RONAN
ENGINEERING COMPANY

Administrator Edition

X11CB and X16CB Configuration Application

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1. Overview

The purpose of this manual is to collect all of those items that a manager or administrator would have access.

The categories are general and mostly deal with security.

Only an administrator can change passwords, Hardware and Firmware revision levels within the Ronan Products, and a few other critical maintenance features.

2. Requirements

2.1. Configuration of the X11CB Annunciator

The Windows Desktop icon properties for the X11CB Configuration Application will need to be modified to include a parameter that will allow the additional engineering features.

Or a batch file could be used to initiate the X11CB Configuration Application that includes the required parameters.

The required parameter is “RonanAdministrator”, entered as one word without quotes.

Sample batch file:

```
X11CB_Config RonanAdministrator
```

As well as specifying this on the command line, the user will also have to logon as Administrator.

3. Usage notation

Command line parameters commonly employ a small syntax to describe the valid command forms:

- angle brackets for *required* parameters: `ping <hostname>`
- square brackets for *optional* parameters: `mkdir [-p] <dirname>`
- ellipses for *repeated* items: `cp <source1> [source2]... <dest>`
- vertical bars for *choice* of items: `netstat { -t | -u }`

3.1. Command line parameters

X11CB_ Config	[RonanAdministrator] [RonanEngineering] [IncludeRemotes]

3.2. Standard Definitions:

AM – Alarm Module

DHCP - The Dynamic Host Configuration Protocol (DHCP) is a network protocol used to configure devices that are connected to a network (known as hosts) so they can communicate on that network using the Internet Protocol (IP). In simple terms, the DHCP server supplies the application computer

with an IP address, typically 192.168.x.x.

IM – Interface Module

IP - Internet Protocol, a set of rules for sending data across a network

IP address - a computer's address under the Internet Protocol. The X11CB Interface Module uses the IPV4 addressing scheme which is a set of octet numbers (example – 192.168.1.1). This manual assumes that the Class 'C' IP Address are used.

IRIG - The Inter-Range Instrumentation Group, a standards publishing body

MAC - MAC address, Media Access Control address or Ethernet Hardware Address (EHA)

sequence: the chronological series of actions and states of an annunciator after an abnormal process condition or manual test initiation occurs.

sequence state: the condition of the visual display and audible device provided by an annunciator to indicate the process condition or pushbutton actions or both. Sequence states include normal, alarm (alert), silenced, acknowledged, and ring-back.

SQL - (Structured Query Language) is a special-purpose programming language designed for managing data held in relational database management systems (RDBMS). It is pronounced either S-Q-L or "sequel". This difference in pronunciation also affects the writing of documentation; this manual may lean toward the latter.

XML - Extensible Markup Language (XML) is a markup language that defines a set of rules for encoding documents in a format that is both human-readable and machine-readable. It is used in the X11CB applications primarily for configuration storage files.

4. Machine Setup dialog differences

The ability to change the Part Number or Hardware / Firmware Revisions requires both the RonanAdministrator parameter as well as the Administrator logon.

