SIEMENS

INSTALLATION & OPERATION

iVIU Console A80615

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VERSION B

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FCC RULES COMPLIANCE

The equipment covered in this manual has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his/her own expense.

DOCUMENT HISTORY

Version	Release Date	Sections Changed	Details of Change
A		- - - - -	INITIAL RELEASE
A.1	07-17-2012	1.3	Change ordering information
A.2	08-01-2012	1.3	Change ordering information
B	02-18-2021	1.2	• Page 1-2, Caution added to Section 1.2.1 regarding Power/ECD Connector. • Page 1-4, Figure 1.3 added to Section 1.2.1. • Manual converted to Siemens Mobility, Inc. branding.

Table of Contents

LIST OF FIGURES

LIST OF TABLES

NOTES, CAUTIONS, AND WARNINGS

Throughout this manual, notes, cautions, and warnings are frequently used to direct the reader's attention to specific information. Use of the three terms is defined as follows:

WARNING

⚠ WARNING

INDICATES A POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY. WARNINGS ALWAYS TAKE PRECEDENCE OVER NOTES, CAUTIONS, AND ALL OTHER INFORMATION.

CAUTION

⚠ CAUTION

REFERS TO PROPER PROCEDURES OR PRACTICES WHICH IF NOT STRICTLY OBSERVED, COULD RESULT IN A POTENTIALLY HAZARDOUS SITUATION AND/OR POSSIBLE DAMAGE TO EQUIPMENT. CAUTIONS TAKE PRECEDENCE OVER NOTES AND ALL OTHER INFORMATION, EXCEPT WARNINGS.

NOTE

NOTE

Generally used to highlight certain information relating to the topic under discussion.

If there are any questions, contact Siemens Mobility, Inc. Application Engineering.

ELECTROSTATIC DISCHARGE (ESD) PRECAUTIONS

Static electricity can damage electronic circuitry, particularly low voltage components such as the integrated circuits commonly used throughout the electronics industry. Therefore, procedures have been adopted industry-wide which make it possible to avoid the sometimes invisible damage caused by electrostatic discharge (ESD) during the handling, shipping, and storage of electronic modules and components. Siemens has instituted these practices at its manufacturing facility and encourages its customers to adopt them as well to lessen the likelihood of equipment damage in the field due to ESD. Some of the basic protective practices include the following:

- Ground yourself before touching card cages, assemblies, modules, or components.
- Remove power from card cages and assemblies before removing or installing modules.
- Remove circuit boards (modules) from card cages by the ejector lever only. If an ejector lever is not provided, grasp the edge of the circuit board but avoid touching circuit traces or components.
- Handle circuit boards by the edges only.
- Never physically touch circuit board or connector contact fingers or allow these fingers to come in contact with an insulator (e.g., plastic, rubber, etc.).
- When not in use, place circuit boards in approved static-shielding bags, contact fingers first. Remove circuit boards from static-shielding bags by grasping the ejector lever or the edge of the board only. Each bag should include a caution label on the outside indicating static-sensitive contents.
- Cover workbench surfaces used for repair of electronic equipment with static dissipative workbench matting.
- Use integrated circuit extractor/inserter tools designed to remove and install electrostatic-sensitive integrated circuit devices such as PROM’s (OK Industries, Inc., Model EX-2 Extractor and Model MOS-40 Inserter (or equivalent) are highly recommended).
- Utilize only anti-static cushioning material in equipment shipping and storage containers.

For information concerning ESD material applications, please contact the Technical Support Staff at 1-800-793-7233. ESD Awareness Classes and additional ESD product information are also available through the Technical Support Staff.

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SECTION 1
INTRODUCTION

1.0 INTRODUCTION

1.1 GENERAL DESCRIPTION

The iVIU is the core of the iVIU system that can be configured to provide a variety of applications for wayside control and monitoring including Positive Train Control (PTC) applications.

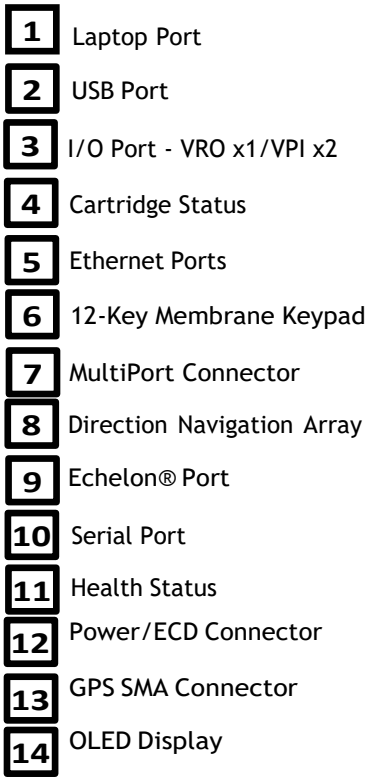
1.2 IVIU CONSOLE

The iVIU Console is shown in Figure 1-1. The console is the core of the iVIU system. The console serves as the local interface. The console has Dual 400 MHz processors with up to 8GB of Flash Memory per processor. An Intelligent Front Panel includes and OLED display and 12 key membrane keypad with navigational key cluster. Inputs include one Ethernet Laptop and up to 3 Ethernet networkports, four RS-232 serial ports, one USB port, and an Echelon® network port. LEDs provide status of the system at a glance.

Figure 1-1 iVIU Console

1.2.1 Console Indicators and Controls

See locations on the following page.



⚠ CAUTION

CAUTION

WHEN INSTALLING THE POWER/ECD CONNECTOR AS SHOWN AT LOCATION (12) IN FIGURE 1-2, ENSURE THE TWO SCREWS LOCATED ON EITHER SIDE OF THE POWER CONNECTOR ARE SECURELY FASTENED, TO PREVENT LOOSENING OF THE DEVICE.

ADDITIONALLY, DO NOT UNPLUG THE ECD WHEN ACTIVELY FLASHING RED (SHOWN IN FIGURE 1-3). THIS INDICATES THAT DATA IS CURRENTLY BEING WRITTEN TO THE DEVICE.

DISCONNECTING THE ECD DURING THIS OPERATION MAY CORRUPT INTERNAL CONFIGURATION INFORMATION.

WAIT UNTIL THE LED TURNS GREEN BEFORE REMOVING THE ECD FROM THE CONSOLE.

See descriptions on the previous page.

Figure 1-2 Console Indicator and Control Locations

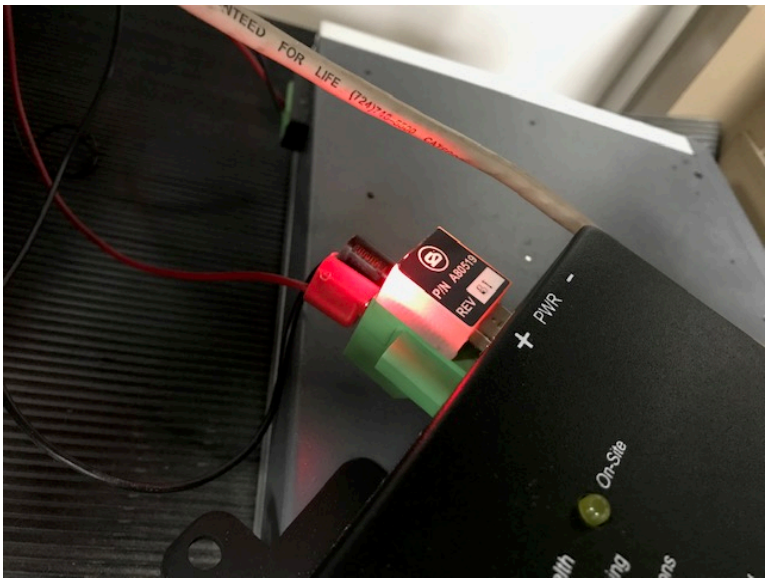


Figure 1-3 ECD Flashing Red to indicate it is actively writing data

1.2.2 A26702-02 iVIU MultiPort Cable

The iVIU Multi-Port cable interfaces the console with the Backplane Inter Connect Buss (ICB) and provides three serial ports for external devices. Figure 1-4 shows the iVIU Multi-Port Cable.

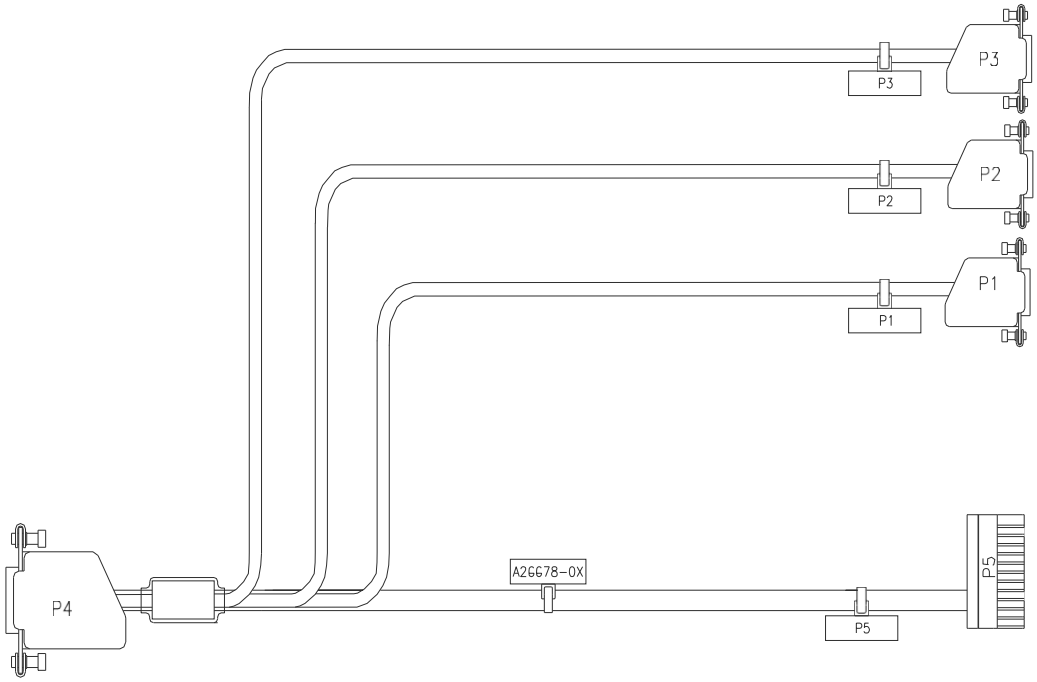


Figure 1-4 A26702-02 MultiPort Cable

A wiring diagram of the Multi-Port cable is shown in Figure 1-5. P1 through P3 provide RS-232 serial protocol via three DB-9 connectors to interface to external devices. The P5 12-pin connector plugs into an Inter Connect Buss (ICB). The P5 connector is keyed and will only plug in the connector one way. The User will install DC power to pins 1 (B) and 2 (N) of theP5 connector to supply power to the ICB.

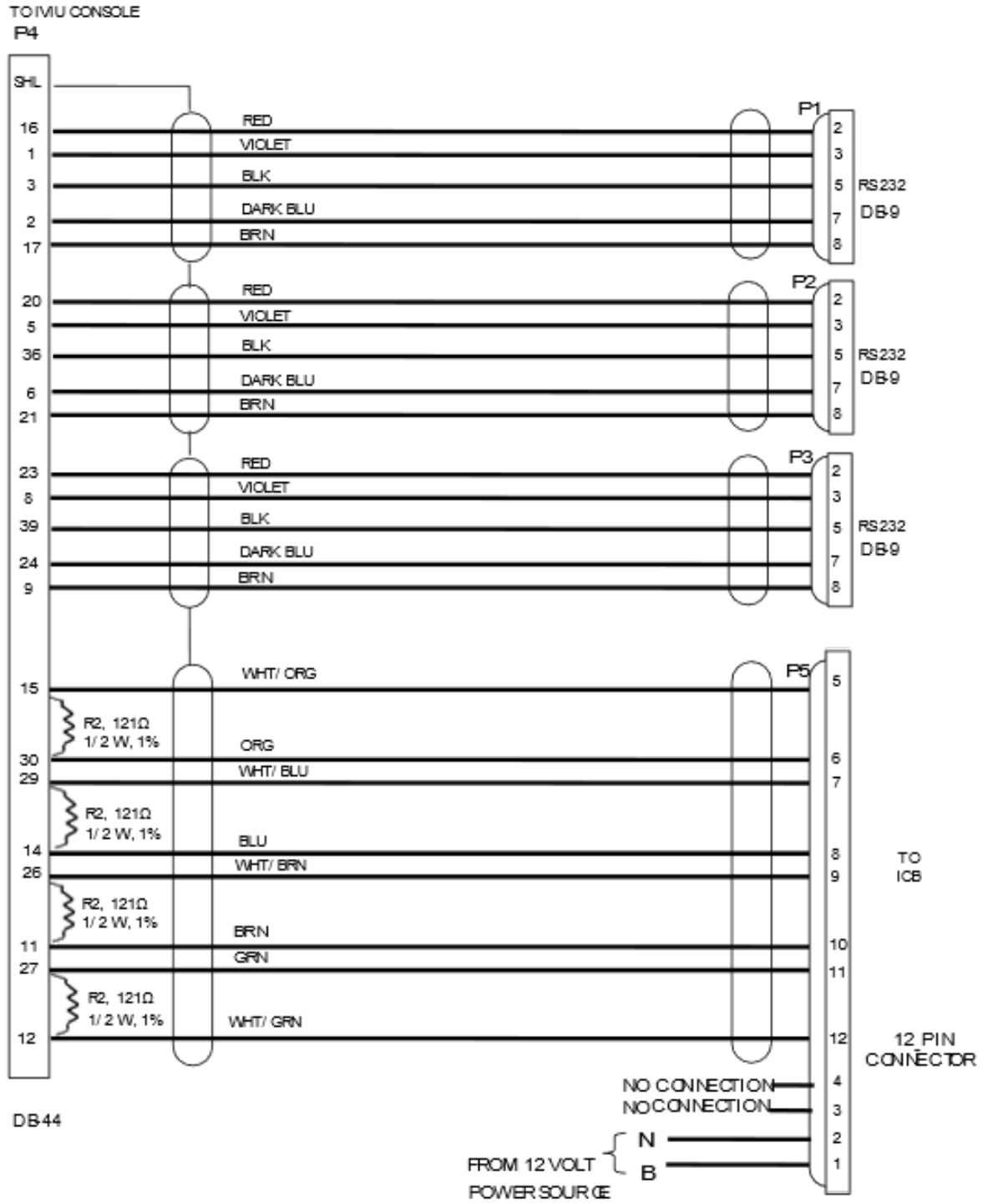


Figure 1-5 MultiPort Cable Wiring Diagram

1.2.3 Vital I/O Connector

An optional Vital I/O connector is located on the left side of the iVIU Console. This 6-pin connector has one Vital Relay Output and two Vital Parallel Inputs. Figure 1-6 shows the pin out configuration of the iVIU Console I/O Connector.

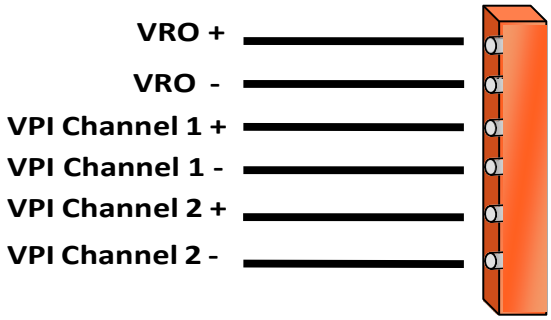


Figure 1-6 Vital I/O Connector

1.3 ORDERING INFORMATION

Figure 1-7 displays the iVIU Console and Multi-Port Cable ordering information. Options are subject to change. Contact Siemens Mobility, Inc. Customer Service for the latest configuration options.

iVIU Console:

8000-80615-X0XX

1	Reserved

0	No Daughter Card
1	80611-1 GPS
2	80611-2 GPS/VIO

1	Wall/Relay Rail Mounting Bracket

iVIU Console Multi-Port Cable:

8000-26702-000X

	Length P5 ±2"	Length P1, P2, P3 ±2"	Source
1	3 FT	3 FT	Back Shell
2	6 FT	3 FT	Back Shell
3	6 FT	6 FT	Back Shell
4	12 FT	6 FT	Back Shell
5	12 FT	12 FT	Back Shell

Figure 1-7 Ordering Information

1.3.1 Specifications

Power Requirements	Input Voltage	9-32 VDC, Isolated, Reverse Polarity Protection
	Input Current	3 Amps Max @ 13.8 VDC
Connectivity	Power	
	GPS	
	Serial Ports	
	Ethernet Ports	
	Echelon®	
	USB	
	MultiPort	
	Vital I/O Port	
Display		3.75 inch x 2 inch OLED display
Keypad		12-Key Membrane keypad with Navigation Array
Indicators		16 Cartridge Status 7 Color LEDs
		12 Health/Status 7 Color LEDs
Physical	Dimensions	9.625 inches Wide
		7.000 inches High
		2.125 inches Deep
	Weight	8 lbs
Environmental	Temperature	-40 ° C to 70 ° C
	Humidity	95% non-condensing

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SECTION 2
APPLICATIONS

2.0 APPLICATIONS

2.1 APPLICATIONS OVERVIEW

The iVIU may be used in a variety of applications. This section will provide an overview of possible applications using the iVIU modular system.

2.1.1 PTC Enabled GEO

In this example, the SEAR II remains in place to perform the non-vital logic and codeline interface functions. The iVIU Console is installed into an existing system to report signal/switch/hazard detector status to the PTC network.

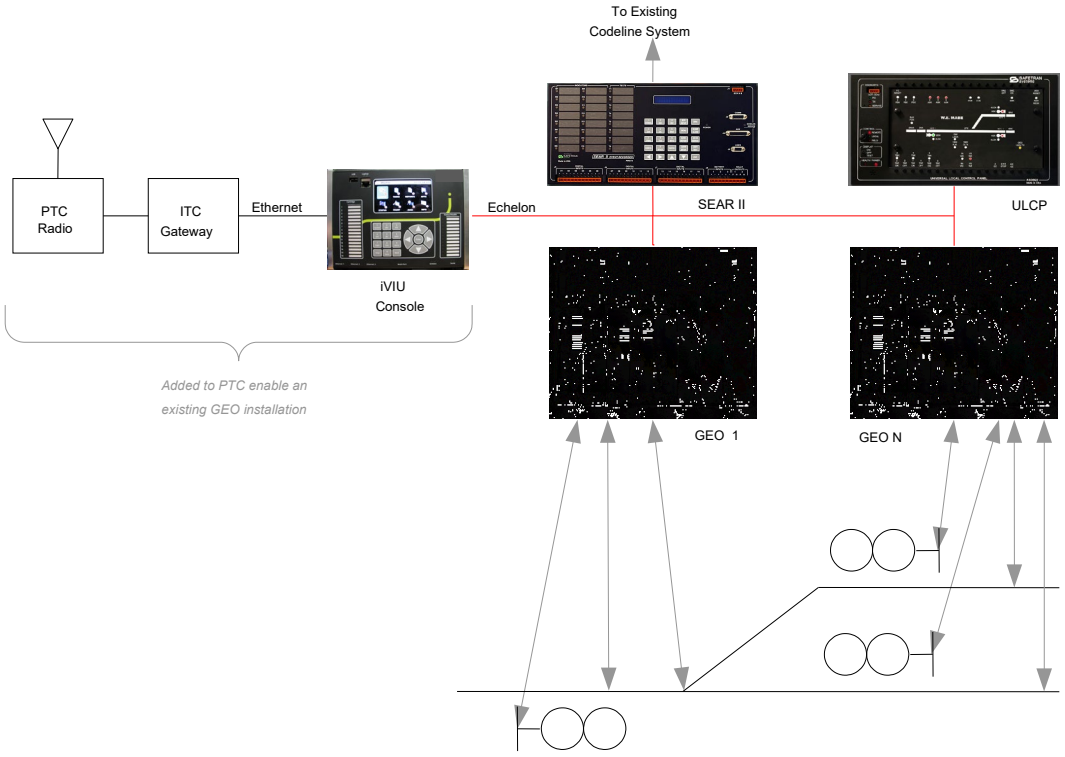


Figure 2-1 PTC Enabled GEO Installation Example

2.1.2 Dark Territory

The iVIU Console can be used to monitor switch position in dark territory using the internal VRO/VRI connector. In the diagram below a typical dark territory system is shown.

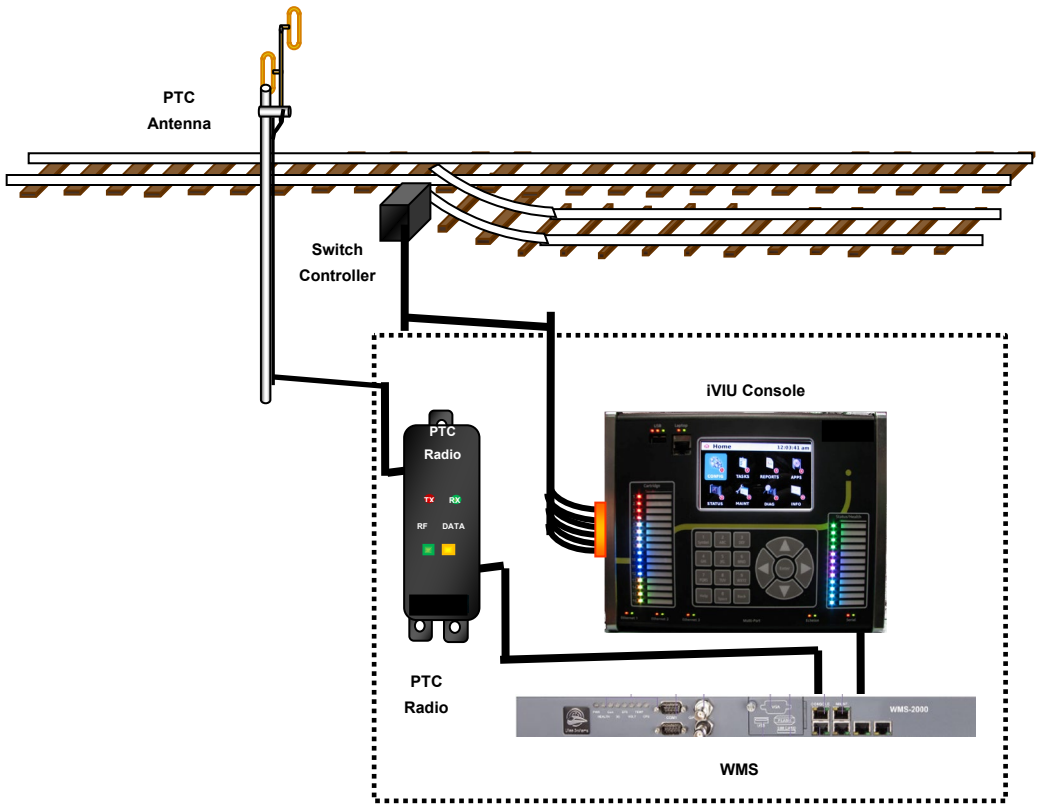


Figure 2-2 Dark Territory Installation Example

SECTION 3
INSTALLATION AND CONFIGURATION

3.0 INSTALLATION AND CONFIGURATION

3.1 INTERCONNECTION OVERVIEW

The installation of the iVIU will involve a variety of connections relative to the application. Figure 3-1 displays all the available connections on the iVIU Console.

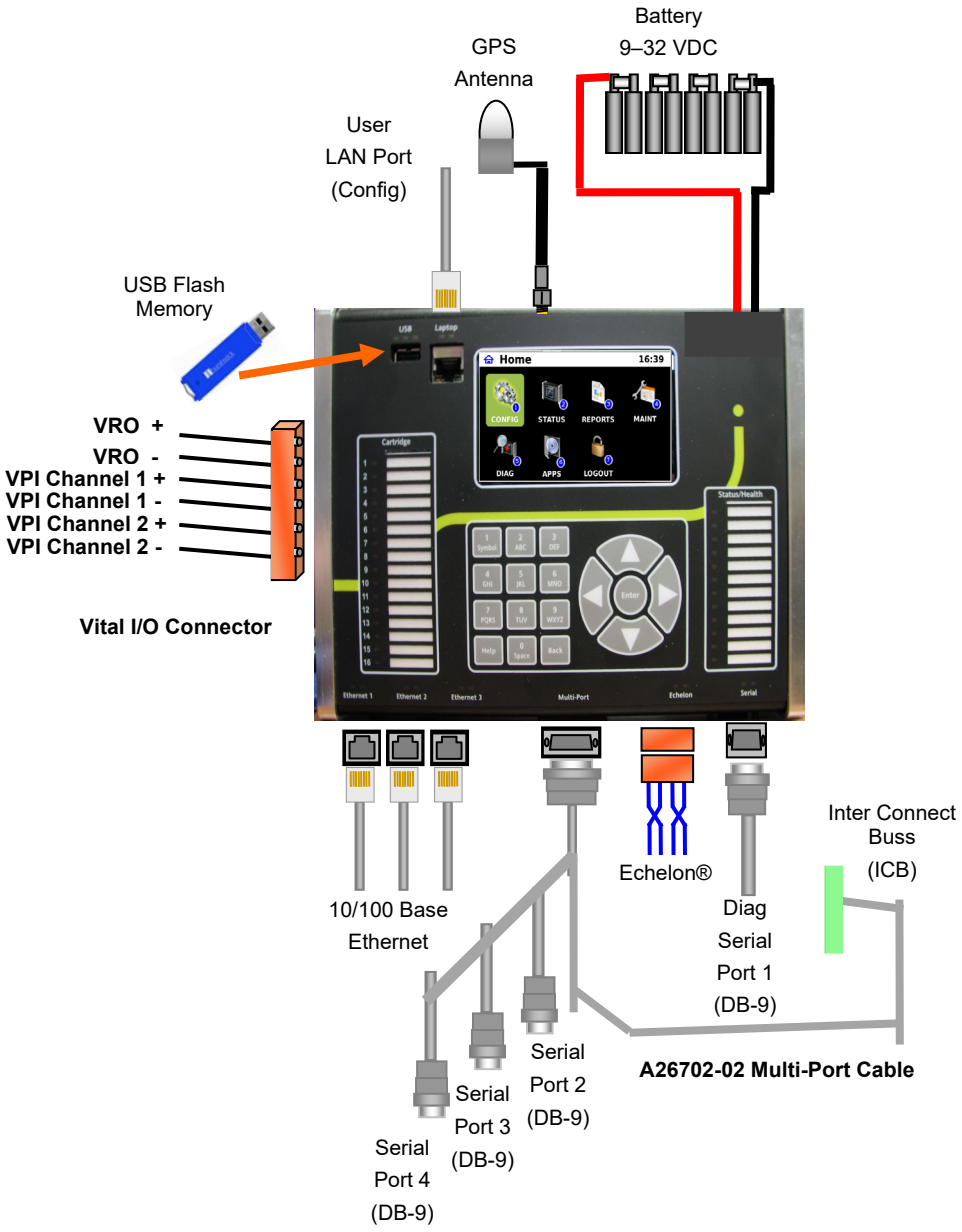


Figure 3-1 iVIU Console Interconnection Overview

3.1.1 Example PTC Enabled GEO Installation

The figure below is an example of a PTC Enabled GEO installation.

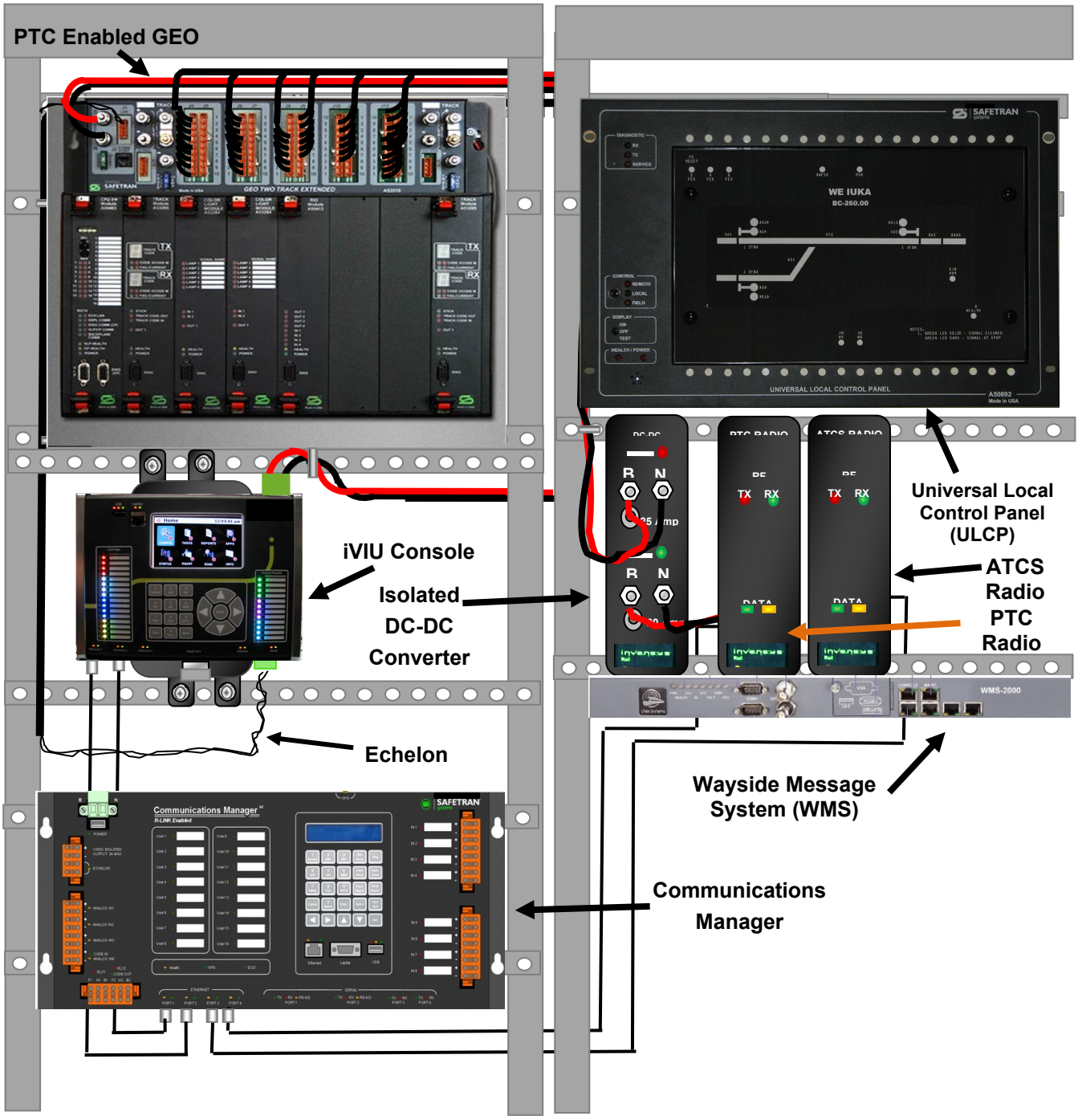


Figure 3-2 PTC Enabled GEO Installation Example

3.1.1.1 PTC Enabled GEO Wiring Diagram

The figure below depicts an example wiring diagram of a PTC Enabled GEO installation.

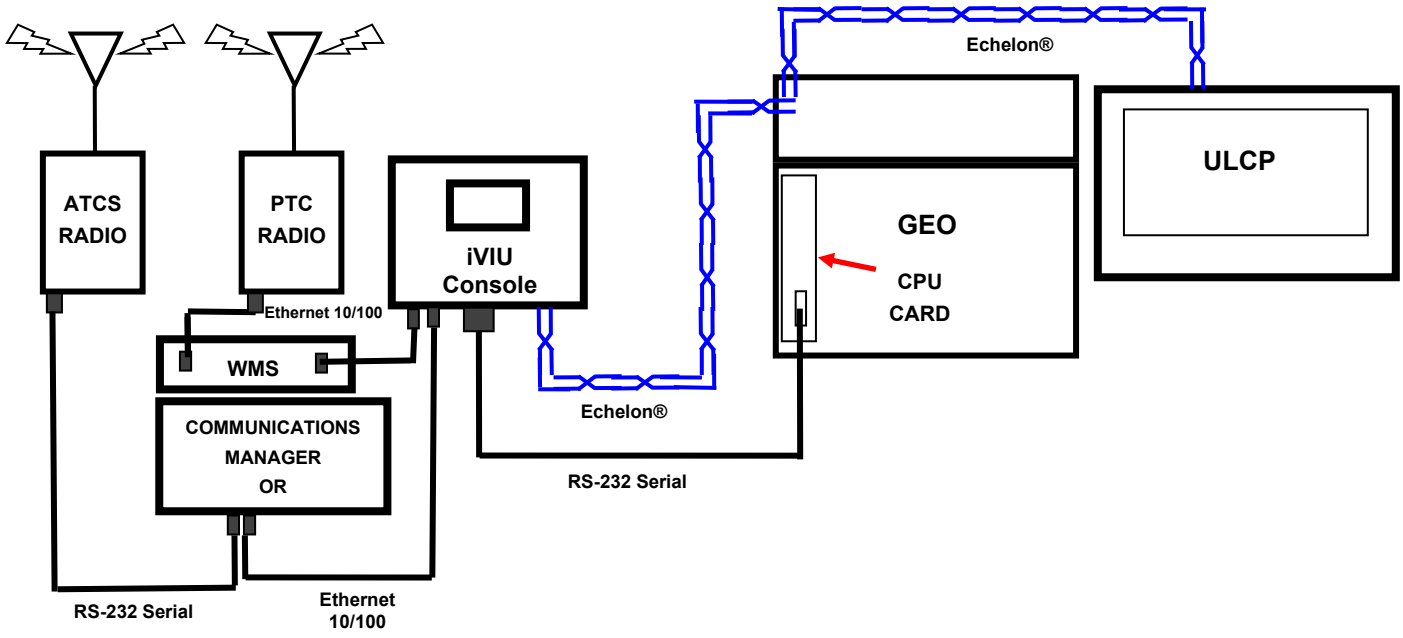


Figure 3-3 PTC Enabled GEO Wiring Diagram

3.1.2 Example Dark Territory Installation

The drawing below is an example Dark Territory Switch Monitor and Control using an iVIU Console with optional I/O connector with PTC communications in a weatherproof pole mount cabinet.

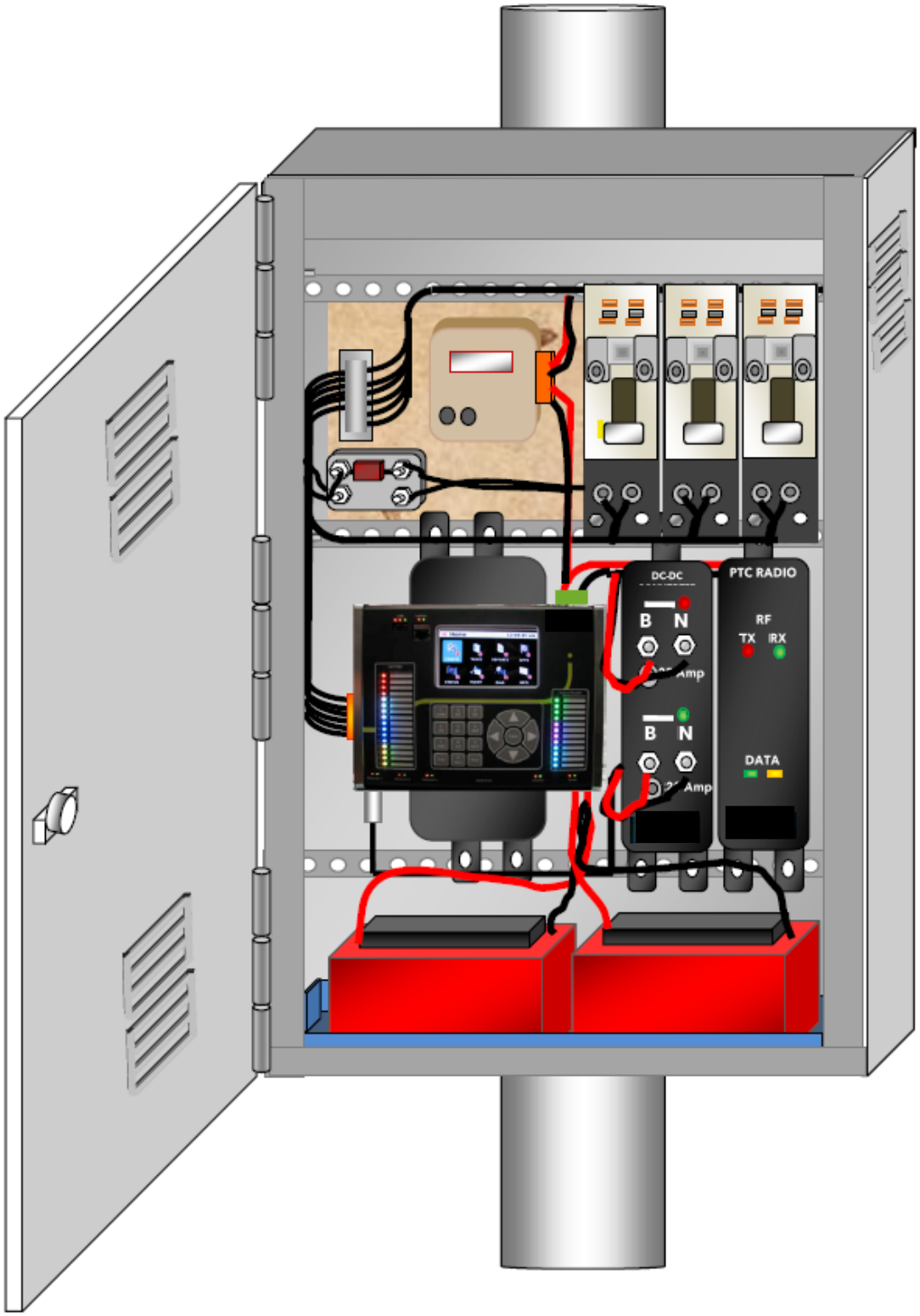


Figure 3-4 iVIU Dark Territory Switch Monitor Example

3.1.2.1 Example Dark Territory Switch Monitor Wiring Diagram

The diagram below is an example of a dark territory switch monitor for a PTC application.

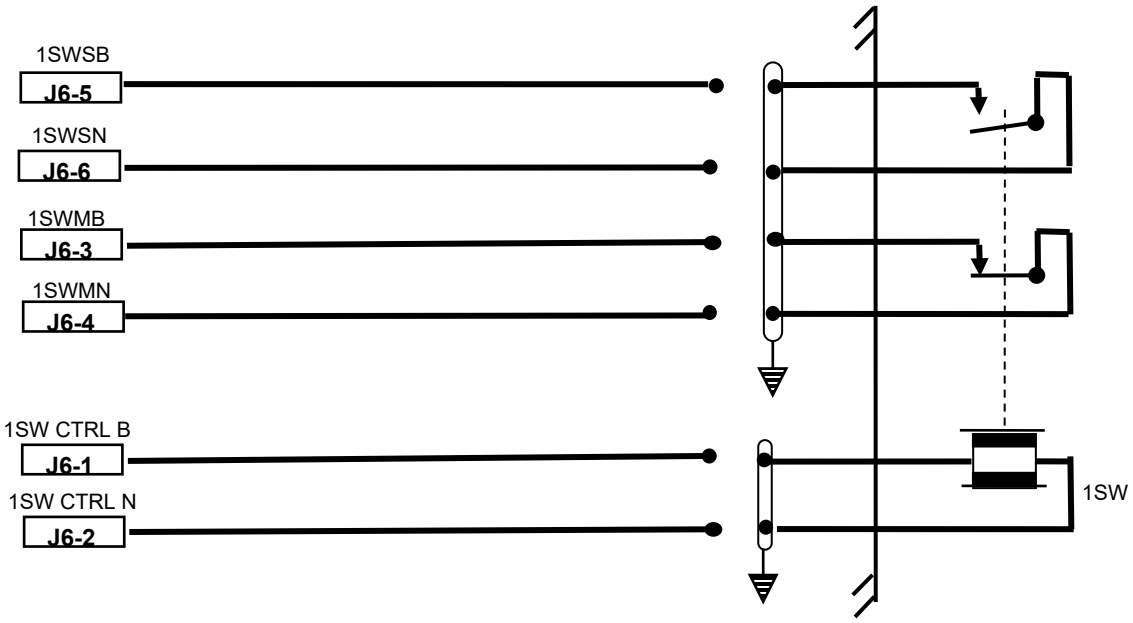


Figure 3-5 Example Dark Territory Switch Monitor Wiring Diagram

3.2 CONSOLE INSTALLATION

The iVIU Console is mounted to the relay rack assembly using the D39607 mounting bracket. The iVIU Console has four #8 threaded mounting holes on the rear of the unit.

3.2.1 Installing Mounting Bracket to Console

Use the following procedure to install the D39607 Mounting Bracket to the iVIU Console:

1. Position the mounting bracket with the counter sunk holes facing away from the console.
2. Mount the bracket to the iVIU Console using four #8 flat head screws as shown in Figure 3-6.

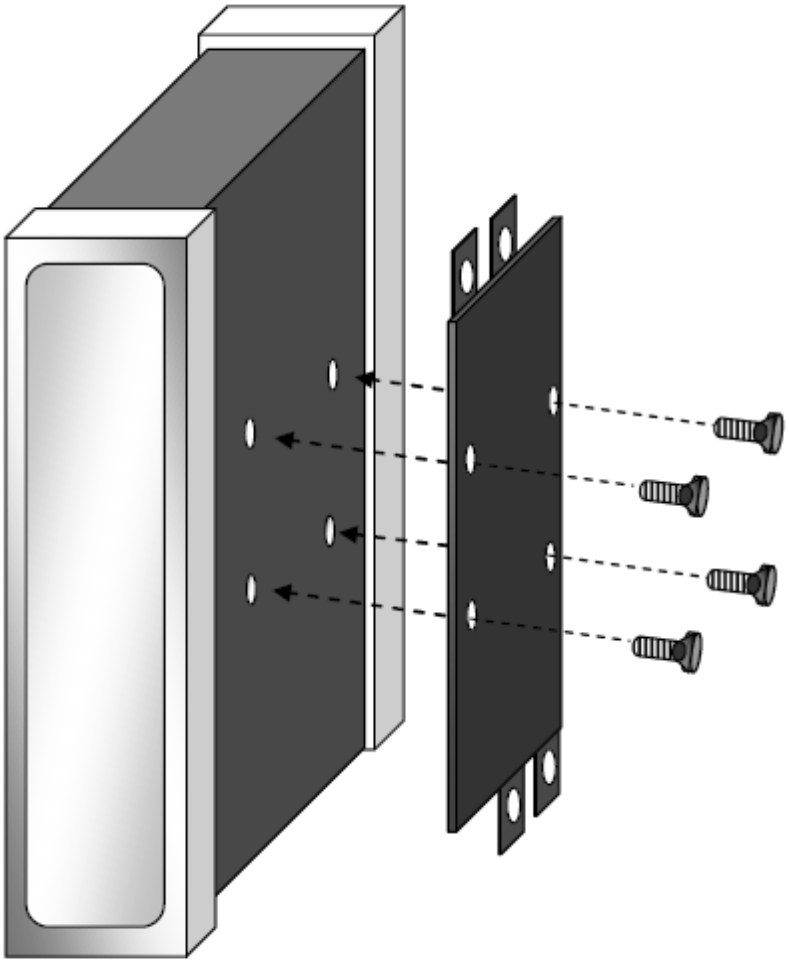


Figure 3-6 Installing iVIU Console Mounting Bracket

3.2.2 Installing the iVIU Console to the Rack Assembly

The iVIU Console D39607 Mounting Bracket is designed to enable mounting of the console between the relay rack rails. Mount the console using the following procedure:

1. Align the Mounting Bracket with the Relay Rack rails.
2. Use ¼-20 bolts and flat washers and slide through the holes in the mounting bracket and the rack rail.
3. Secure the bolts using a flat washer, a lock washer, and a ¼-20 nut.

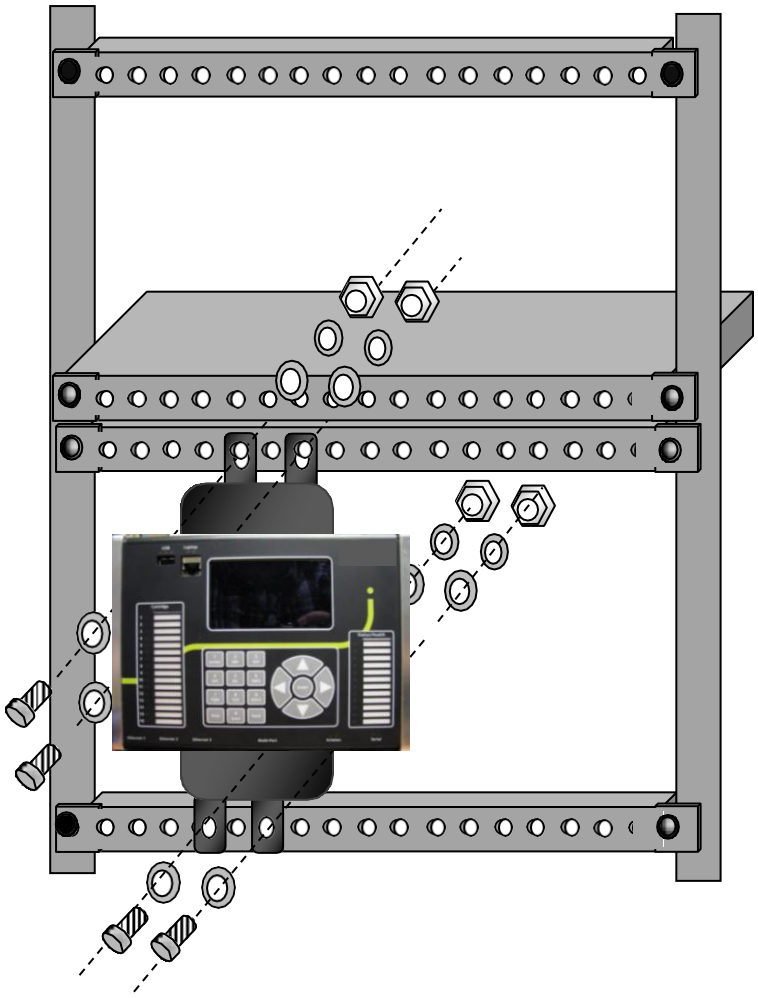


Figure 3-7 Mounting the iVIU Console to the Rack Assembly

3.3 CONFIGURATION

The simplest means of system configuration is the use of the USB port to upload all configuration parameters from a thumb drive.

