Alarm modules properties.
4. Error descriptions if an error occurred.

NOTE:
If you have a problem with saving the report file, save the logical module properties to a CFG file in the directory where you want to create the report file, and then try again.

4.5.1 Creating a New Report File

To create a new report, click on the *System* menu and then the *SaveAsReport* submenu. Set the file name and then click on the *Save* button.

4.5.2 Printing a Report

To print the current report of the logical module configurations, click on the *System* menu and then the *PrintReport* submenu.

Example: Figure 4-1 (Module1:3 channels, Module2:4 channels)

X11CA-IM Switch: PRGM

Click on the *System* menu and then the *PrintReport* submenu.

Verify that the information is correct and there is no error messages.

```
X11CA SYSTEM REPORT.


File Access Info:
C:\ \SAMPLE-CONFIG.CFG
Created: 1/31/03 1:16:50 PM
Last Accessed: 1/31/03 1:16:50 PM
Last Modified: 1/20/03 10:15:11 AM


WIDHT : 2
HIGH : 1


GLOBAL SYSTEM PROPERTIES
TEST TYPE :  OPERATIONAL TEST
HORN1 TYPE : Continuous
HORN2 TYPE : Continuous
CTA FOLLOW : FC,NNE
SERIAL DATA FOLLOW : FC


ALARM MODULES PROPERTIES

-------------------------------------------------------------------------------------------------
|Module|Channel|Seq. |Input|FC Time|Ser. Output|AUX Rel | TO    |HORN|  GF1  |  GF2  |Global
|Number|Number |Type |Type |Delay,s|Data Follow|Follow  |Follow |    |Inhibit|Inhibit|Prop.
-------------------------------------------------------------------------------------------------
|  1   |   1   |A-1  | FC  | 0.02  |    FC     |FC, NNE |FC, NNE| H1 |       |       |  OK  |
|      |   2   |A-1  | FC  | 0.02  |    FC     |FC, NNE |FC, NNE| H1 |       |       |  OK  |
|      |   3   |A-1  | FC  | 0.02  |    FC     |FC, NNE |FC, NNE| H1 |       |       |  OK  |
-------------------------------------------------------------------------------------------------
|  2   |   1   |F3M-1| FC  | 0.02  |    FC     |ACK, NNE|FC, NNE| H1 |       |       |  OK  |
|      |   2   |F3M-1| FC  | 0.02  |    FC     |ACK, NNE|FC, NNE| H1 |       |       |  OK  |
|      |   3   |F3M-1| FC  | 0.02  |    FC     |ACK, NNE|FC, NNE| H1 |       |       |  OK  |
|      |   4   |F3M-1| FC  | 0.02  |    FC     |ACK, NNE|FC, NNE| H1 |       |       |  OK  |
-------------------------------------------------------------------------------------------------

*-  The alarm module needs to be reprogrammed

x11CA – C:\sample-config.cfg                page        1      1/31/03 2:11:34 PM
```

Figure 4-32 Example Report

4.6 Connecting to Physical Alarm Modules

Before making connection from the Configuration Software to physical alarm modules, make sure that power to the X11CA-IM device is on and its switch 8 (SW8) is set to *PRGM* side.

When the X11CA-IM device is in the program mode, the red *ERROR* LED on the X11CA-IM device keeps blinking because the Configuration Software bypasses the

X11CA-IM in order to configure the physical alarm modules. The green *RUN* LED on the X11CA-IM device keeps blinking at the same time.

Connection can be established in one of the following two ways.

1) Click on the *Connect* icon .
2) Click on the *System* menu, followed by *Connect* from the submenu. (<ALT+S> and then <C>)

Example: Figure 4-1 (Module1:3 channels, Module2:4 channels)

X11CA-IM Switch: PRGM

Click on the *Connect icon*. When connection is successful, the logical modules might be either in *Run* or *Stop* mode. If the Module Display table displays module properties in *Stop* mode, skip the section *4.7 Stopping Physical Modules from Running.*