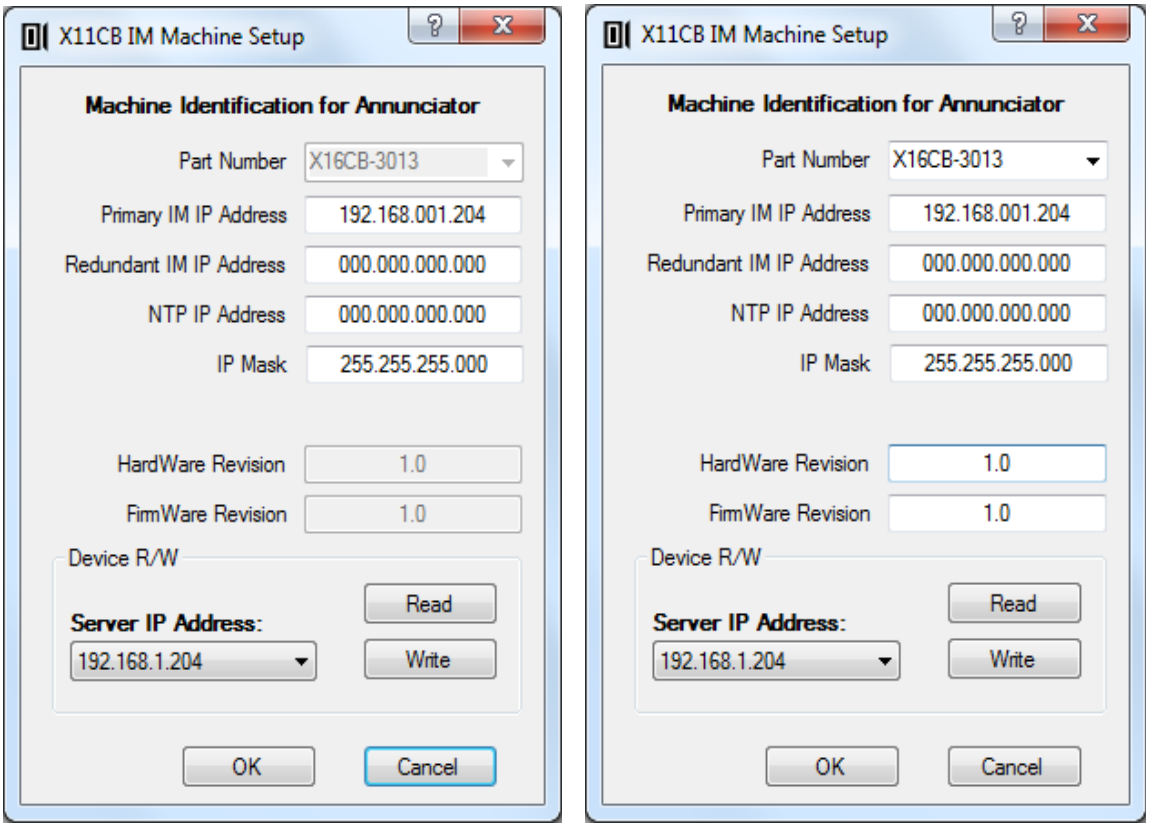


Figure 4-1 IM Machine Setup Security Level Differences

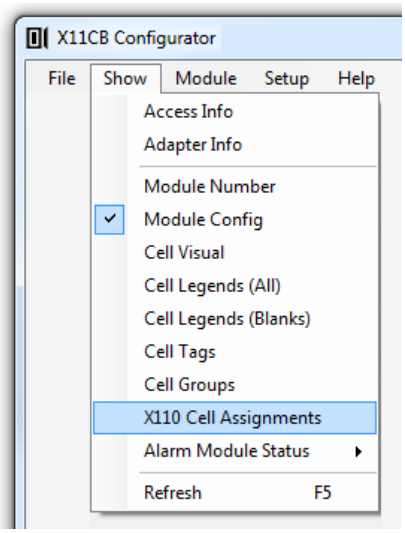
5. Hard-Wired vs. Soft Points

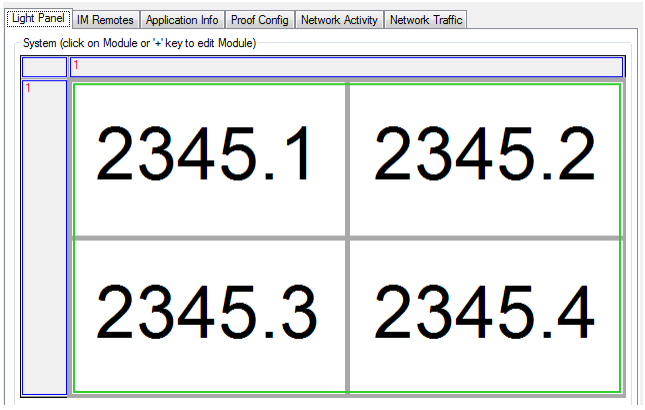
Most points are hard-wired or have physical wires connected to the Field Contact terminals on the back of the alarm module. There is an option on the X11CB to have soft-points or remote points that will control the alarm module. When an Alarm is configured for a remote or soft point, it will not check the I/O that is assigned that Field Contact.

The soft points are controlled by packets on the Ethernet connection. The packets are formatted as a Ronan proprietary UDP X110 style transmission. As long as the remote source can transmit these packets, the X11CB soft point can be controlled by this signal.

5.1. Assigning an Alarm to a Soft Point

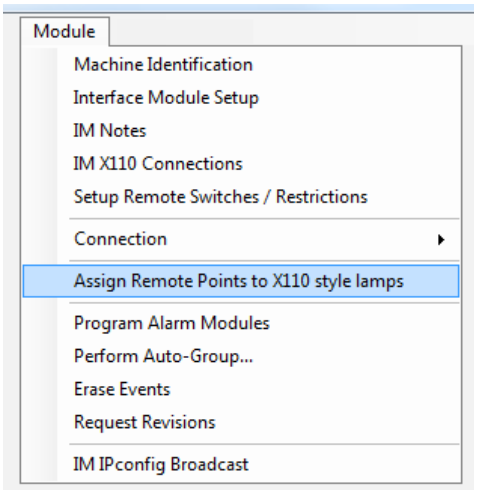
The first step is to display the X110 Cell Assignments. Do this by selecting from the main menu “Show”, the “X110 Cell Assignments”.