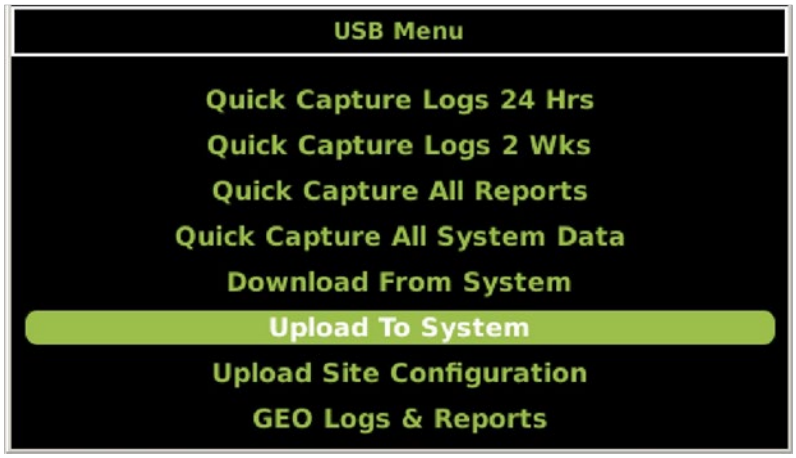


Figure 3-8 Uploading Configuration Information via USB Port

3.3.1 Uploading Files Using USB

The following procedures will provide step-by-step instructions on uploading and setting up application and configuration files. Be sure to adhere to the warnings at the beginning of this section before proceeding.

3.3.2 Uploading MCF Files

It is recommended that configuration files be created using the Office Configuration Editor (OCE). Uploading OCE created configuration files simplifies field installations and minimizes errors that may render the system inoperative. Refer to the Office Configuration Manual (Siemens Document Number: SIG-00-11-15) for details on creating configuration files.

3.3.3 OCE File Structure

The output of OCE created files are in a zipped package which contains the MCF, Site PTC database, WIU Configuration, rc2key, non-vital configuration, and cic bin file. The folder structure is set up in the proper order when the zipped package is extracted.

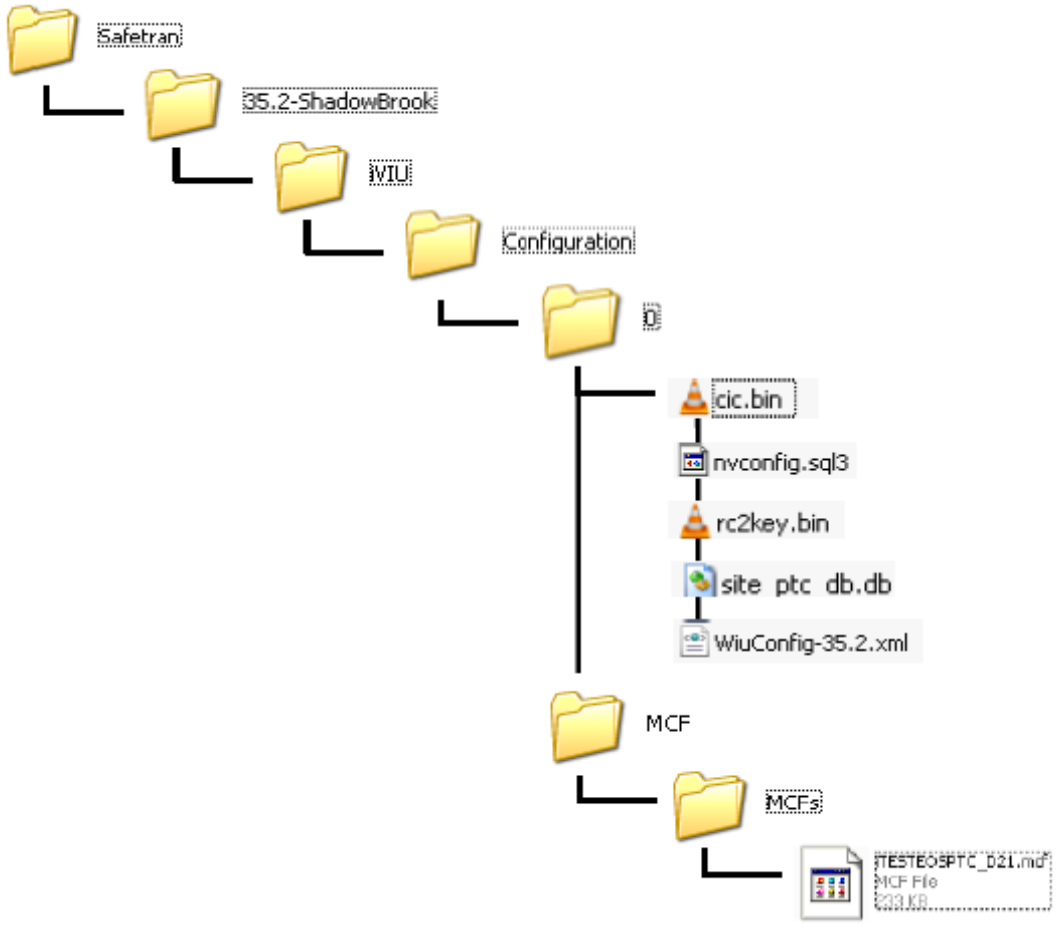


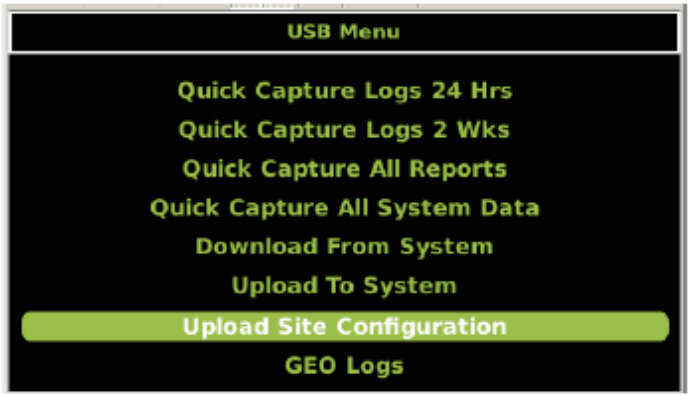
Figure 3-9 OCE File Hierarchy

3.3.3.1 OCE File Uploading Procedure

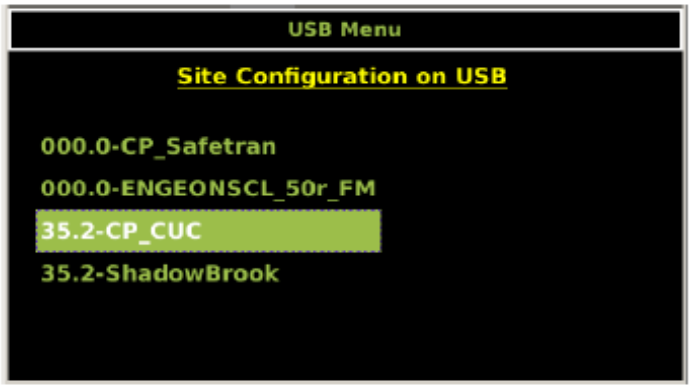
To upload an OCE created file use the following procedure:

1. Insert the USB drive into the USB port on the iVIU Console.

2. The USB Menu will appear on the iVIU Console display. Navigate to UPLOAD SITE CONFIGURATION text and press the ENTER key.

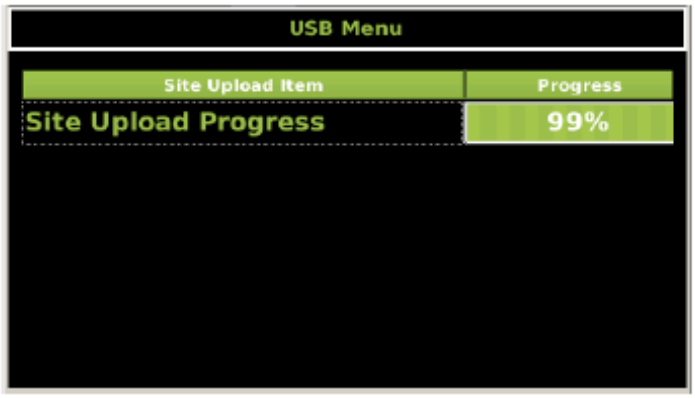


3. Navigate to the desired configuration file and press the ENTER key.

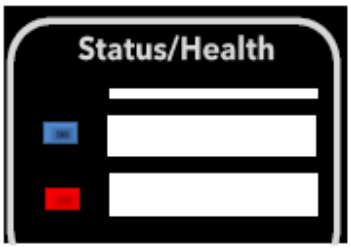


4. A warning screen will appear advising that the existing configuration will be overwritten. Press any key to cancel or press the ENTER key to continue

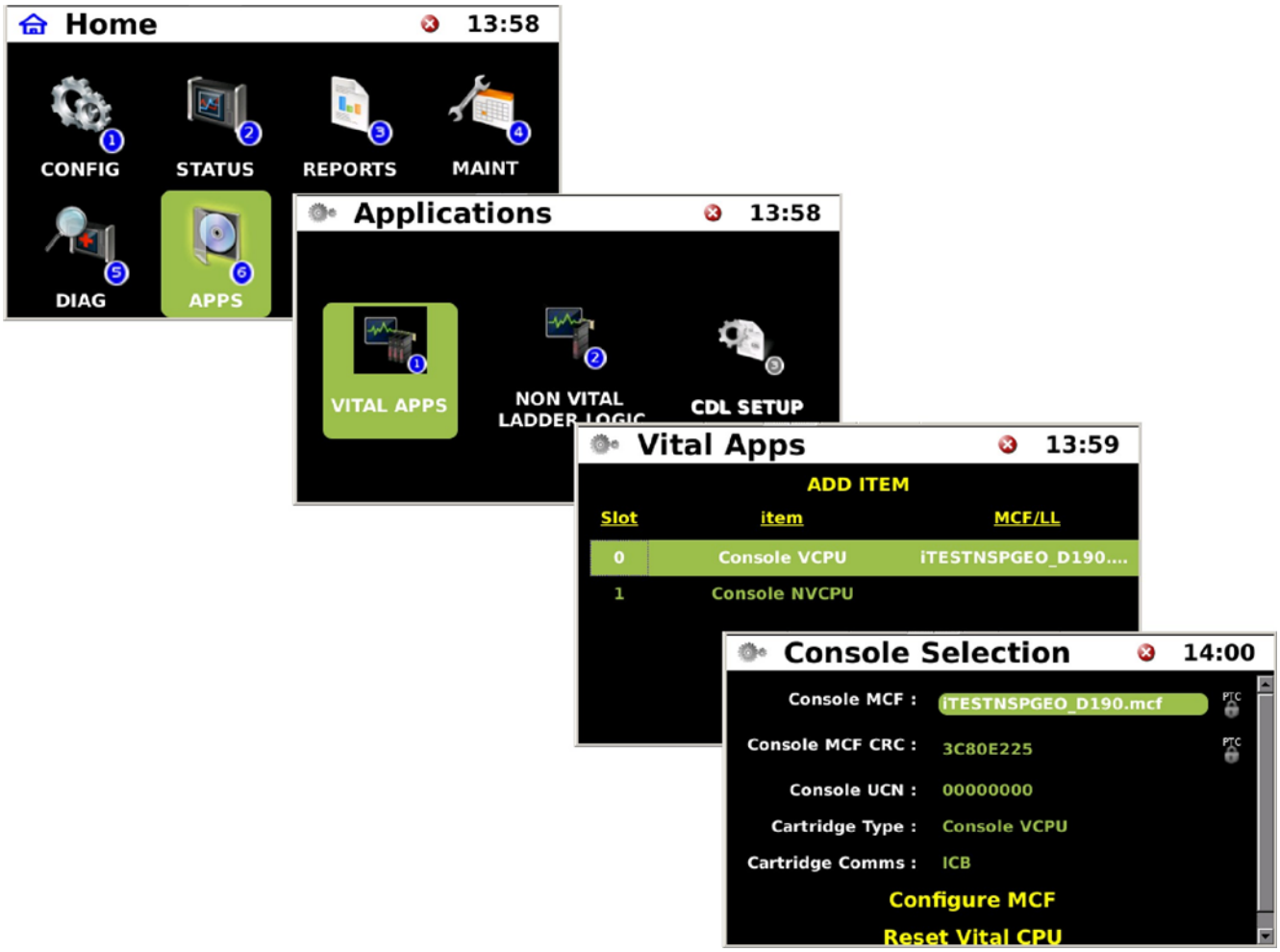
5. The uploading of the files will begin. The progress will be displayed on the console screen.



6. The console will reboot and the Status/Health will be illuminated blue. This indicates that the configuration is not complete.



7. It is necessary to enter the UCN number to complete the installation. Navigate to the APPS menu and press the ENTER key. Select the VITAL APPS icon and press the ENTER key. Select the CONSOLE VCPU and press the ENTER key. The console information will appear.



8. Enter the Console UCN (available at the bottom of the Configuration Report generated by OCE).

   IVIU UCN : 0xE0D85D22

   PTC UCN : 0x5D295B4E

   APPROVAL CRC : 0xD61ACC43

Press the ENTER key and an information screen will appear, press any key to continue. A request to reboot the Vital Core will appear, press the ENTER key to continue. Another information screen will appear, press any key to continue.

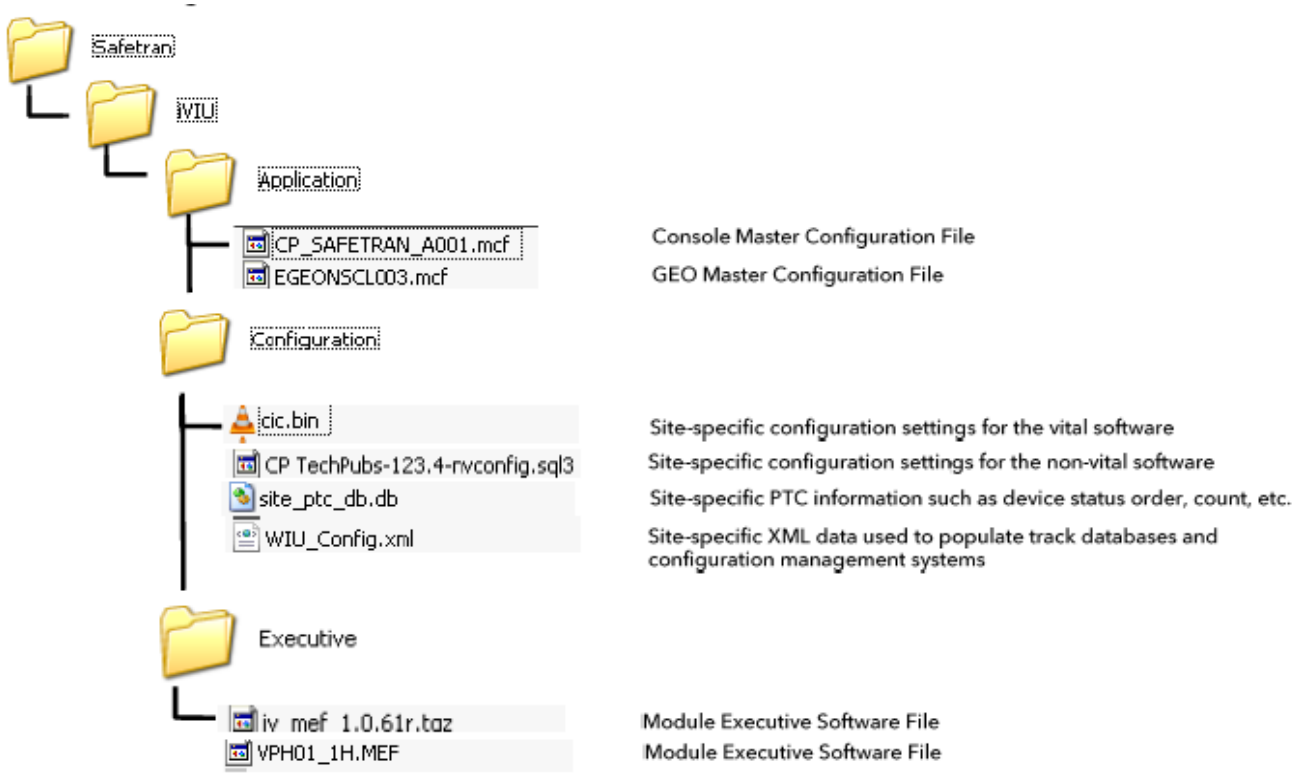
9. The Vital Core will reboot, the Status/Health LEDs should cycle from RED to BLUE and finally to GREEN. The console is now operational. Perform the necessary tests to confirm the system is ready to be placed into service.

3.3.4 Uploading Non-OCE Generated Files

The following procedure provides step-by-step instructions on uploading and setting up a vital application. Be sure to adhere to the warnings at the beginning of this section before proceeding.

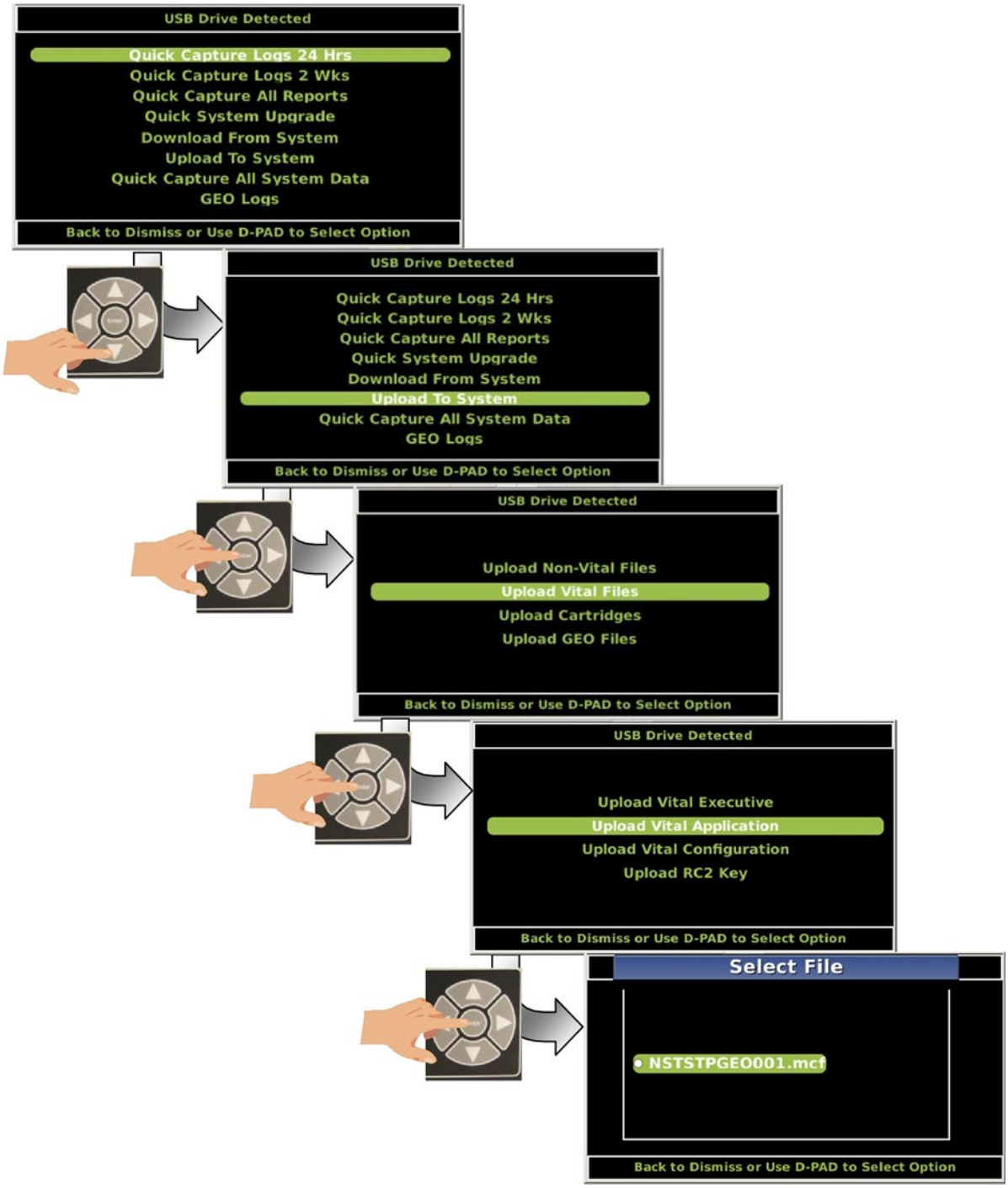
1. Insert the USB drive into the USB port on the iVIU Console.

Ensure the file structure on the USB drive is in the proper format as shown below. Files made using the Office Configuration Editor will automatically populate the files in the proper order. For information on OCE refer to Siemens Document No.: SIG-00-11-15, Office Configuration Editor.

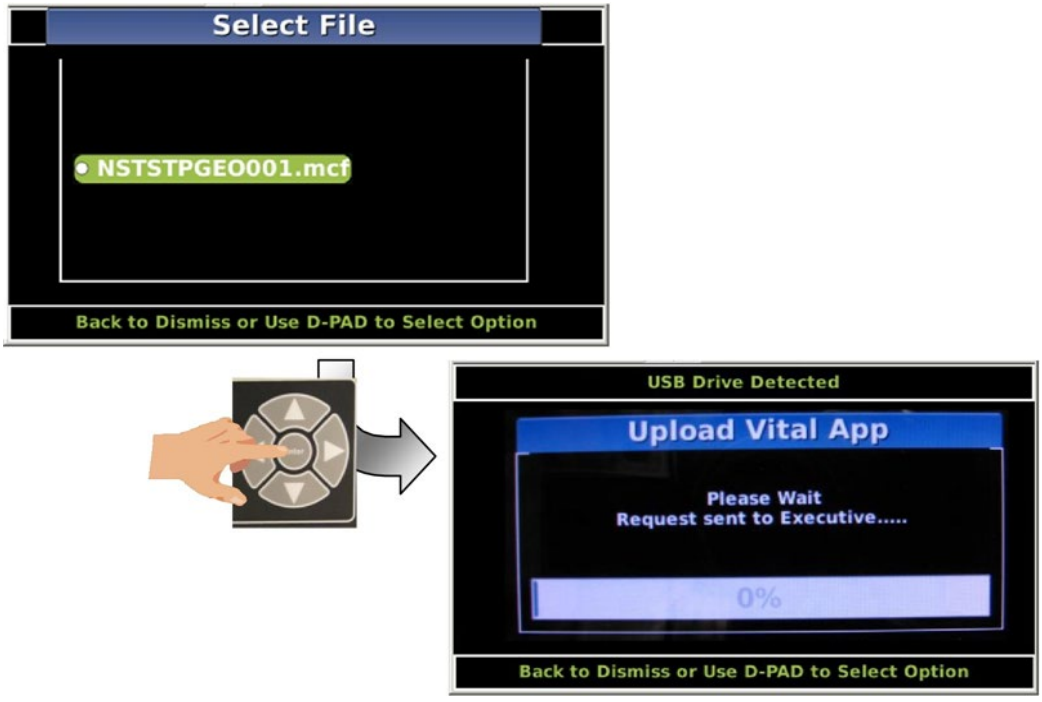


2. The USB Drive menu will appear. Navigate to the "Upload To System" text and press Enter.
3. On the next screen navigate to the type of file to be uploaded and press Enter.
4. On the next screen navigate to the second file menu and select the type of file or key to be uploaded and press Enter.

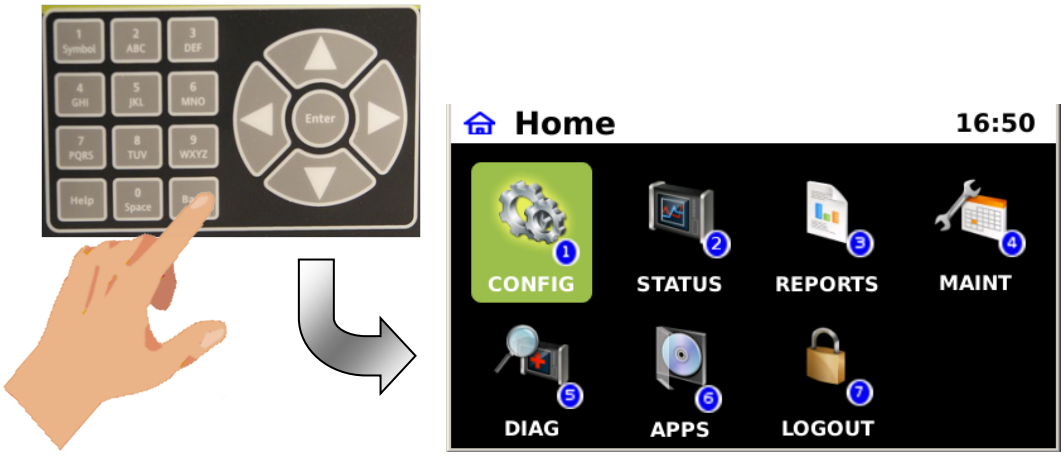
5. A list of available applicable file(s) will appear (this may be only a single file). The following procedure will provide step-by-step instructions on uploading and setting up a vital application other type files load in a similar fashion.



6. Navigate to the desired file and press Enter. An upload progress screen will appear.



7. Upon completion of the upload use the Back button to navigate back to the Home screen.

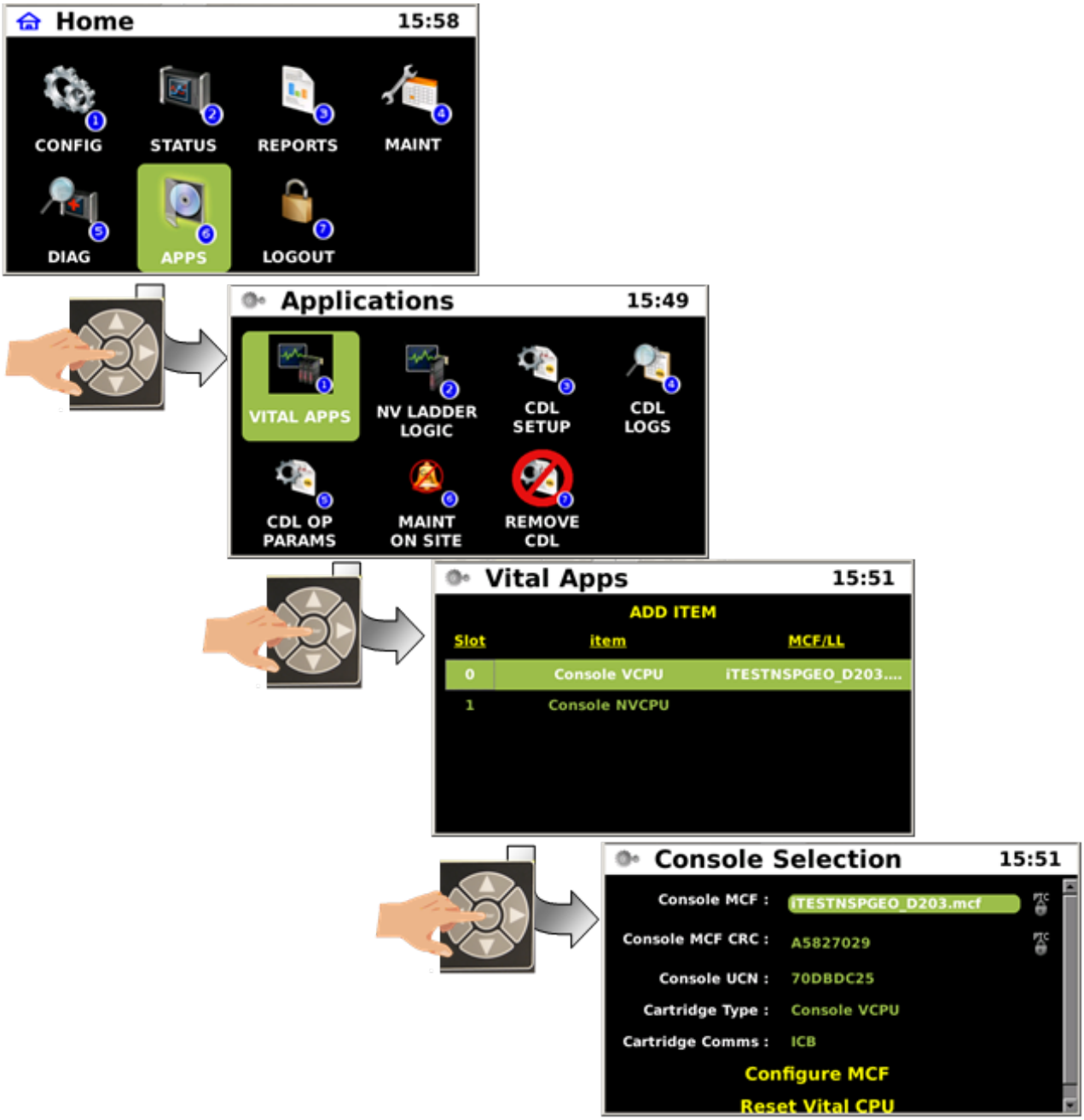


8. From the APPS icon press Enter.

9. Navigate to the VITAL APPS icon and press Enter.

10. Highlight the Console VCPU (Vital CPU) and press Enter.

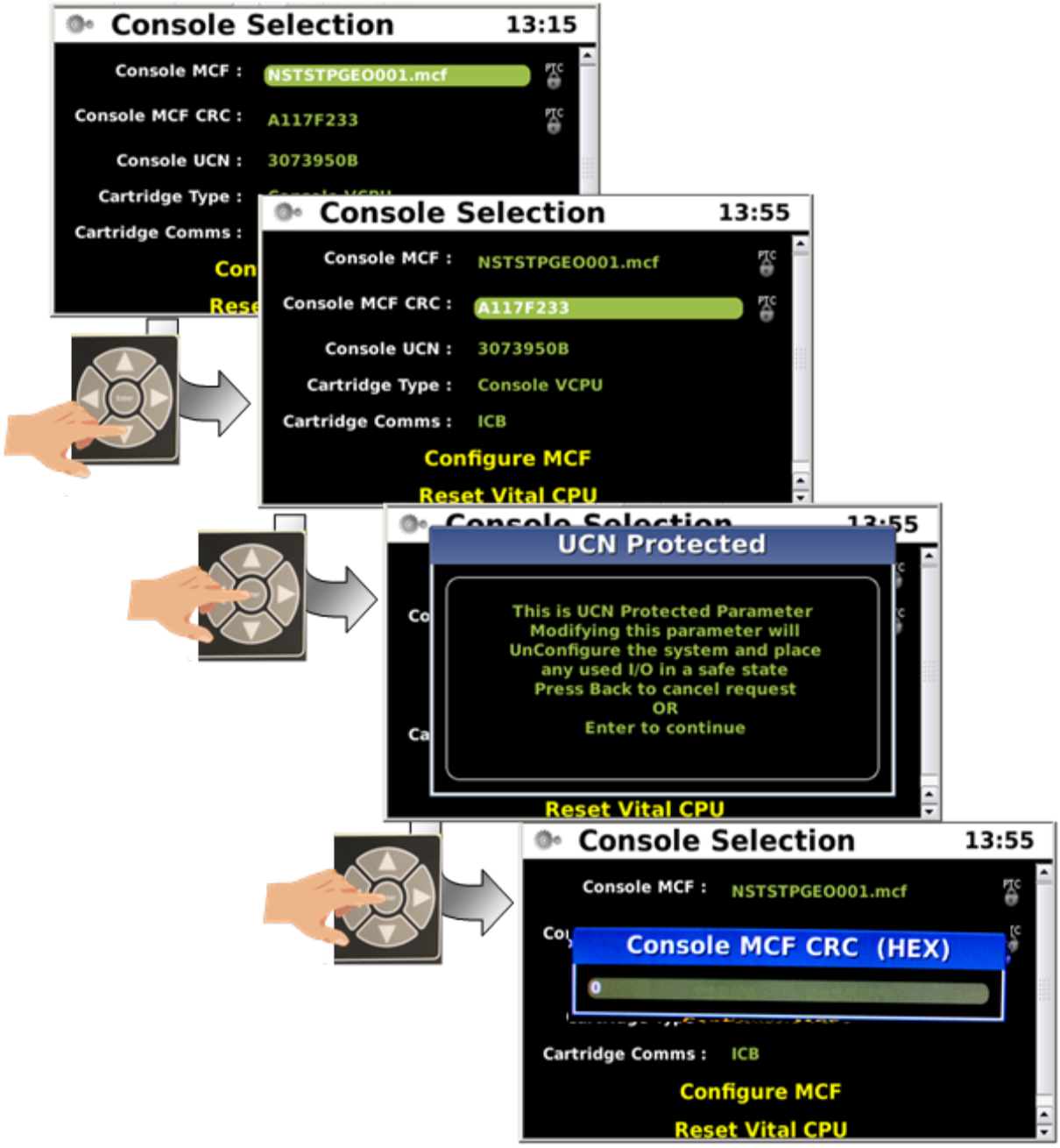
11. The Console Selection screen will be displayed.



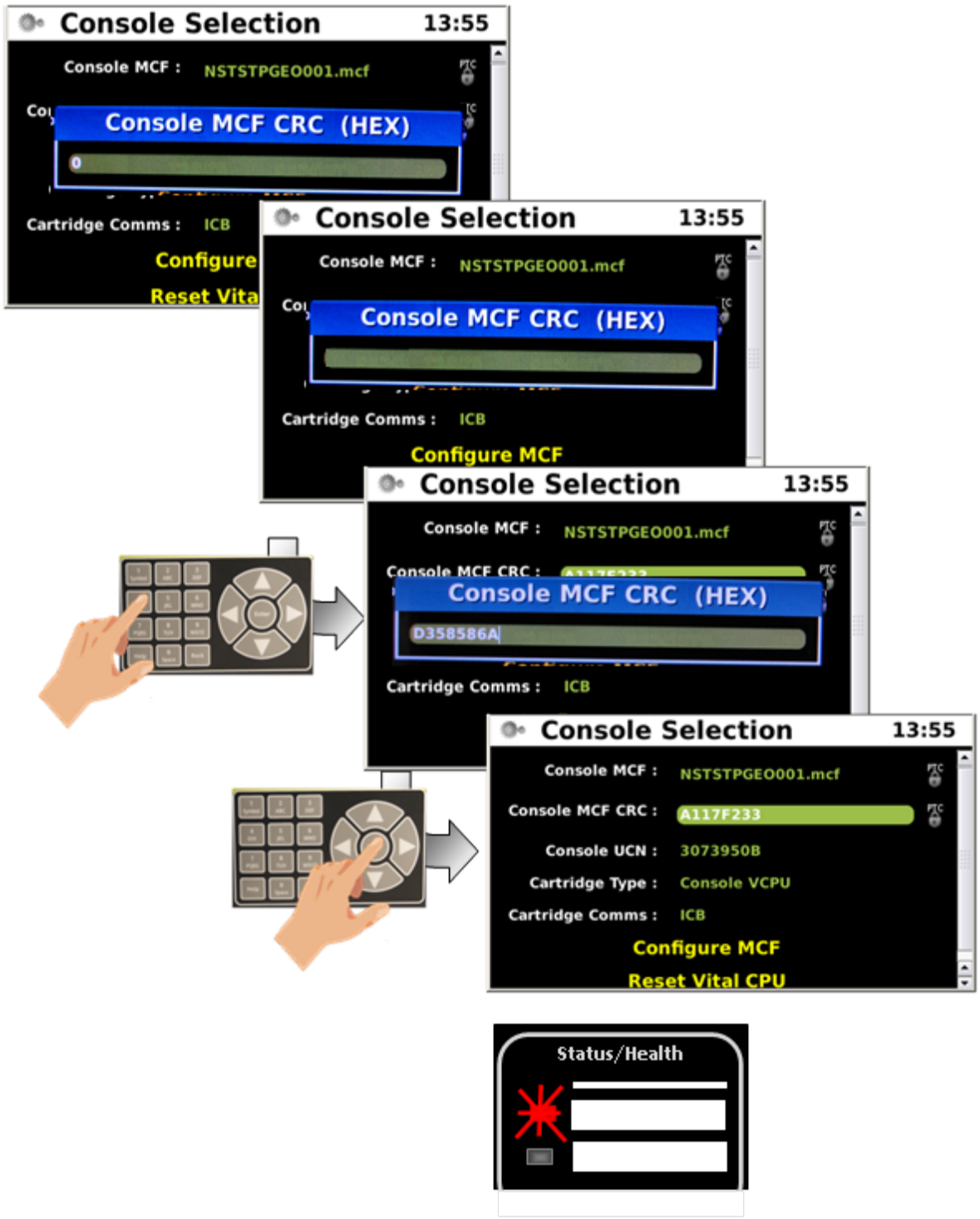
12. The MCF file that was uploaded should appear in the "Console MCF" line.

13. Navigate to the "Console MCF CRC:" line and press Enter.

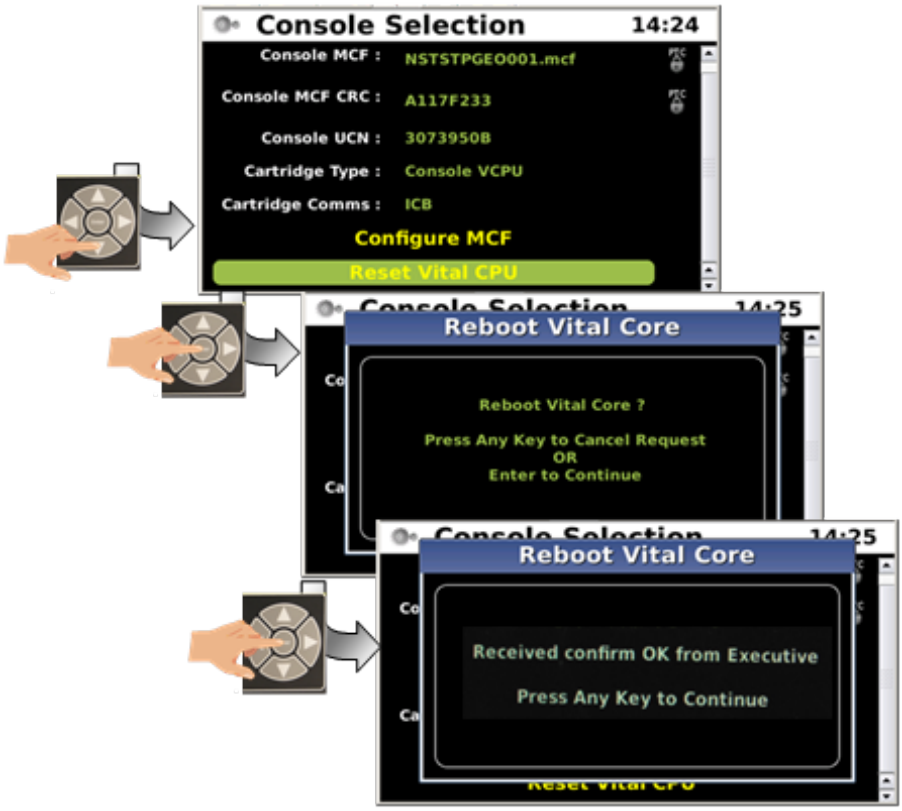
14. A warning screen will appear advising this is a UCN protected parameter. Press Enter to continue.



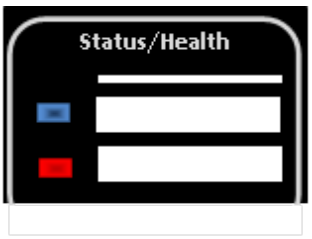
15. The "Console MCF CRC (HEX)" dialog box will appear. Use the Back button to clear the "0" on the text line.
16. Using the keypad enter the CRC number and press Enter. The first Status/Health LED will illuminate flashing red.



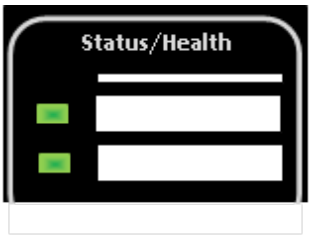
17. Navigate to "Reboot Vital CPU" text and press Enter.
18. A warning screen will appear to verify if a reboot of the Vital CPU is desired. Press Enter to continue.
19. A confirmation screen will appear. Press any key to continue. Please wait as the console reboots.



20. Once the Console has completed rebooting note that the Status/Health LED is now blue.



21. When the reboot sequence is completed verify the Status/Health LED is green.



The iVIU Console is now ready to run the installed application. Verify the site equipment is fully operational and has been tested per railroad or agency's procedures.

SECTION 4
WEB USER INTERFACE (WebUI)

4.0 WEB USER INTERFACE (WEBUI)

4.1 WEBUI OVERVIEW

The iVIU comes with a Web Interface which enables users to configure the iVIU remotely. Using a standard web browser enter the URL assigned to the console (e.g. https://192.168.100.1). The Web UI utilizes the HTTP Secure (https) protocol.

4.1.1 WebUI Login Page

Upon connecting to the console the WebUI Login Page will come up. It will be necessary to log in to the console. Log in to the console using the assigned password and click on the login button as shown below. Note that passwords are case sensitive.

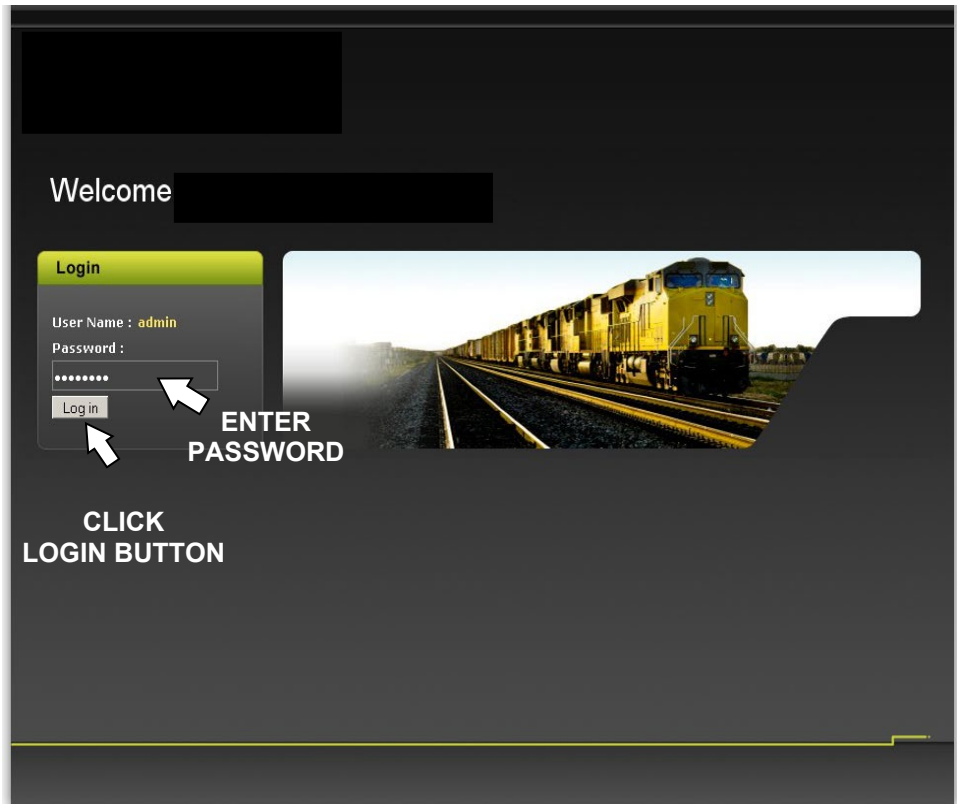


Figure 4-1 WebUI Login Page

4.1.2 Configuration Menu

The WebUI opens with the Configuration Menu. The Configuration Menu contains six sub-menus for Site Information, PTC, Console, Modules, External Networking, and Log Setup. Click on any of the menu buttons to bring up that configuration page.

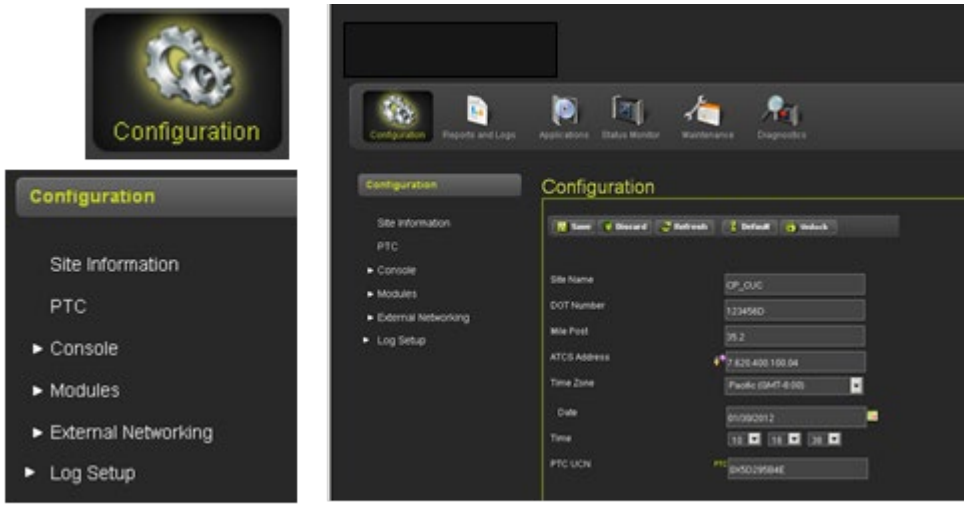


Figure 4-2 Configuration Menu

4.1.2.1 Site Information

The Site Information menu enables the user to configure Site Name, DOT Number, Mile Post, ATCS Address, Time Zone, Date, Time, and PTC UCN.

Figure 4-3 Configuration Menu – Site Information

- **Setting the Time Zone**

To set the Time Zone, click on the drop menu. Select the desired time zone and click the mouse.

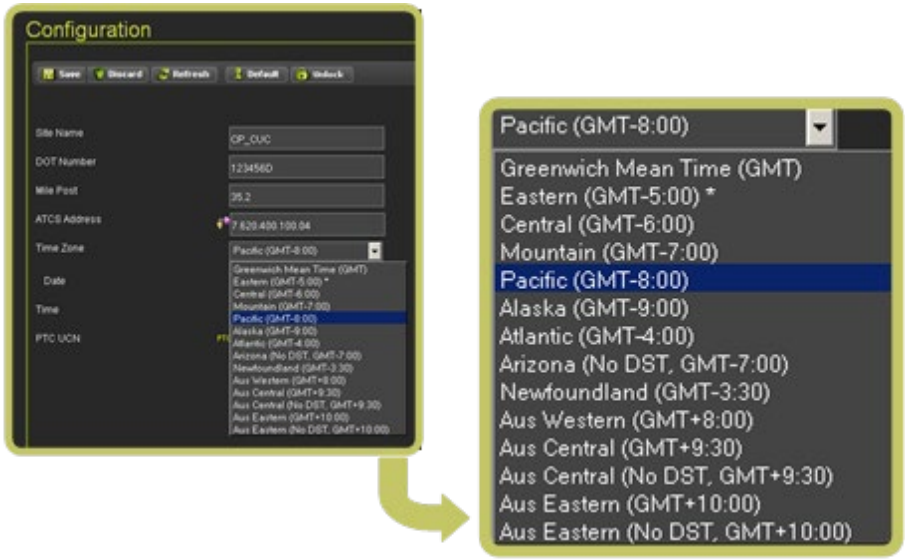


Figure 4-4 Setting the Time Zone

- **Setting the Date**

To set the Date, click on the calendar icon on the right of the Date box. Highlight the current date and click on it with the mouse.