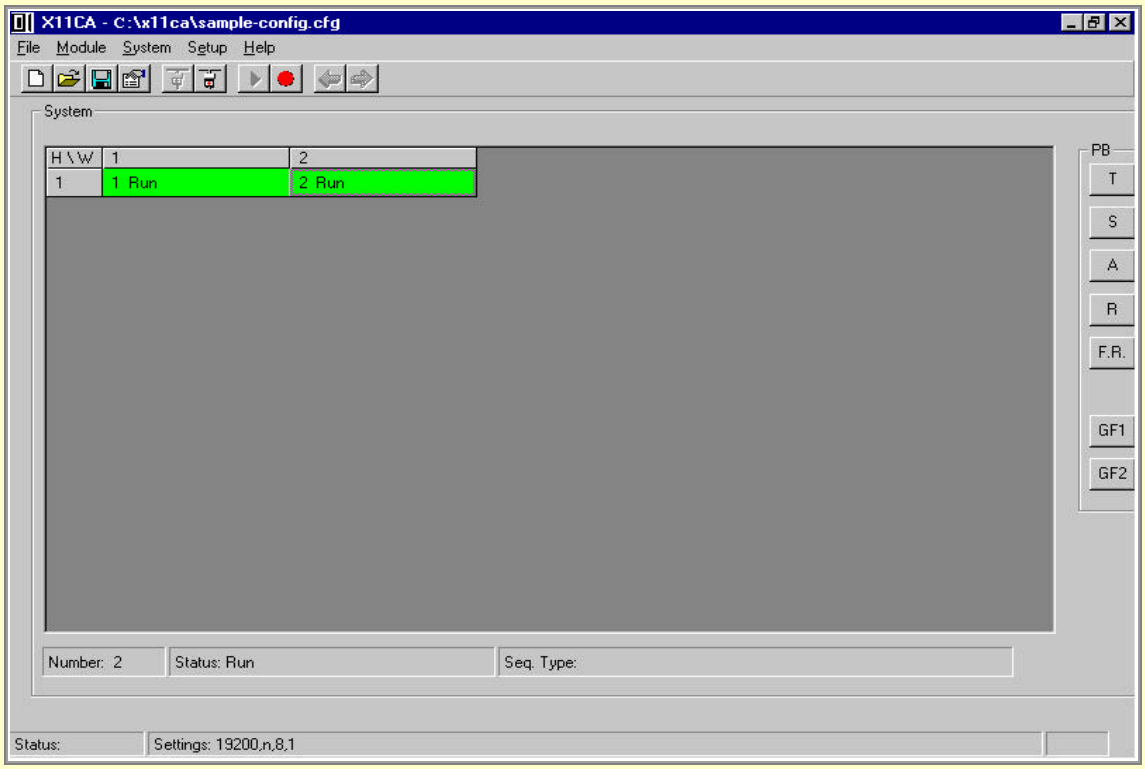


Figure 4-33. Modules in Run Mode

The following changes will be shown on the *System Display* screen, if the modules are in *Run* mode.
The following changes will be shown on the *System Display* screen, if the modules are in *Run* mode.

Results:

? A 'Run' message displays in the green cell of each active module cell.
? A 'N.C' message displays in the white cell of each inactive module.
? The *Stop* icon () turns red.
? On each module status cell, the module number and its status display.
? On the status area, the com port settings display
? The *Push Button* field displays at the right side of the window.
? The *Disconnect* icon () becomes active.

4.7 Stopping Physical Modules from Running

The logical modules must be in *Stop* mode to perform one of the following cases.

? To program logical module properties into the physical modules.
? To retrieve the physical module properties into the logical module properties.

Follow the instructions below to stop the physical modules from running.

1) Click on the *Stop* icon () to stop receiving Field Contact inputs.
2) Click on the *System* menu and then *stop* to stop all modules. (<Alt+S> then <S> key).
3) Or click on the *Module* menu and then the S*top* submenu to stop a single module. (<Alt+M> then <S> key).

Example: Figure 4-1 (Module1:3 channels, Module2:4 channels)

X11CA-IM Switch: PRGM

The following changes will be shown on the *System Display* screen after stopping the modules from running.