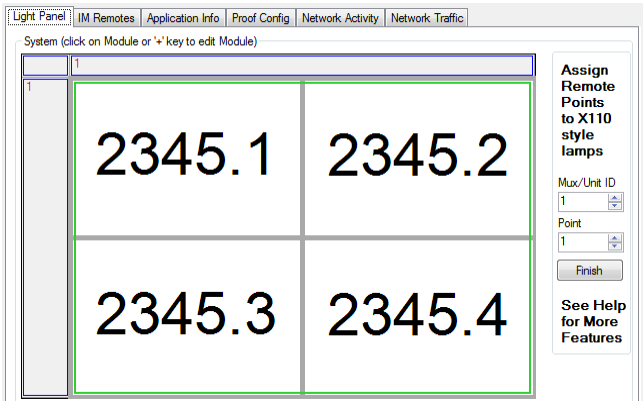




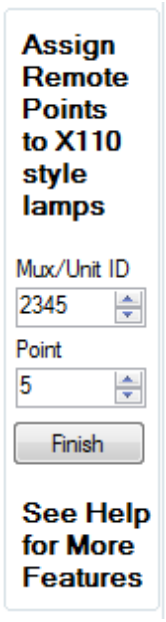
As shown above is an example of a simple test unit with 4 soft points assigned to a single AM4000 unit.

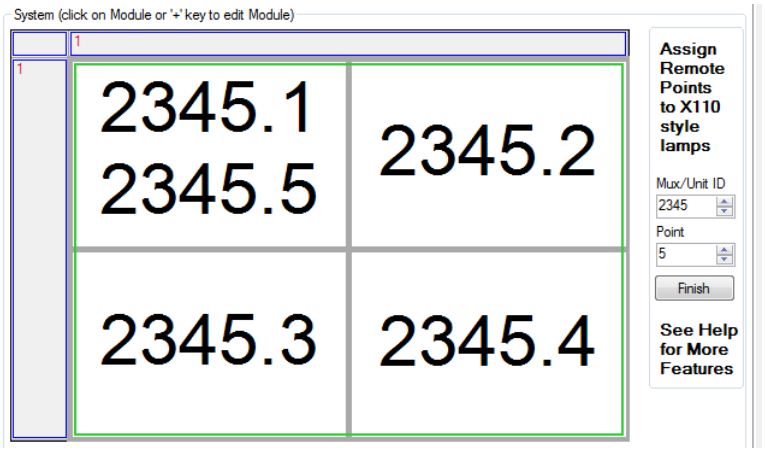
The next step is to assign or remove points from this configuration. Do this by selecting from the main menu "Module", the "Assign Remote Points to X110 style lamps".





A panel or group box to the right of the lamp box configuration will display. To add an additional point to one of the individual alarms, enter the Mux/Unit ID of the controlling point as well as the controlling point within the specified mux. Click in the desired Alarm and the additional point will display in that box. In the example below we added 2345.5 to the upper left alarm.