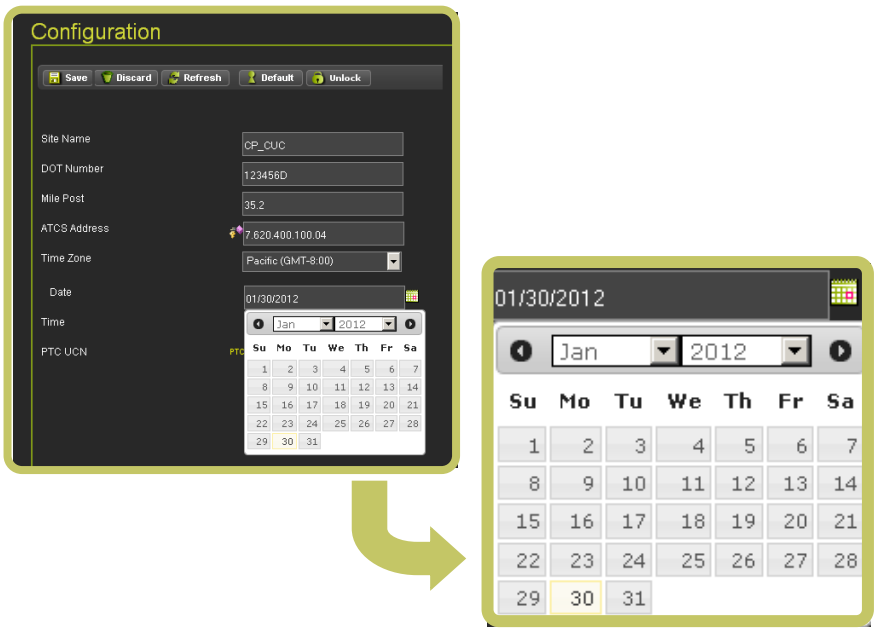


Figure 4-5 Setting the Date

- **Setting the Time**

To set the time click on the Hours drop menu and highlight the current hour, click on the Minutes drop menu and select the current minute, and select the Seconds drop menu and select the current second. Click on the "Save" button to accept changes or the "Discard" button to delete any changes.

Figure 4-6 Setting the Time

4.1.2.2 PTC

The PTC sub-menu enables the configuration of some of the PTC parameters. The PTC screen has five tabs that select additional menus. Figure 4-7 shows the menu tab selections available.

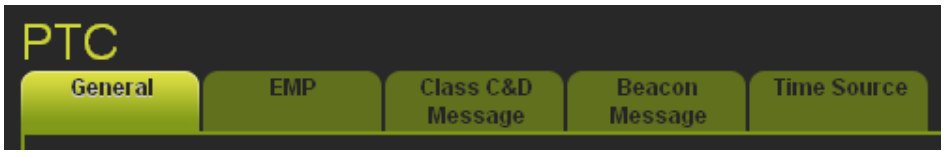


Figure 4-7 PTC Menu Tabs

- **PTC - General**

The PTC - General menu is shown in Figure 4-8 below. Some parameters may have a key lock or a PTC designator. These parameters affect applicable UCN (Unique Check Number) and CRC (Cyclic Redundancy Code). Changing these parameters will place the system in the safe mode and render the console in an unconfigured state. The proper UCN or CRC number will be required and entered into the console to restore normal operation.

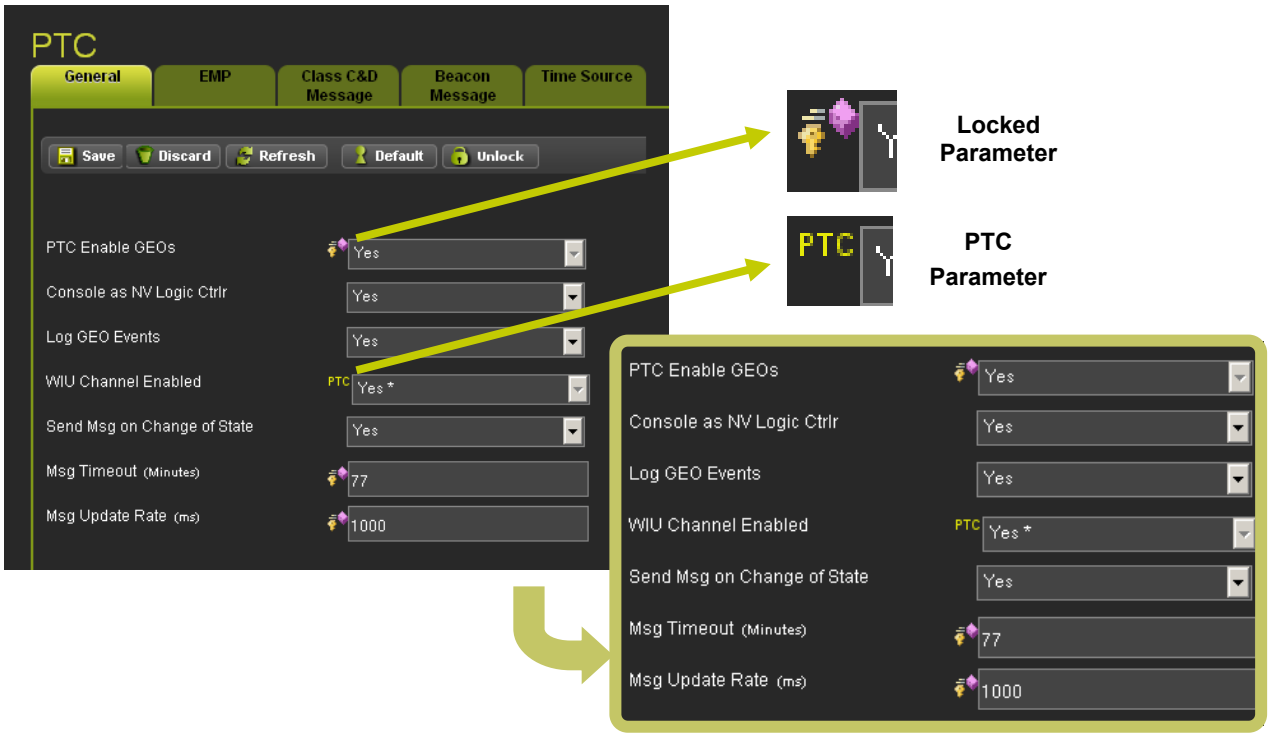


Figure 4-8 PTC - General Configuration

- **PTC - EMP**

The PTC - EMP menu is shown in Figure 4-9 below. Refer to AAR specification AAR_S-9202 for proper values in setting up the PTC-EMP.

Figure 4-9 PTC - EMP Configuration

- **PTC - Class C&D Message**

Figure 4-10 displays the PTC Class C&D Message configuration options. Refer to AAR specifications AAR_S-9280 (Class C) and AAR_S-9356 (Class D) when setting up PTC - Class C&D messaging.

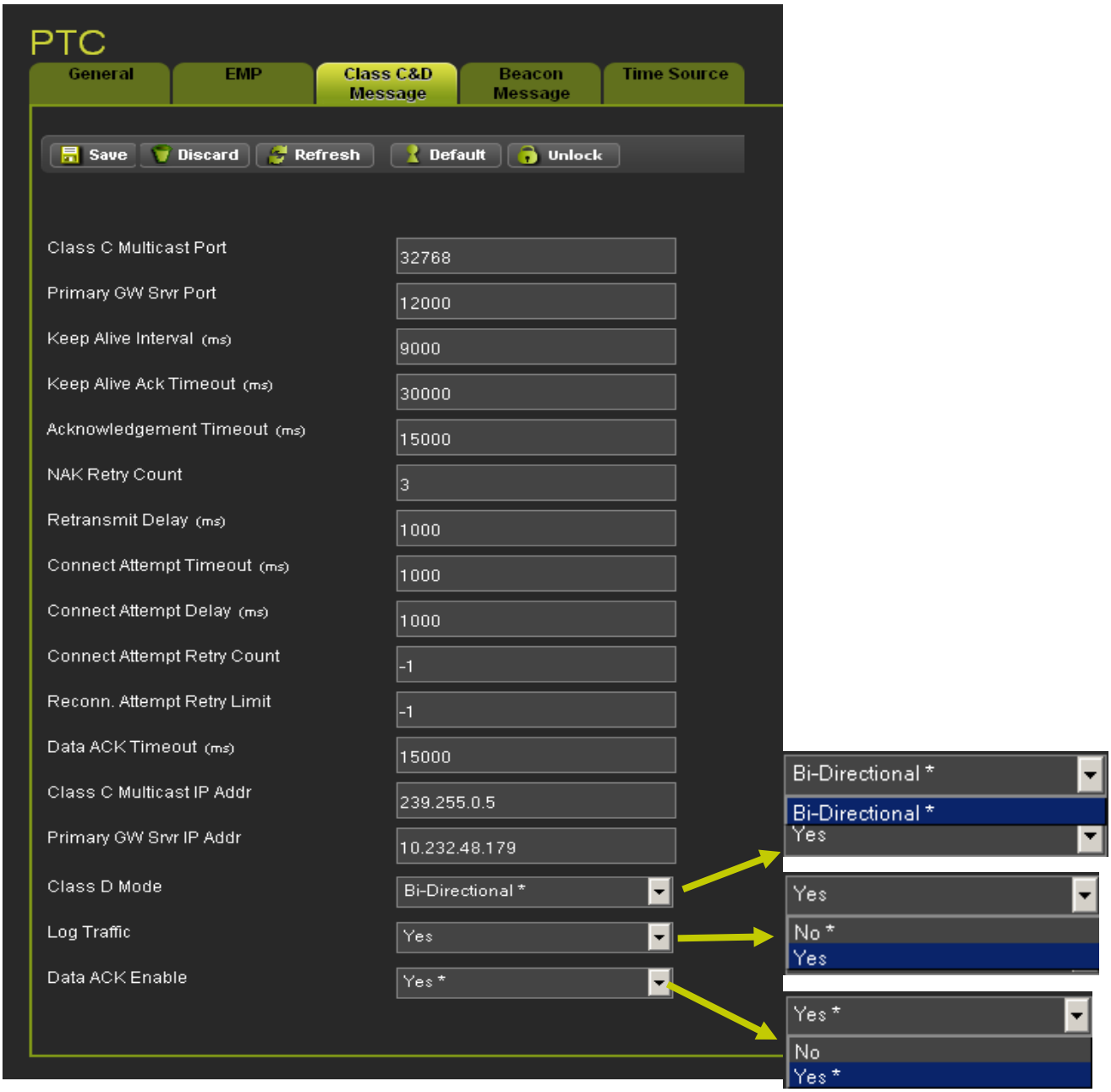


Figure 4-10 PTC - Class C&D Message Configuration

- **PTC - Beacon Message**

The PTC Beacon Message configuration with the Beacon Continuous option is shown in Figure 4-11 below.

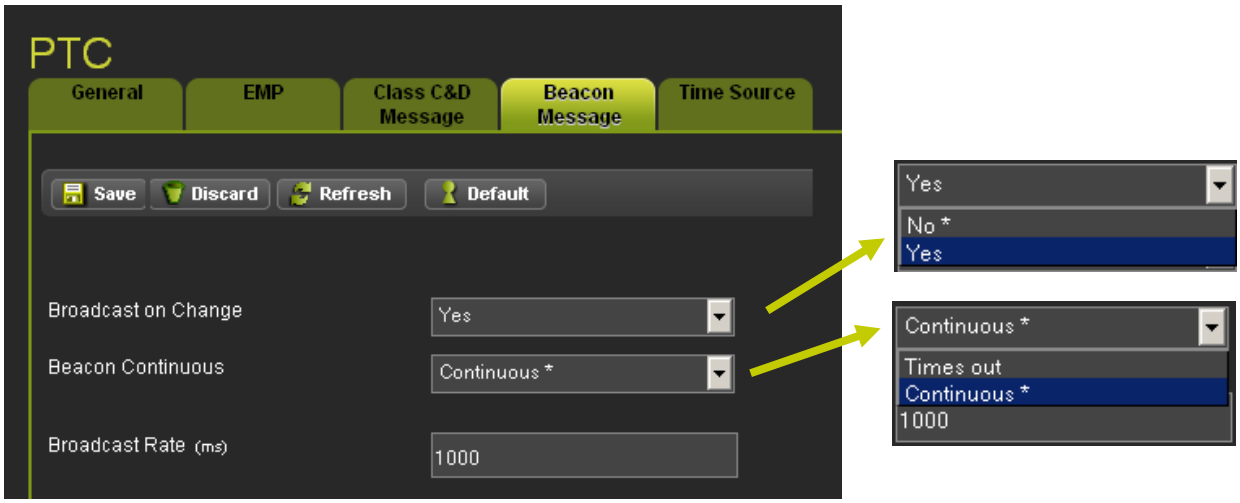


Figure 4-11 PTC - Beacon Message Configuration - Beacon Continuous

The PTC Beacon Message configuration with the Beacon Times Out option is shown in Figure 4-12 below.

Figure 4-12 PTC - Beacon Message Configuration - Beacon Times Out

- **PTC - Time Source Configuration**

Figure 4-13 displays the PTC Time Source configuration options.

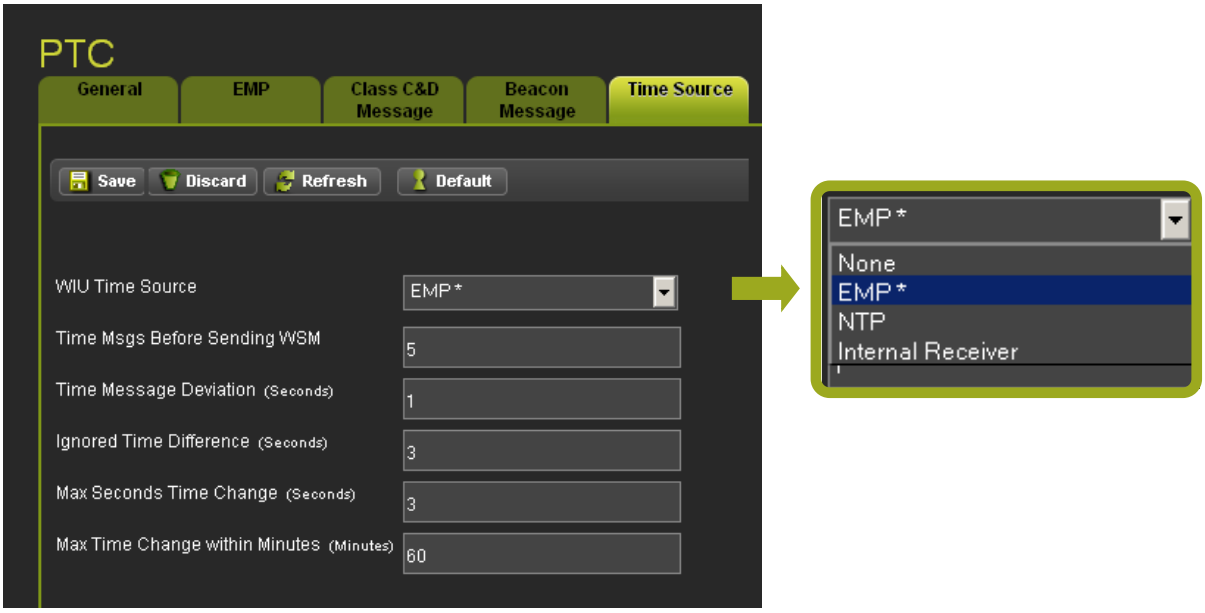


Figure 4-13 PTC - Time Source Configuration

4.1.2.3 Console Configuration

The Console Configuration menu has three sub-menus for Serial Ports, Ethernet Ports, and Security as shown in Figure 4-14.

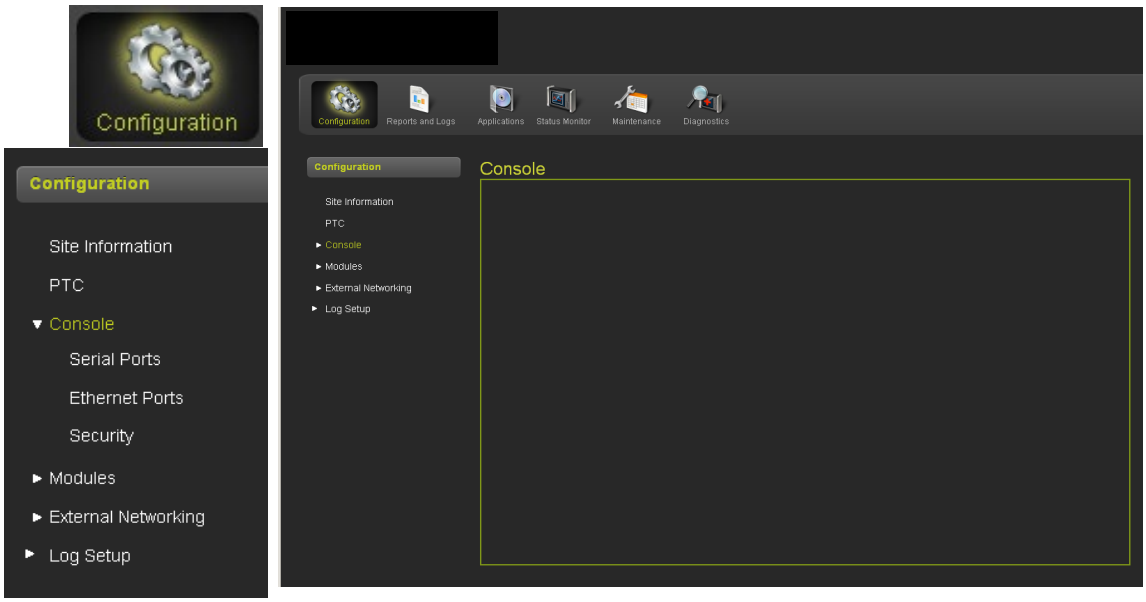


Figure 4-14 Console Configuration Menu

- **Console Configuration - Serial Ports**

Figure 4-15 displays the serial port configuration screen. The screen has four tabs for the Laptop port and the three serial ports.

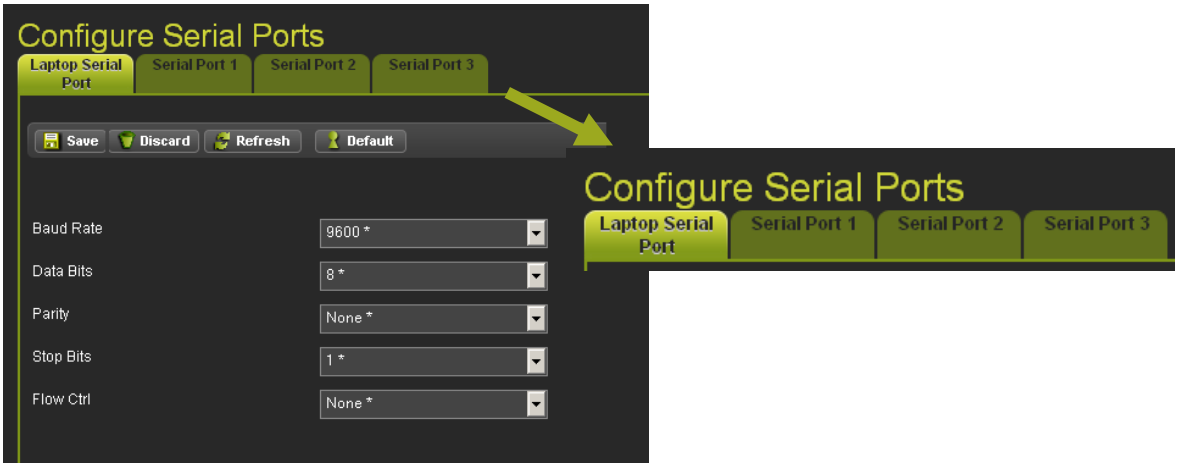


Figure 4-15 Configuration Serial Ports

Figure 4-16 displays the Laptop Configuration option windows for each parameter.

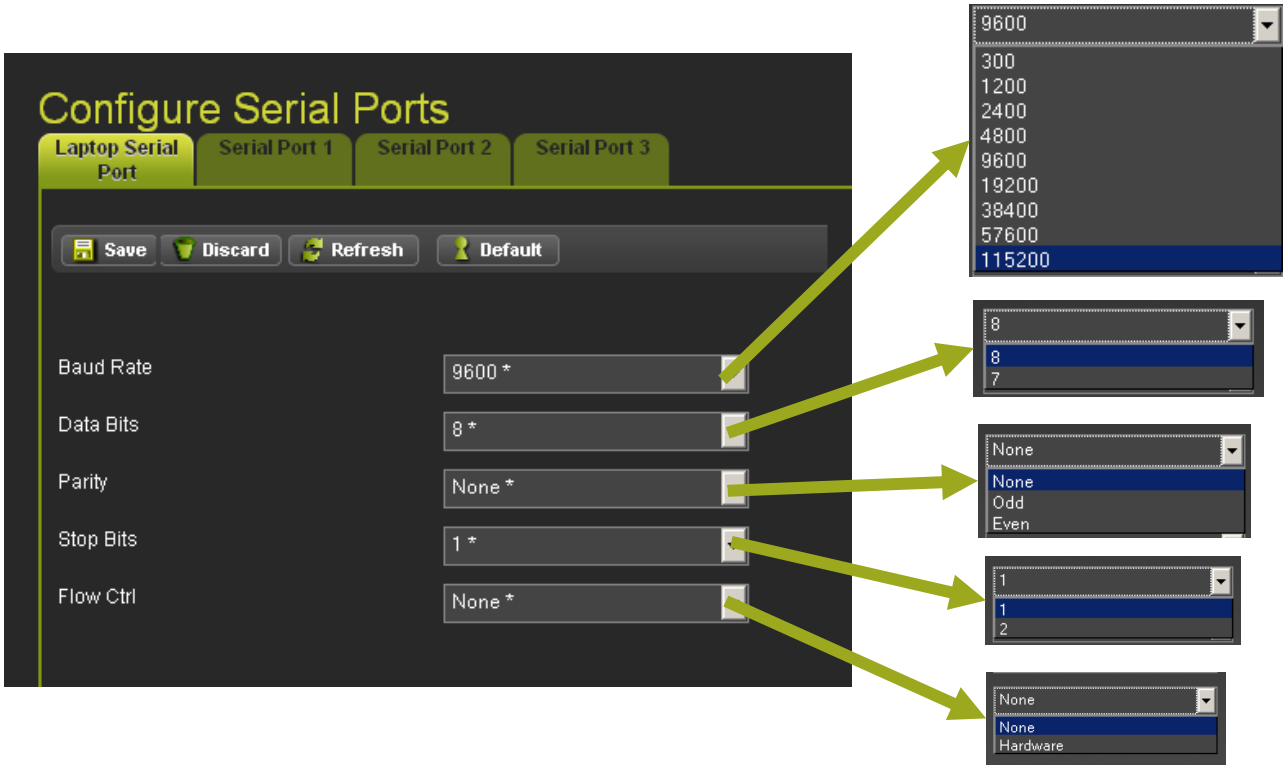


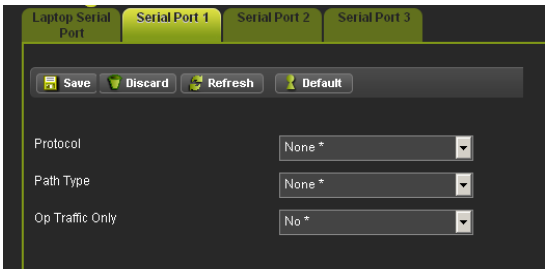
Figure 4-16 Laptop Serial Port Configuration Options

Figure 4-17 shows the configurable parameters for Serial Ports 1-3.

Figure 4-17 Serial Ports 1-3 Options

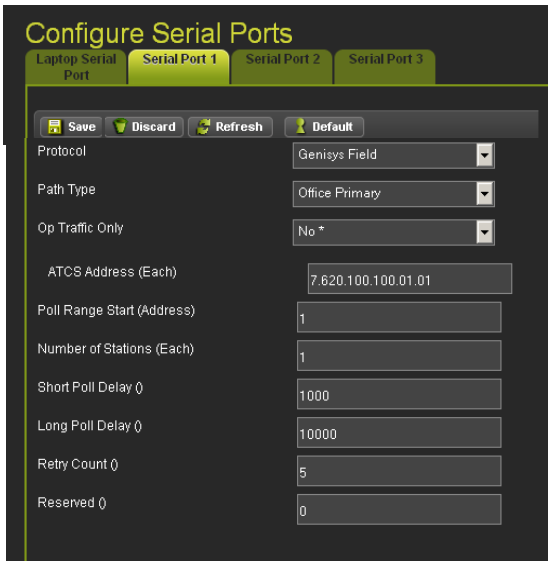
- **Serial Ports One through Three Protocol and Path Configuration**

There are 15 Protocol options available for serial ports 1 through 3. In addition there are six Path Types choices while configuring the port. The following figures display the various parameters for each Protocol and Path combination.



Protocol: None
(No additional parameters appear)

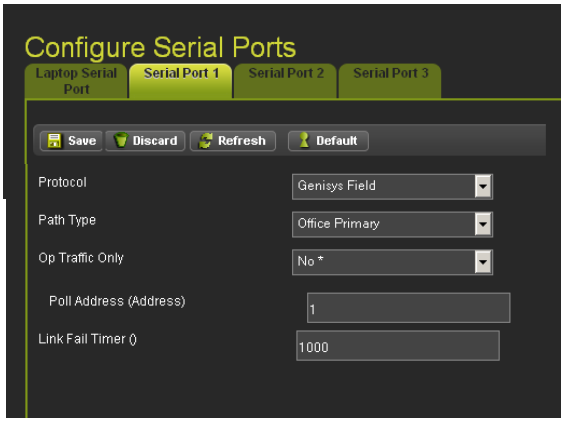
Protocol: GENATCS Office



Protocol: GENATCS Field

Protocol: Genisys Office

Figure 4-18 Serial Port Protocol Configurations

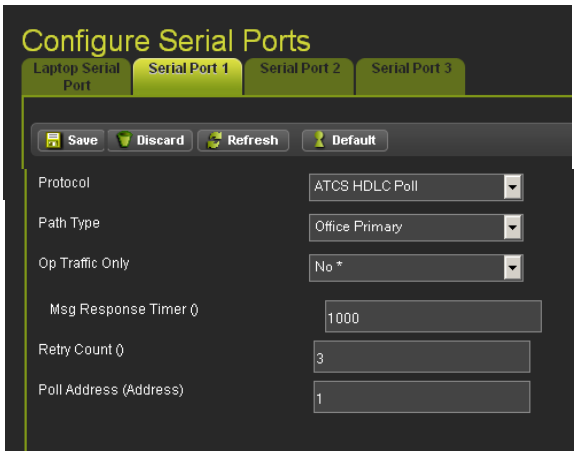


Protocol: Genisys Field

Protocol: Genisys GEO
(No additional parameters appear)

Protocol: ATCS HDLC ADM

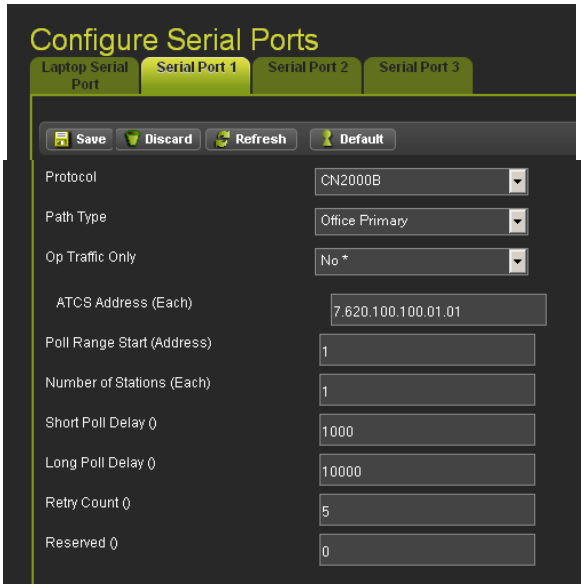
Protocol: ATCS HDLC UI



Protocol: ATCS HDLC Poll

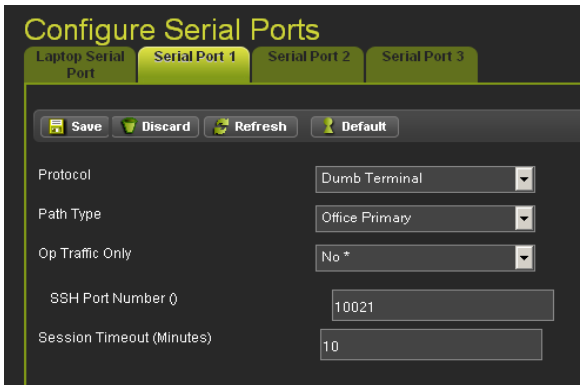
Protocol: CN2000A

Figure 4-19 Serial Port Protocol Configurations (Continued)

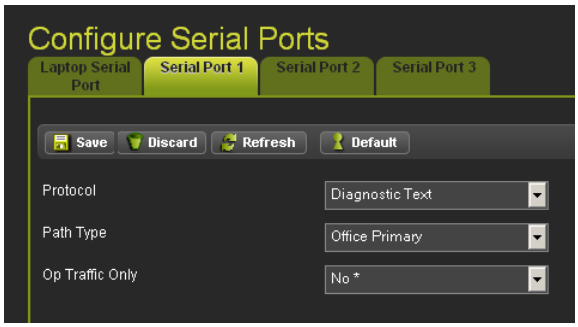


Protocol: CN2000B

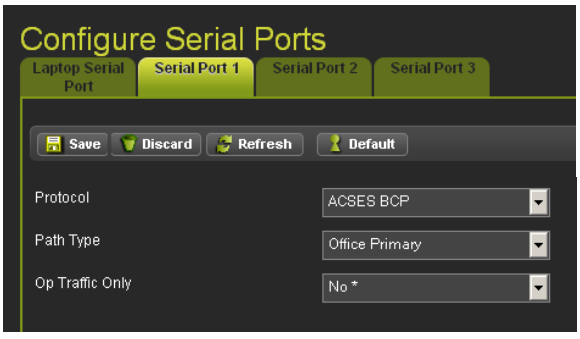
Protocol: BCM Diag
(No additional parameters appear)



Protocol: Dumb Terminal



Protocol: Diagnostic Text
(No additional parameters appear)



Protocol: ACSES BCP
(No additional parameters appear)

Figure 4-20 Serial Port Protocol Configurations (Concluded)

- **Console Configuration - Ethernet Ports**

Figure 4-21 displays the Ethernet Port configuration screen. Five tabs select the sub-menus. LTOP is the Laptop port located on the iVIU Console front panel. ETH1 through ETH3 are located on the bottom of the console. The DNS tab is used to set the DNS server IP Addresses.

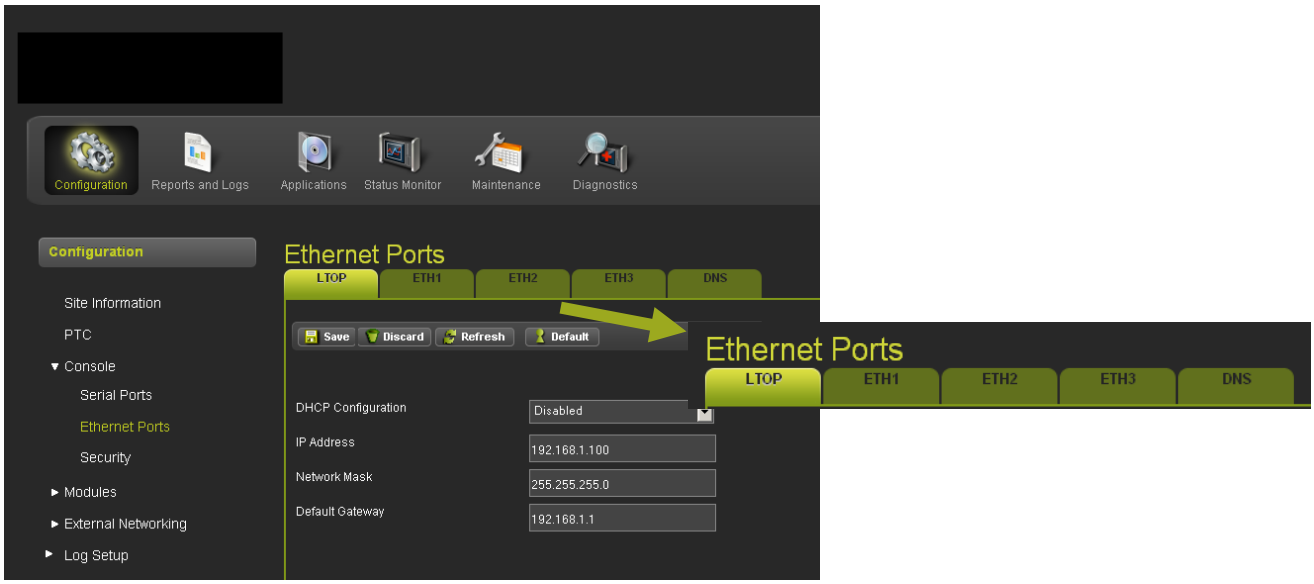


Figure 4-21 Console Configuration - Ethernet Ports

- **LTOP (Laptop) Port Configuration**

The LTOP (Laptop) configuration includes DHCP options (Disabled, Client, and Server) and IP Address, Network Mask, and Default Gateway settings as shown in Figure 4-22.

Figure 4-22 Ethernet Port Configuration - LTOP (Laptop)

- **ETH1, ETH2, ETH3 Port Configuration**

The ETH1 through ETH3 Ethernet ports have the same configuration options which includes DHCP options (Client, and Disabled), Protocol, IP Address, Network Mask, Default Gateway, Path Type, and Op Traffic Only settings as shown in Figure 4-23.

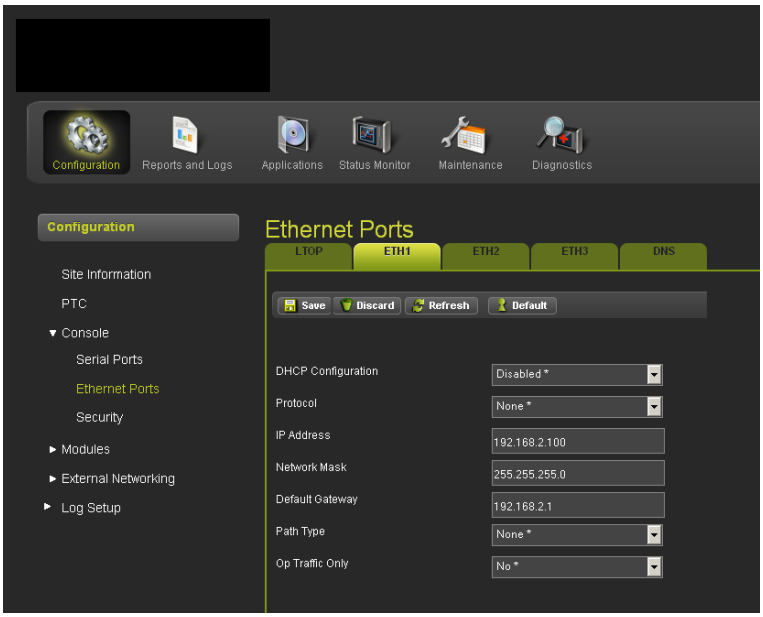


Figure 4-23 Ethernet Port Configuration - ETH1 through ETH3

- **DNS Server Configuration**

Three DNS Server IP Address configurations are accessed by clicking on the DNS tab as shown in Figure 4-24.

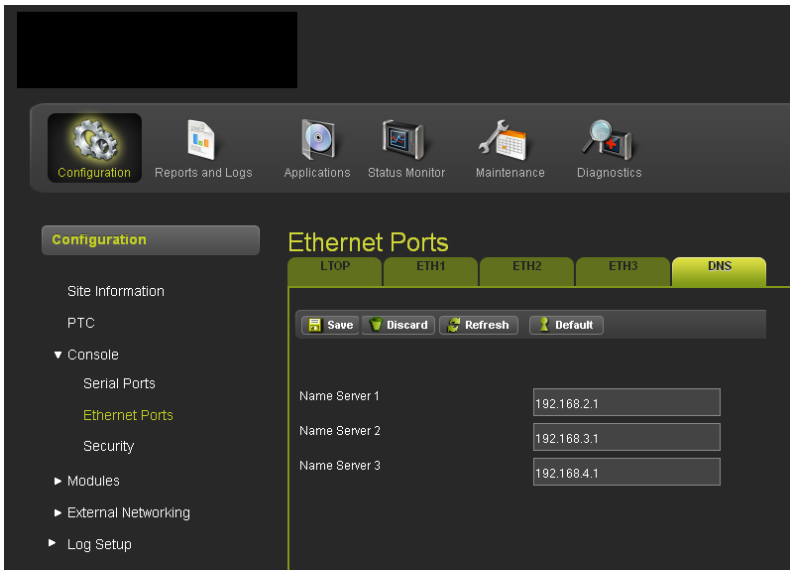


Figure 4-24 Ethernet Port Configuration – DNS

- **Console Configuration - Security**

The Security sub-menu enables configuration of passwords WebUI and LocalUI. A session inactivity timer can be set to close the session if left unattended. Display hibernation time and Keypad/Display password completes the list of parameters.

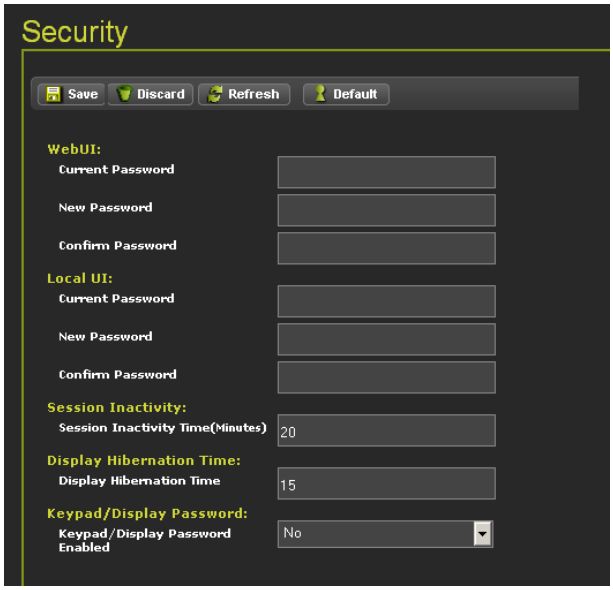


Figure 4-25 Console Configuration - Security

4.1.2.4 Modules

The Modules Menu has three sub-menus Cartridge Selection and Connections as shown in Figure 4-26.

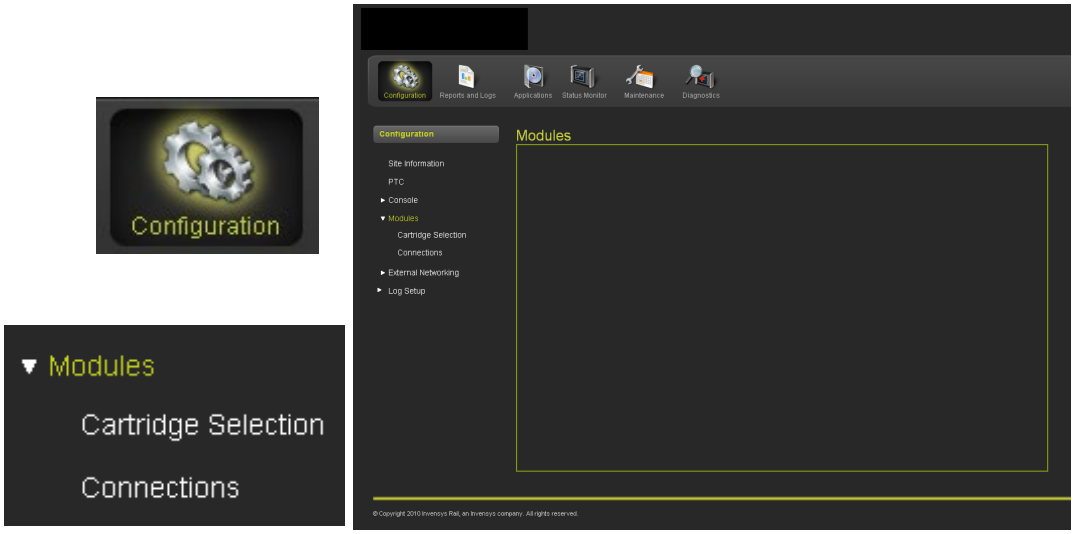


Figure 4-26 Modules Configuration

- **Modules - Cartridge Selection**

The Cartridge Selection screen displays cartridges that have been installed and their respective slot numbers. An ADD NEW CARTRIDGE interactive text is available for the user to add additional cartridges to the configuration.

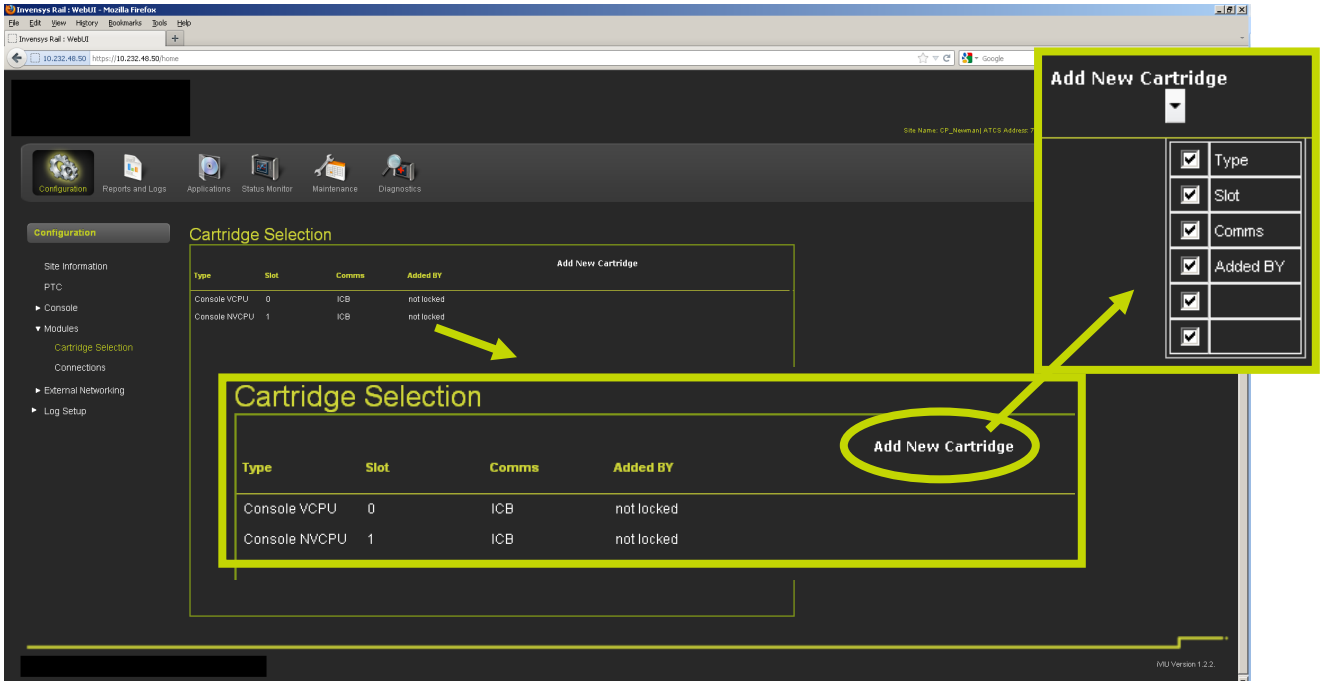


Figure 4-27 Module Configuration - Cartridge Selection

- **Modules - Cartridge Selection - Add A Cartridge**

The Cartridge Selection function is currently not available. Contact Siemens Mobility, Inc. Customer Service for information on future releases.

Click on the Add New Cartridge interactive text to bring up a new cartridge selection screen. The selections include the Slot Number (2 through 31), the Cartridge type (VIO, NVIO, CTRK, or XCON), and the type of Communications the cartridge will use (ICB or Network) as shown below.

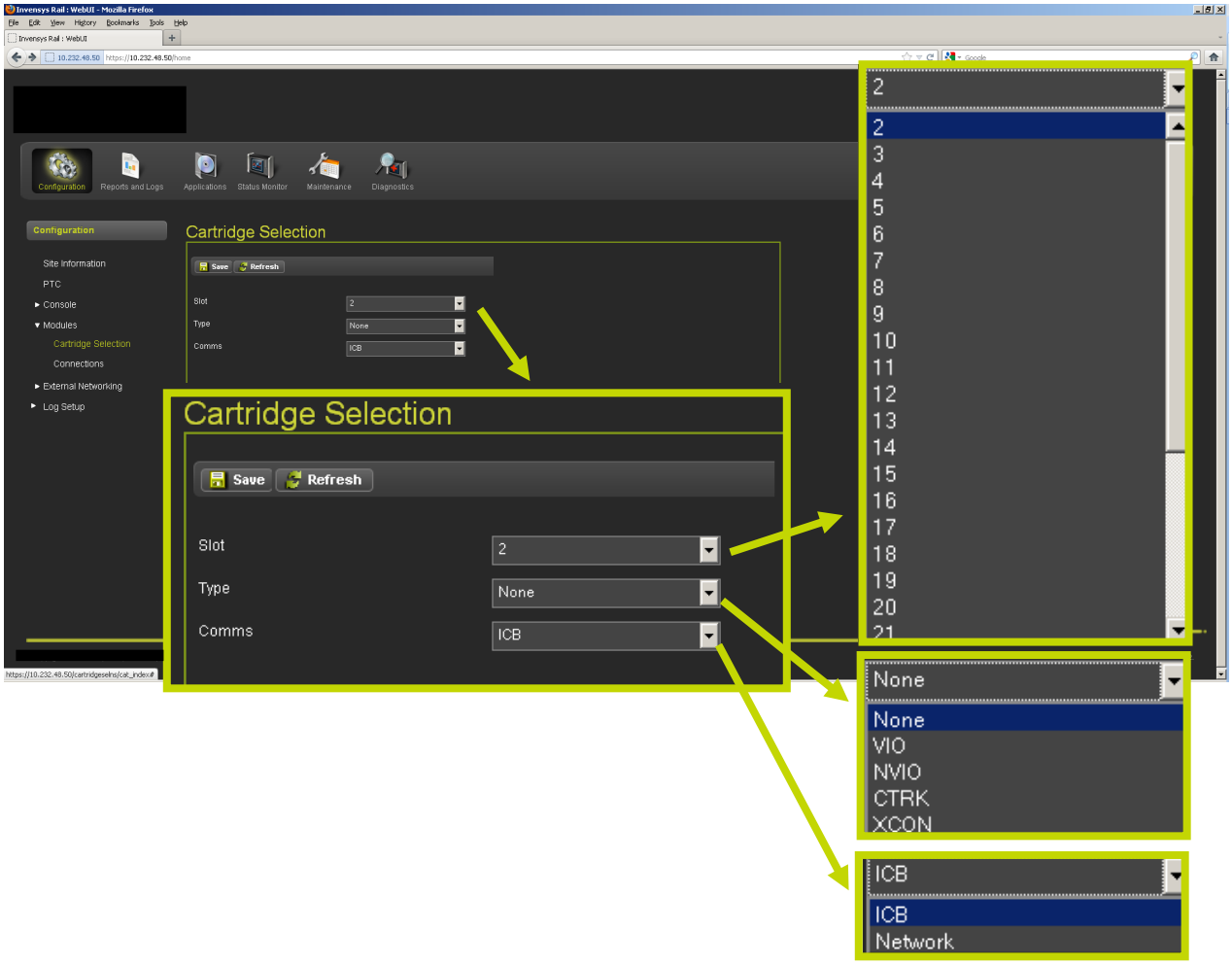


Figure 4-28 Cartridge Selection - Add a Cartridge

- **Modules - Connections**

The Connections screen displays the installed modules. To install a new module click on the desired module slot in the MODULES column. A parameters screen will appear listing the required parameters for the module to be installed. It will be necessary to have the proper UCN number available to complete the installation. Drop-down menus are used on the module Type and Connection Type. The figure below shows the drop-down menu choices.