Results:

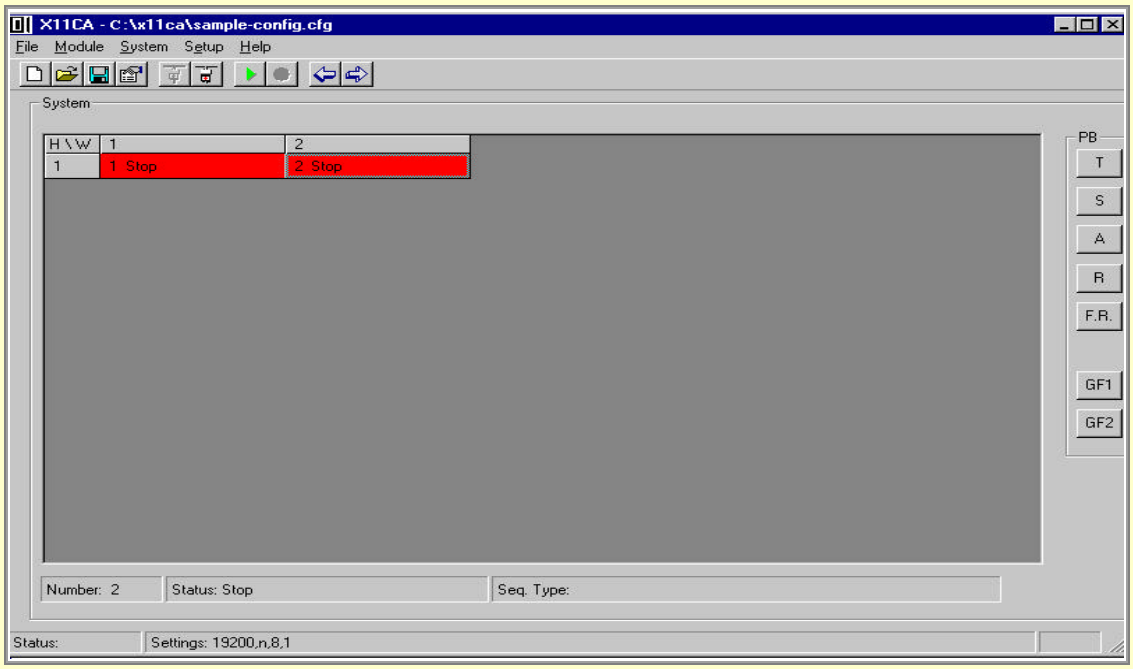


Figure 4-34 Modules in Stop Mode

? A 'Stop' message appears in each red active module cell.
? A 'No Comm.' message appears in each white inactive module cell.
? The *Run* icon turns green.
? The *Program* and *Receive* icons () become active.

4.8 Programming Alarm Module Properties

When you request programming, Configuration Software checks your password. After authentication, it prepares a data packet that contains a programming code, the address of the target module, and data that contains configuration properties, and then Configuration Software places it on the serial data line. When the switch on X11CA-IM is set to *PRGM,* X11CA-IM passes it directly onto the RS485 line.

The micro-controller on the target physical module picks the data package addressed to its address and checks the code. If it is a programming code, it will save the data into its firmware. The data saved in the firmware is permanent until it is cleared or re-programmed.

To program physical modules, follow the instructions below.

1) Verify that system and module properties are configured correctly on each logical module.
2) Make sure that the X11CA-IM SW8 is set to the *PRGM* side to bypass the X11CA-IM operation.
3) Make sure that the power to the X11CA-IM and physical module is ON.
4) Make sure that logical modules on the Configuration Software screen are in *Stop* mode.
5) Make sure that the red *ERROR* LED and the green *RUN* LED on the X11CA-IM are blinking.
6) There are two ways to start programming

   i) To save a single module, click in the logical module cell to select it. Click on the *Module* menu and then *Program* (or <Alt+M> and then <P>, or click on the *Program* () icon).
   ii) To save all the module properties, click on the *System* menu and then *Program* option (Or <Alt+S> and then <P>).

7) When the *Programming Password* window opens, enter the password, and then press the *OK* button.