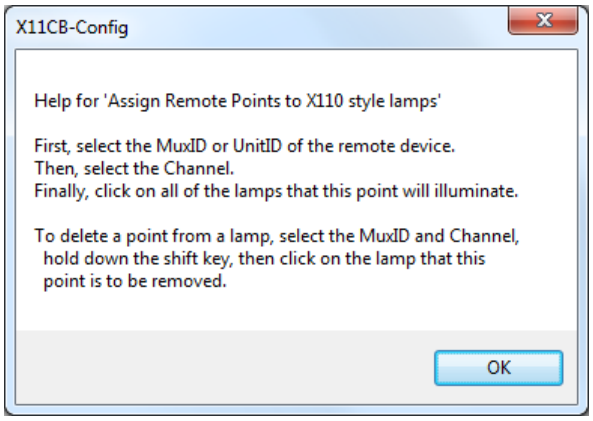




5.2. Removing a Soft Point

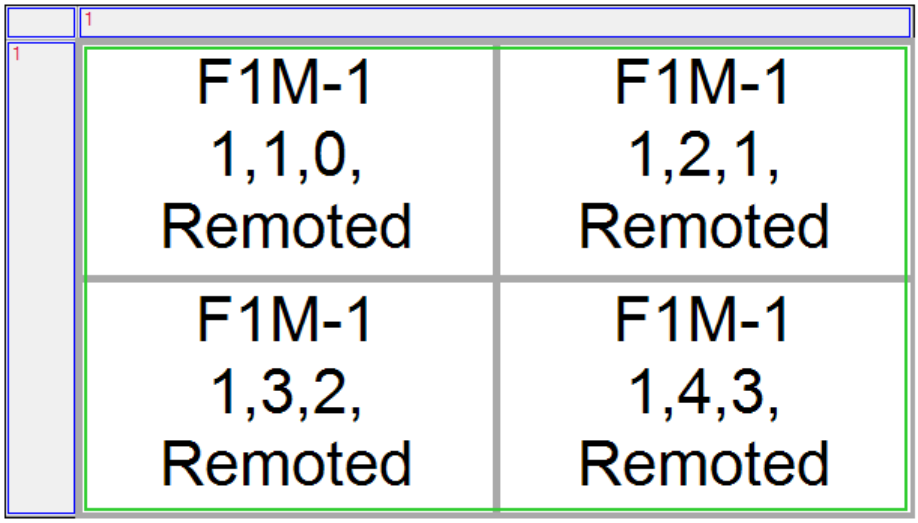
To remove an assigned soft point, follow the same procedure as adding a soft point. Enter the Mux and Point of the source or controlling point. In the alarm in which the soft point is to be removed, hold either shift key and click the cell in the Alarm Panel. The point will be removed.

Clicking help in the Assign group box will display the following dialog:



Click the “Finish” button at any time to remove the “Assign Remote” group box panel from the display.

Selecting from the main menu “Show”, and “Module Config” will display the detail configuration for the alarm. Notice that all 4 cells were assigned soft points, so all 4 cells indicate “Remoted”.



Appendix A – Definition of terms:

The following list of terms was taken directly from the Annunciator Sequences and Specifications manual : ISA-18.1-1979 (R1992) FormerlyANSI/ISA-18.1-1979 (R1992)

The following are terms and their definitions that have special meaning in relation to annunciators. Commonly used alternate terms are shown in parentheses. Defined terms used in other definitions are in italics to provide a cross-reference.

acknowledge	the sequence action that indicates recognition of a new alarm.
active alarm point	see alarm point.
alarm	1. an abnormal process condition. 2. the sequence state when an abnormal process condition occurs. 3. a device that calls attention to the existence of an abnormal process condition. See annunciator. Types of alarm include: Momentary: an alarm that returns to normal before being acknowledged. Maintained: an alarm that returns to normal after being acknowledged.
alarm module (point or sequence module)	a plug-in assembly containing the sequence logic circuit. Some alarm modules also contain visual display lamps or lamps and windows.
alarm point	the sequence logic circuit.. visual display.. auxiliary devices.. and internal wiring related to one visual display. Types of alarm point include: active- an alarm point that is wired internally and completely equipped. The window is labeled to identify a specific monitored variable. spare- an alarm point that is wired internally and completely equipped. The window is not labeled to identify a monitored variable. future (blank)- an alarm point that is wired internally and equipped except for the plug-in alarm module. The window is not labeled to identify a monitored variable.
alert	see process condition and sequence state.
analog input point	an alarm point for use with an analog monitored variable signal.. usually current or voltage. The logic circuit initiates an alarm when the analog signal is above or below a set point.
annunciator	a device or group of devices that call attention to changes in process conditions that have occurred. An annunciator usually calls attention to abnormal process conditions.. but may be used also to show normal process status. Usually included are sequence logic circuits.. labeled visual displays.. audible devices.. and manually operated pushbuttons.
audible device	a device that calls attention by sound to the occurrence of abnormal process conditions. An audible device may also call attention to return to normal conditions.
audible device follower	see auxiliary output.
automatic reset	see reset.
auxiliary contact	see auxiliary output.
auxiliary output (auxiliary contact)	An output signal operated by a single alarm point or group of points for use with a remote device. Types of auxiliary output include: field contact follower- an auxiliary output that operates while the field contact indicates an abnormal process condition.