When an iVIU PTC GEO site has been selected, the OCE will automatically create connections for each GEO expected in the installation.

NOTE

NOTE

The user must enter the UCN for the GEO that is to be PTC enabled A UCN for each GEO connection is required. If this is not entered correctly, the iVIU will not be able to PTC Enable that GEO.

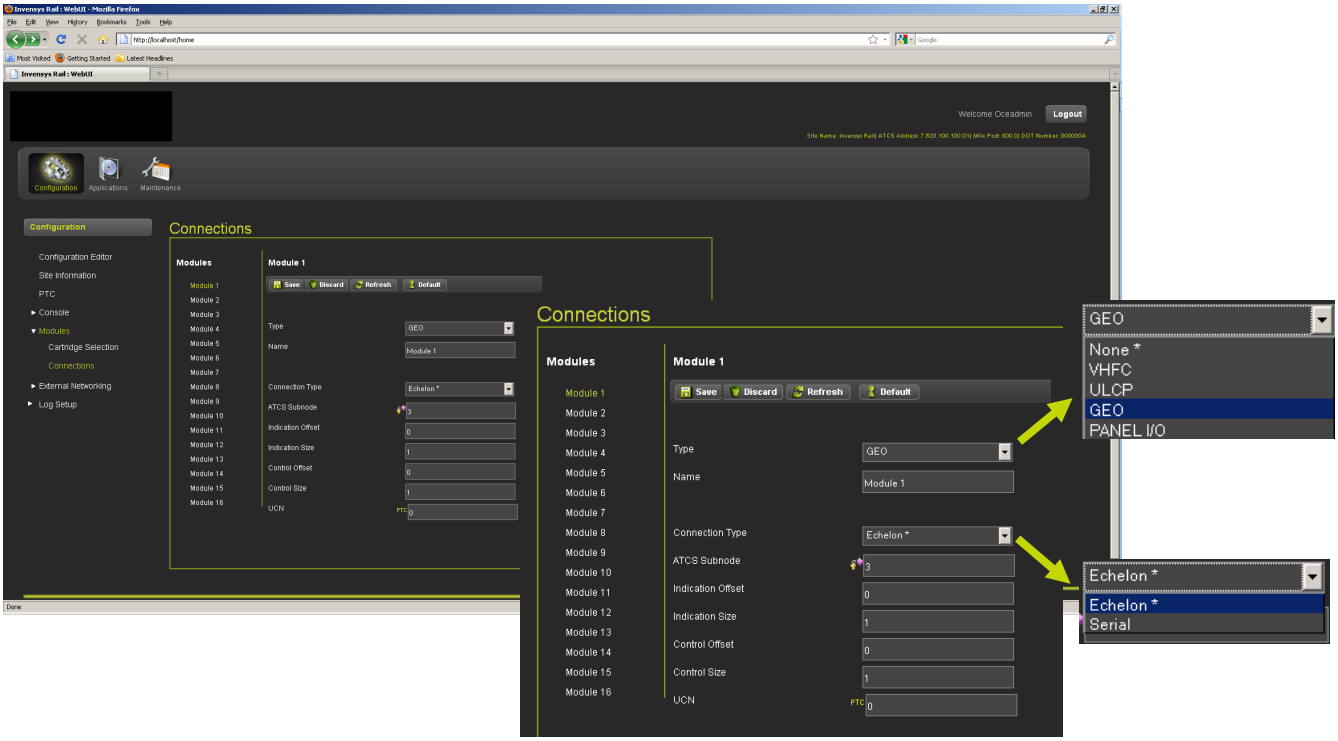


Figure 4-29 Modules - Connections

4.1.2.5 External Networking

To configure the various external networks click on the External Networking interactive text. Four sub-menus will enable configuration of the CAD, WAMS, WNC, Echelon® networks, and SNMP.

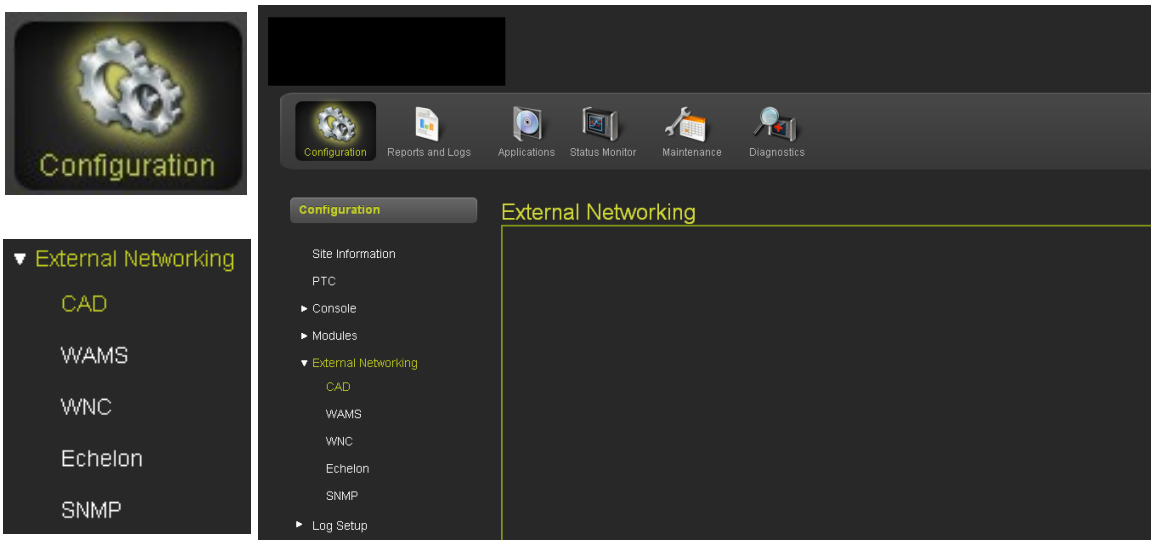


Figure 4-30 External Networks Sub-Menus

- **CAD (Computer Aided Dispatch)**

The CAD sub-menu contains parameters for the CAD Address, Indication Refresh Period, and Indication Hold Off as shown in Figure 4-31.

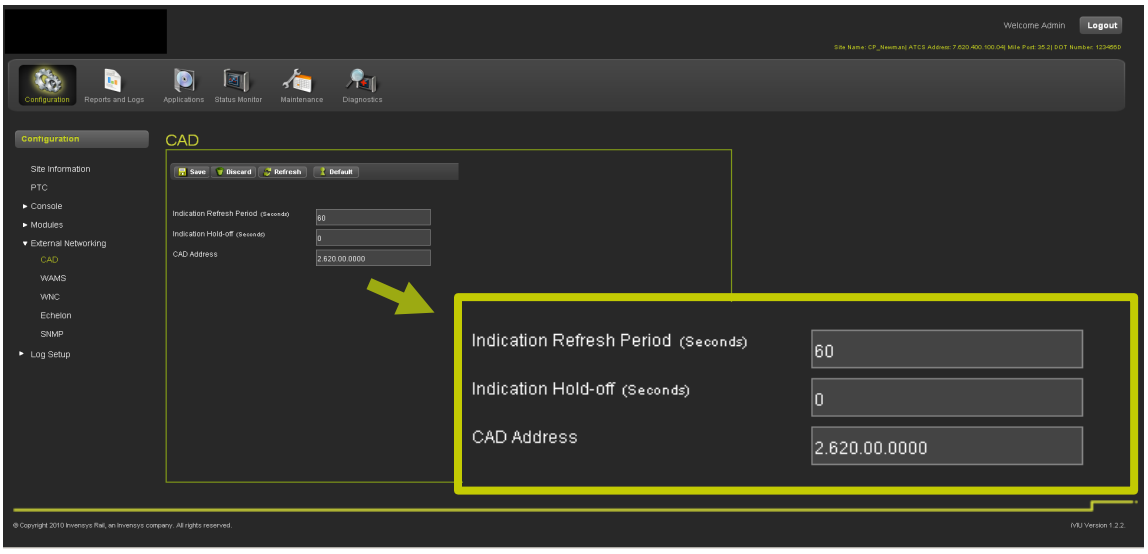


Figure 4-31 CAD Configuration Parameters

- **WAMS (Wayside Alarm Management System)**

The WAMS sub-menu has three parameters, WAMS enable/disable, WAMS Address, and WAMS Alarm Retry Time.

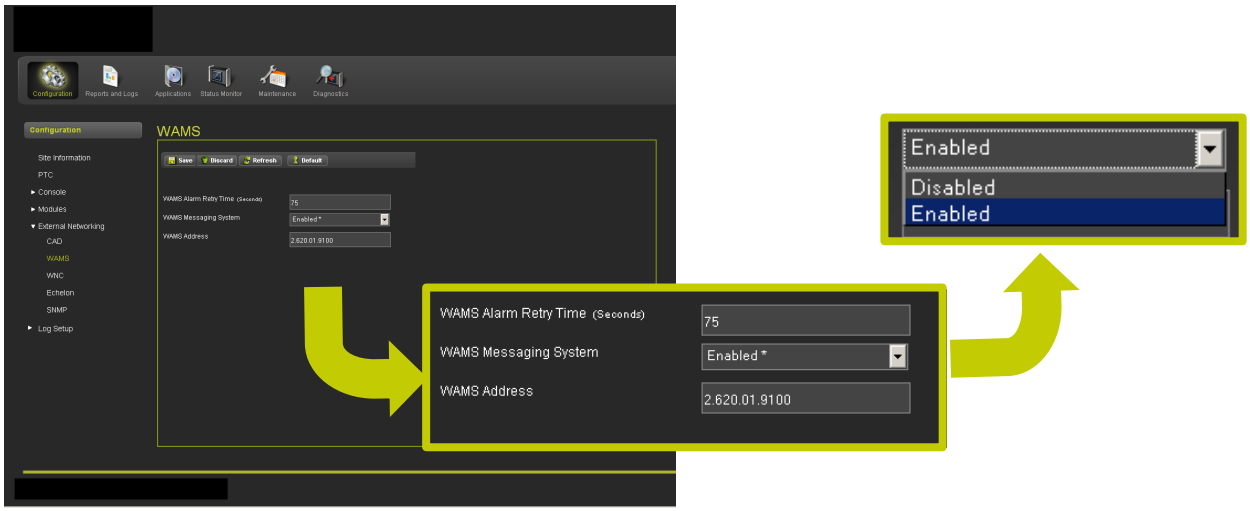


Figure 4-32 WAMS Configuration Parameters

- **WNC**

The WNC Menu consists of a single parameter for the WNC Installation Address.

Figure 4-33 WNC Configuration

- **Echelon® Network**

The Echelon® menu is a single parameter for entry of the Gateway Node number.

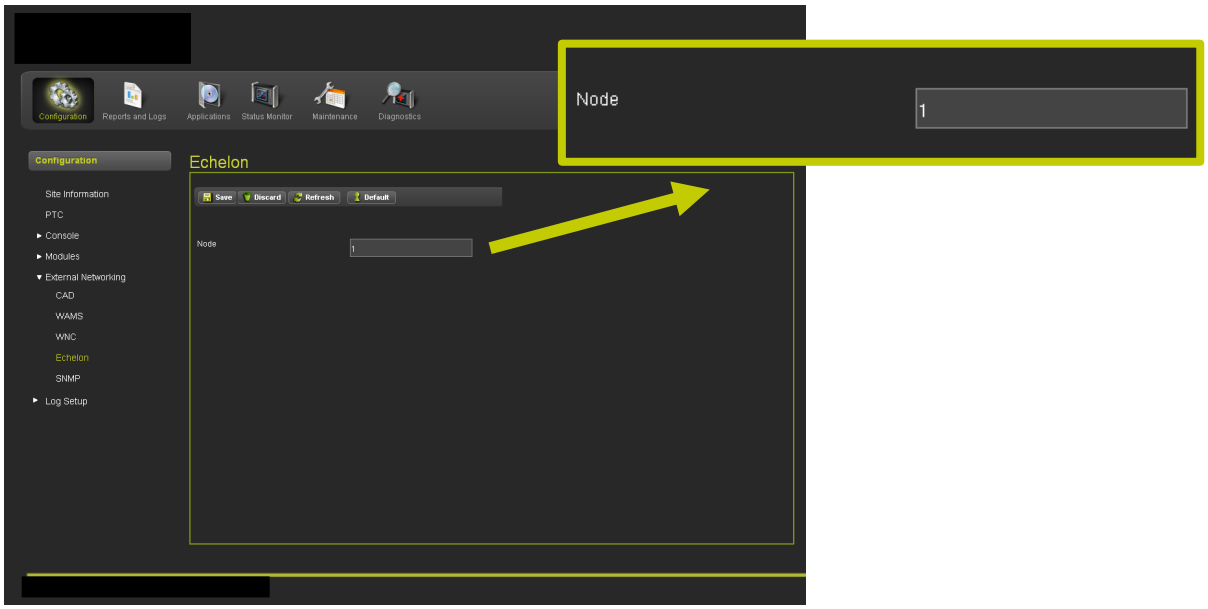


Figure 4-34 Echelon® Node Configuration

- **SNMP**

Enter each Destination IP and Port for up to four destinations [1]. Verify the information and click on the SAVE button [2a] to save any changes or click on the DISCARD button [2b] to remove any changes. The REFRESH button [3] refreshes the screen and the DEFAULT button [4] changes all entries to the original factory default values.

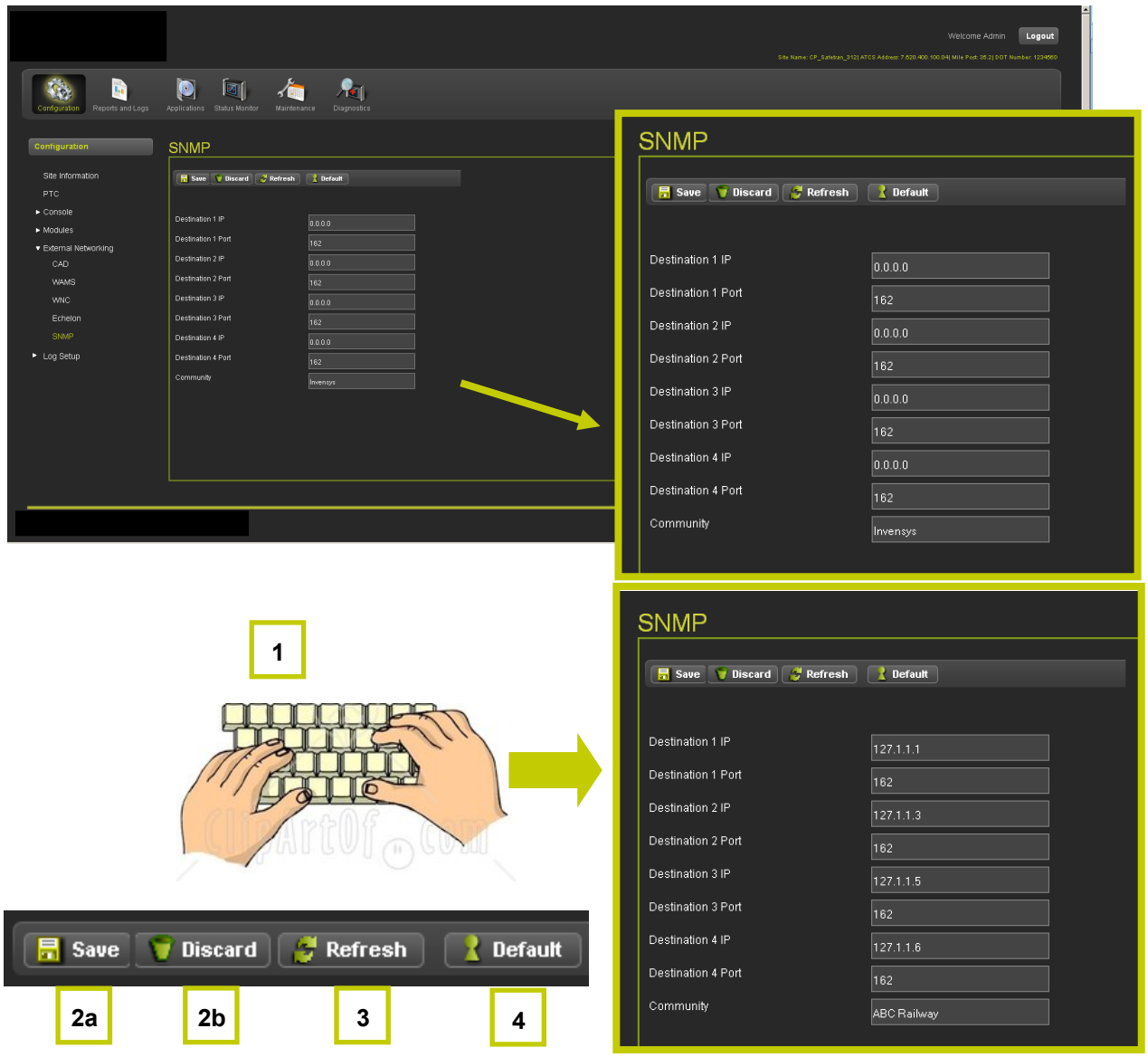


Figure 4-35 SNMP Setup

- **SNMP Traps**

SNMP messages sent from the iVIU Console are received in the Back Office. The CDL program defines which alarms are sent.

Table 4-1 SNMP Information

SNMP OID	VALUE	DESCRIPTION
deviceType.0	iVIU	Defines the type of equipment that sent the SNMP trap. For the iVIU Console, this field will always contain “iVIU”
dateTime.0	03-May-2012 18:56:13	Date and Time the system created the alert
siteName.0	CP_Safetran_312	This field contains the Site Name, as set in the iVIU Console configuration settings.
milePost.0	35.2	This field contains the Milepost Number, as set in the iVIU Console configuration settings
spareText2.0		Not used. Reserved for future use.
spareText1.0	2950240fd20218	Not used. Reserved for future use.
alarmPriority.0	4	The priority of the alarm as set by the iVIU’s CDL logic. This value is specific to each alert (see the manual for the specific CDL program).
alarmClearFlag.0	0	Indicates whether this is the alarm or the corresponding clear for the alarm.
alarmText.0	Alarm Enabled Message	The Alarm text as programmed into CDL logic. This value is specific to each alert (see the manual for the specific CDL program).
alarmID.0	2	The Alarm ID number as programmed in the CDL logic. This value is specific to each alert (see the manual for the specific CDL program).
trapNum.0	3	The Trap Number as programmed in the CDL logic. This value is specific to each alert (see the manual for the specific CDL program).
snmpTrapOID.0	1.3.6.1.4.1.3064.3.20.2.2	The ID of the trap in the unit’s MIB. This value is specific to each alert (see the manual for the specific CDL program).
sysUpTime.0	1days22h55m24.59s	System Up Time

4.1.2.6 Log Setup

The Log Setup Menu has three sub-menus for Consolidated Logging, Diagnostic Message Logging Options, and Log Verbosity.

Figure 4-36 Log Setup

- **Consolidated Logging**

Consolidated Logging enables logs to be consolidated to a single location. A log is still held locally however reports will be forwarded to a single location. The IP Address for the "collecting" location is entered into the text box. An address is setup for the Event Log and the Diagnostic Log as shown in Figure 4-37.

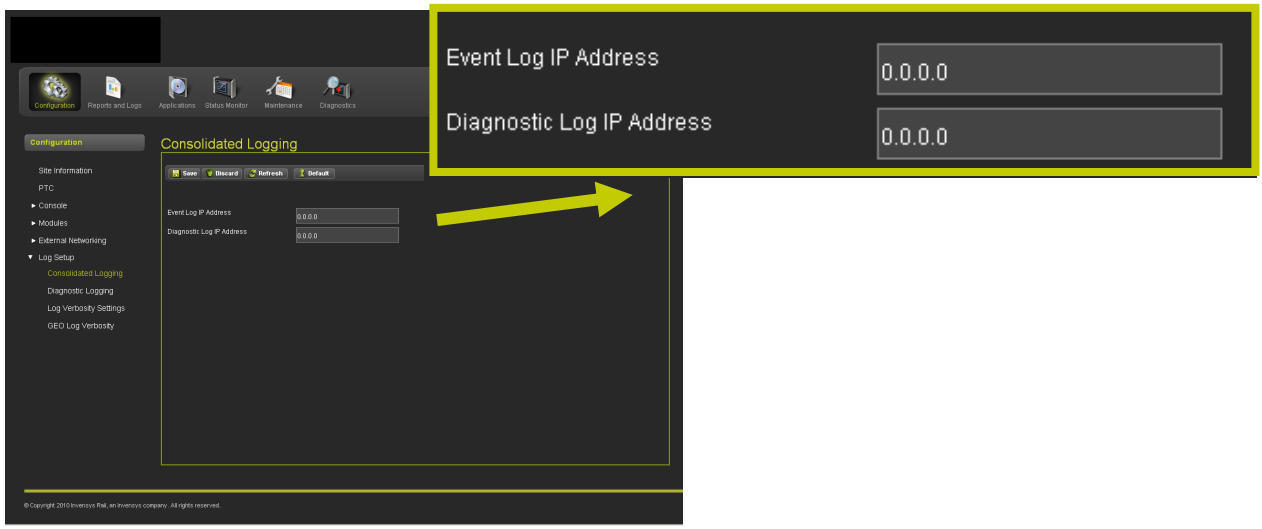


Figure 4-37 Consolidated Logs

- **Diagnostic Message Logging Options**

The Diagnostic Message Logging Options screen provides the User the ability to enable or disable thirteen options as shown in Figure 4-38. All options are disabled by default. Each option may be enabled or disabled as desired.

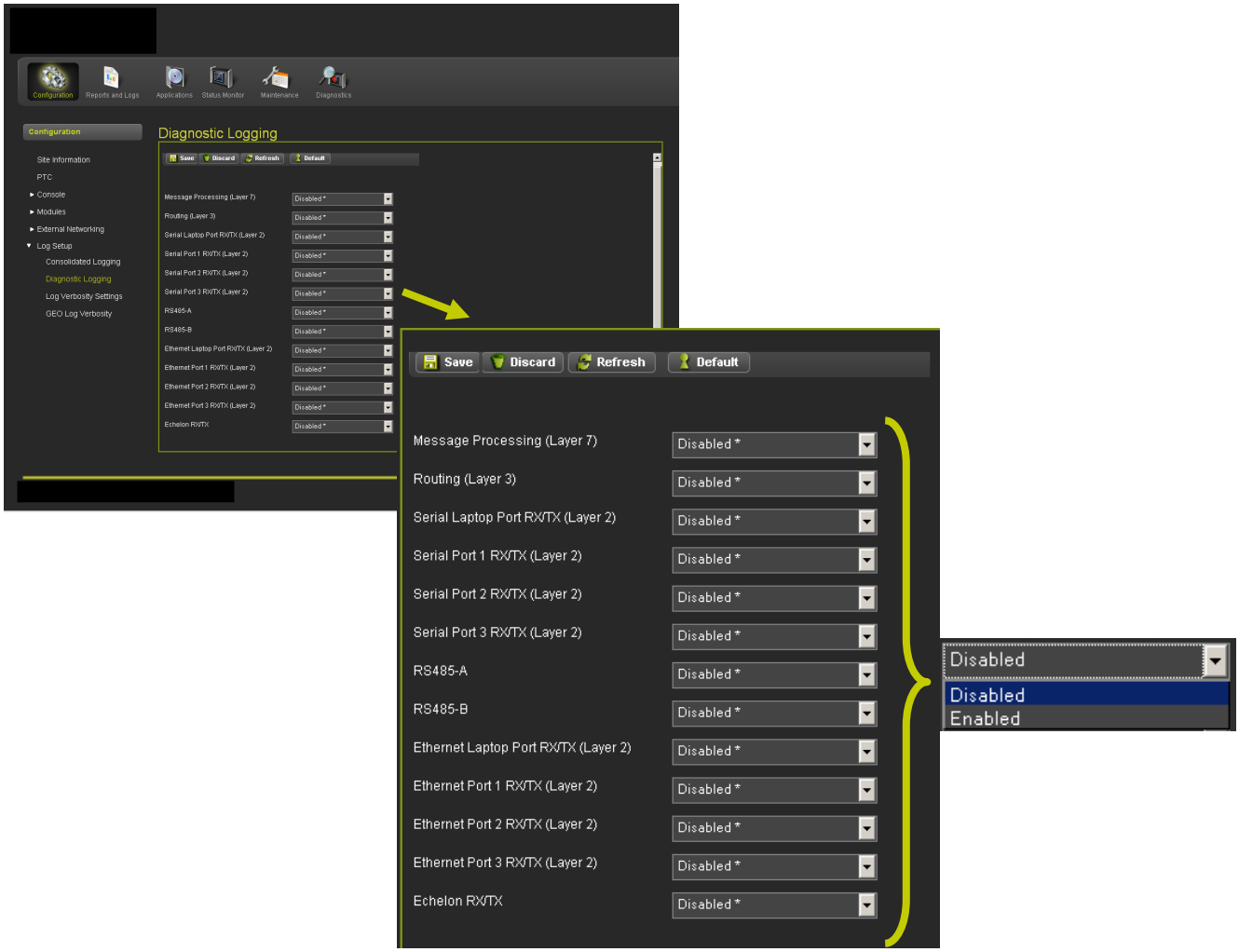


Figure 4-38 Diagnostic Message Logging Options

- **Log Verbosity Settings**

The Log Verbosity may be set to gather information at various levels. Default is Basic which gathers general information. The Error setting will log only error messages while the Warning setting gathers warnings. The Info setting collects the minimum amount of data. On the other hand, the Debug setting gathers all information for troubleshooting purposes. The Debug setting will

Figure 4-39 Log Verbosity Settings

- **GEO Log Verbosity**

The GEO Log Verbosity menu allows the user to set the verbosity level for each GEO slot. The opening screen has a drop-down menu listing the available GEO unit(s). Click on the GEO Address of the unit desired.

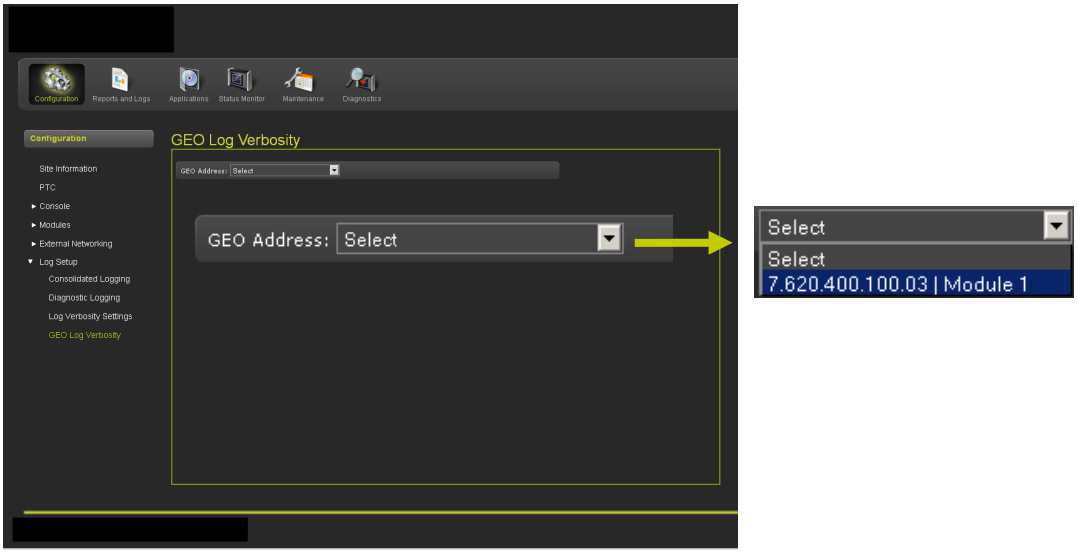


Figure 4-40 GEO Log Verbosity - GEO unit selection

- **GEO Log Verbosity - Slot Selection and GEO Log Verbosity/Level**

After selecting the desired GEO unit, a new screen will display the drop-down menus for Slot selection and GEO Log Verbosity/Level.

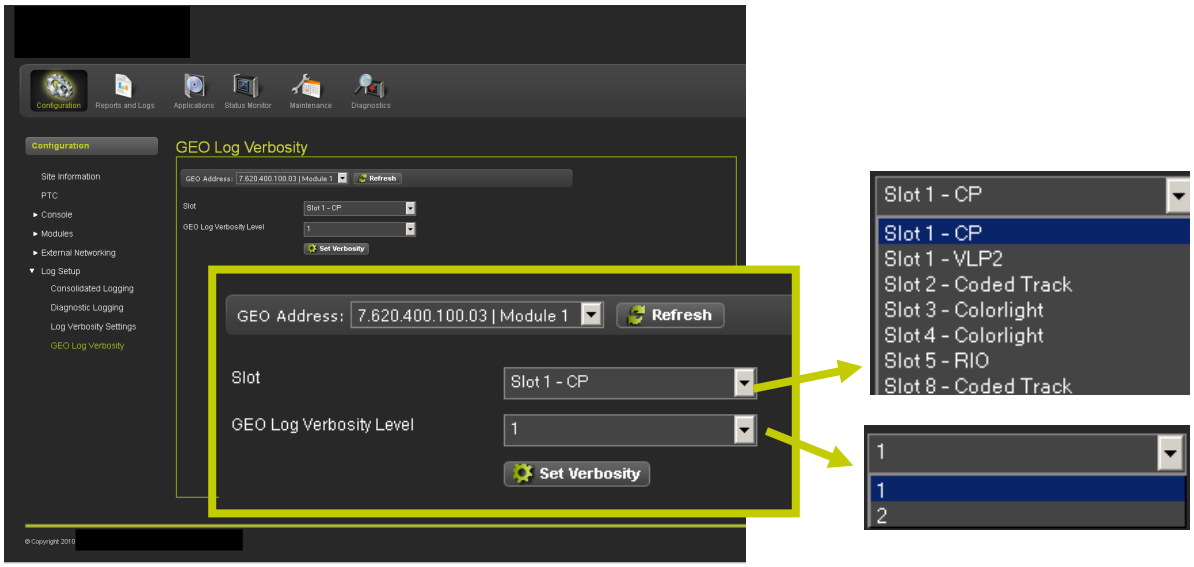


Figure 4-41 GEO Slot Selection and GEO Log Verbosity/Level

4.1.3 Report and Logs

The Reports and Logs menu has nine sub-menus, three reports and three logs as shown in Figure 4-42.

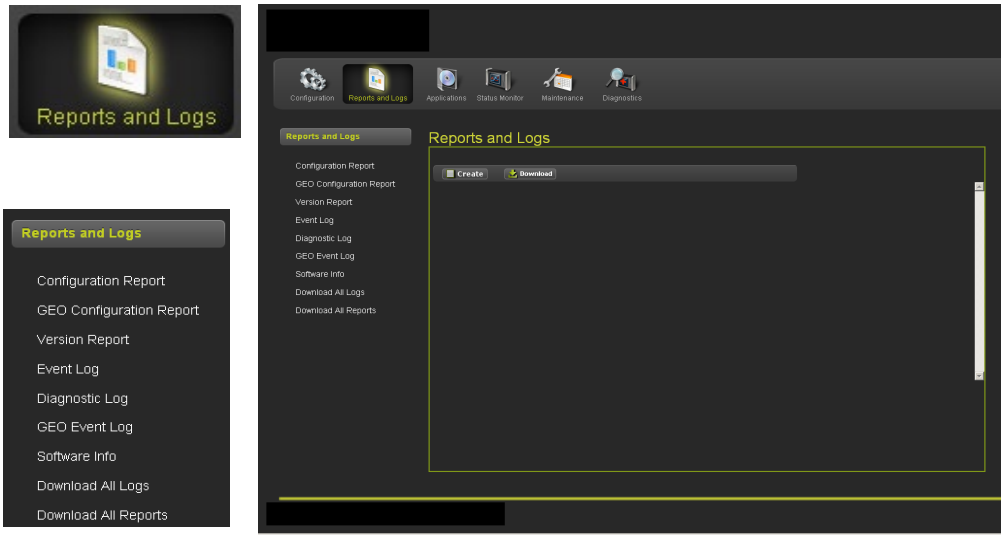


Figure 4-42 Reports and Logs Menus

4.1.3.1 Configuration Report

The configuration reports lists all of the parameter settings currently programmed into the system. Click on the "Create" button to generate the Configuration Report or click on "Download" to download the report to a computer.

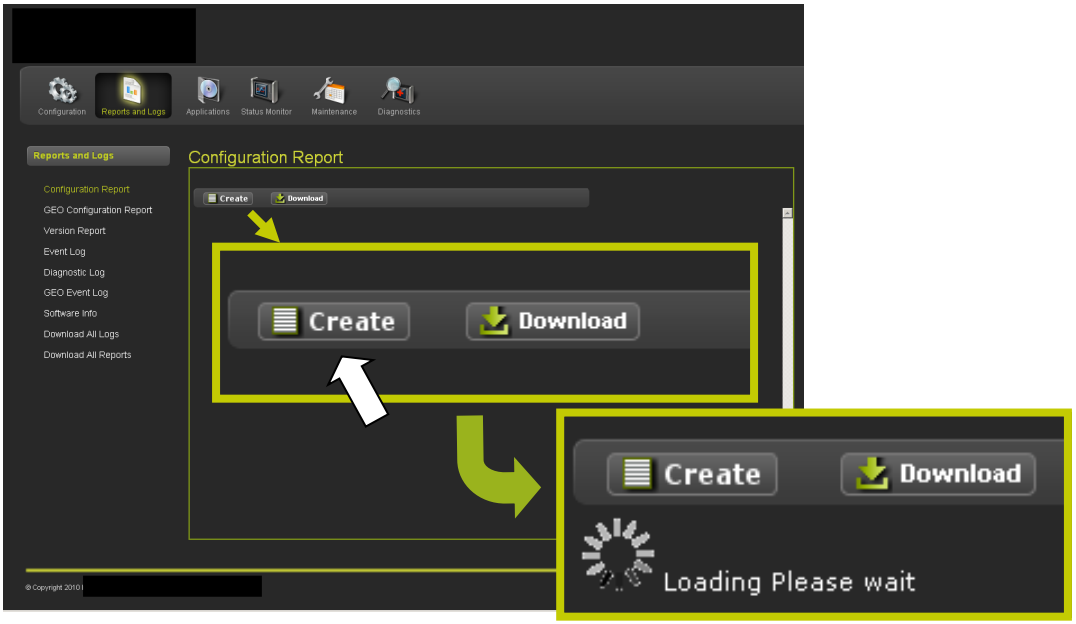
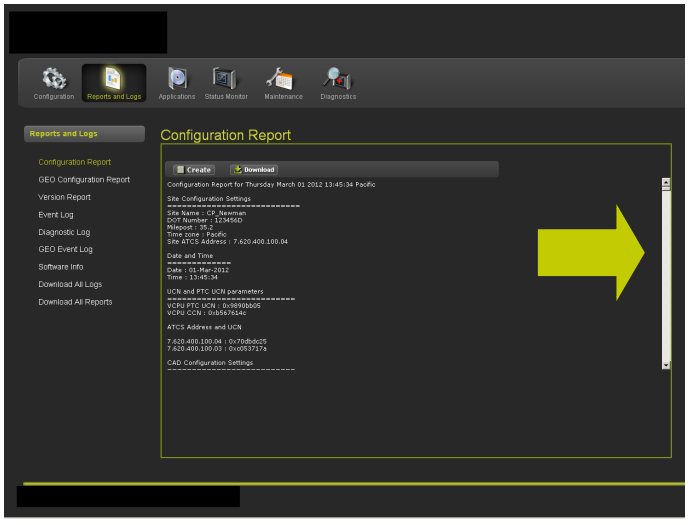


Figure 4-43 Create or Download Configuration Report

Figure 4-44 shows a completed creation of a Configuration Report.



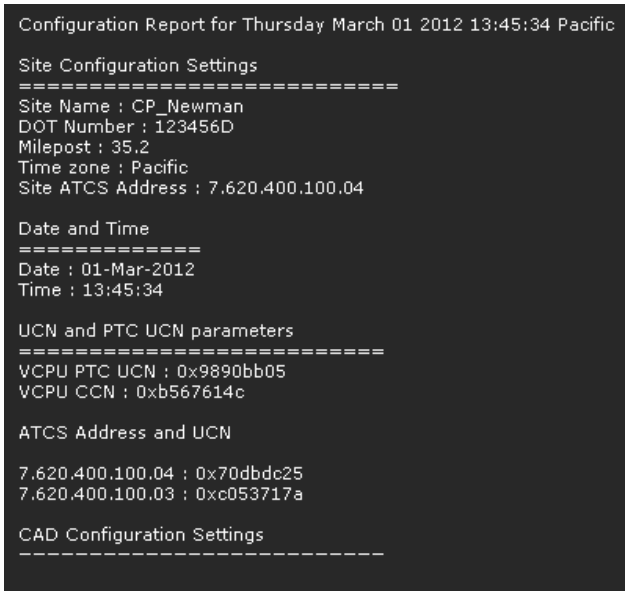


Figure 4-44 Configuration Report display

4.1.3.2 GEO Configuration Report

The GEO Configuration Report provides software and hardware information for the modules installed in the GEO unit. Figure 4-45 shows an example of the GEO Configuration Report.

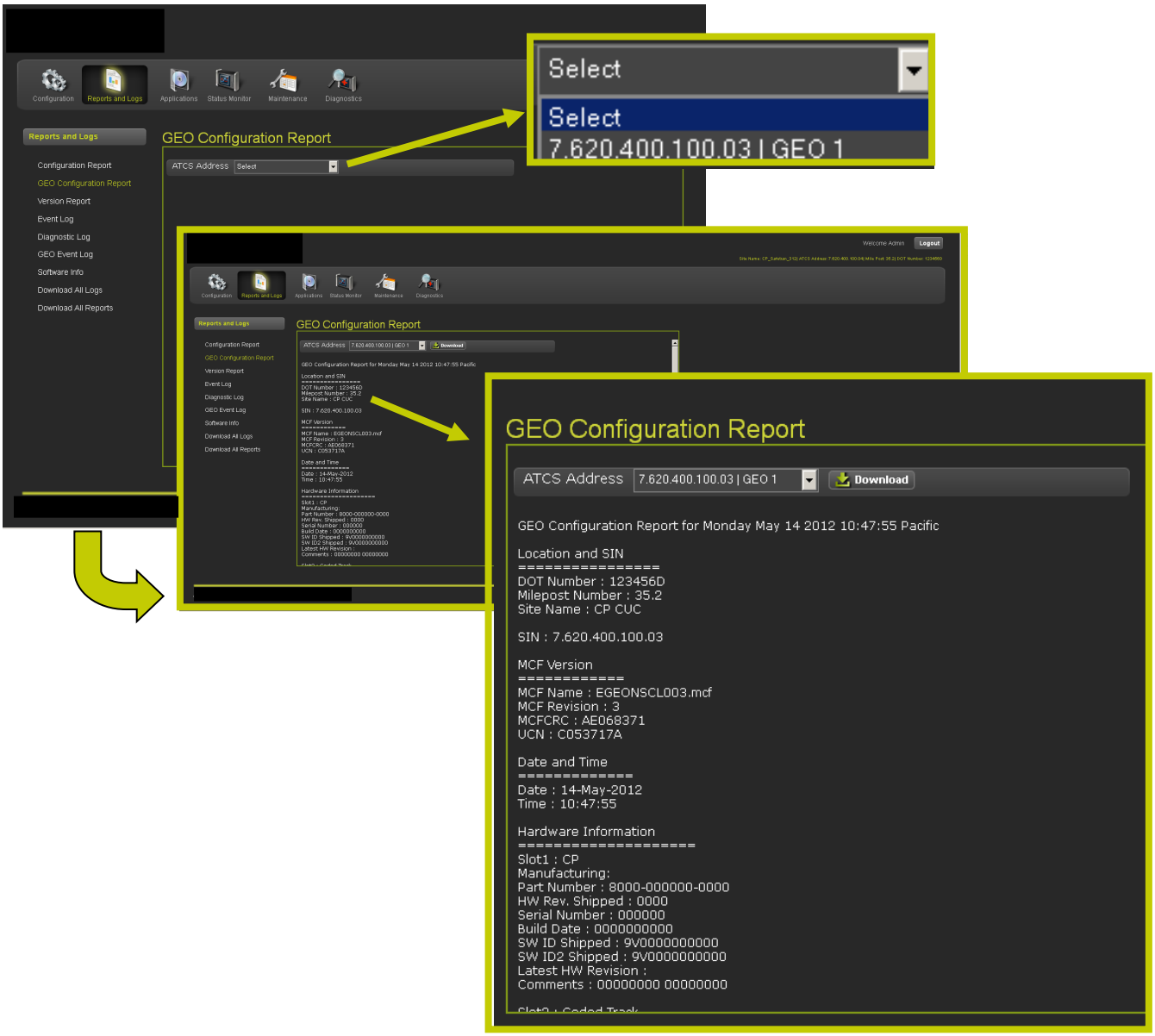


Figure 4-45 GEO Configuration Report

4.1.3.3 Version Report

The Version report lists all the hardware and software version information. Click on the "Create" button to generate the Version Report or click on "Download" to download the report to a computer.

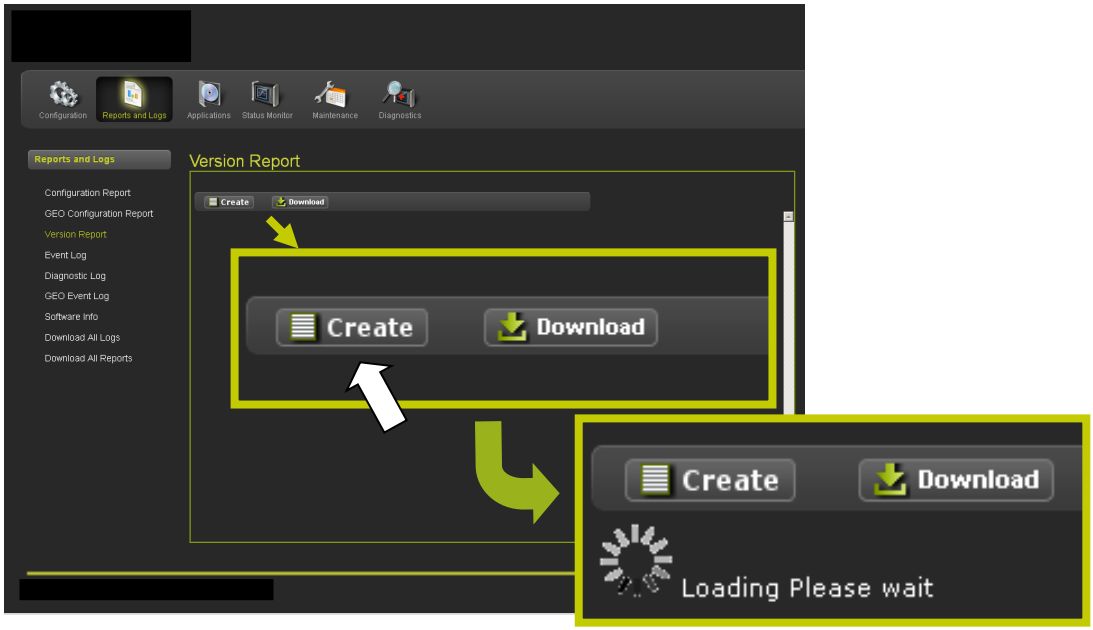


Figure 4-46 Create or Download Version Report

Figure 4-47 shows a completed creation of a Version Report.

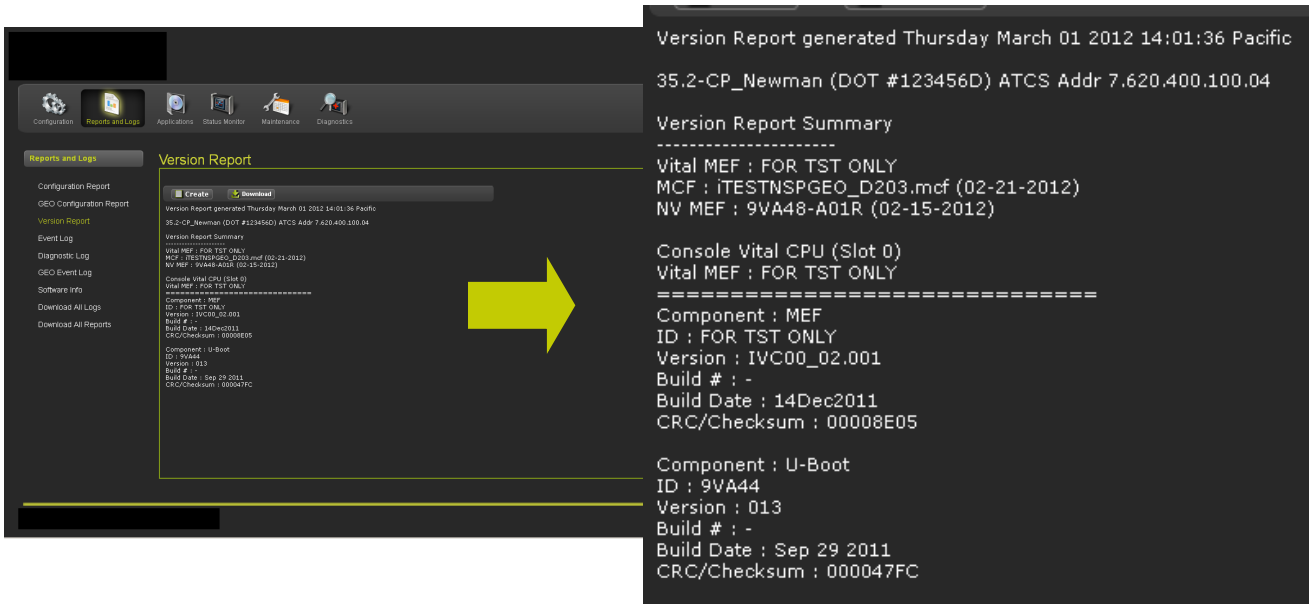


Figure 4-47 Version Report

4.1.3.4 Event Log

The Event Log records events based on the configured verbosity. There are three retrieval methods available.

- **Event Log - Basic**

The Basic log is the default retrieval method. The Basic search of the Event Log is shown in Figure 4-48. Buttons are included to navigate to the beginning or the end of the log. The number of entries is selectable from 50 to 500 entries per page in six increments. An All Events button may be selected to download all available events.