   NOTE:
   The password is case sensitive. If you want to change the password, *see Section 4.12 Changing Password.*

Figure 4-35 Password Window

Enter the password into the Password box. It will display as a string of asterisk characters (*). Press the *OK* button. When the *Erase Confirmation* window will display. Press the *OK* button again.

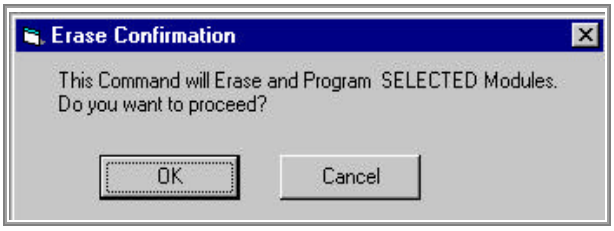


Figure 4-36 Erase Confirmation Window in Programming Mode

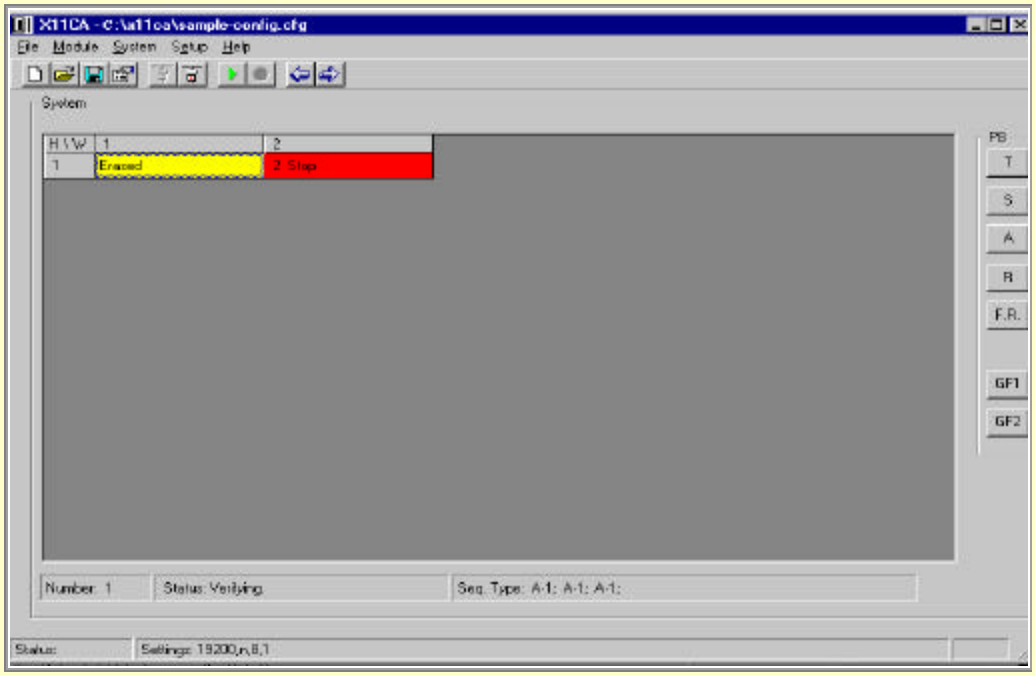
8) Wait until the micro-controller completes programming. When the programming is done successfully, each logical module cell will display the message, '*Programmed*', in the yellow background as shown in the Figure 4-37, and then returns to *Stop* mode.

Example: Figure 4-1 (Module1:3 channels, Module2:4 channels)

X11CA-IM Switch: PRGM

Click in the first logical module cell, and then click on the *Program* icon. Enter the password and confirm it.

Results:



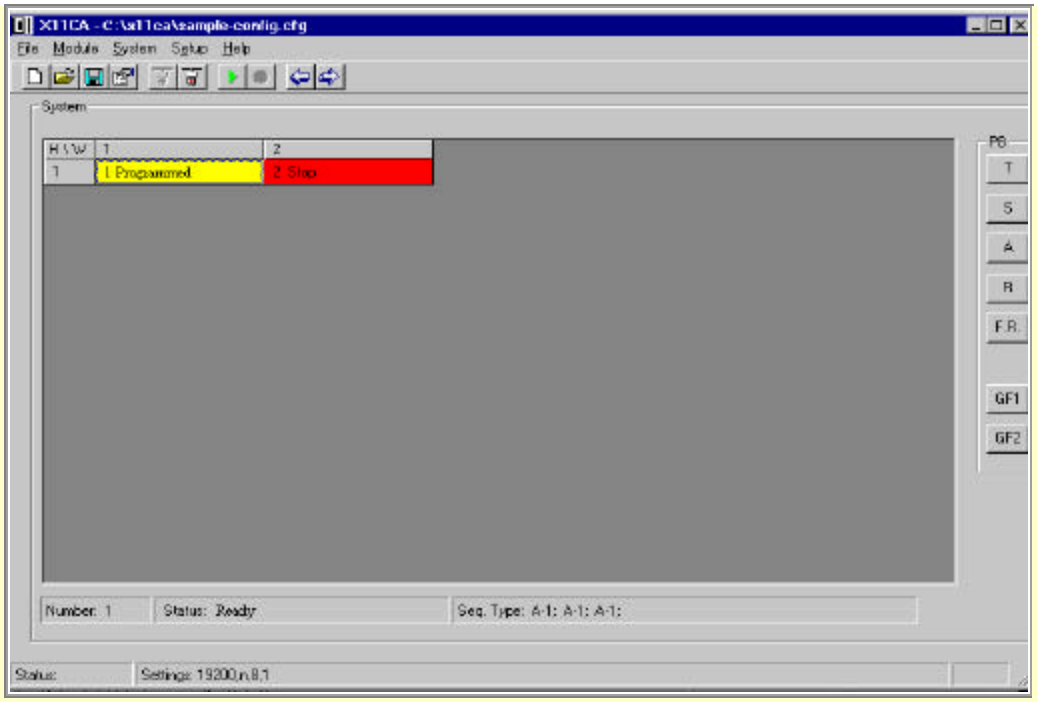


Figure 4-37 Programming the First Module

? The messages, '*Stop*', '*Erased*', '*Programmed*,' and then '*Stop*', display in the yellow logical module cell.
? The messages '*Erasing*', '*Programming*', '*Verifying*' and then '*Stop*', display in the Module Status area near the bottom of the window.
? An 'NoComm' message appears in each white inactive logical module cell.
? The *Run* icon turns green.
? The *Program* and *Receive* icons () become active.

9) Program the other modules.

4.9 Retrieving Alarm Module Properties

When you request retrieving, Configuration Software prepares a data packet that contains a retrieving code and the address of the target physical module, and then places it on the RS232 serial data line. When the switch on X11CA-IM is set to *PRGM*, X11CA-IM passes it directly onto the RS485 line.

The micro-controller on the target physical module picks the data package addressed to its address and checks the code. If the code is for retrieving, it will

send a packet that has its address and the copy of the data in its firmware to Configuration Software via X11CA-IM. Configuration Software will place the data into the corresponding logical module.

In order to retrieve the properties from the modules, verify the followings.

1) The Configuration Software is in connection with the physical modules.
2) The target logical module cell must be set up in the Module Display Table area.
3) The target logical module is in *Stop* mode.
4) The switch 8 on the X11CA-IM is in *PRGM* mode.
5) The red *ERROR* LED and the green *RUN* LED are blinking on the X11CA-IM.

Retrieving can be done to all logical modules at once or to one single module at a time, but remember that a physical module and its logical module have absolute relationship. That means the properties from the physical module address 1 can be copied to only the logical module address 1, not to any other address.

4.9.2 Retrieving from All Modules

Click on the *System* menu and then *Receive* to retrieve properties from all modules.

After retrieving properties, verify that the retrieved properties are valid ones.

? Print the report and check its content.

? Click in each logical module cell on the Module Display Table to verify that its channel sequence types are displayed in the Module Status area. Double click in a logical module cell to verify its module properties on the *Module Properties* window.

4.9.3 Retrieving from a Single Alarm Module

A single alarm module properties can be retrieved into its logical module.

1) Click once in a logical module cell to highlight it.
2) Click on the *Receive* () icon. Or click on the *Module* menu and then the *Receive* submenu.
3) Print the report and check its content.