	lamp follower- an auxiliary output that operates while the visual display lamps indicate an alarm.. silenced.. or acknowledged state.
audible device follower (horn relay contact)	an auxiliary output that operates while the common alarm audible device operates.
reflash	an auxiliary output that operates when any one of a group of alarm points indicates an abnormal process condition. The output usually returns to normal briefly when each alarm point changes to an abnormal process condition and returns to normal when all alarm points in the group indicate normal process conditions.
blank alarm point	see alarm point.
field contact (trouble or signal contact)	the electrical contact of the device sensing the process condition. The contact is either open or closed. Annunciator field contacts are identified in relation to process conditions and annunciator operation.. not the disconnected position of the devices. Types of field contact include: normally open (NO)- a field contact that is open for a normal process condition and closed when the process condition is abnormal. normally closed (NC)- A field contact that is closed for a normal process condition and open when the process condition is abnormal.
field contact follower	see auxiliary output.
field contact voltage (trouble or signal contact voltage)	the voltage applied to field contacts.
first alert	see first out.
first out (first alert)	a sequence feature that indicates which of a group of alarm points operated first.
first out reset	see reset.
flasher	a device that causes visual displays to turn on and off repeatedly. Types of flashing include: fast flashing.. flashing.. slow flashing.. and intermittent flashing.
functional test	see test.
future alarm point	see alarm point.
horn relay contact	see auxiliary output.
integral logic annunciator	an annunciator that includes visual displays and sequence logic circuits in one assembly.
lamp cabinet	a cabinet containing visual displays only.
lamp follower	see auxiliary output.
lamp test	see test.
lock-in	a sequence feature that retains the alarm state until acknowledged when the abnormal process condition is momentary.
logic cabinet	a cabinet containing logic circuits and no visual displays.
maintained alarm	see alarm.
manual reset	see reset.
momentary alarm	see alarm.
multiple input	see reflash.
nameplate	see window.
normally closed (NC)	see field contact.
normally open (NO)	see field contact.
operational test	see test.
point module	see alarm module.

process condition	the condition of the monitored variable. The process condition is either normal or abnormal (alarm.. alert.. or off-normal).
pushbutton	A momentary manual switch that causes a change from one sequence state to another. Pushbutton actions include silence.. acknowledge.. reset.. first out reset.. and test.
reflash (multiple input)	1. an auxiliary logic circuit that allows two or more abnormal process conditions to initiate or reinitiate the alarm state of one alarm point at any time. The alarm point cannot return to normal until all related process conditions return to normal. 2. one type of auxiliary output.
remote logic annunciator	an annunciator that locates visual displays and sequence logic circuits in separate assemblies.
reset	the sequence action that returns the sequence to the normal state. Types of reset include: automatic- reset occurs after acknowledge when the process condition returns to normal. manual- reset occurs after acknowledge when the process condition has returned to normal and the reset pushbutton is operated. first out- reset of the first out indication occurs when the acknowledge or first out reset pushbutton is operated.. whether the process condition has returned to normal or not.. depending on the sequence.
response time	the time period between the process condition becoming abnormal and initiation of the alarm state. The minimum momentary alarm duration required for annunciator operation.
return alert	see ringback.
ringback (return alert)	a sequence feature that provides a distinct visual or audible indication or both when the process condition returns to normal.
sequence	the chronological series of actions and states of an annunciator after an abnormal process condition or manual test initiation occurs.
sequence action	a signal that causes the sequence to change from one sequence state to another. Sequence actions include process condition changes and manual operation of pushbuttons.
sequence diagram	a graphic presentation that describes sequence actions and sequence states.
sequence module	see alarm module.
sequence state	the condition of the visual display and audible device provided by an annunciator to indicate the process condition or pushbutton actions or both. Sequence states include normal.. alarm (alert).. silenced.. acknowledged.. and ringback.
sequence table	a presentation that describes sequence actions and sequence states by lines of statements arranged in columns.
signal contact	see field contact.
signal contact voltage	see field contact voltage.
silence	the sequence action that stops the sound of the audible device.
spare alarm point	see alarm point.
test	an annunciator sequence initiated by operation of the test pushbutton to reveal lamp or circuit failure. Types of test include: operational (functional)- test of the sequence.. visual display.. lamps.. audible devices.. and pushbuttons. lamp- test of the visual display lamps.
trouble contact	see field contact.
trouble contact voltage	see field contact voltage.
visual display	that part of an annunciator or lamp cabinet that indicates the sequence state. Usually consists of an enclosure containing lamps behind a translucent window.

	The lamps can be off.. flashing.. or on.
window (nameplate)	a component of a visual display made from a translucent material that is illuminated from the rear and labeled to identify the monitored variable.