Figure 4-48 Event Log - Basic Search

- **Event Log - Advanced**

The Advanced search of the Event Log enables search a particular time period in the log saving searching the entire log for information desired. The same Basic search navigation is included in addition to the Advanced search features as shown in Figure 4-49.

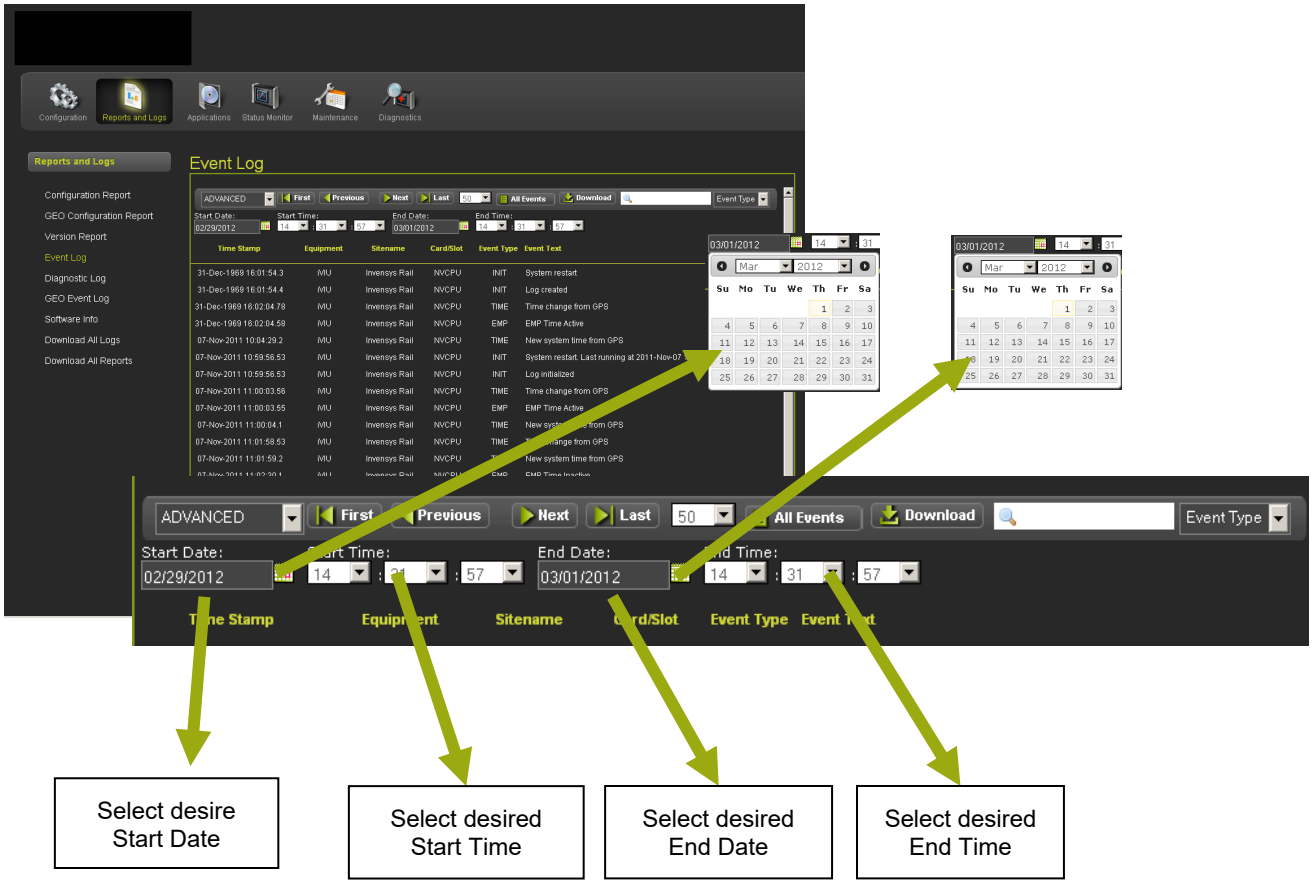


Figure 4-49 Event Log - Advanced

- **Event Log - Trace Events**

The Trace Events option enables the User to see events as they come in. Click on the START button to start tracing events. The screen refreshes every five seconds so events can be viewed in near real time. Click the STOP button to halt tracing events. Figure 4-50 displays the Trace Events navigation buttons.

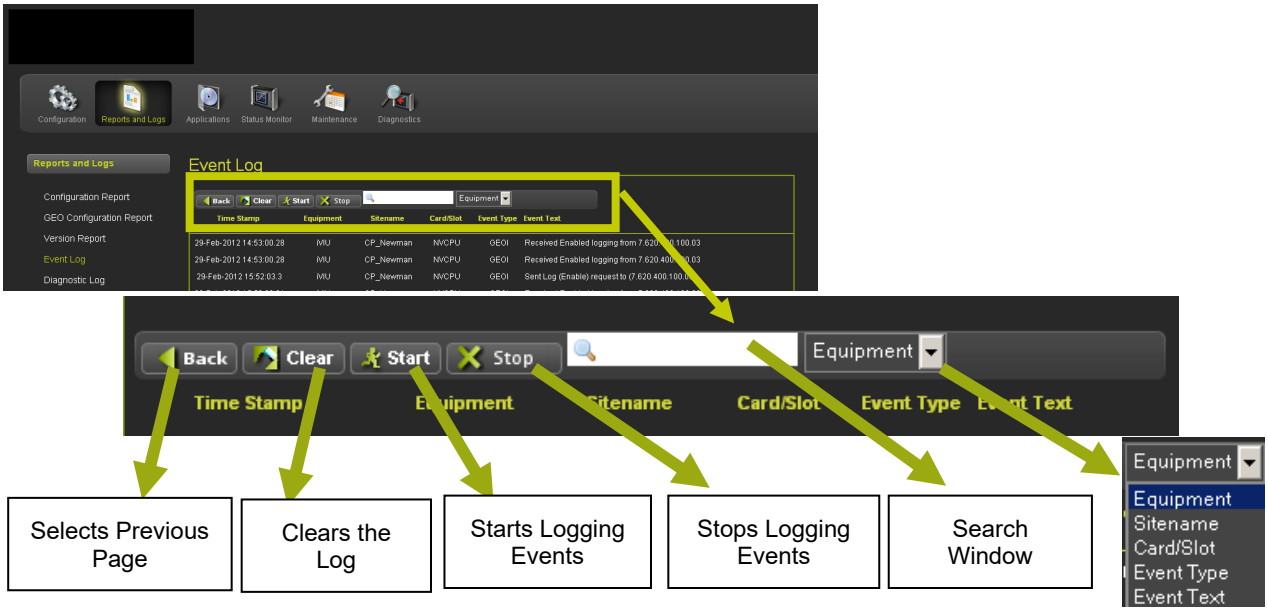


Figure 4-50 Event Log - Trace Events

4.1.3.5 Diagnostic Log

The Diagnostic Log records events based on the configured verbosity. There are three retrieval methods available.

- **Diagnostic Log - Basic**

The Basic search of the Event Log is shown in Figure 4-51. Buttons are included to navigate to the beginning or the end of the log. The number of entries is selectable from 40 to 80 entries per page in 10 entry increments or All entries may be selected.

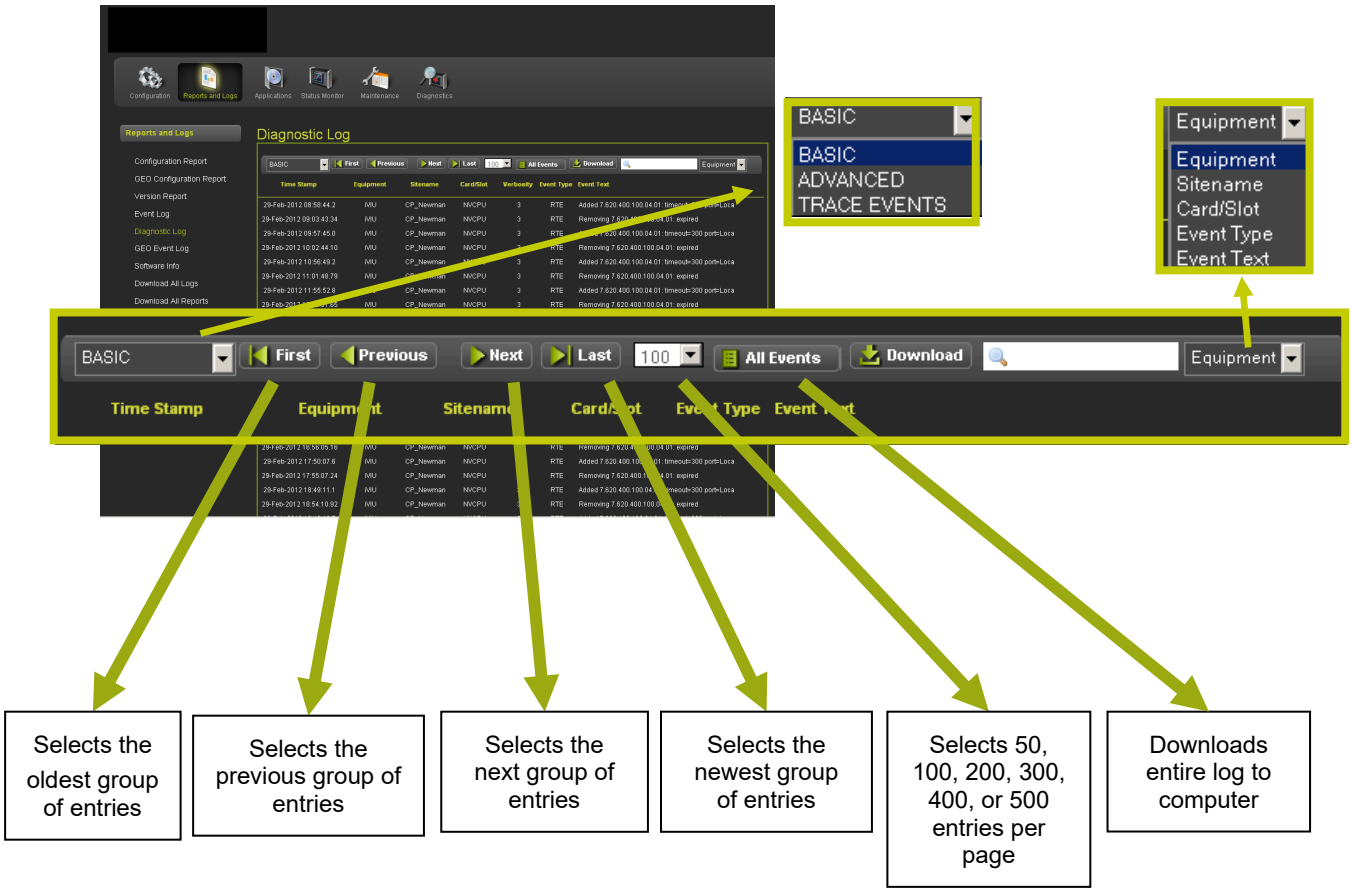


Figure 4-51 Diagnostic Log - Basic

- **Diagnostic Log - Advanced**

The Advanced search of the Diagnostic Log enables search a particular time period in the log saving searching the entire log for information desired. The same Basic search navigation is included in addition to the Advanced search features as shown in Figure 4-52.

Figure 4-52 Diagnostic Log - Advanced

- **Diagnostic Log - Trace Events**

The Trace Events option enables the User to see events as they come in. Click on the START button to start tracing events. The screen refreshes every five seconds so events can be viewed in near real time. Click the STOP button to halt tracing events. Figure 4-53 displays the Trace Events navigation buttons.

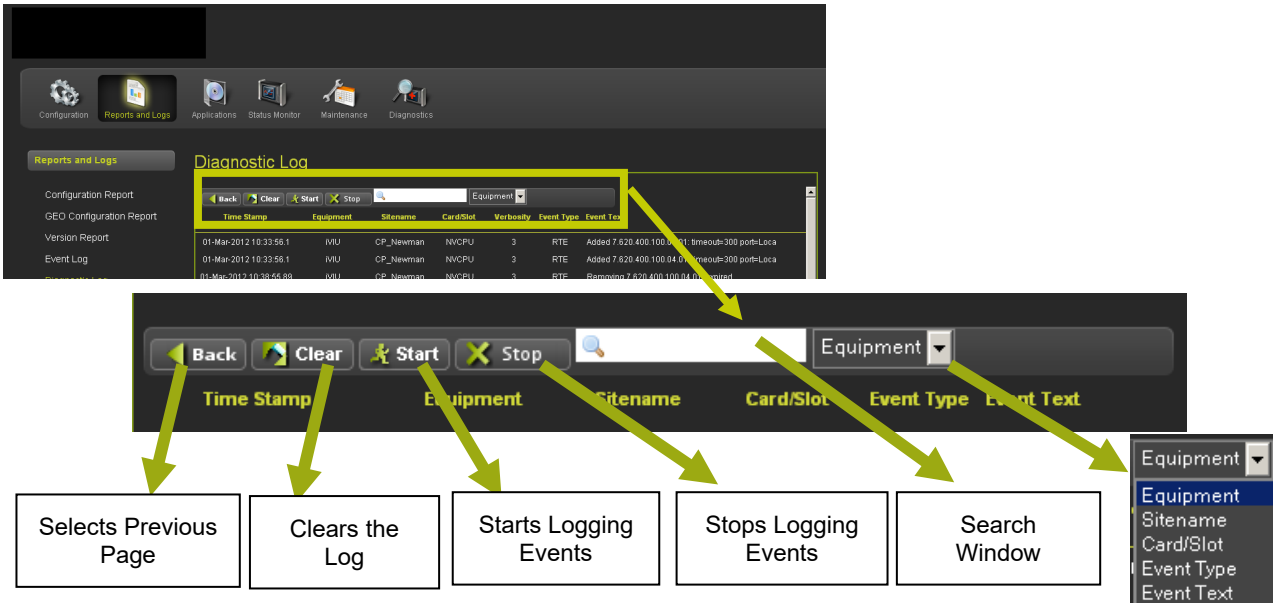


Figure 4-53 Diagnostic Log - Trace Events

4.1.3.6 GEO Event Log

If one or more GEO devices are installed a GEO Event Log is available to track GEO Status or Error events. A separate log is generated for each device. Logs are retrieved by selecting the ATCS Address of the GEO and the Slot number.

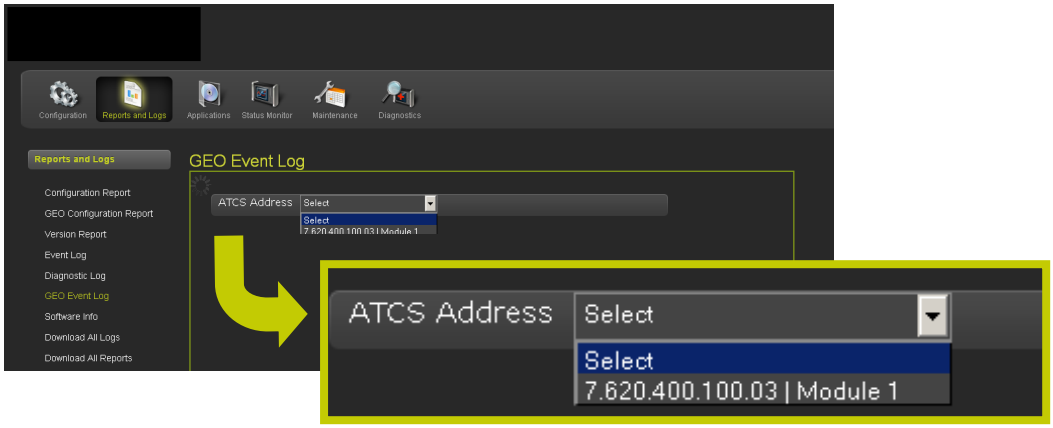


Figure 4-54 GEO Event Log

- **GEO Event Log Navigation**

Navigation for the GEO Event Log has status or summary log selection and a Slot drop-down menu that enables selection of each available slot. Navigation buttons enable selection of the desired portion of the log for viewing.

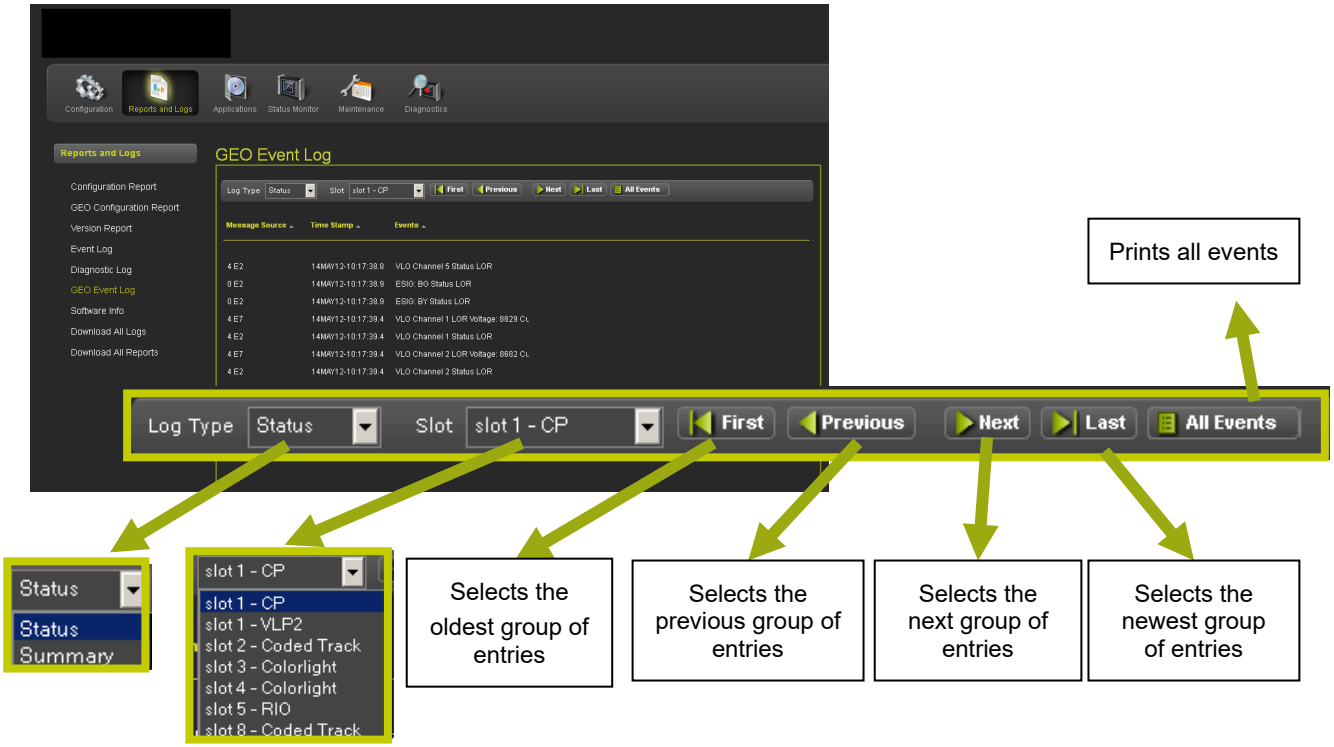


Figure 4-55 Geo Event Log Navigation

4.1.3.7 Software Info

The Software Info Menu opens with a drop-down menu listing the available module ATCS Addresses. Click on the desired module.

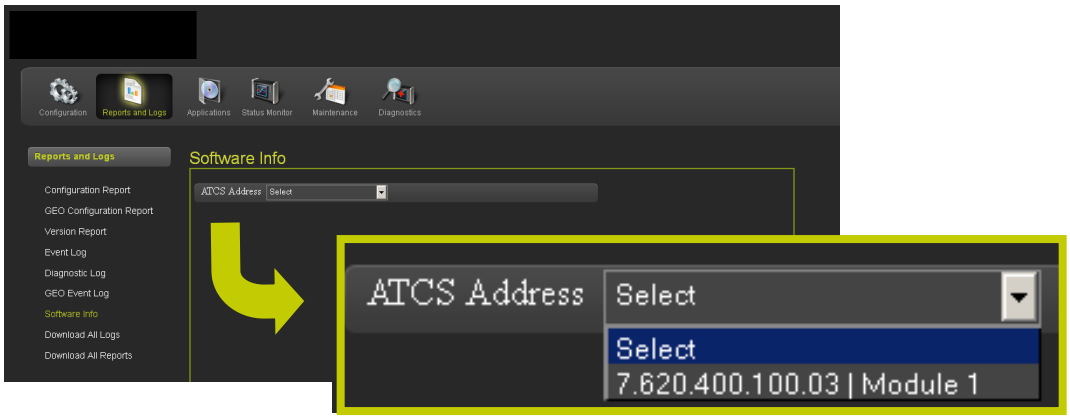


Figure 4-56 Software Info - Select Module ATCS Address

An information list will generate with information on the software installed including version, UCN, MCFCRC, Slot location, current verbosity setting depending on the type of software. Click the DOWNLOAD button to save the listing to a computer file.

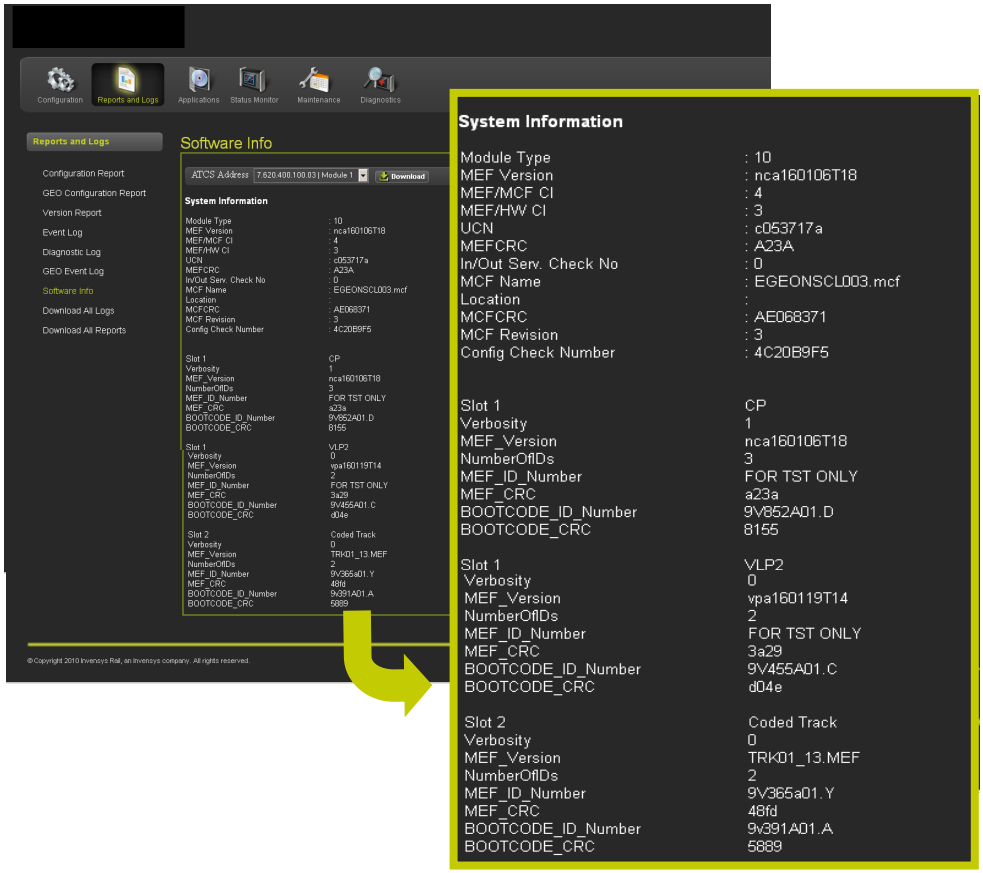


Figure 4-57 Software Info List

4.1.3.8 Download All Logs

The Download All Logs menu will download all three logs. The date and time may be selected to define the time frame of the logs. The Date is selected using pop-up calendars on the Start Date and End Date text boxes. The Time is selected using the drop-down boxes for hours, minutes, and seconds for the start time and the end time as shown in Figure 4-58.

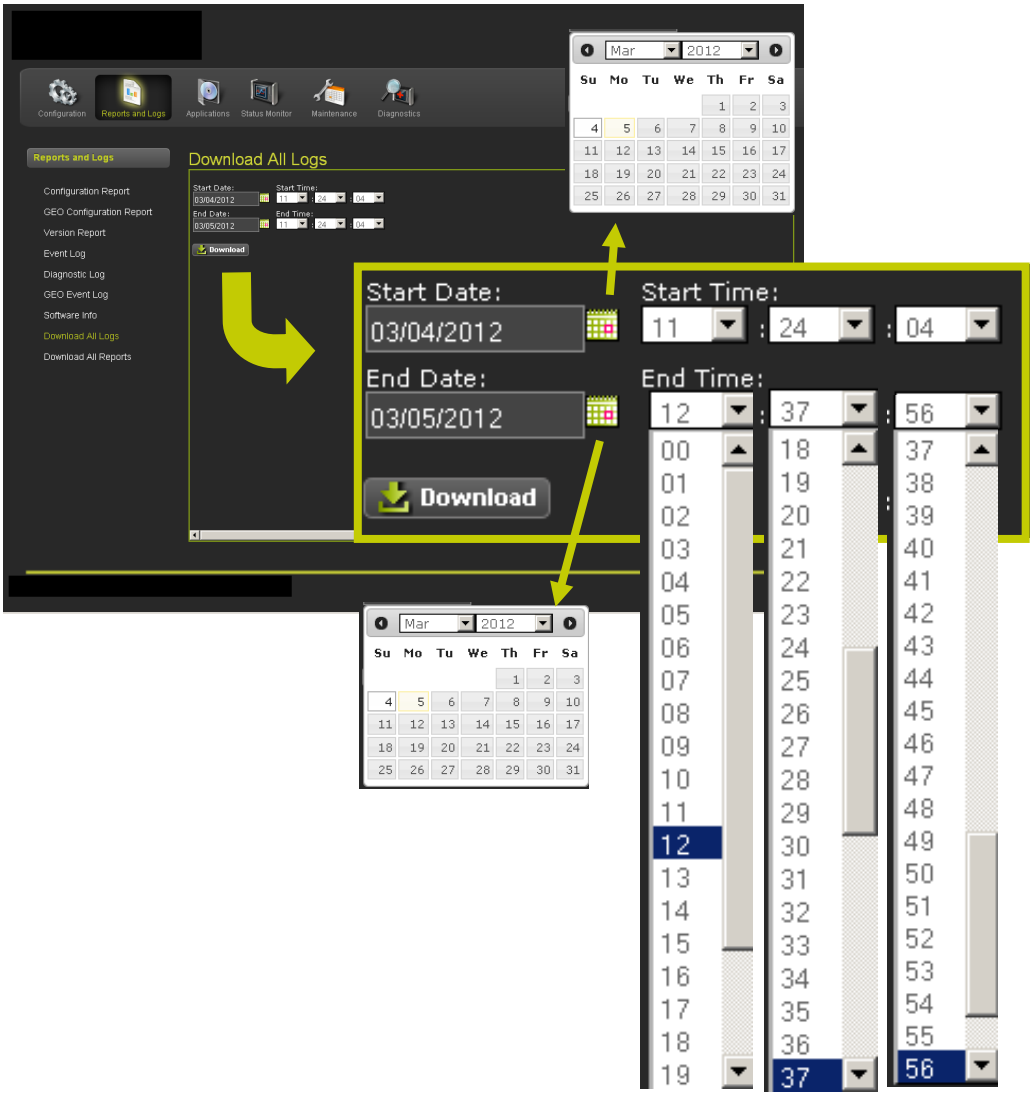


Figure 4-58 Download All Logs - Start and End Date/Time

- **Download All Logs - Viewing and Saving**

Once the starting and ending date and time has been selected, click on the download button. The download will start and will show progress on the screen. When the download is complete a pop-up window will appear to enable viewing or saving the logs as shown in Figure 4-59 below.

Figure 4-59 Viewing and Saving Logs

4.1.3.9 Download All Reports

The Download All Reports menu has a single DOWNLOAD button. Click on the button to download all of the reports. When the download is complete, a pop-up will appear for viewing or saving the reports as shown in Figure 4-60.

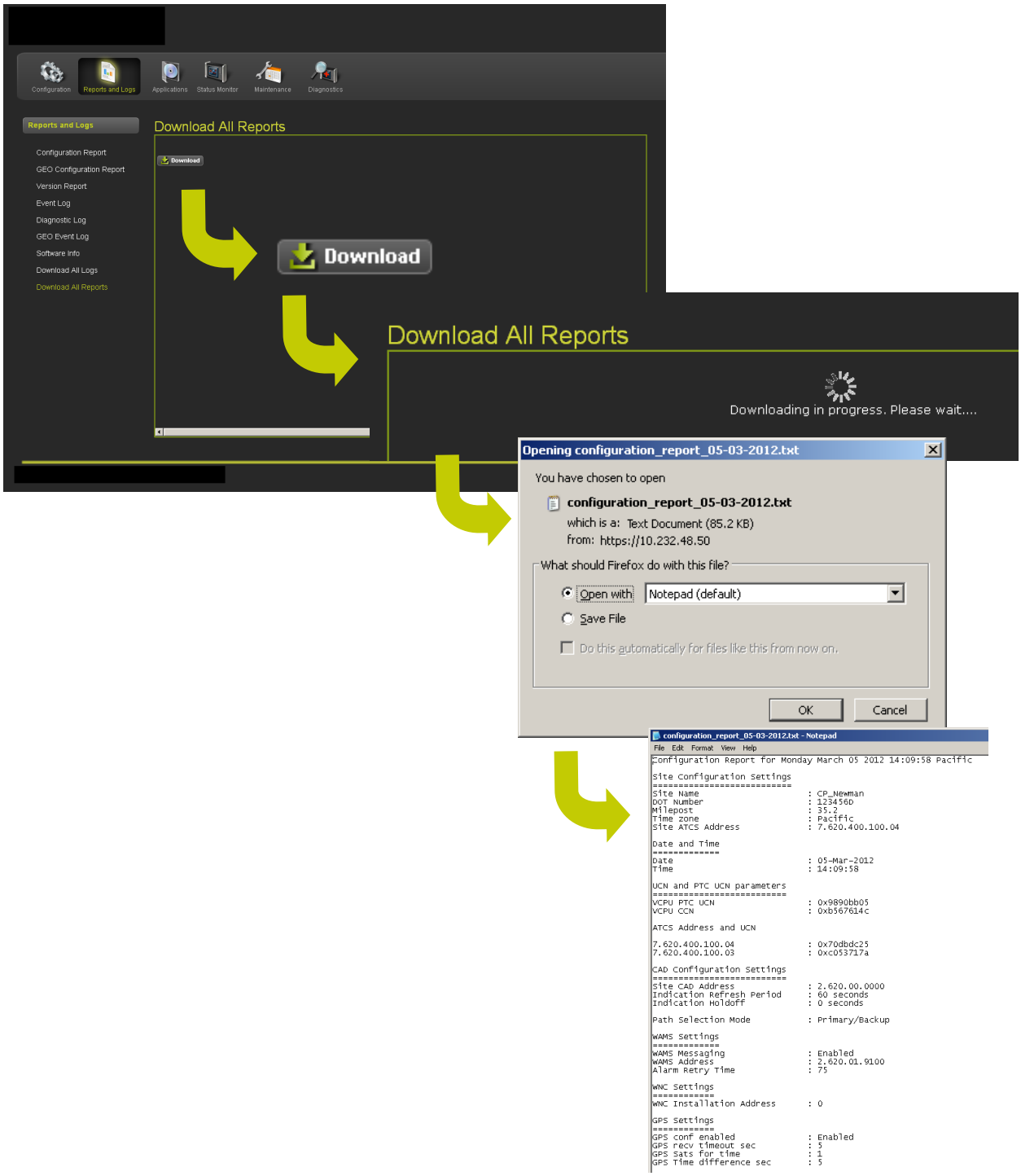


Figure 4-60 Downloading All Reports

4.1.4 Applications

The Application menu has sub-menus for Vital Applications, Non-Vital Ladder Logic, and CDL. The Applications screen is shown in Figure 4-61.

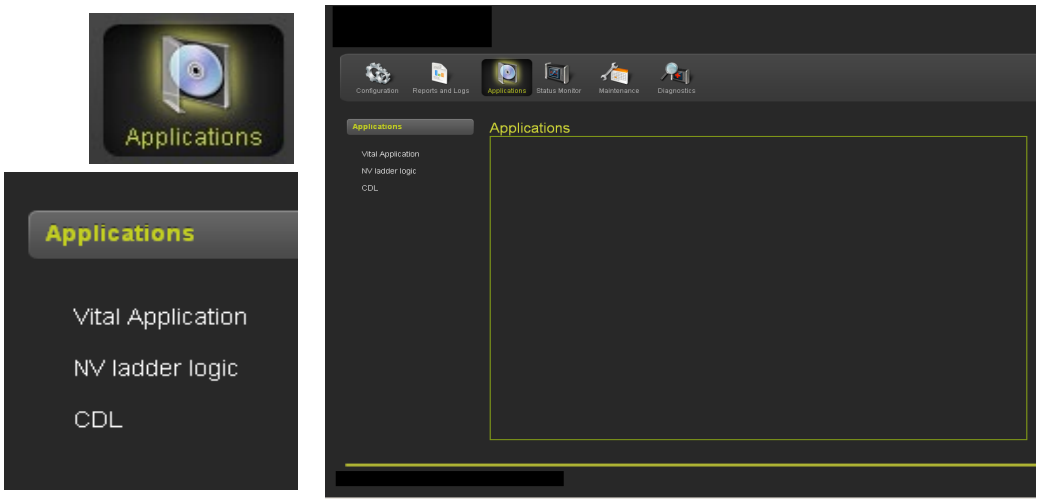


Figure 4-61 Applications

4.1.4.1 Vital Application

The Vital Application screen will display currently installed vital applications. The user can edit the application parameters by clicking on the EDIT text on the far right of the listing.

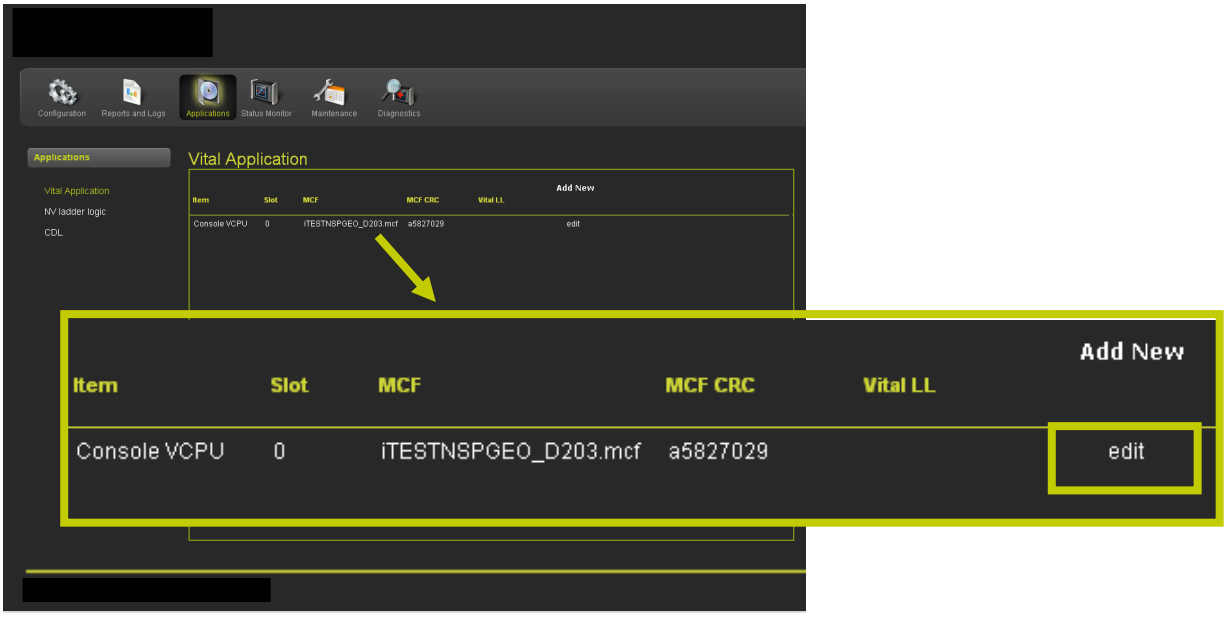


Figure 4-62 Applications - Vital Application Editing

WARNING

⚠ WARNING

BEFORE PROCEEDING SITE EQUIPMENT MUST BE PLACED IN THE MAINTENANCE MODE AND APPLICABLE SAFETY PRECAUTIONS IN PLACE TO PROTECT VEHICLES, PEDESTRIANS, AND RAILWAY TRAFFIC.

EDITING VITAL PARAMETERS WILL CAUSE THE SITE EQUIPMENT TO ENTER A RESTRICTIVE/SAFE STATE.

IT IS THE RESPONSIBILITY OF THE RAILROAD OR AGENCY TO ENSURE QUALIFIED PERSONNEL PERFORM ANY CHANGES AND PERFORM ADEQUATE TESTING PRIOR TO PLACING EQUIPMENT BACK INTO SERVICE.

WARNING

⚠ WARNING

WHEN EDITING A VITAL APPLICATION REMOTELY, AN AUTHORIZED TECHNICIAN MUST BE PRESENT AT THE SITE BEFORE PROCEEDING.

PARAMETERS CHANGED BY THE REMOTE USER WILL REQUIRE THE SYSTEM TO BE REBOOTED. A QUALIFIED TECHNICIAN WILL BE REQUIRED AT THE SITE TO VERIFY ALL EQUIPMENT HAS RECOVERED FROM THE RESTRICTIVE STATE.

- **Vital Application - Unlocking Parameters**

The vital application edit screen will appear. It is necessary to unlock the system before any changes can be performed. Clicking on the unlock button will cause a warning screen to appear. Clicking OK will cause a PERMISSION screen to appear on the iVIU Console. An on-site qualified technician will be required to approve access by pressing the ENTER key on the iVIU Console. A message will appear stating access has been approved by an on-site technician.

Figure 4-63 Unlocking Vital Application Parameters

- **Vital Application - Restrictive State Indicator**

A warning icon will appear in the upper right corner of the screen to indicate that the iVIU Console and any peripheral equipment is in the RESTRICTIVE/SAFE STATE.

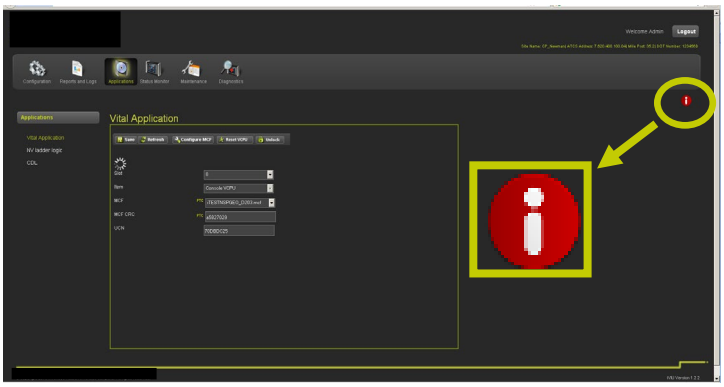


Figure 4-64 Restrictive/Safe State Warning

- **Vital Application Navigation**

Figure 4-65 details the action buttons on the Vital Application screen.

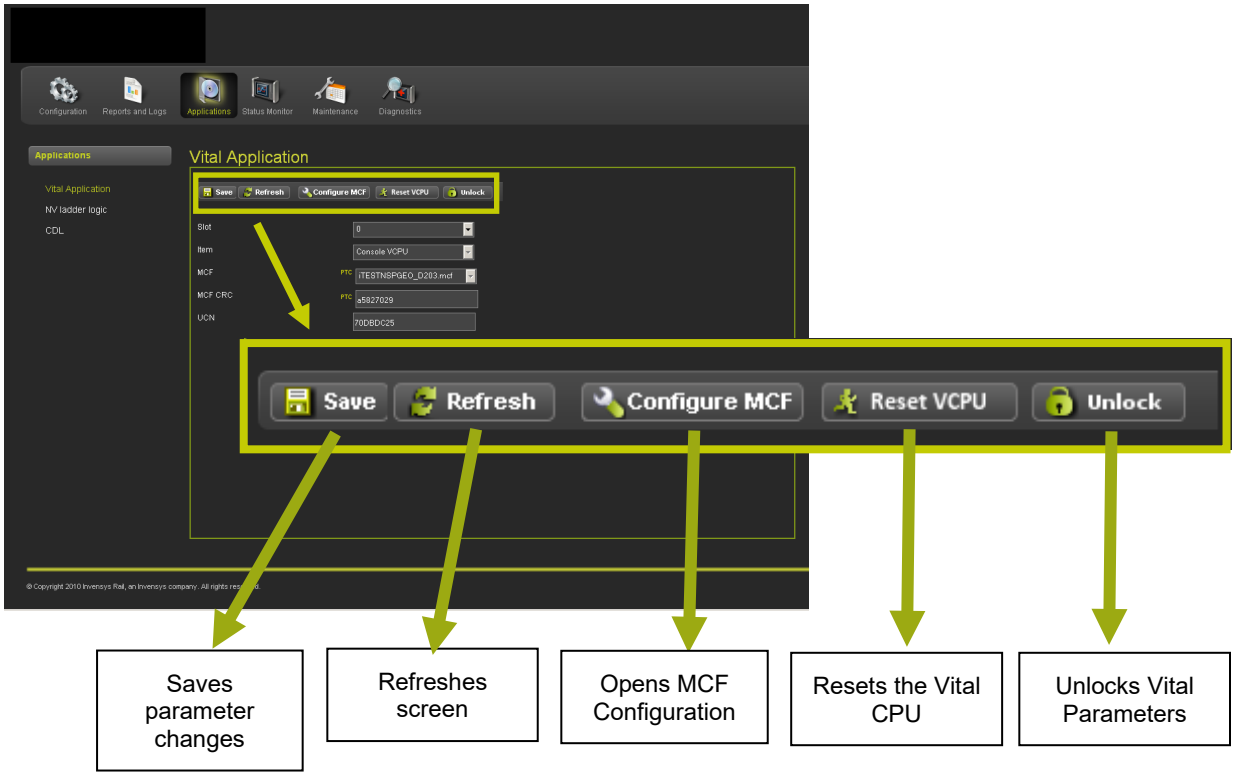


Figure 4-65 Vital Application Action Buttons

- **Vital Application - Configure MCF**

Vital Applications vary in their composition. For information on installation and setup of applications refer to the application's manual for detailed information.

4.1.4.2 NV Ladder Logic

The iVIU Console supports applications written in Ladder Logic. The Non-Vital Ladder Logic screen enables the user to upload ladder logic files. To upload Ladder Logic files check the box [1] for the Non-Vital Ladder Logic Controller. Click the Browse button for the LLW File [2A]. A pop-up screen will appear, locate the desired LLW Ladder Logic file and click the Open button [2B]. The file name will appear in the LLW File text box. Click the Browse button for the LLB File [3A]. A pop-up screen will appear, locate the desired LLB Ladder Logic file and click the Open button [3B]. The file name will appear in the LLB File text box. Click the Upload button to load the Ladder Logic Files.

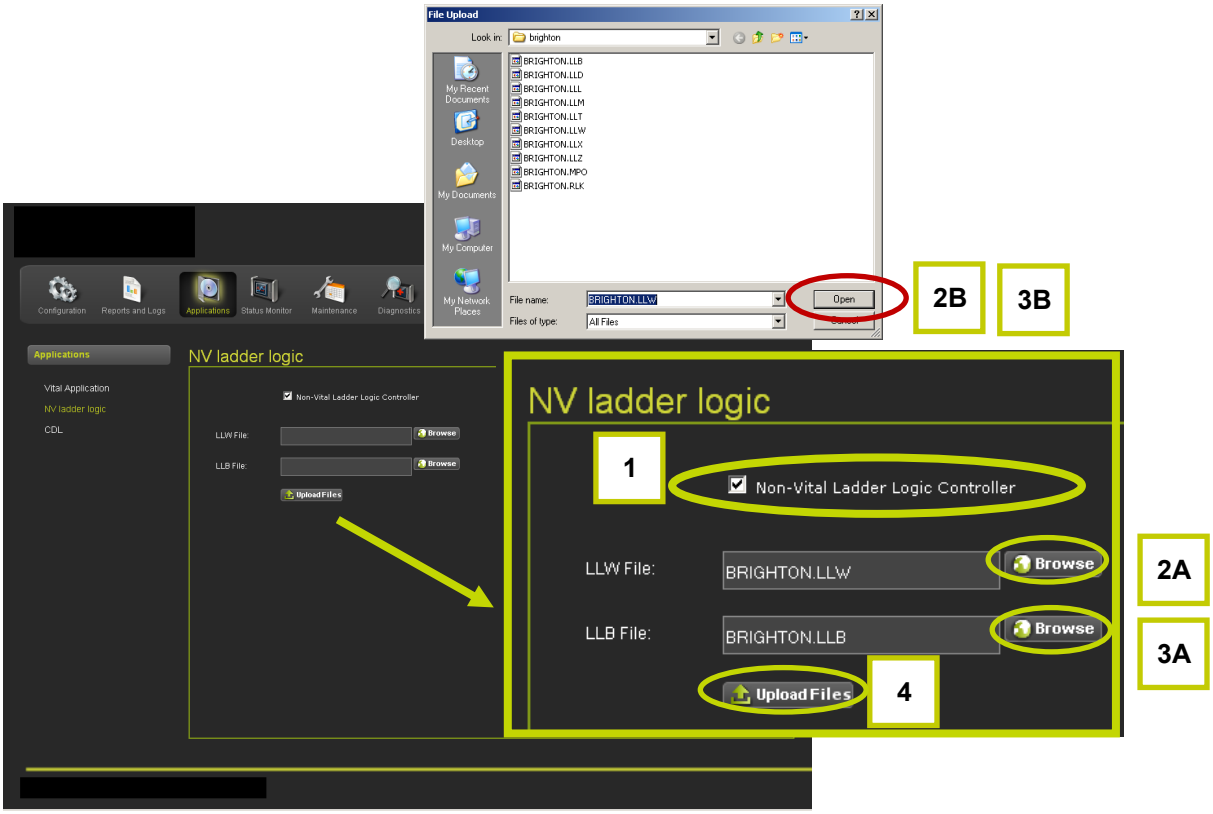


Figure 4-66 Uploading Ladder Logic Files

4.1.4.3 CDL (Control Description Language) Files

To access CDL Menu, select Applications icon [1] from menu bar. Then, under Applications column, select CDL [2].

The CDL Menu enables uploading and running CDL applications. To upload a CDL file click on the Upload CDL button [3]. Click on the Browse button [4] and select the desired CDL file from the stored location and click on the Open button [5]. The selected CDL file will appear in the CDL File text box. Click on the Upload File button [6] to upload the file.