4.10 Running Modules in Program Mode

There are two types of running physical alarm modules, depending on how the switch on the X11CA-IM is set.

If the switch on X11CA-IM is set to *RUN,* Configuration Software is ignored and X11CA-IM will take a full control of running its devices and the physical alarm modules.

If the switch is on *PRGM,* X11CA-IM is bypassed and Configuration Software is ready to test physical alarm module properties. This section explains the later type. When a logical module is in *Run* mode, the Configuration software informs its physical modules to get ready for the simulated tests from the software. You can run all the modules at once or only specific modules.

Before running any module, verify that the connection to the physical alarm modules is active. The physical module must have properties saved in its firmware, and the switch 8 on the X11CA-IM should be set to *Program* mode.

Running the modules can be started in one of two ways.

1) Click in a logical cell of the table once to select a module to run. Click on the *Module* menu and then the *Run submenu to run the selected module* (or <Alt+M> then <R> key).
2) Click on *the System* menu and then *Run* to run all the modules (or <Alt+S> then <R> key, or click on the *Run* icon () to run all the modules).

Results:

? Each active logical module cell in *Run* mode on the Main window becomes green and the message, '*Run*', displays on it.
? The Status bar displays communication port settings.

4.11 Testing Alarm Modules

There are two types of testing the physical alarm module properties. One is testing by using X11CA-IM when its switch is set to *RUN* mode. The other is testing by using the Configuration Software while the switch is set on *PRGM* mode.
This section explains the later type.

When the connection was requested, the push buttons in the *PB* area of the Main window become visible
You can test a single alarm module or all the modules at once.

4.11.1 Testing A Single Module

1) Before you start testing, makes sure that the logical module cell to be tested displays '*Run*' message.
2) Click in a logical module cell on the Main window.
3) Click on the *T* button in the PB area.

The test result depends on the test type set on the *System Setup* window.

Lamp Test Only Type

Pressing the *T* button on the Main window simulates active the Field Contact inputs of the selected physical module. All the lamplights of the selected module will light up.

Releasing the button will turn off all the lamplights.

Operational Test Type

Pressing the T button will light up all the lamps of the selected module. The operational test result depends on the sequence type of the selected channels. If any signal is set for the Global Function keys, you can press the GF1 or GF2 key to test it.

For the sequence process, refer to the sequence charts on the CD.

4.11.2 Testing All Modules At Once

1) Before you start testing, makes sure that the logical module cells to be tested display '*Run*' messages.
2) Click on the *T* button in the PB area.

The test result depends on the test type set on the *System Setup* window.

Lamp Test Only Type

Pressing the *T* button on the Main window simulates activating the Field Contact inputs of the physical modules whose logical modules are in *Run* mode. All the lamplights of the running modules will light up.

Releasing the button will turn off all the lamplights.

Operational Test Type

The operational test results depend on the sequence type of each channel. If any signal is set as inhibition signal for the Global Function keys, it can be tested.

For the sequence process, refer to the sequence charts on the CD.

Functions of the Push Buttons

The following is the summary of the push button functions.

PB	Buttons	Description
T	Test	Tests properties of physical alarm modules.
S	Silence	Stops the sound of the audio devices during the operational test. Not available at this time.
A	Acknowledge	Acknowledges the alarms during the operational test.
R	Reset	Resets input to normal during the operational test.
F.R.	First Out Reset	Resets the first out alarms during the operational test.
GF1	General Function 1	Inhibits the GF1 inhibit signals while the button is being pressed.
GF2	General Function 2	Inhibits the GF2 inhibit signals while the button is being pressed.

Figure 4-38 Push Button Functions

Example: Figure 4-1 (Module1:3 channels, Module2:4 channels)

X11CA-IM Switch: PRGM

Click on the *Run* icon and then the *T* button.