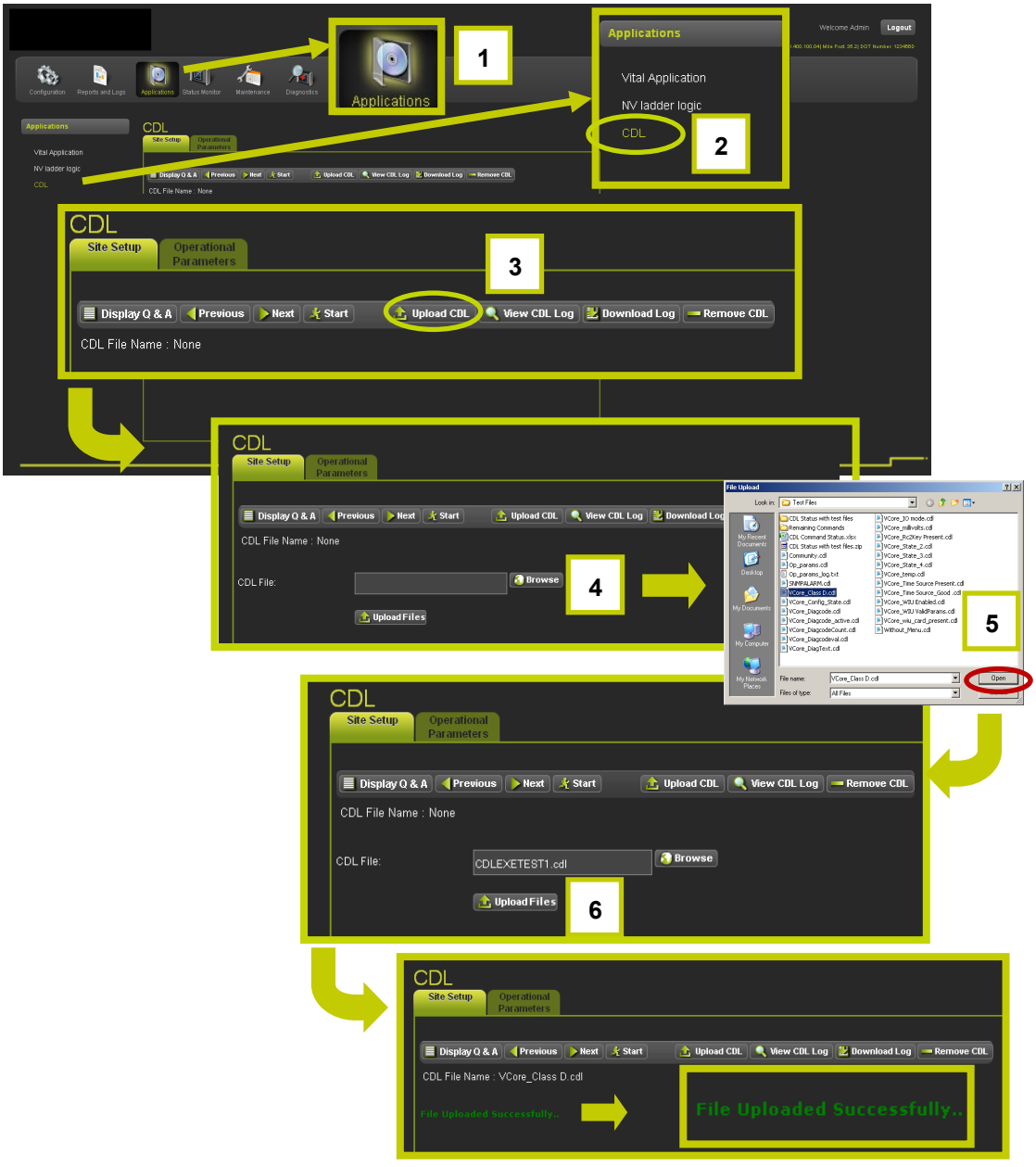


Figure 4-67 Applications - CDL - Uploading CDL Files

- **Running CDL Files**

To run a CDL file click on the START button [1]. A CDL may have more than one file. A list of files will appear. Select the desired CDL file [2]. In the example shown below there are a total of two test files to choose. Click the NEXT button [3] to continue.

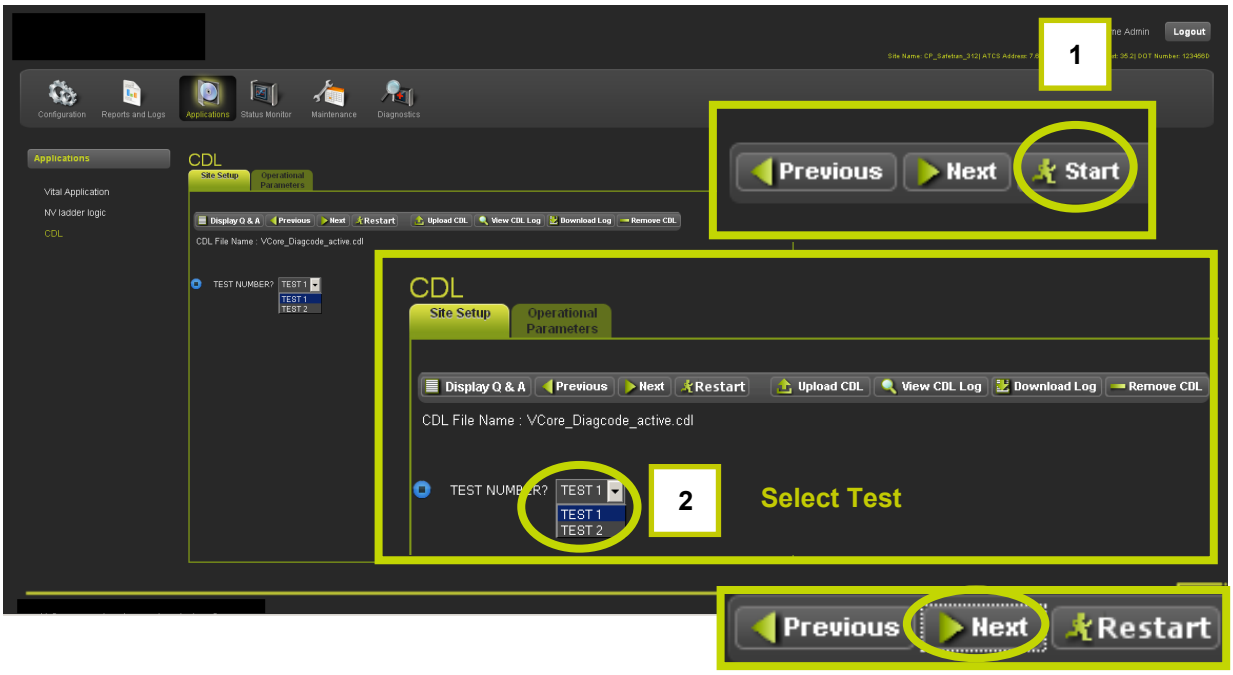


Figure 4-68 Running CDL Files - Start File

Select the answer to the next question (in this case OK or NOT OK) [1] then click the NEXT button [2] to continue. Click the PREVIOUS button to back up through the sequence.

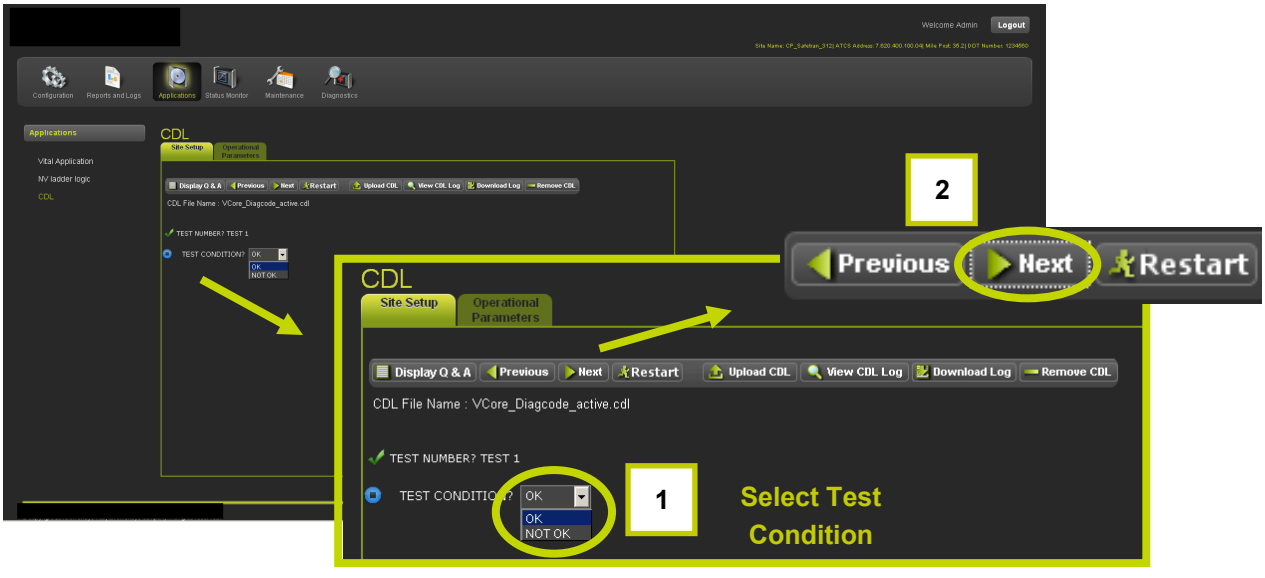


Figure 4-69 Running CDL Files - Sequence File

Continue to click the NEXT button to continue until the end of the sequence is reached. All tests should have a green check if the test was successful.

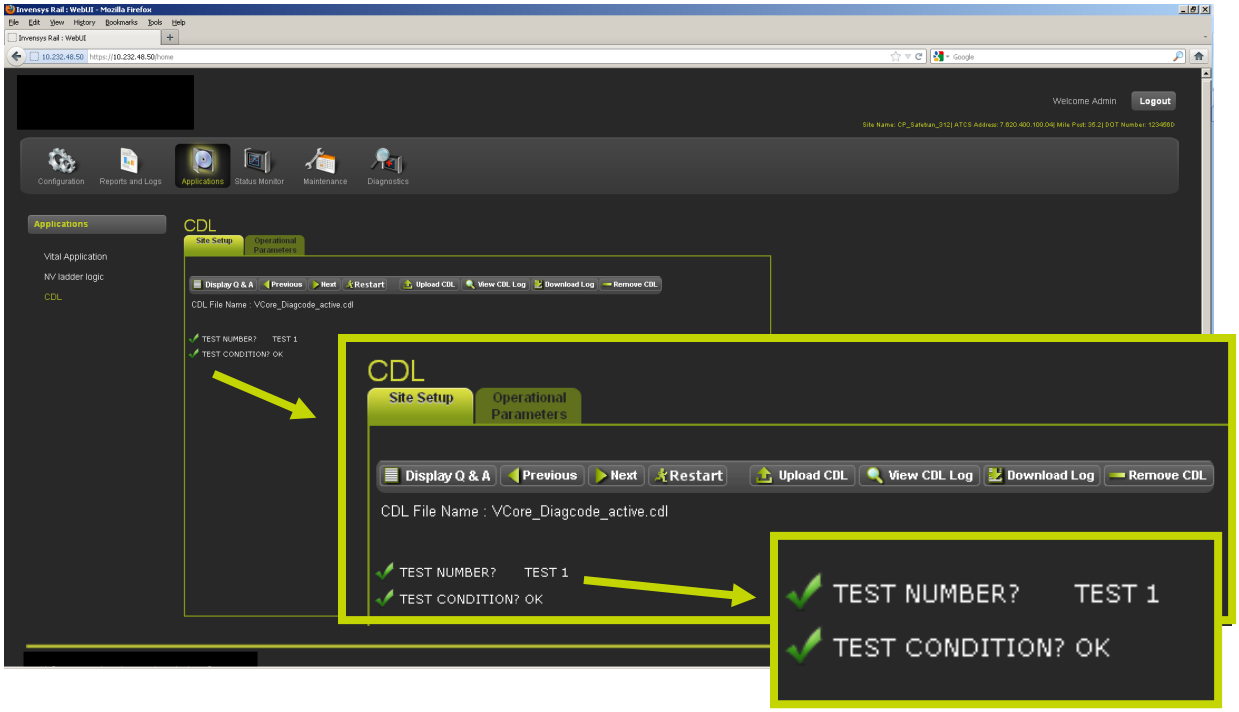


Figure 4-70 Successful CDL File Run

The final step is to compile the CDL file. Click the NEXT button [1] as shown below.

Figure 4-71 Compile CDL File

A pop up window will appear asking to the user if they want to compile the CDL file. Click on the OK button [1] to continue as shown in the figure below.

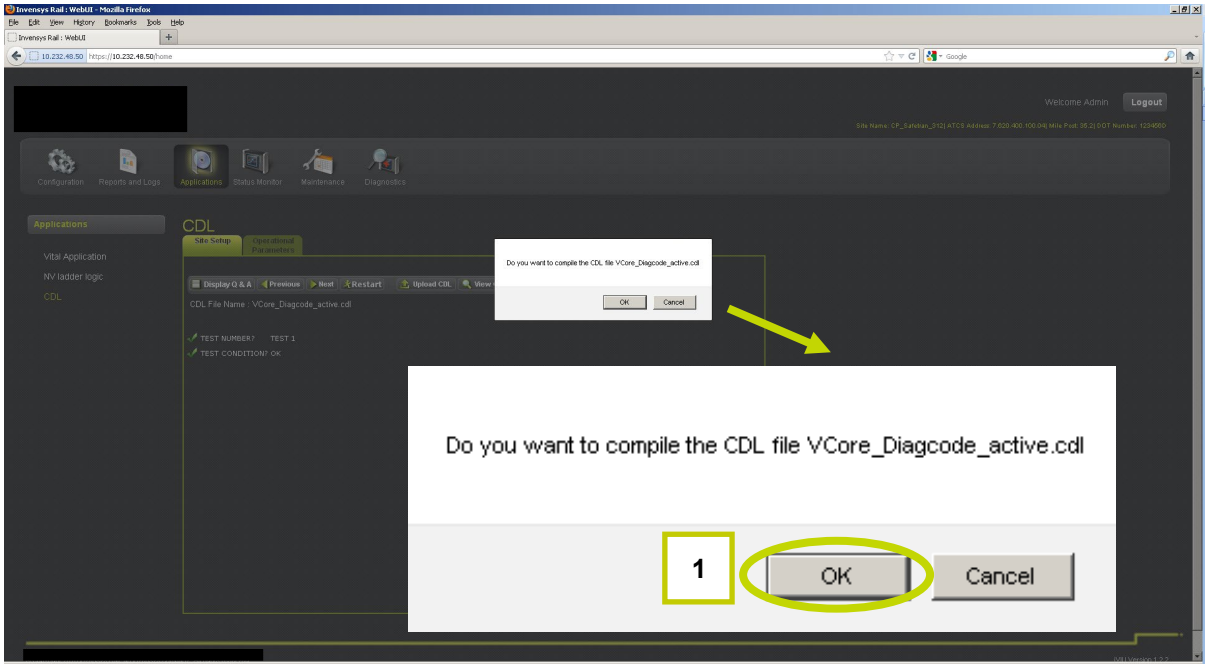


Figure 4-72 Confirm CDL Compilation

A confirmation text will appear to confirm the compilation was successful.

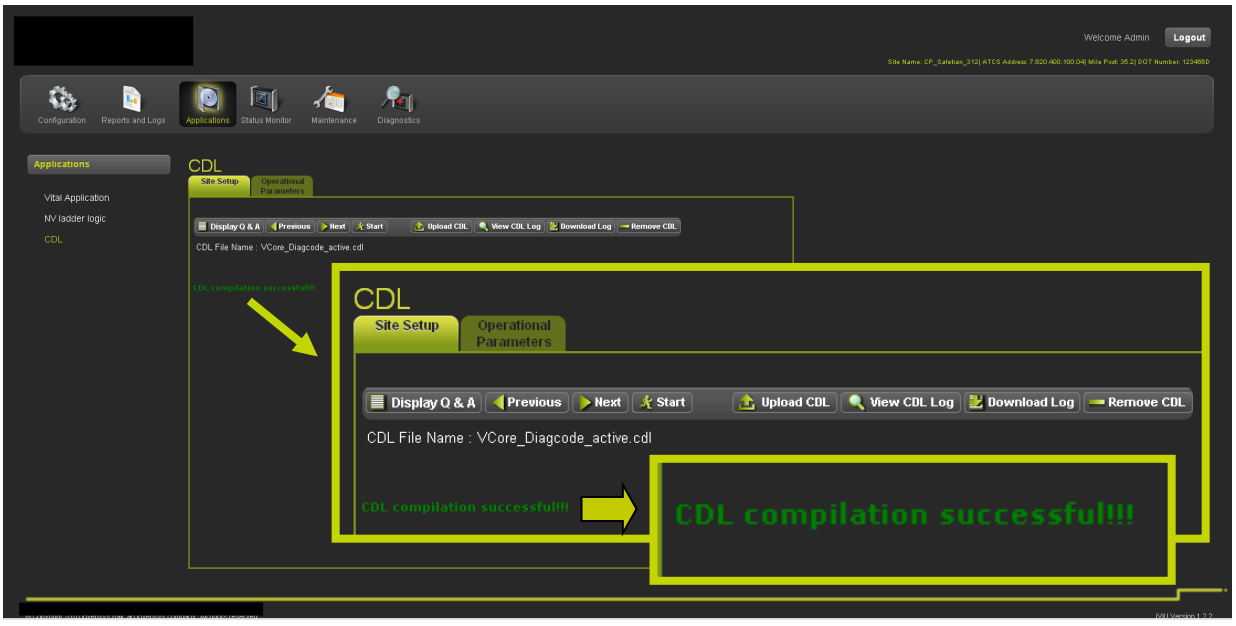


Figure 4-73 Verification of Successful CDL Compilation

- **View or Download CDL Log**

The CDL Log displays the compiling of the CDL file (both successful and failed files). To view the CDL Log, click on the View CDL Log button. To download the log to a computer file, click on the Download Log button.

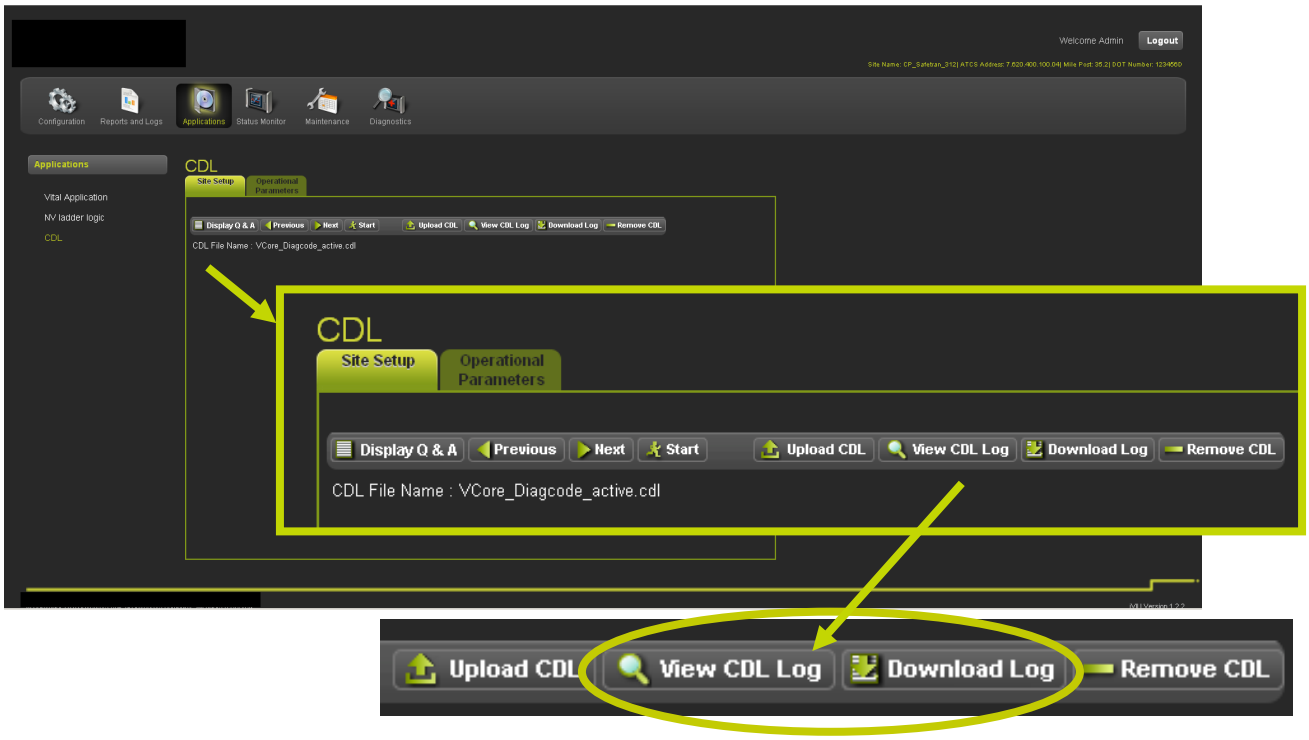


Figure 4-74 View or Download CDL Log

- **CDL Log Printout**

The CDL Log will appear in the window for local viewing as shown in Figure 4-75.

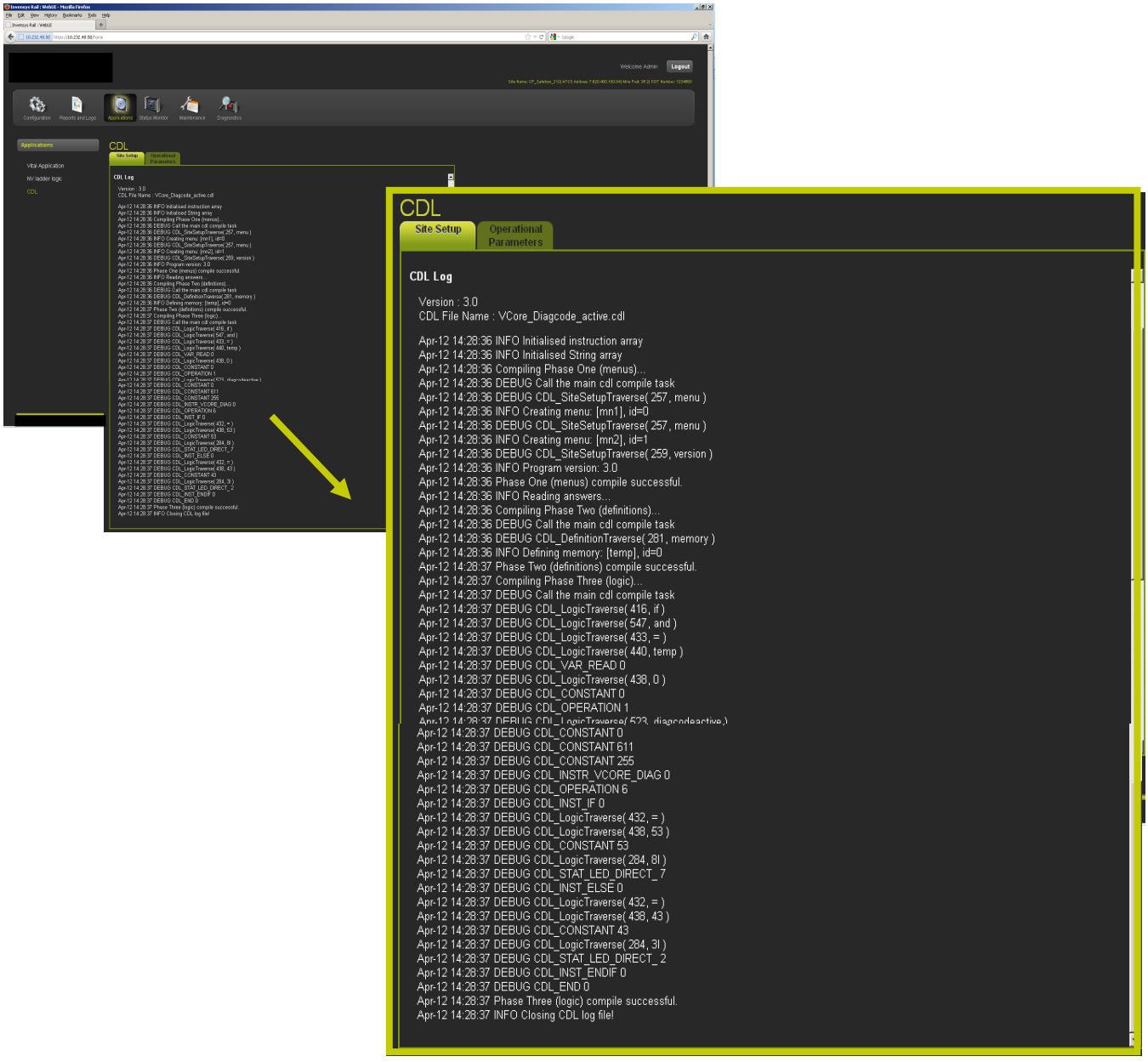


Figure 4-75 CDL Log Printout

- **Removing a CDL File**

To remove a CDL file from the iVIU Console, click on the Remove CDL button as shown in Figure 4-76. A confirmation message will appear confirming the CDL has been removed as shown in Figure 4-77.

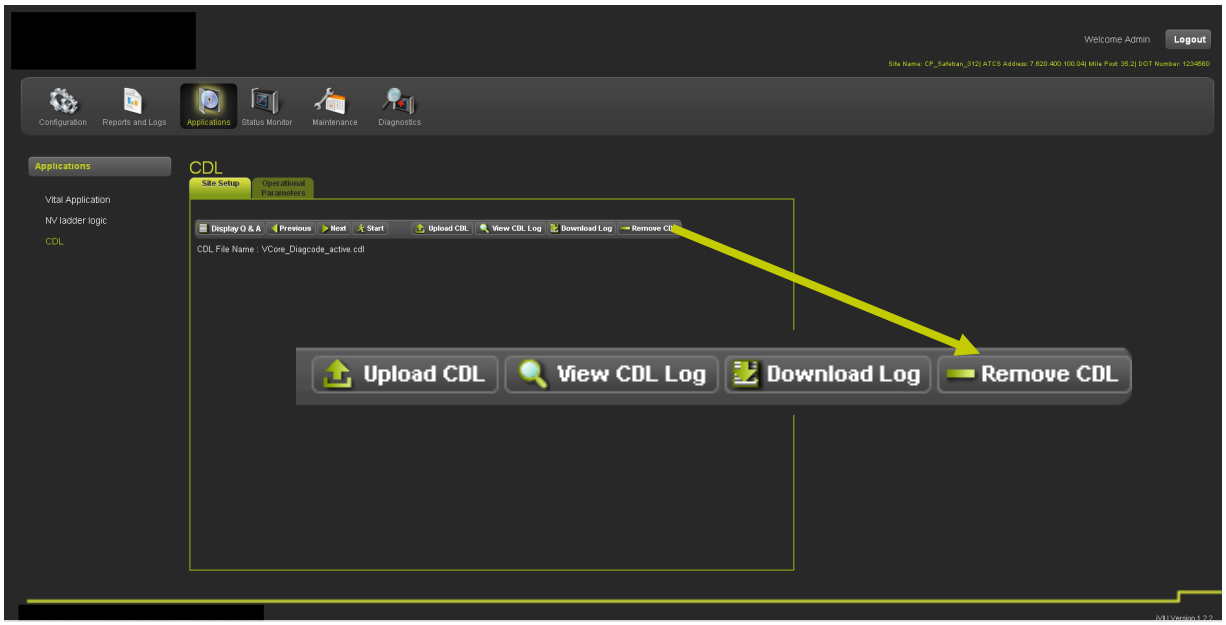


Figure 4-76 Removing a CDL File

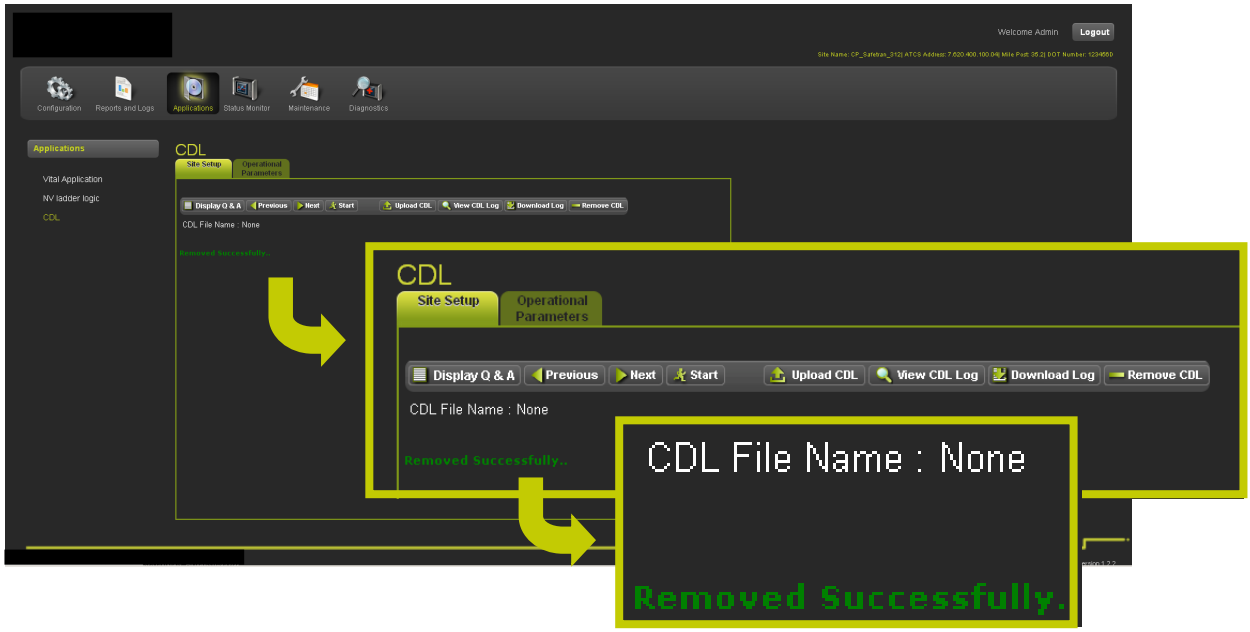


Figure 4-77 CDL File Removal Confirmation

4.1.5 Status Monitor

The Status Monitor has five sub-menus for monitoring CDL status, Cartridge status, I/O status, PTC status, and System status.

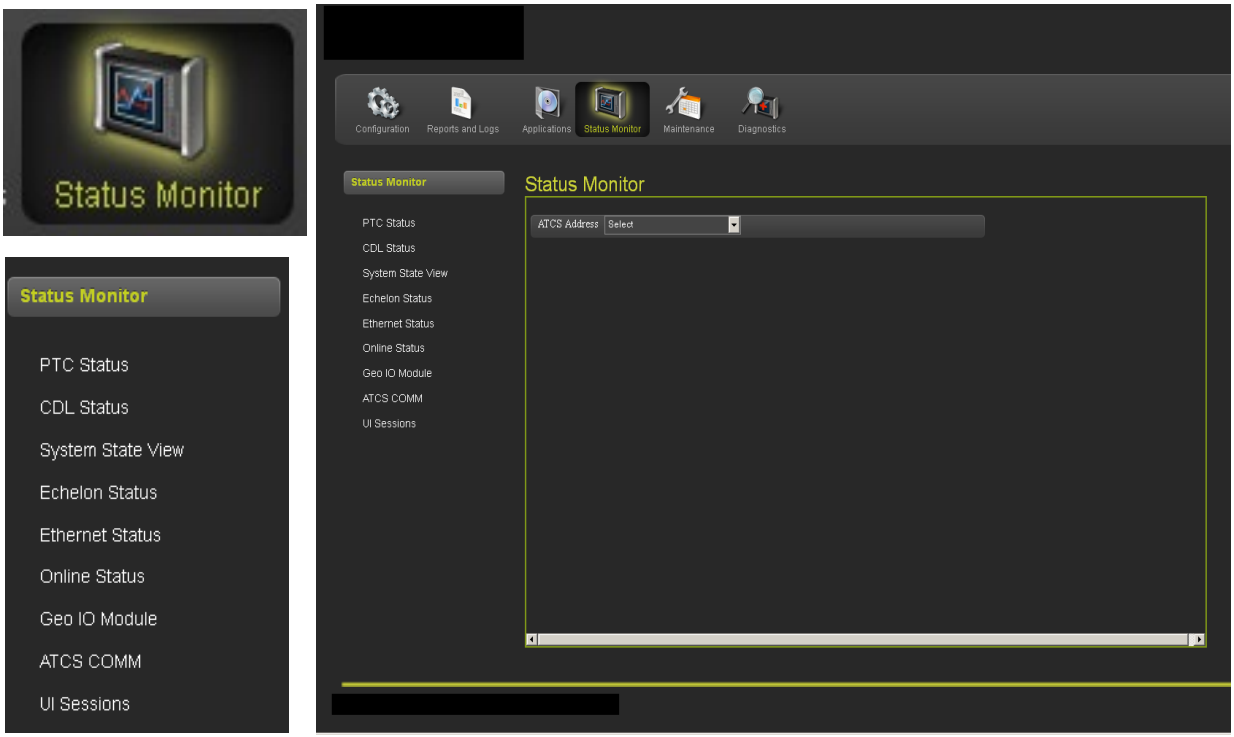


Figure 4-78 Status Monitor Menus

4.1.5.1 Status Monitor - PTC Status

The PTC Status function in the Status Monitor menu displays real-time Signal and Switch information being sent to the locomotive. A typical display is shown in Figure 4-79.

NOTE

NOTE

PTC Codes will be displayed when a location is being polled or if the PTC Beacon has been set for Continuous. This function will vary in appearance depending on the GEO Model.

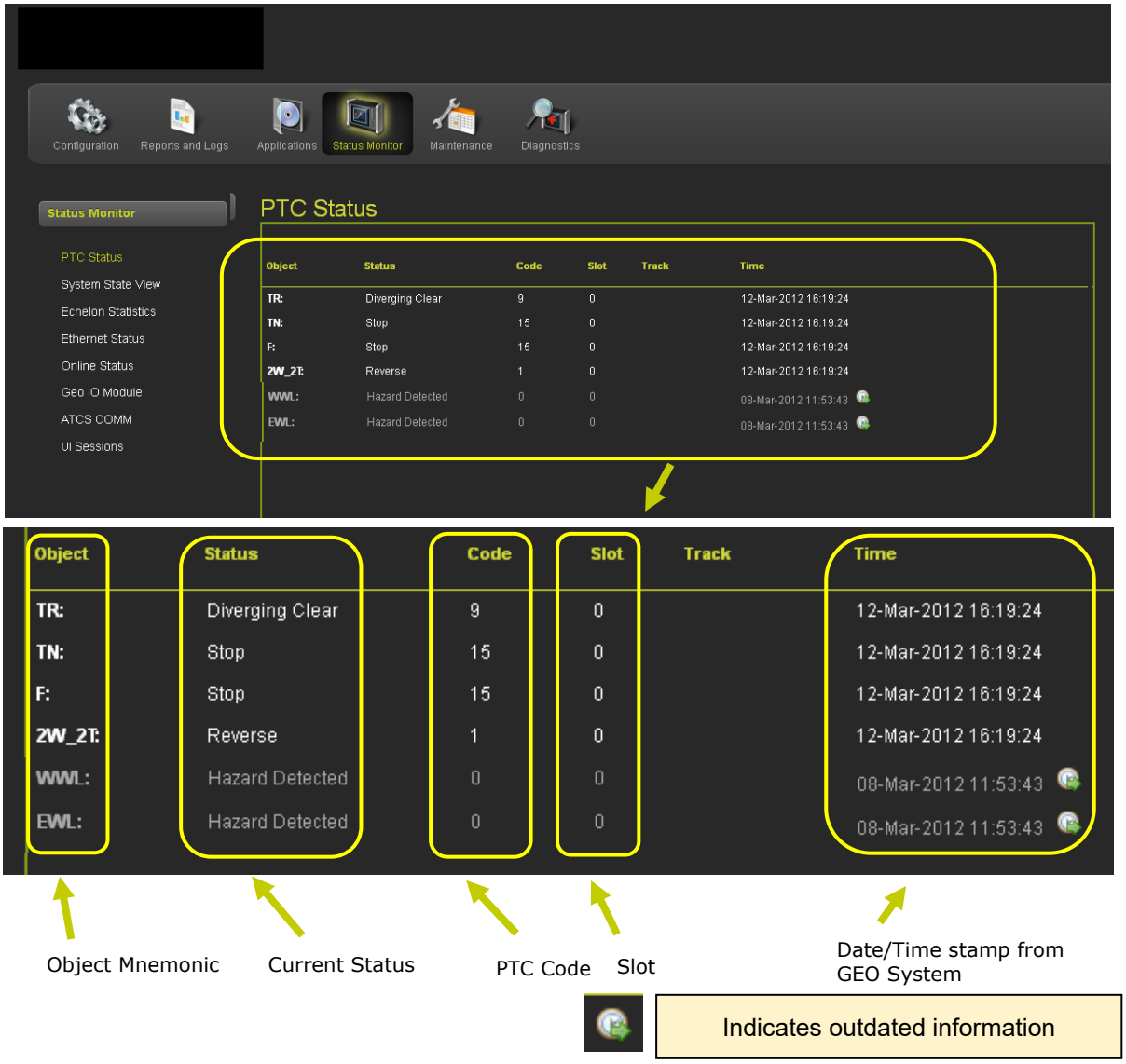


Figure 4-79 Status Monitor - PTC Status

4.1.5.2 Status Monitor - System State View

Figure 4-80 displays the System State View which displays information for the iVIU Console and connected devices. In this example two GEO units and the iVIU Console is available. Select the STATUS MONITOR icon to open the sub-menus. Select the SYSTEM STATE VIEW sub-menu. A drop-down menu will appear listing the available ATCS addresses to view. Select the GEO or Console address and click the mouse on the text.

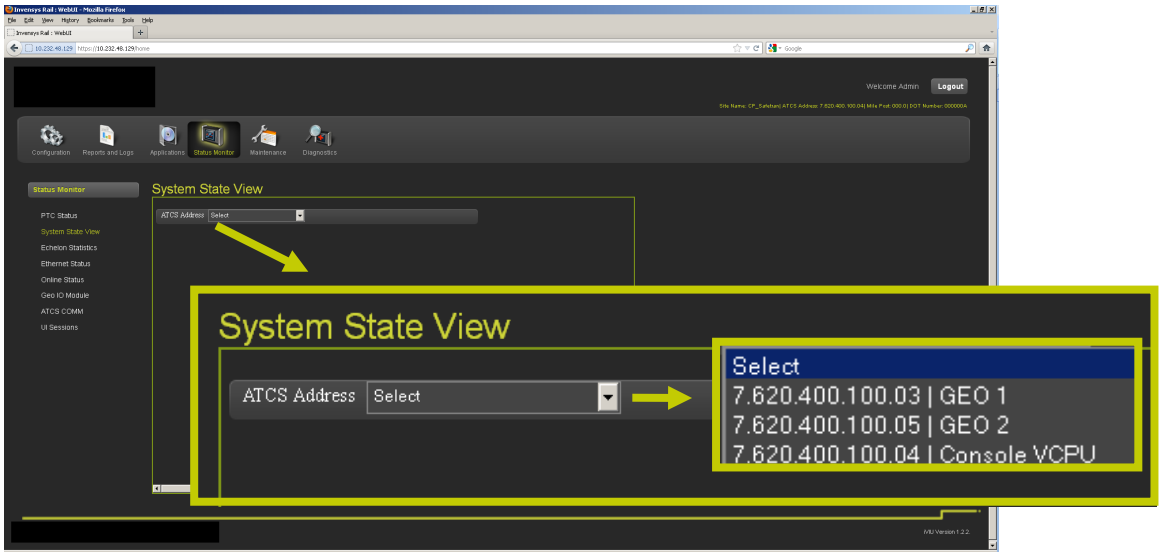


Figure 4-80 Status Monitor - System State View

- **System State View - Geographic Objects**

In the example below of a GEO unit a list of Geographic Objects are displayed. Select the desired object and expand as needed.

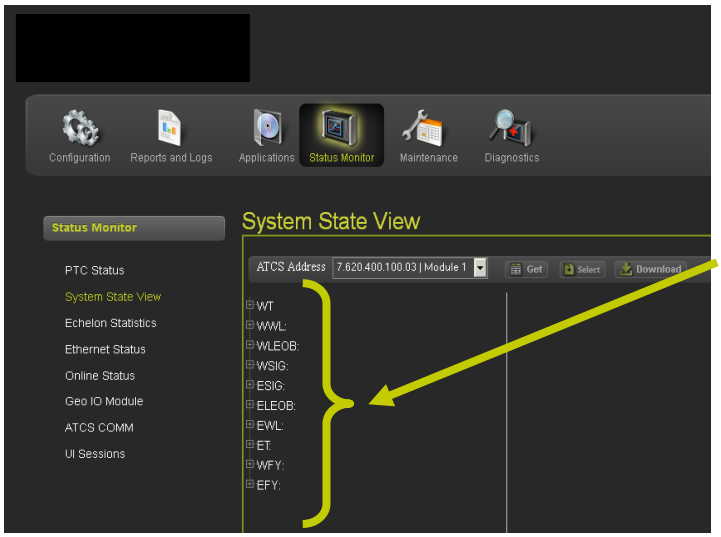


Figure 4-81 System State View - Geographic Objects

- **Status Monitor - System State View - View Connections**

Figure 4-82 displays GEO Objects in the left column. Objects can be expanded [1] and selected. Click on the GET button [2] to retrieve the data available.

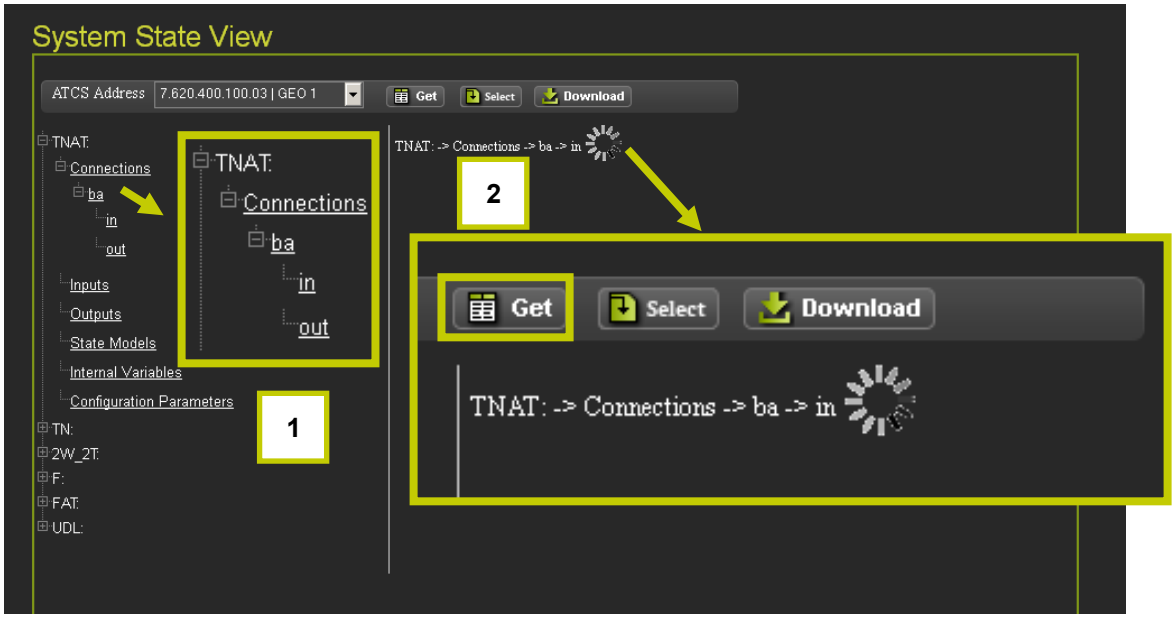


Figure 4-82 System State View - View Connections

Select the desired variable Name and Value and click the SELECT icon.

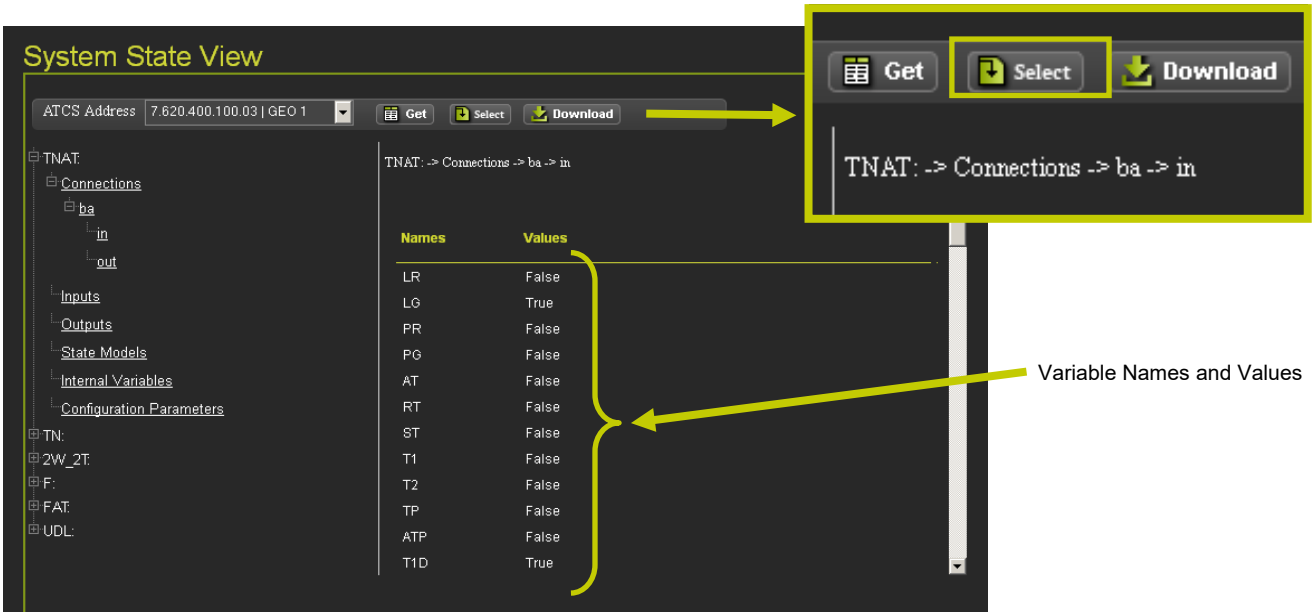


Figure 4-83 System State View - View Object Values

The Select Range screen will appear with edit text boxes for First Logic State and Late Logic State. Enter the first and last logic states in the range to be displayed (value in the Last Logic State box must be equal to or less than the total number of variables assigned to the object category).

NOTE

NOTE

Some variables may have multiple elements, each with its own logic state.

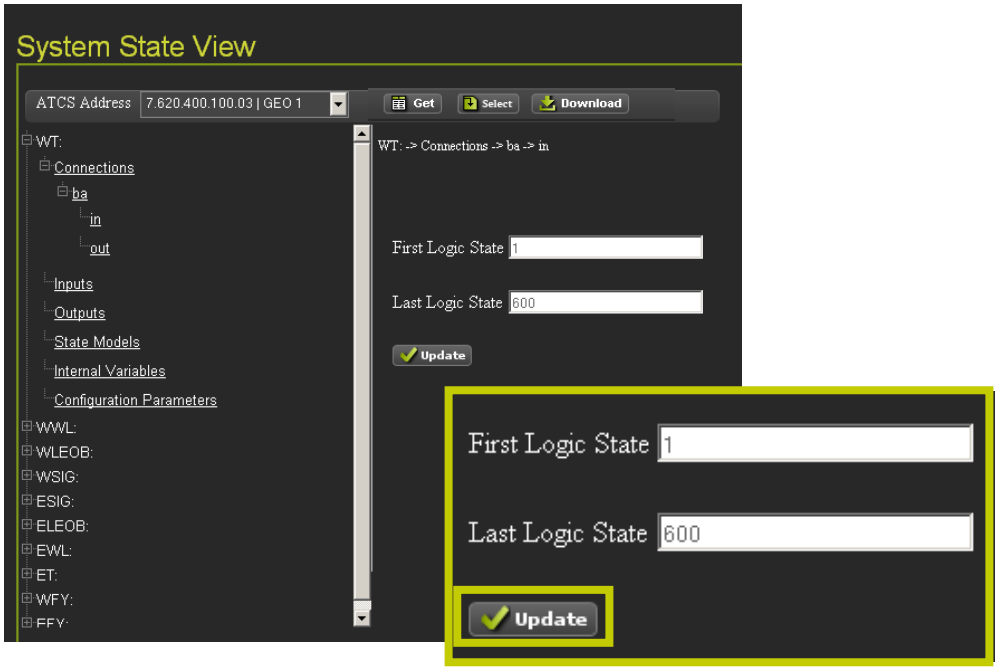


Figure 4-84 First and Last Logic States

The Connections category includes all the Geographic Messages that are transmitted from and received on each Geographic Connection. In this example the state of each Geographic Message is transmitted from the base (ba) connection of Signal WSIG.

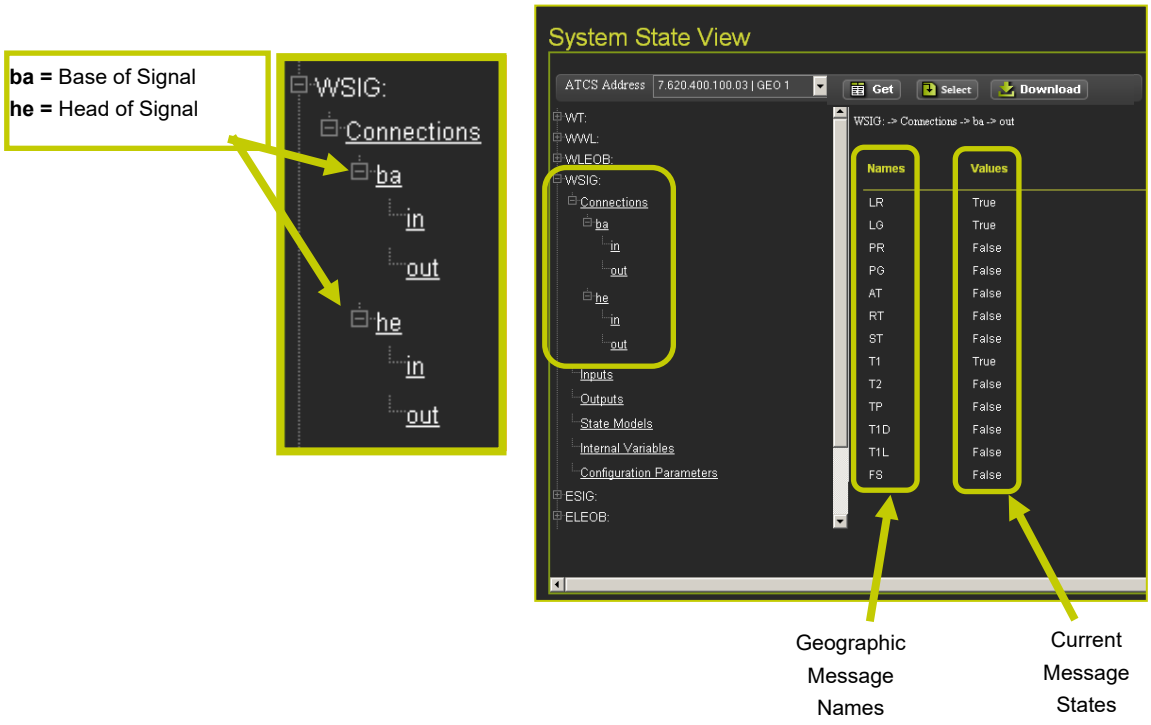


Figure 4-85 Connections

- **System State View - Inputs**

The Input category includes all controls and physical inputs associated with each Geographic Object including relay inputs, searchlight signal mechanism inputs, and coded track inputs. In this example the state of controls and physical inputs of signal ESIG are displayed.

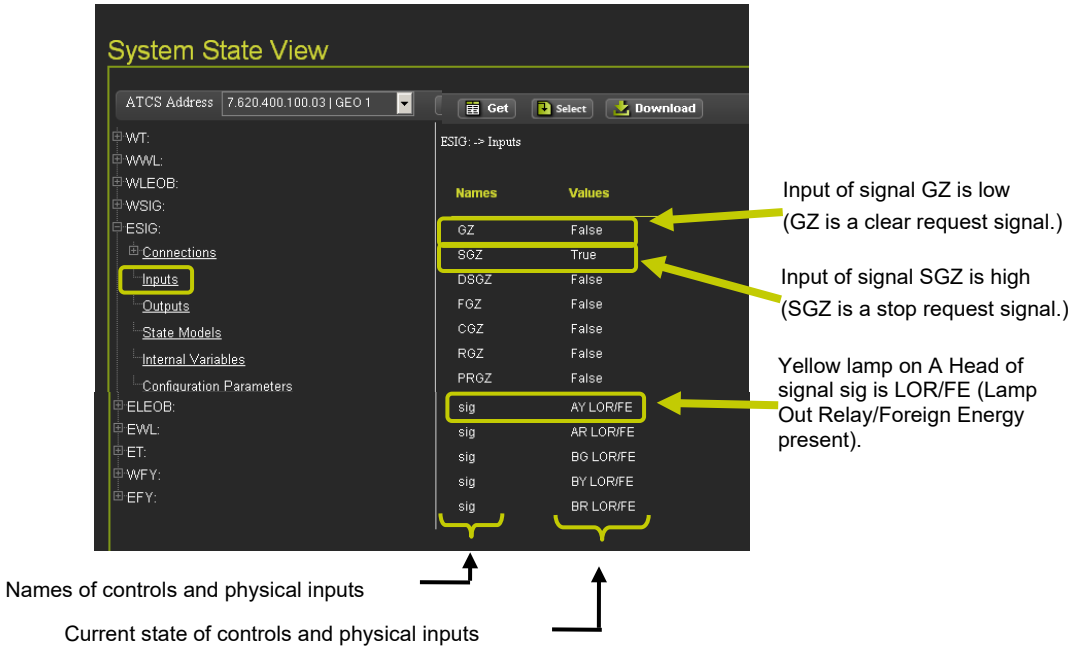


Figure 4-86 System State View - GEO Inputs

- **System State View - Outputs**

The Outputs category includes all indications and physical outputs associated with each Geographic Object including lamp outputs, relay outputs, searchlight signal mechanism outputs, and coded track outputs. In this example the state of indications and physical outputs of signal ESIG are displayed.

- **System State View - State Models**

The State Models category includes the current state of all state models defined in the Geographic Object Library. In this example the current state of the State Models of signal ESIG are displayed.

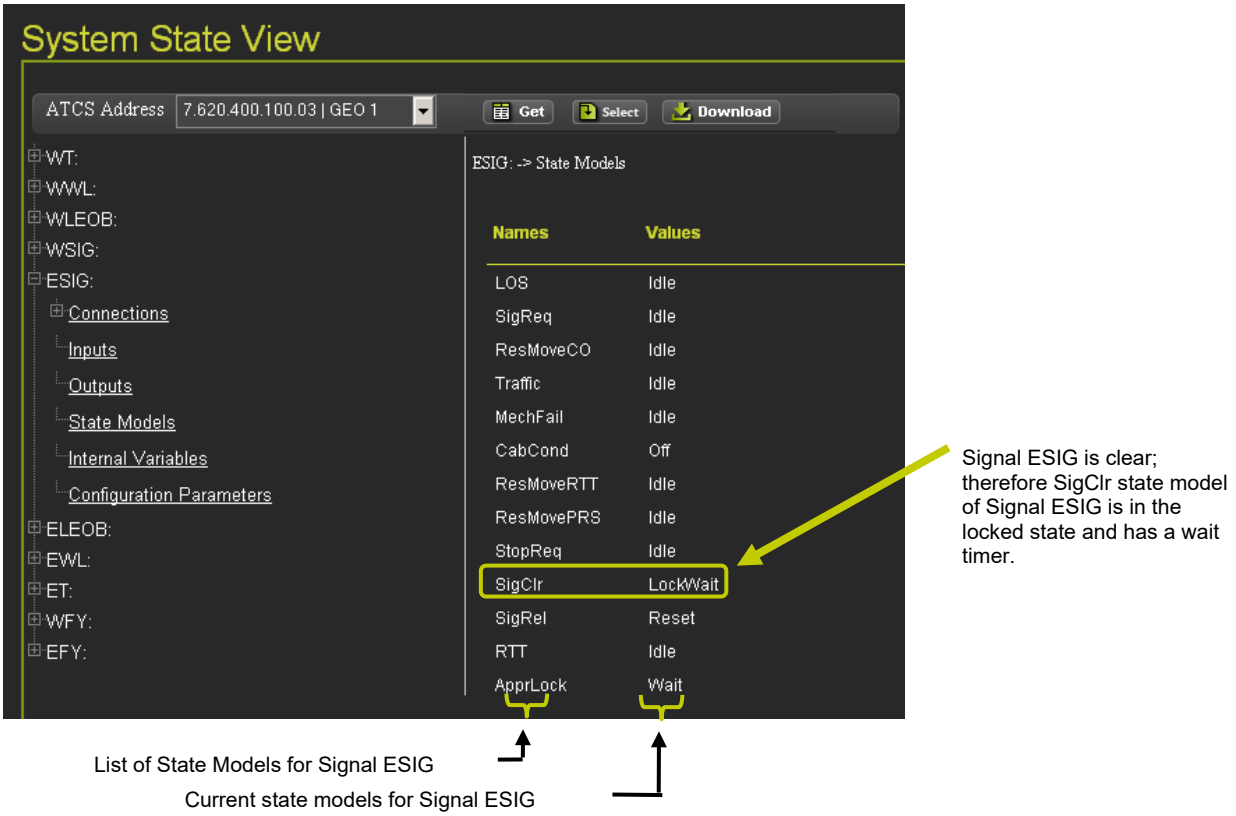


Figure 4-87 System State Views - State Models

- **System State Views - Internal Variables**

The Internal Variables category includes the current state or value of all other variables defined in the Geographic Object Library.

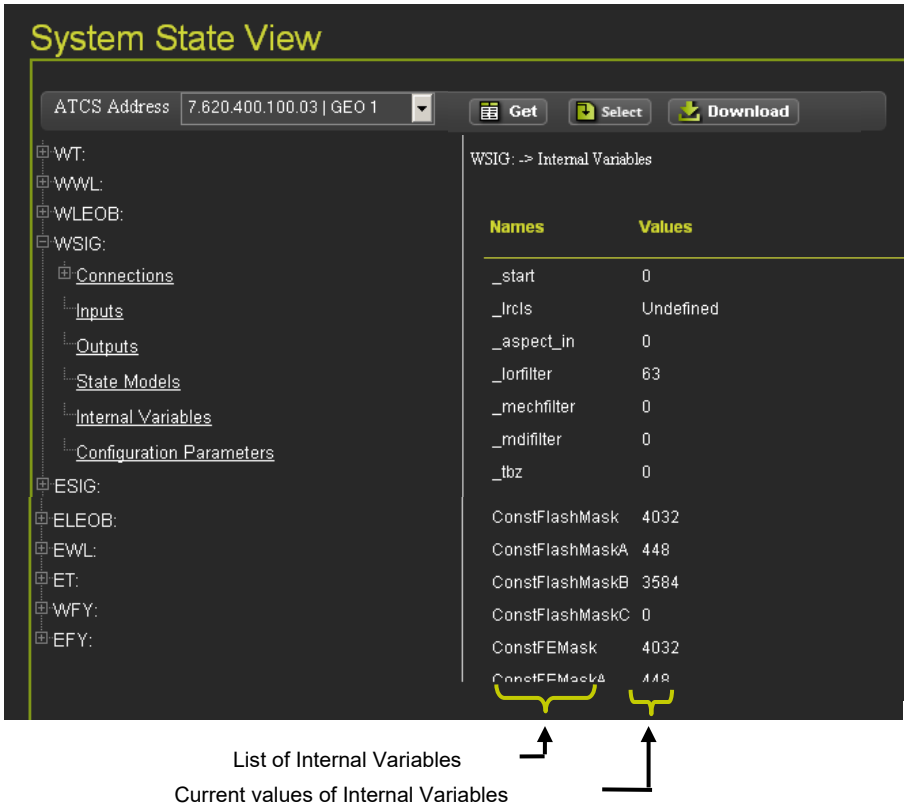


Figure 4-88 System State Views - Internal Variables

- **System State Views - Configuration Parameters**

The Configuration Parameters category includes a list of parameters and the current configuration of each parameter.

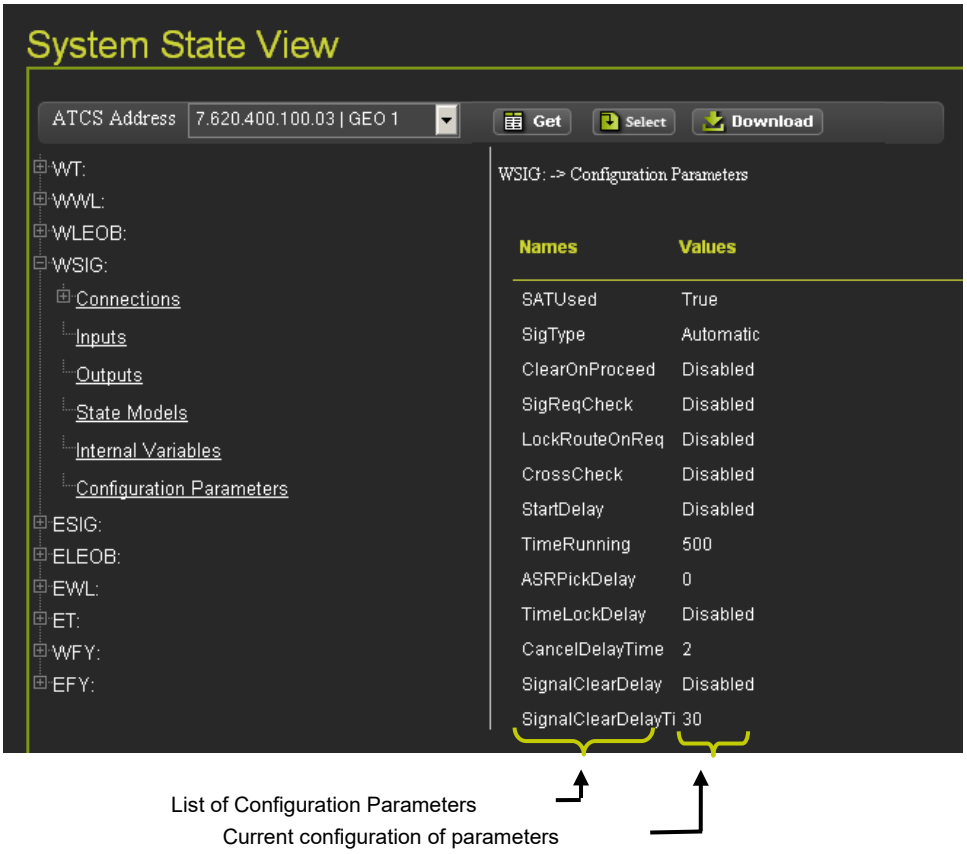


Figure 4-89 System State Views - Configuration Parameters

- **Download Object Values**

To download the Object Values to a file click on the Download button [1] to bring up a pop-up window. The window provides optional selections for viewing data in a Notepad file or saving the data to a file [2] as shown in Figure 4-90.

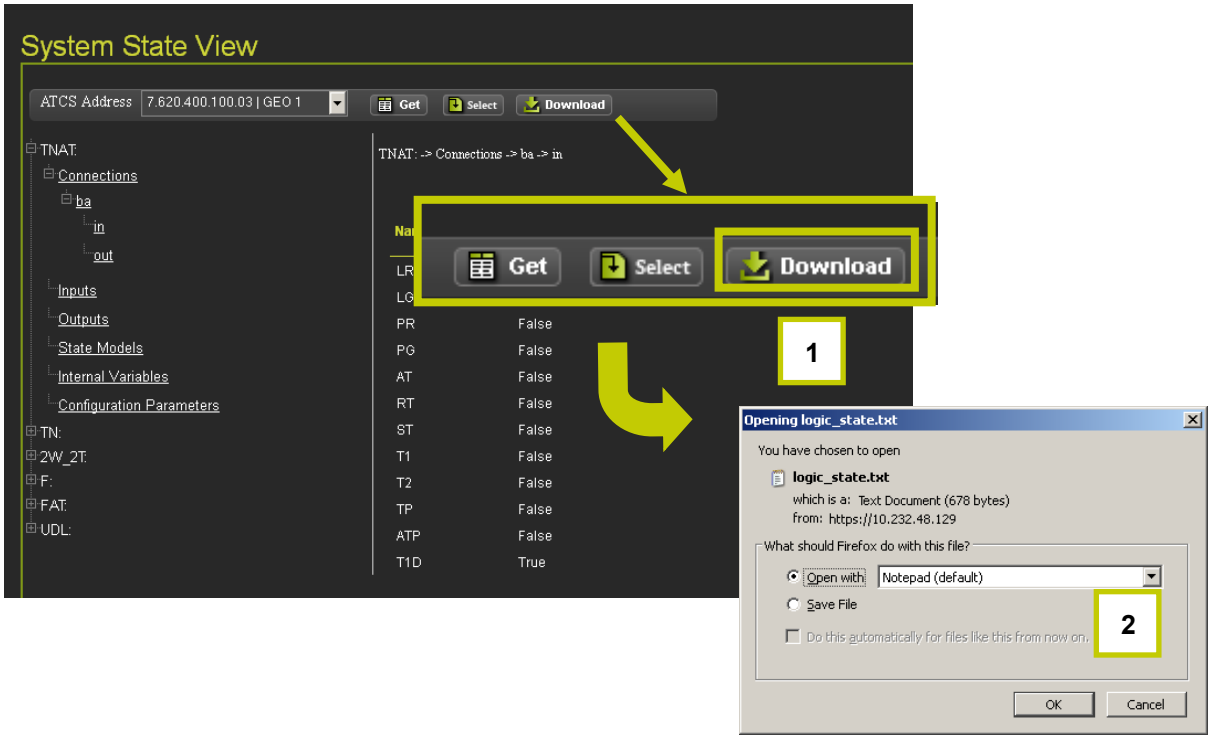


Figure 4-90 System State View - Download Object Values

Figure 4-91 displays an example of a download printout of Aspect Signal information.

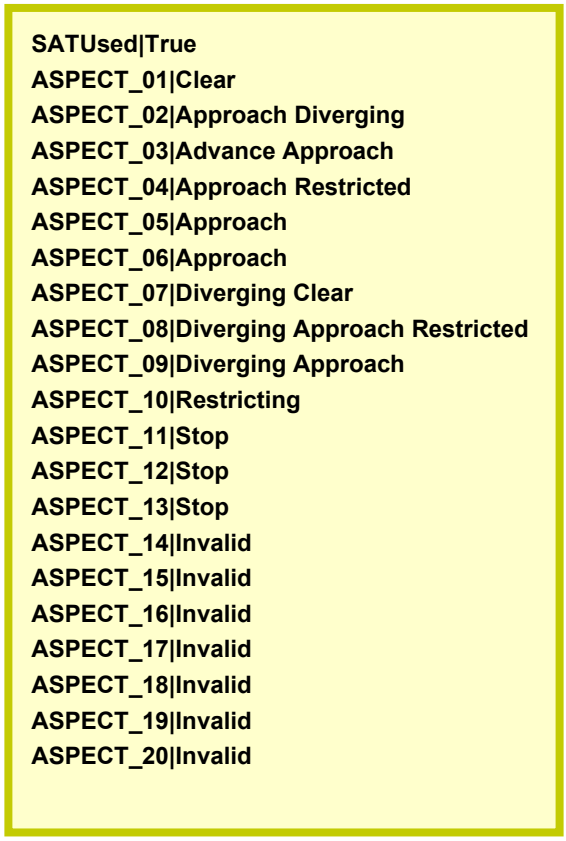


Figure 4-91 Example System State View - Aspect information

4.1.5.3 Echelon Status

The Echelon Status category includes the Module Name, Node Number, TX Count, RX Count, Acknowledge Fails, and Neuron Resets. The current tally for each column is displayed.

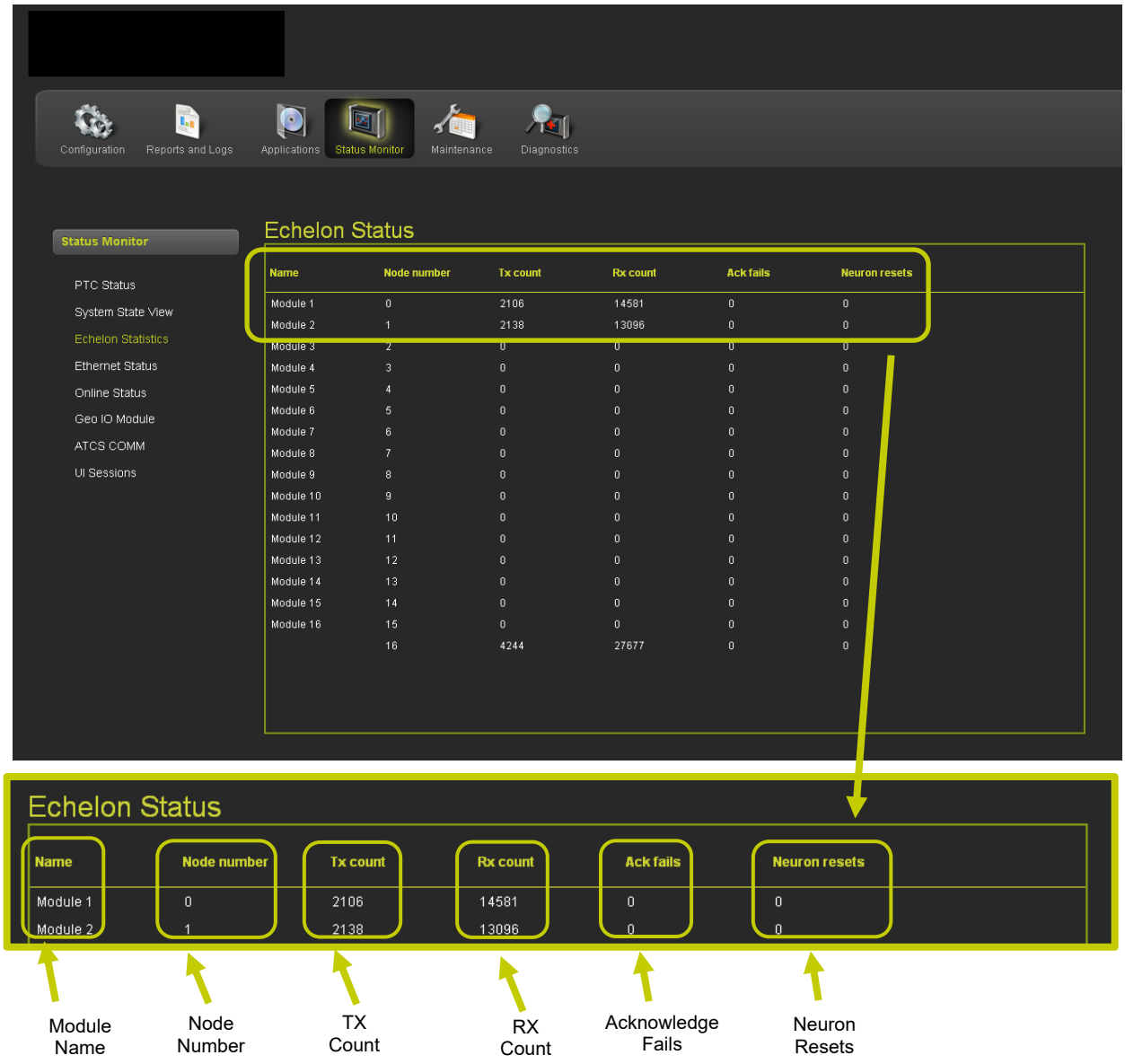


Figure 4-92 Status Monitor - Echelon Status

4.1.5.4 Ethernet Status

The Ethernet Status screen shows the four Ethernet ports and their current settings and connection status.

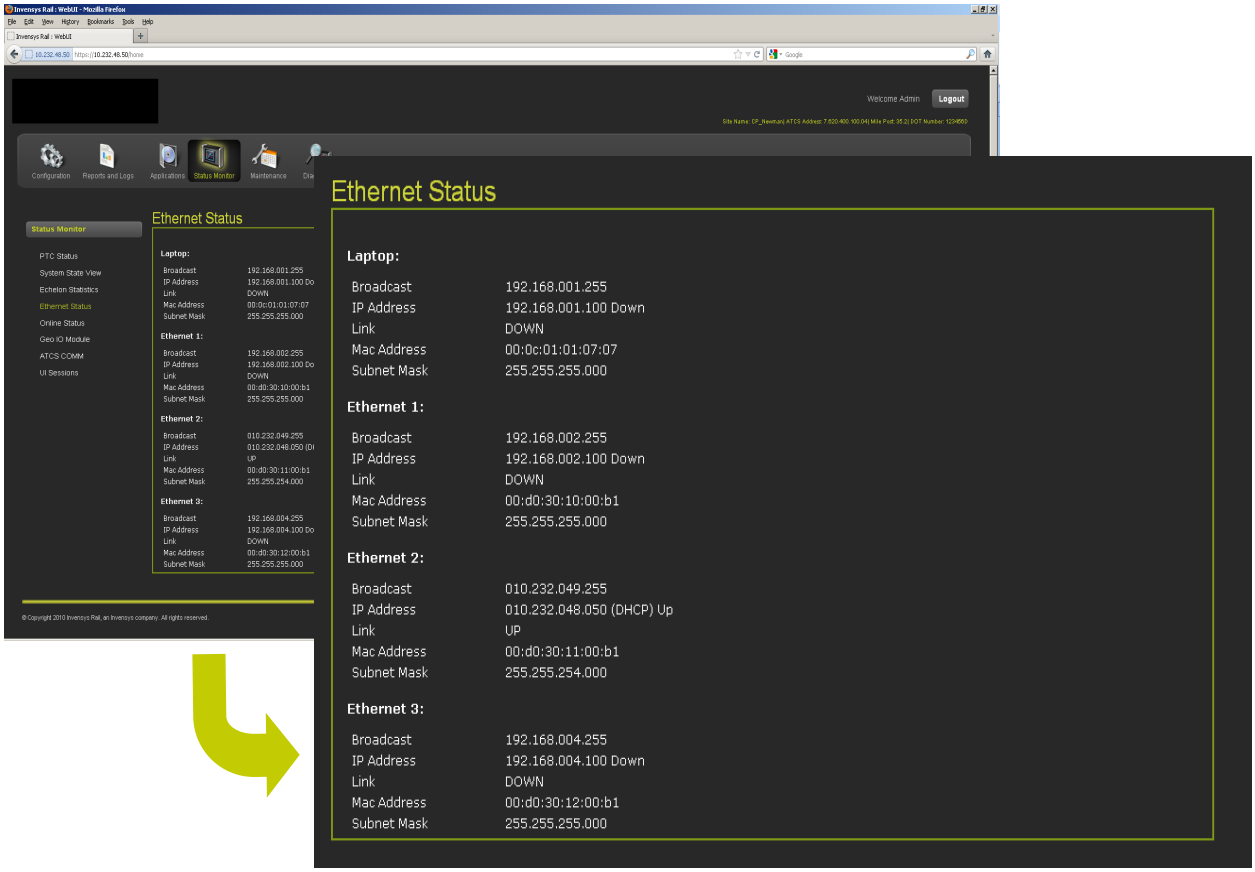


Figure 4-93 Status Monitor - Ethernet Status

4.1.5.5 Online Status

The Online Status lists in real time the status of the components of the selected device. The Online Status comes up running and collecting data. To stop the Online Status stream click on the STOP button. To restart the Online Status stream click on the START button. Save the Online Status data collected by clicking on the SAVE button. A pop-up screen will appear providing options for viewing the data or saving to a file. Click on the CLEAR button to erase the data collected.

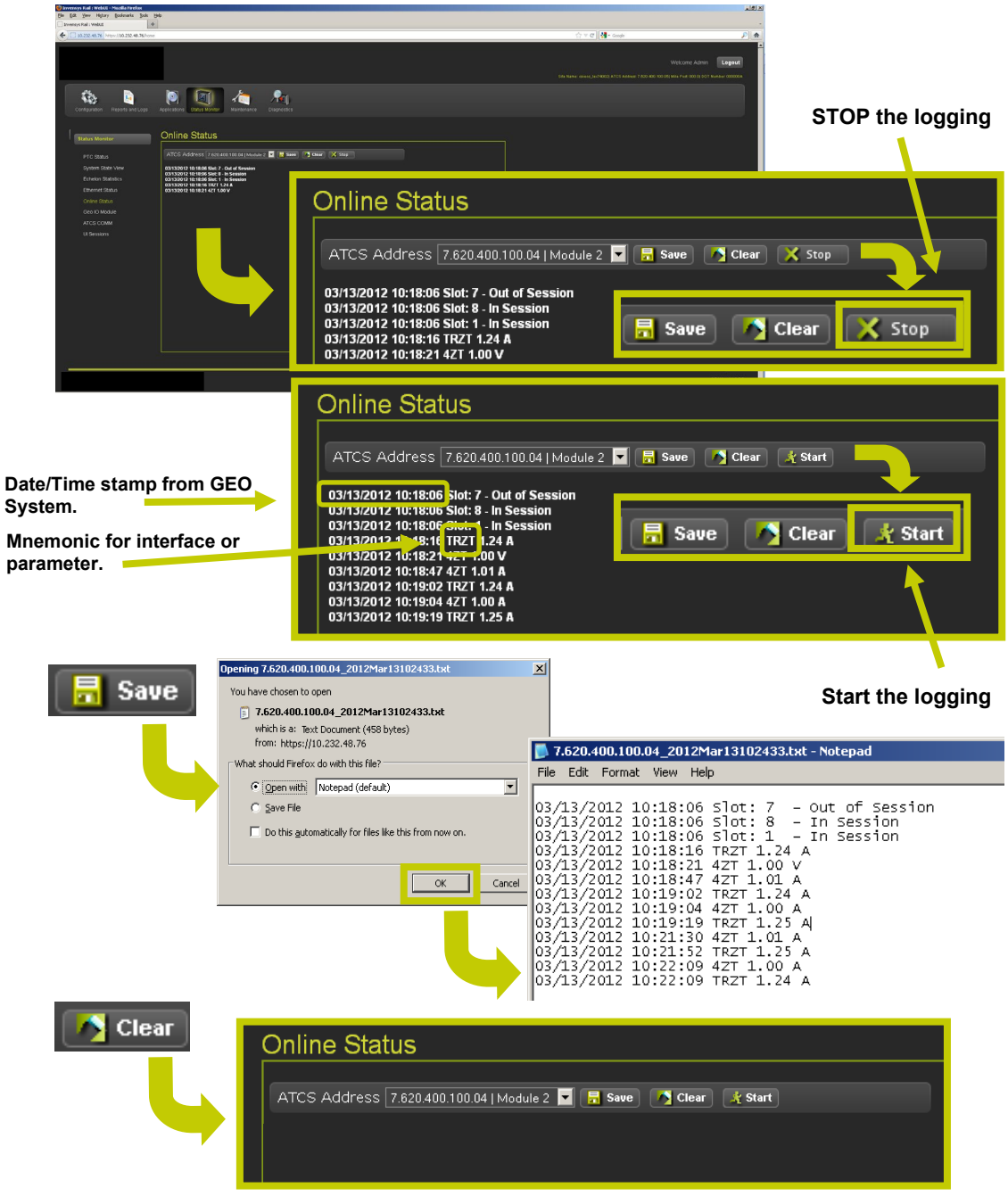
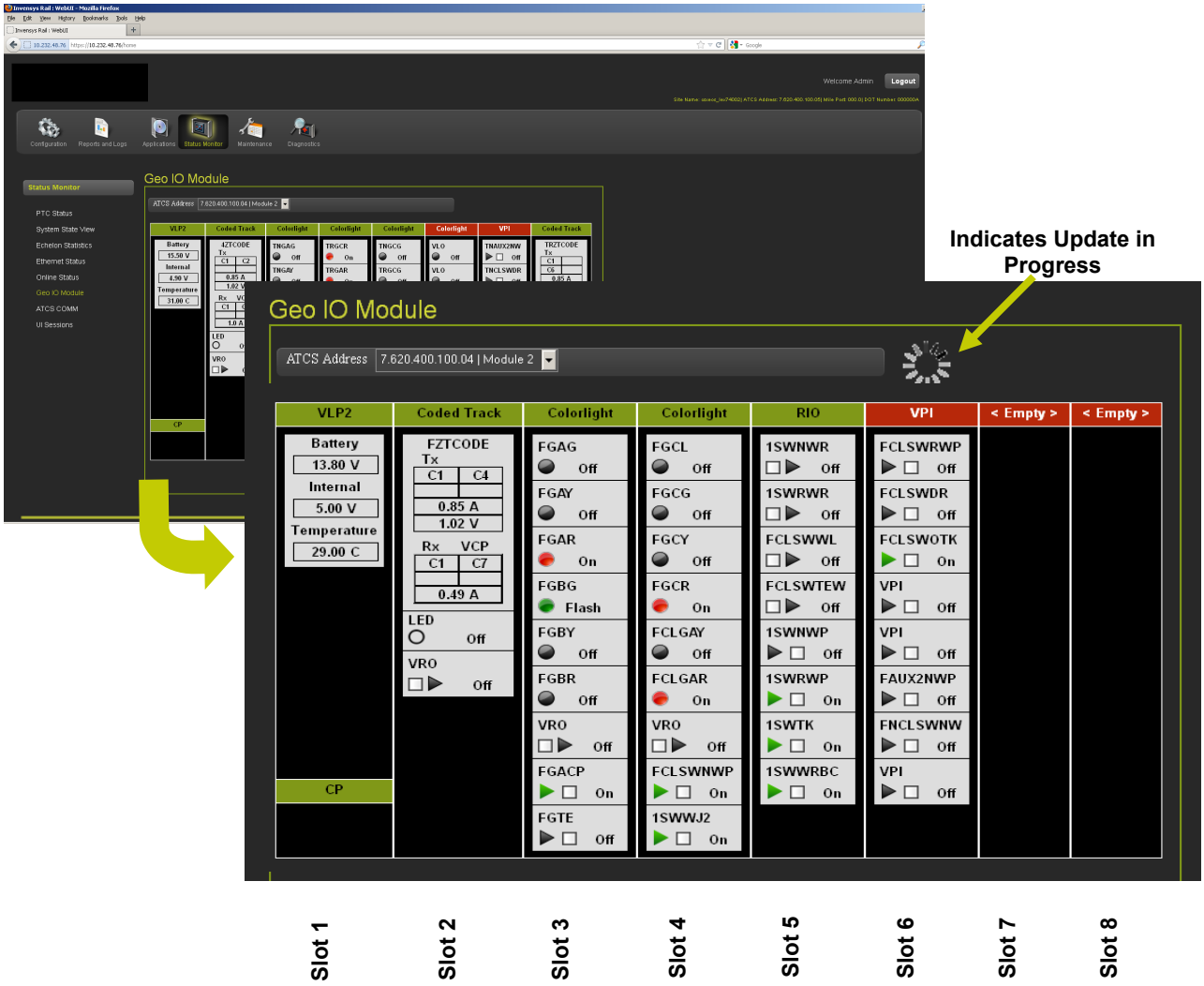


Figure 4-94 Status Monitor - Online Status

4.1.5.6 Status Monitor - GEO I/O Module

The GEO I/O Module screen shows a graphic display of the GEO modules of the selected unit. The display is near real time with a snapshot refreshed every few seconds.



Module Labels: GREEN when operational; RED when not communicating with CPU; when not used.

Figure 4-95 Status Monitor - GEO I/O Module Display

- **GEO I/O Module Displays**

The following are detailed views of the individual modules displayed on the GEO I/O Module real-time screen.

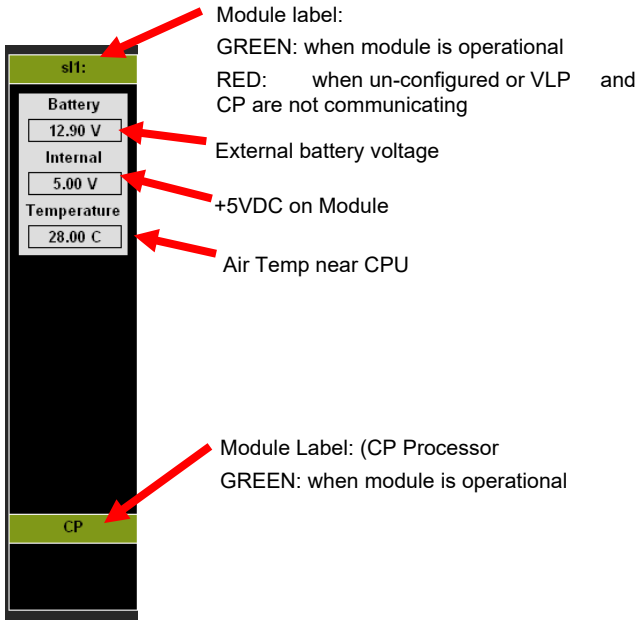


Figure 4-96 CPU II+

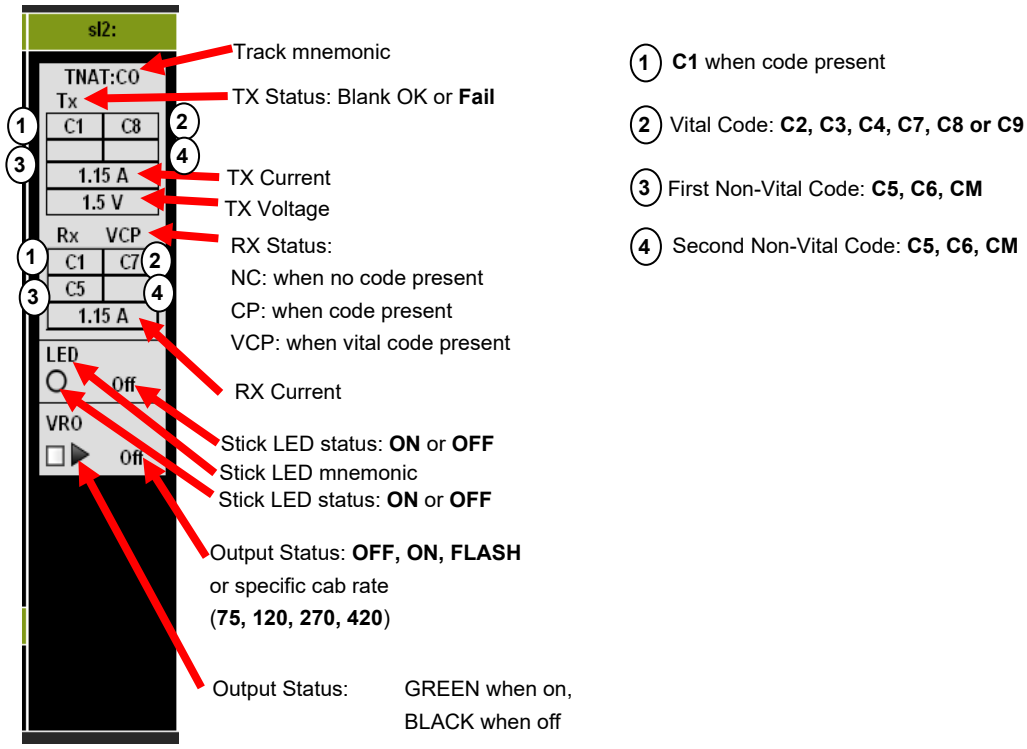


Figure 4-97 Coded Track

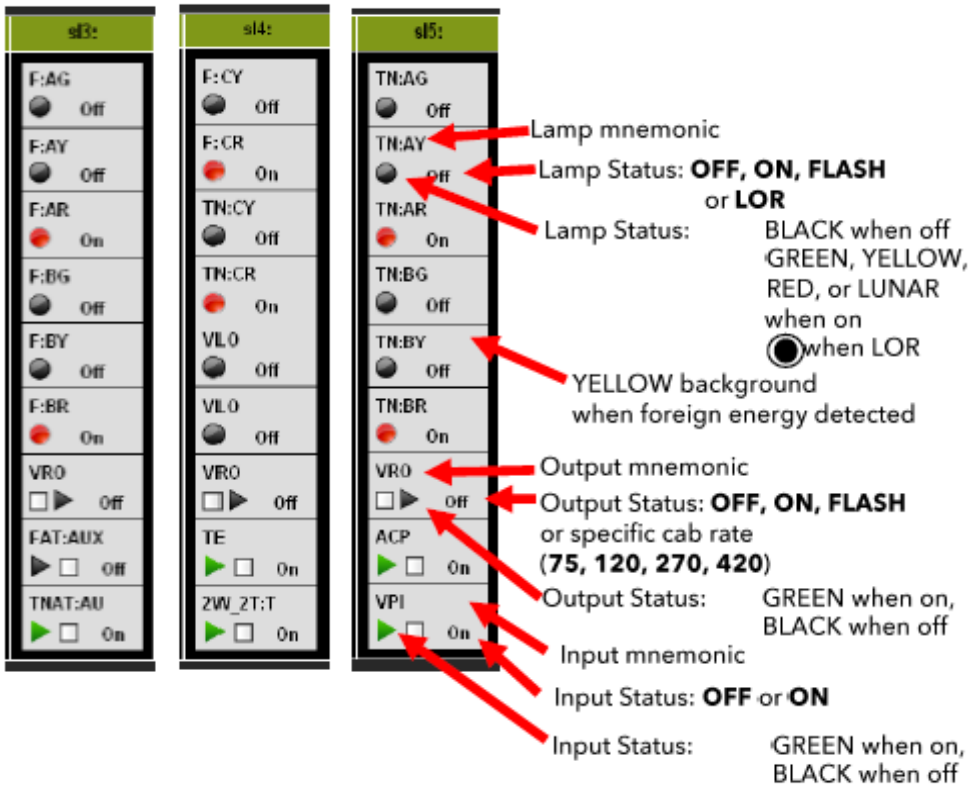


Figure 4-98 Colorlight

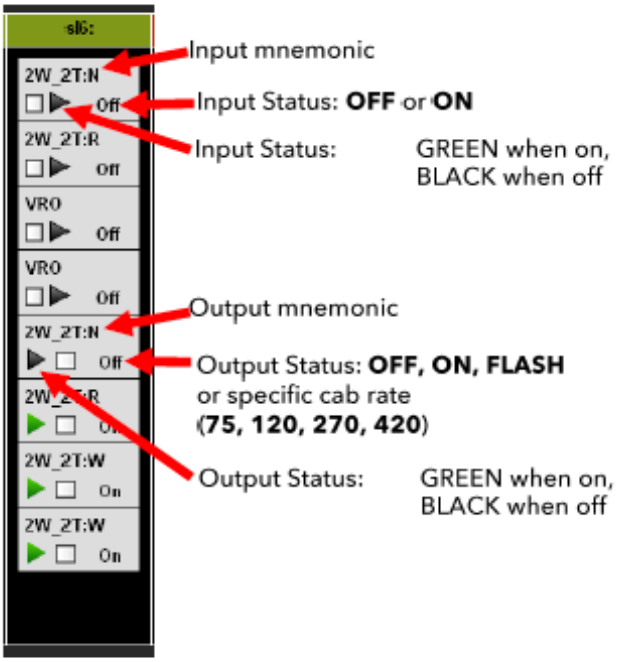


Figure 4-99 RIO

- **GEO I/O - Module Information**

GEO Module information may be retrieved by RIGHT CLICKING the mouse on the Module Label. A pop-up menu will appear, select MODULE INFORMATION and click the mouse. A pop-up window will appear displaying the module parameters and that parameter's value.

NOTE

NOTE

Verify the browser's pop-up blocker is **NOT** on to allow the information window to appear.

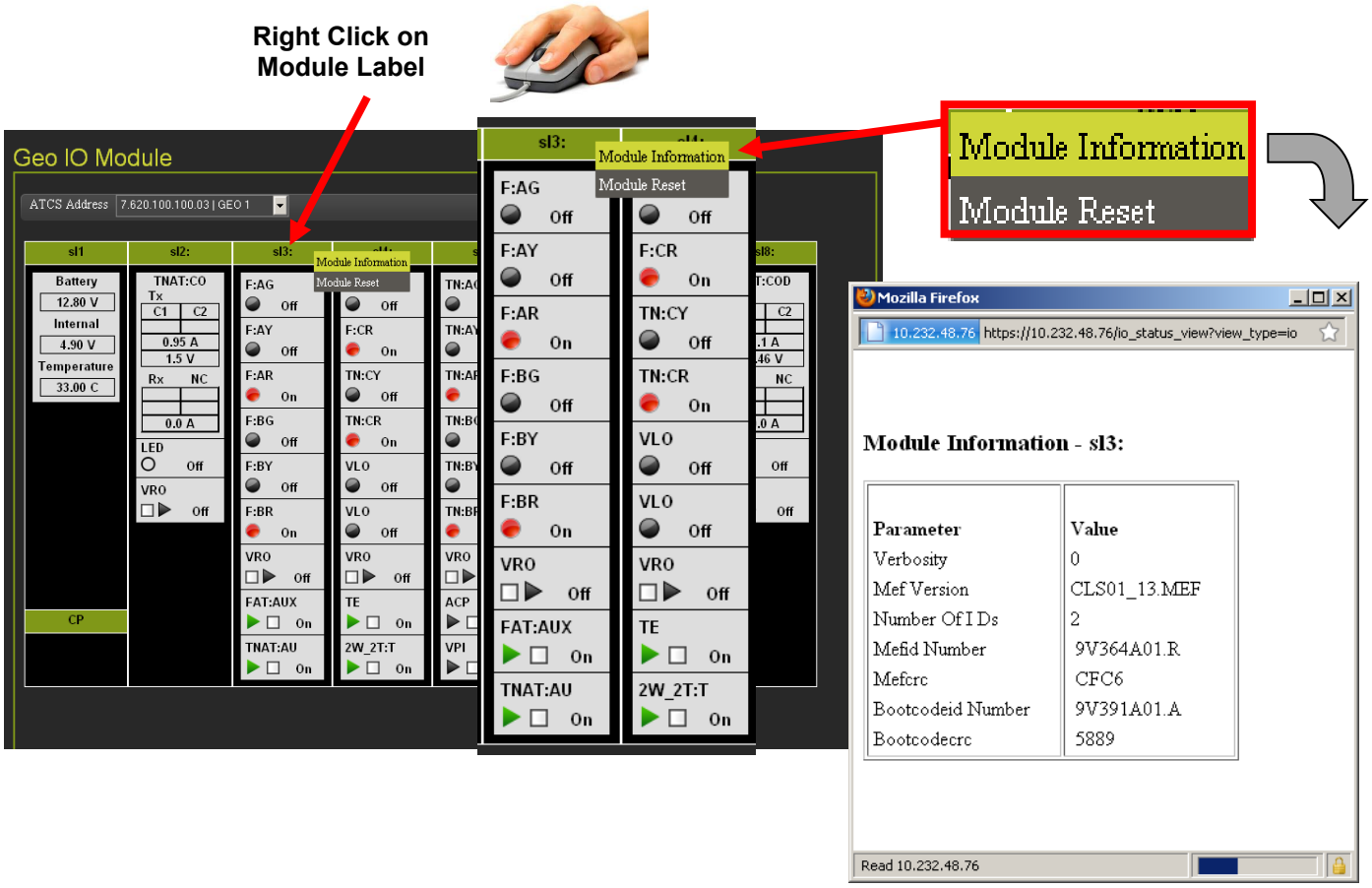


Figure 4-100 GEO I/O - GEO Module Information

- **GEO I/O - Module Reset**

A GEO module can be reset by RIGHT CLICKING the mouse on the Module Label. A pop-up menu will appear, select MODULE RESET and click the mouse. A pop-up window will appear displaying the module is being rebooted.