Results:

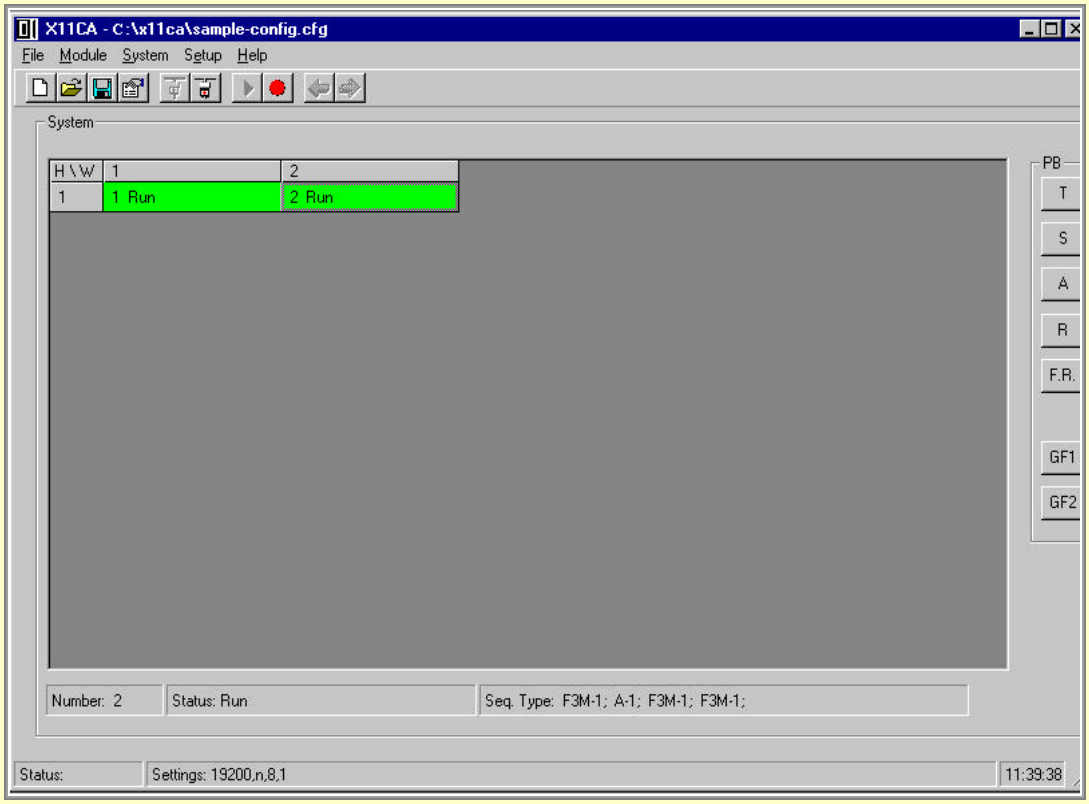


Figure 4-39 Running the Test Push Button

? When the *T*est button is pressed, the active physical module lamps will light up according to the pre-set sequences.

? Pressing *A, R, FR* button changes the lamp display reaction according to its module's sequence set up.

For example, if each channel of the second module is set for F3M-1 sequence type, pressing the *T* button turns on the first out lamp in galloping like flashing while turning on all the other lamps in slow flashing. Pressing the *A* button changes the first out lamp into slow flashing while turning all the other lamps off. Pressing the *R* button turns the first out lamp off.

Please refer to the sequence charts on the CD.

4.12 Changing Password

1) To change the password, click on the *Setup* menu and then *Password*.
2) Enter the old password in the *Old Password* box.
3) Enter the new password in both the *New Password* box and the *Verify* box. Each letter of the password will appear as an asterisk (*) character for the security reason.
4) Click on the *OK* button.

Figure 4-40. Set Password Window

NOTE:
If you prefer not entering a password when you are programming, leave the *New Password* area and the *Verify* area blank and then click on the *OK* button.

4.13 Disconnecting from Physical Modules

1) If modules are in *Run* mode, stop the physical modules from running by clicking the *Stop* icon.
2) Disconnect from the module in one of the following two ways.
   1. Click on the *Disconnect* icon ( ).
   2. Or click on the *System* menu and then *Disconnect* option. (Or <Alt+S> and then <D> key.)

4.14 Exiting from the Configuration Software

Click on the *File* menu and then the *Exit* submenu.

5. Appendix A: List of Tables

6. Appendix B: List of Figures

6. Appendix B: List of Figures

7. Index

7. INDEX