WARNING

SITE EQUIPMENT MUST BE PLACED IN THE MAINTENANCE MODE AND APPLICABLE SAFETY PRECAUTIONS IN PLACE TO PROTECT VEHICLES, PEDESTRIANS, AND RAILWAY TRAFFIC.

THE RESETTING OF MODULES WILL CAUSE THE GEO TO ENTER A RESTRICTIVE/SAFE STATE.

IT IS THE RESPONSIBILITY OF THE RAILROAD OR AGENCY TO ENSURE QUALIFIED PERSONNEL PERFORM FILE UPLOADING AND ADEQUATE TESTING PRIOR TO PLACING EQUIPMENT BACK INTO SERVICE.

NOTE

Verify the browser's pop-up blocker is **NOT** on to allow the information window to appear.

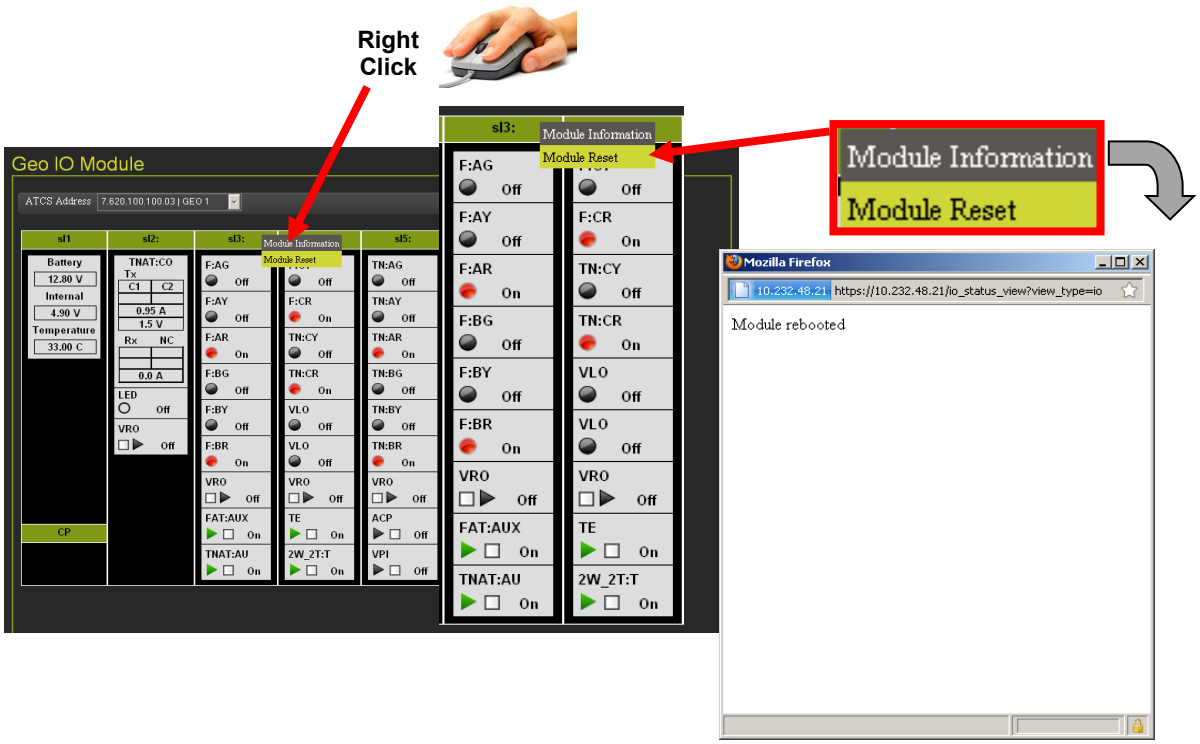


Figure 4-101 GEO I/O - GEO Module Reset

4.1.5.7 Status Monitor - ATCS Comm

The ATCS Communication Links (ATCS Comm) function displays the ATCS links between the GEO and connected devices. Figure 4-102 details the ATCS Comm display.

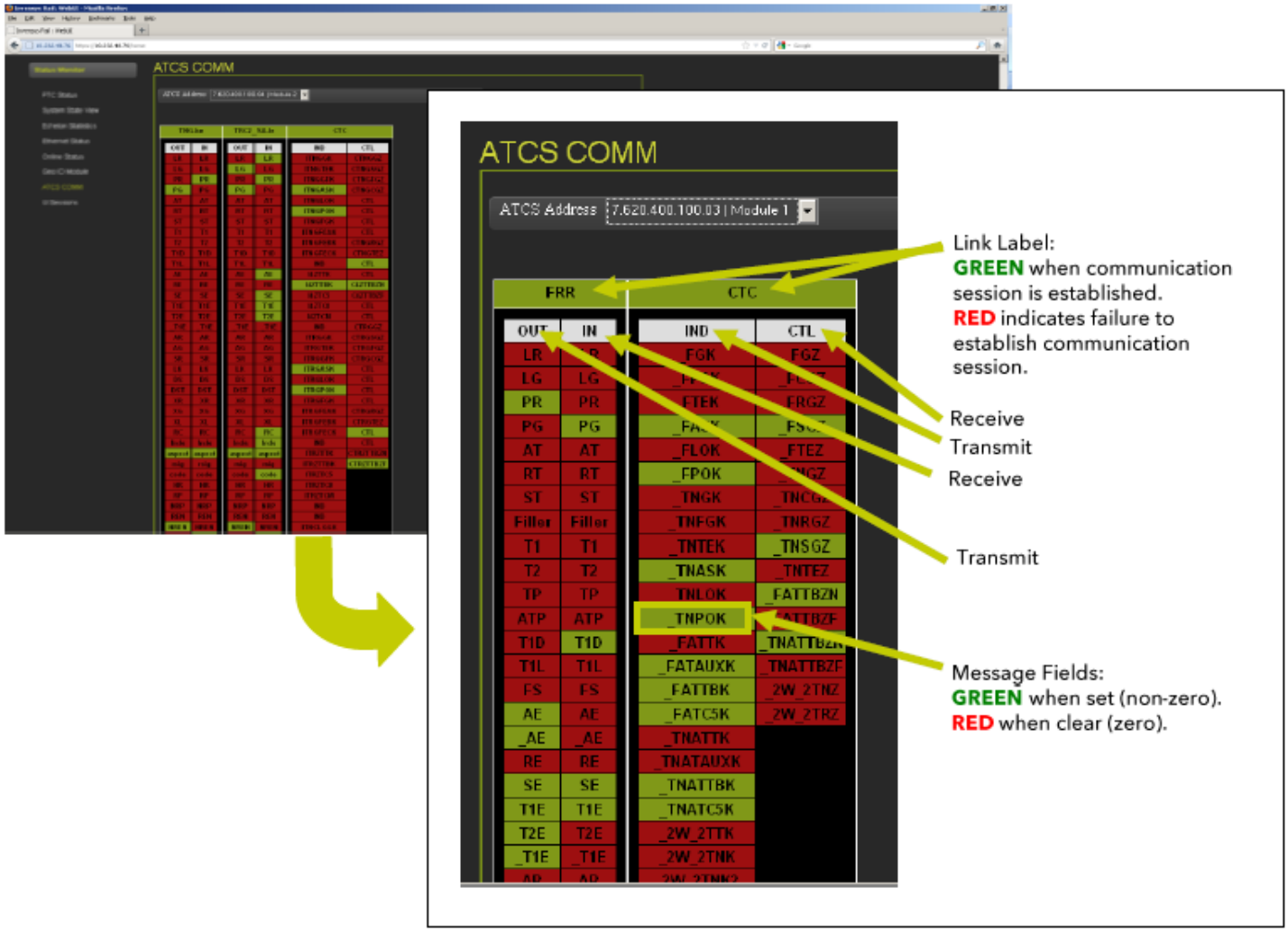


Figure 4-102 ATCS Communications Links

- **ATCS Communication Link - Message Field Status**

When navigating the cursor over the message fields the state of the field will appear, 1 = Set (Green field) and 0 = Clear (Red field) as shown below:

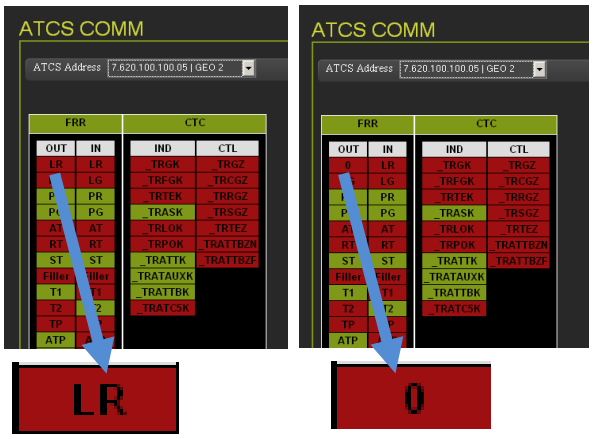


Figure 4-103 ATCS Comm Link - Message Field Status

4.1.5.8 UI Sessions

The UI Sessions function displays the configured ATCS addresses and their current status as shown in Figure 4-104.

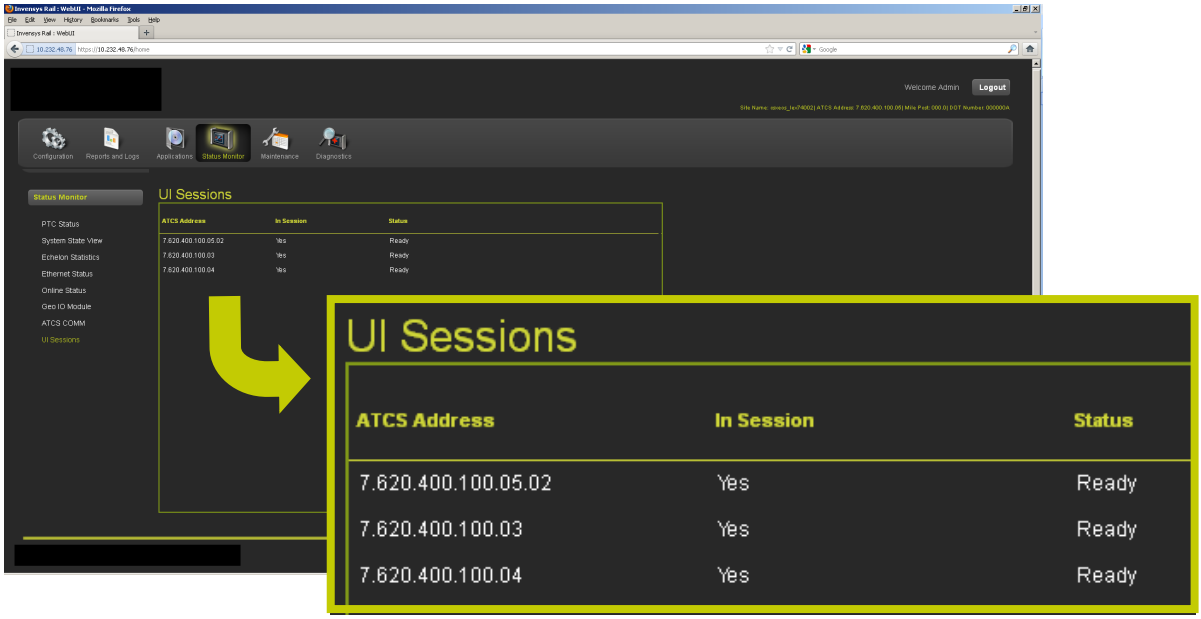


Figure 4-104 UI Sessions

4.1.6 Maintenance

The Maintenance Menu enables software updates to the iVIU system and the attached components.

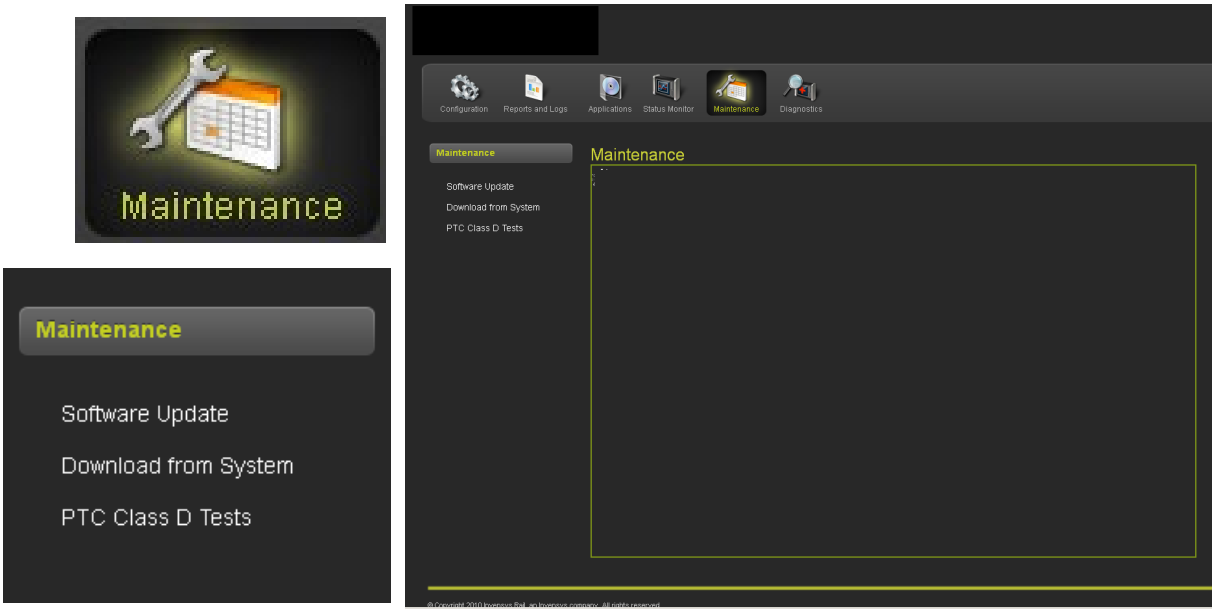


Figure 4-105 Maintenance

4.1.6.1 Maintenance - Software Update

When performing a software update using WebUI from a location outside of the equipment site it is necessary for an authorized technician be present at the site. The technician will need to approve access to the console before the outside source can perform any uploading functions.

⚠ WARNING

WARNING

IN ORDER TO PERFORM ANY SOFTWARE UPGRADES USING WEBUI THERE MUST BE AN OPERATOR AT THE EQUIPMENT SITE TO SECURE THE SITE TO MAINTAIN SAFETY TO PEDESTIANS, VEHICULAR TRAFFIC, AND TRAINS.

THE SITE OPERATOR MUST APPROVE ACCESS TO THE EQUIPMENT BEFORE THE REMOTE COMPUTER CAN PERFORM ANY SOFTWARE UPDATES.

- **Software Update - Unlocking iVIU Console**

To start a software update it is necessary to unlock the iVIU Console. Click on the UNLOCK button [1], this will bring up a pop-up screen [2] advising continuing will place the system in a restrictive/safe state. Click the OK button to proceed. A screen will appear on the iVIU Console at the equipment site, a qualified technician at the equipment site will press the ENTER key on the console keyboard to allow remote access to the console.

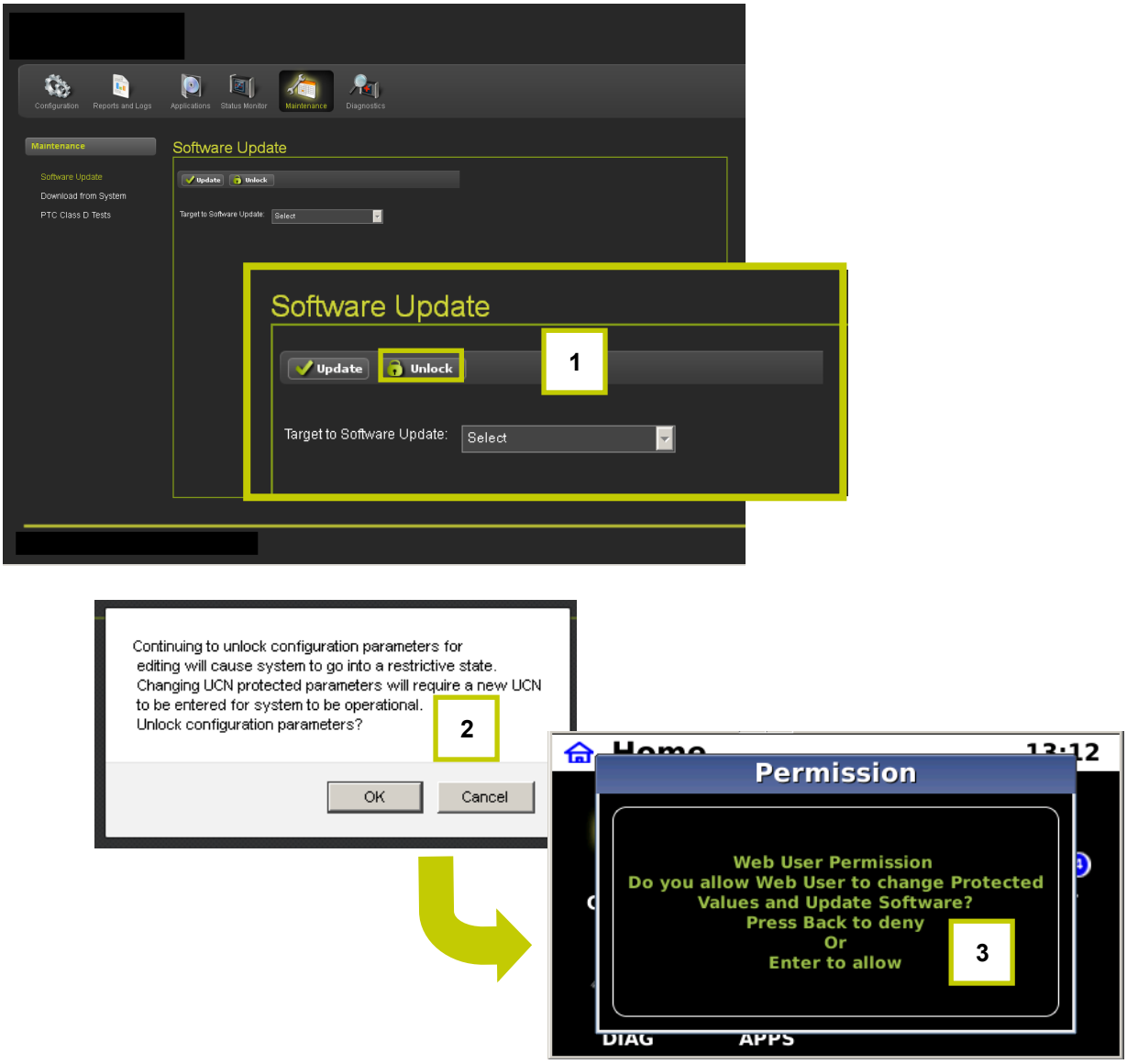


Figure 4-106 Unlocking iVIU Console

When the on-site technician approves the remote access to the console, an authentication message will appear on the Web UI screen [4]. The software update can now be performed.

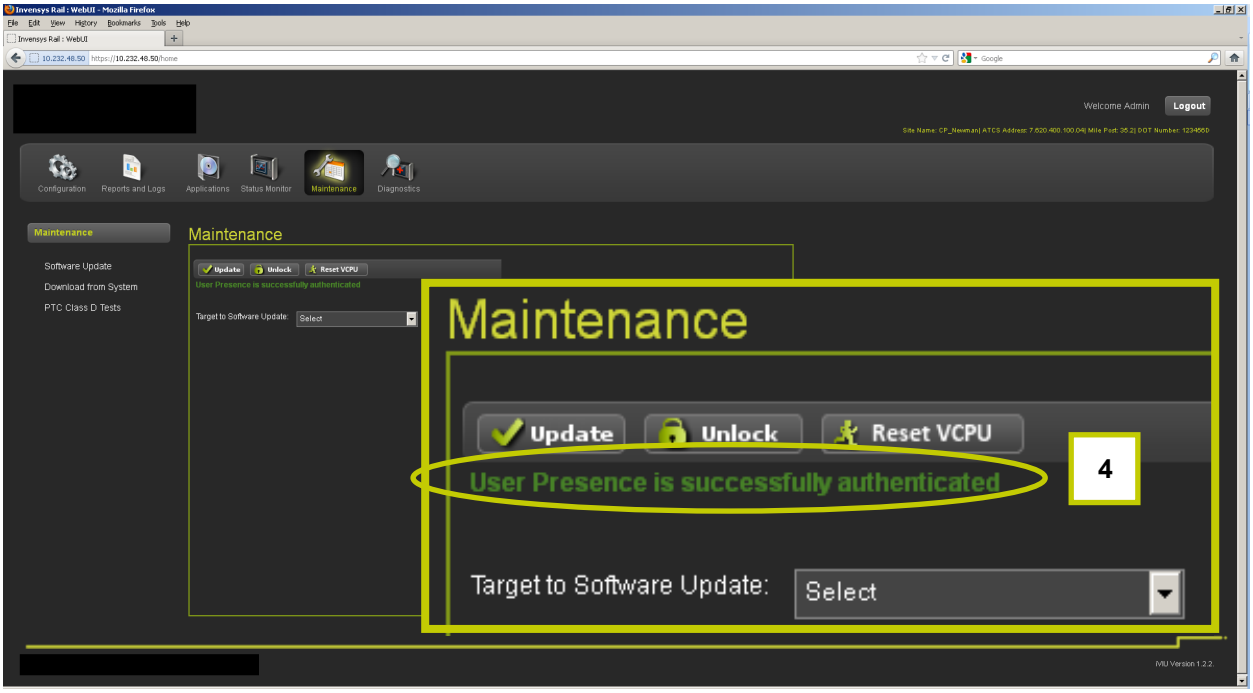


Figure 4-107 Unlocking iVIU Console - Authenticated

- **Software Update Options**

The Software Update screen has a drop-down menu with eight sub-menus as shown below.

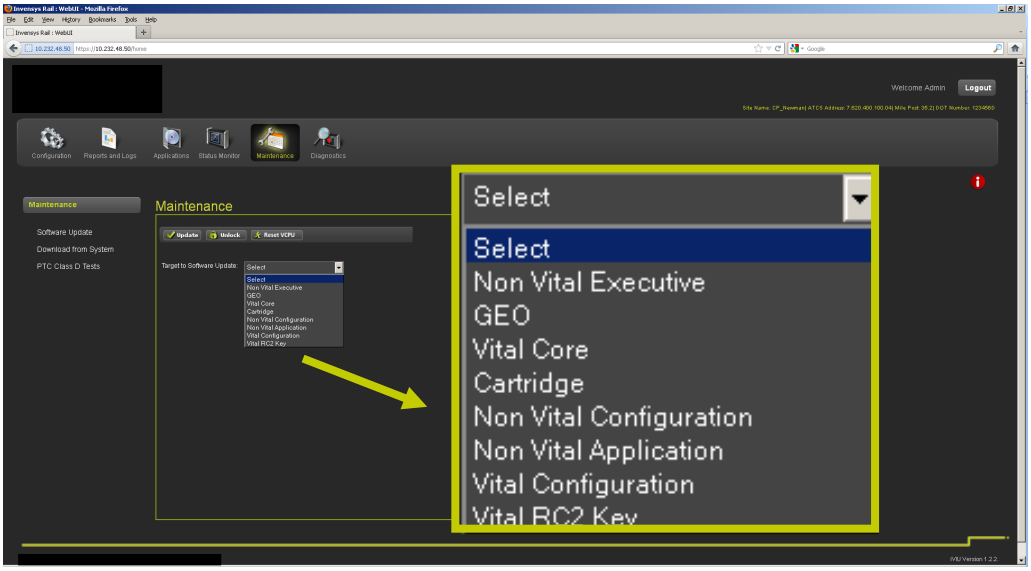


Figure 4-108 Software Update Sub-Menus

- **Software Update - Sub-Menu Screens**

The following figures display the eight software update sub-menu screens.

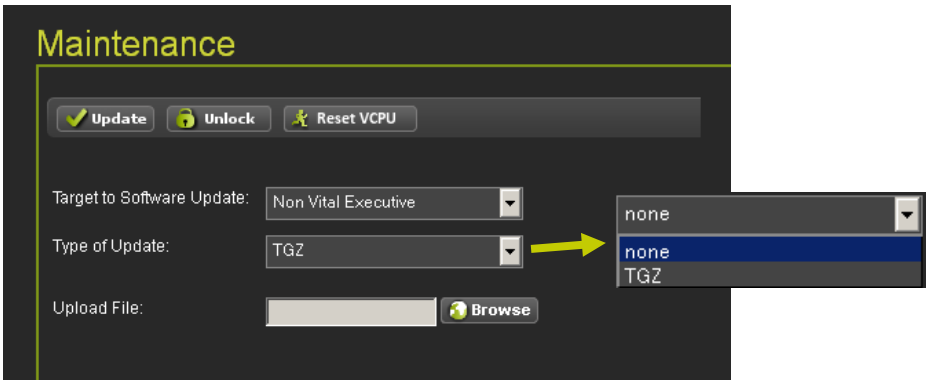


Figure 4-109 Non-Vital Executive Software Update

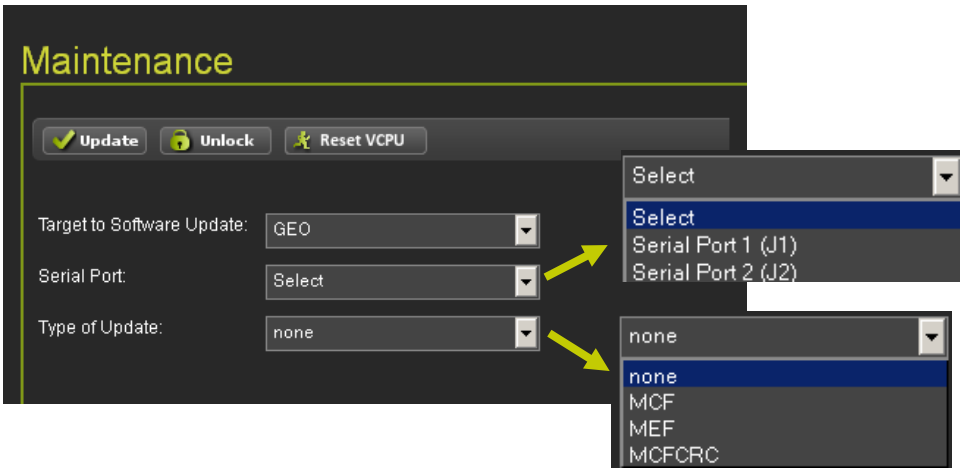


Figure 4-110 GEO Software Update

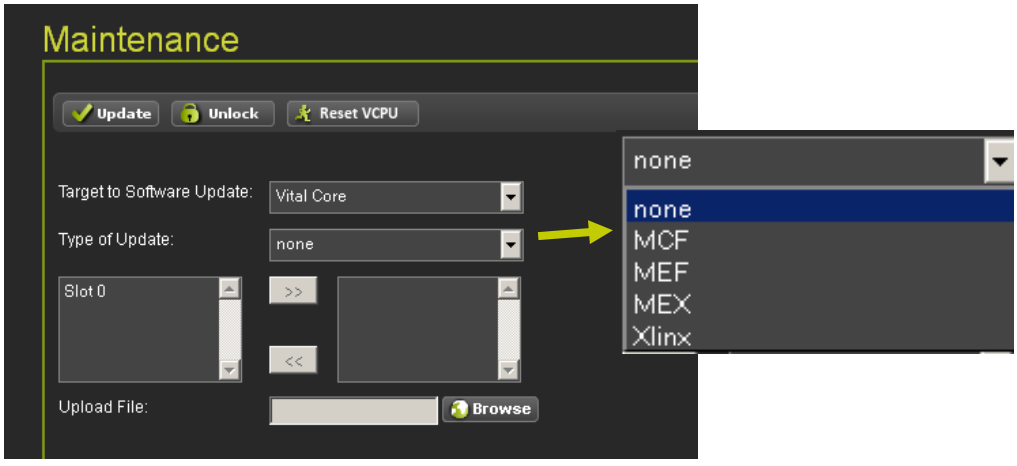


Figure 4-111 Vital Core Software Update

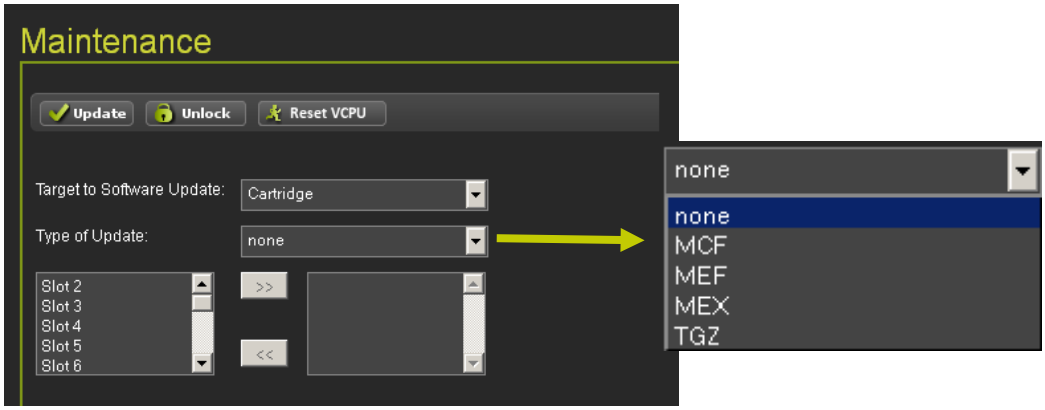


Figure 4-112 GEO Cartridge Software Update

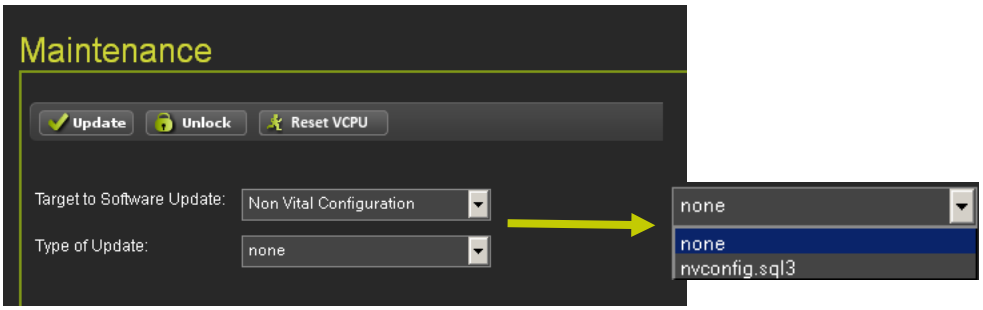


Figure 4-113 Non-Vital Configuration Software Update

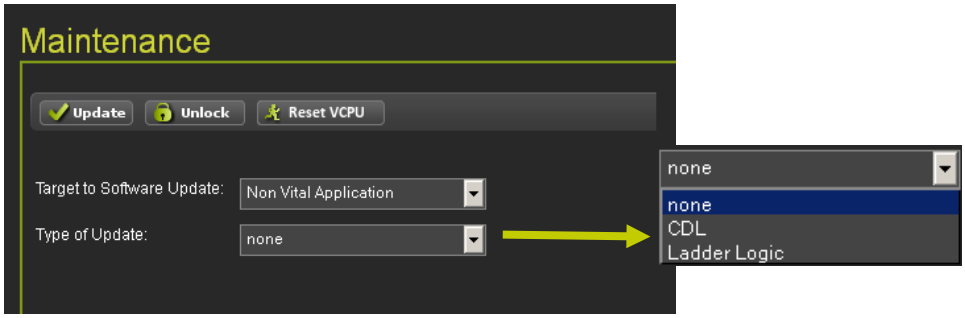


Figure 4-114 Non-Vital Application Software Upgrade

Figure 4-115 Vital Configuration Software Upgrade

- **Download From System**

The following screens display the sub-menus for downloading Vital and Non-Vital Configuration and Application files from the iVIU System.

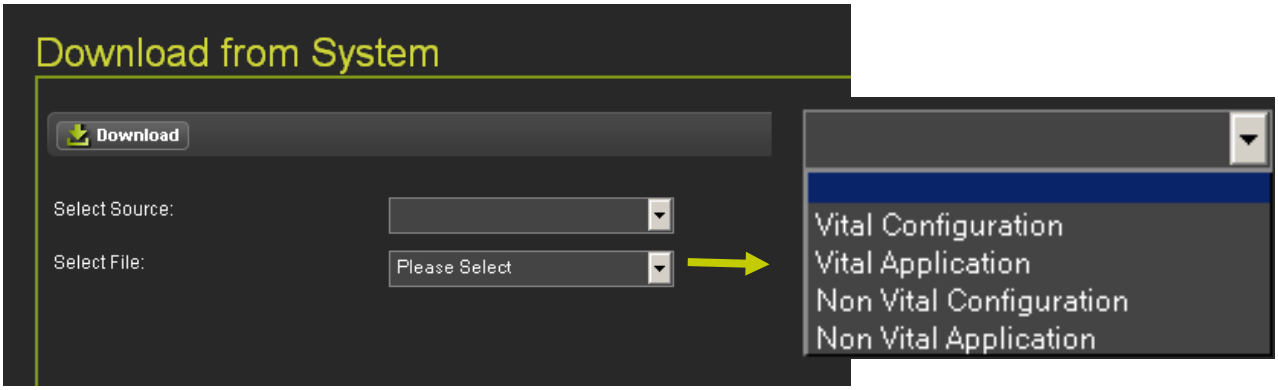


Figure 4-116 Download Configuration and Application Files

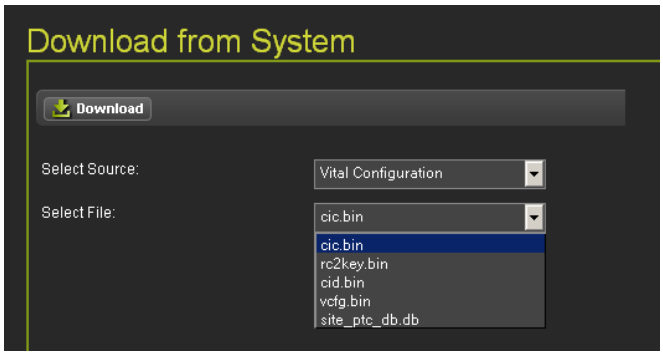


Figure 4-117 Vital Configuration Download

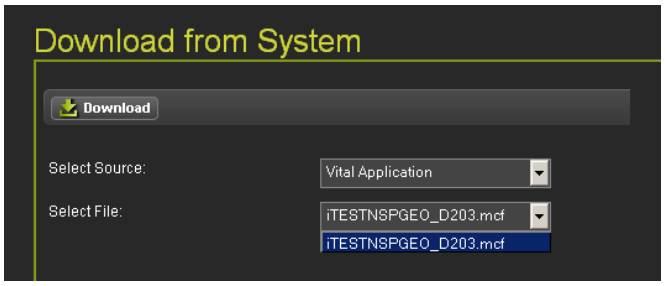


Figure 4-118 Vital Application Download

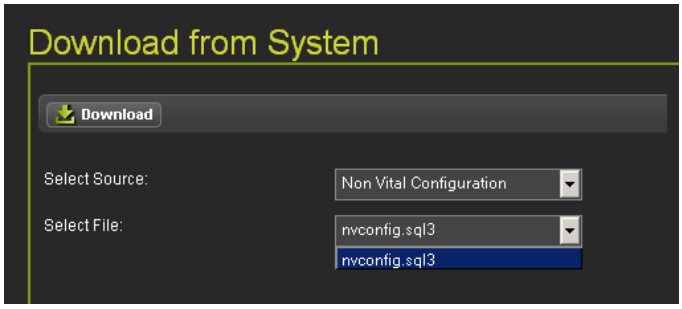


Figure 4-119 Non-Vital Configuration Download

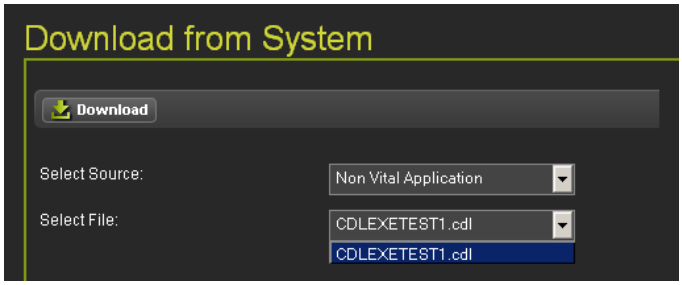


Figure 4-120 Non-Vital Application

- **PTC Class D Tests**

PTC Class D Tests verify the IP based point to point protocol for messaging. Test message can be enabled and sent to a test server. The test results are logged for review later.

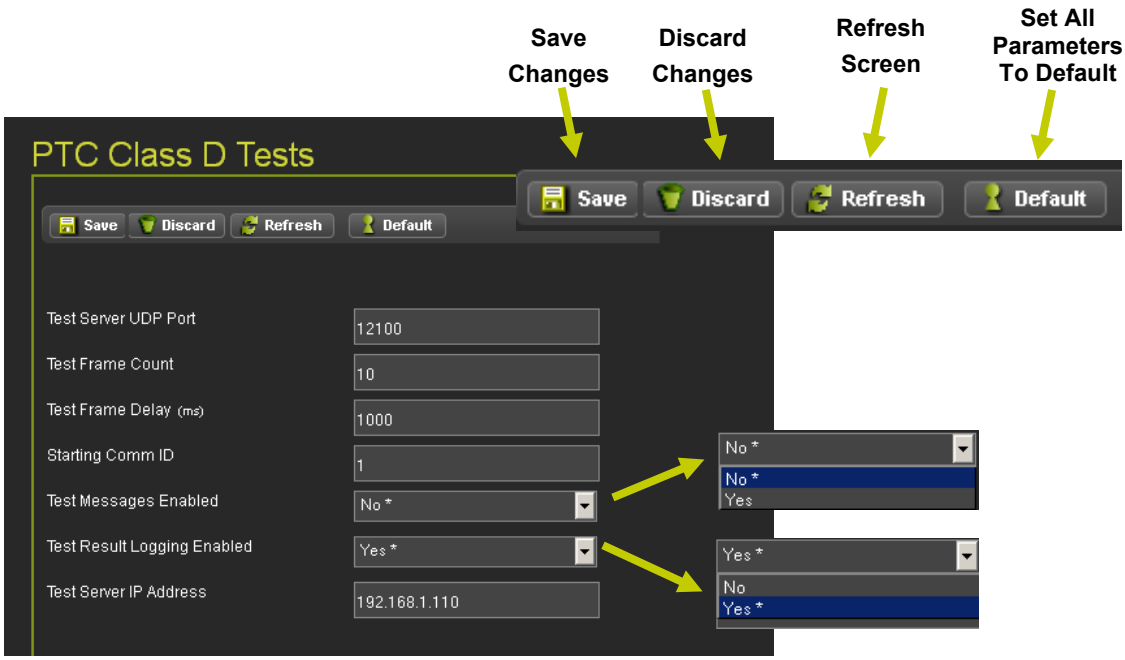


Figure 4-121 PTC Class D Tests

4.1.7 Diagnostics

The Diagnostic menu has two sub-menus, GEO Statistics and Information as shown in Figure 4-122 below.

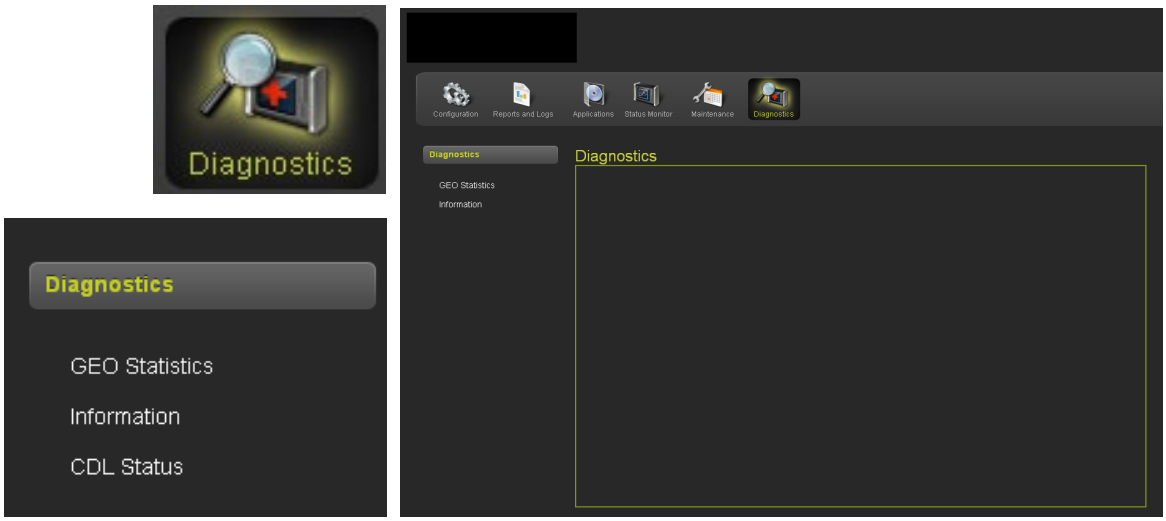


Figure 4-122 Diagnostics

4.1.7.1 GEO Statistics

The GEO Statistics diagnostics menu has eight statistics screens as shown in Figure 4-123.

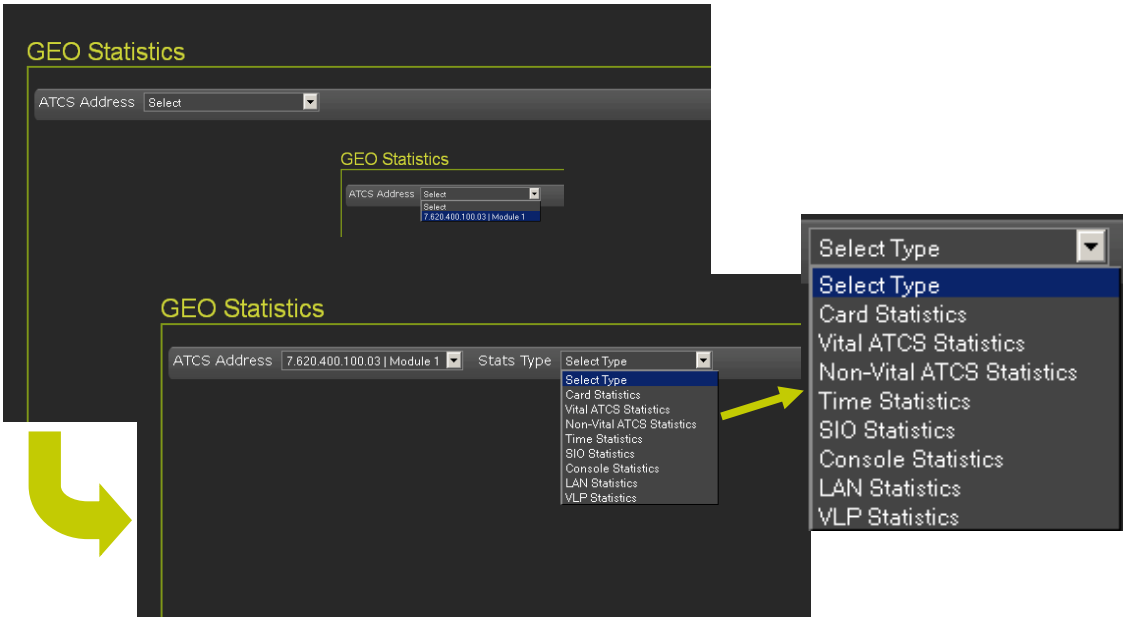


Figure 4-123 GEO Statistics

- **GEO Statistics Screens**

The following are the GEO Statistics screens available.

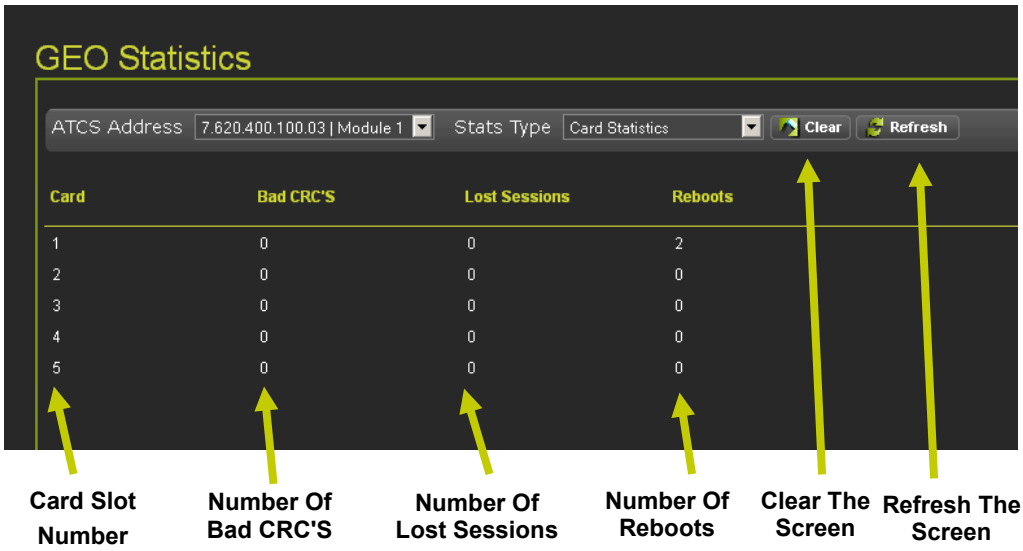


Figure 4-124 GEO Card Statistics

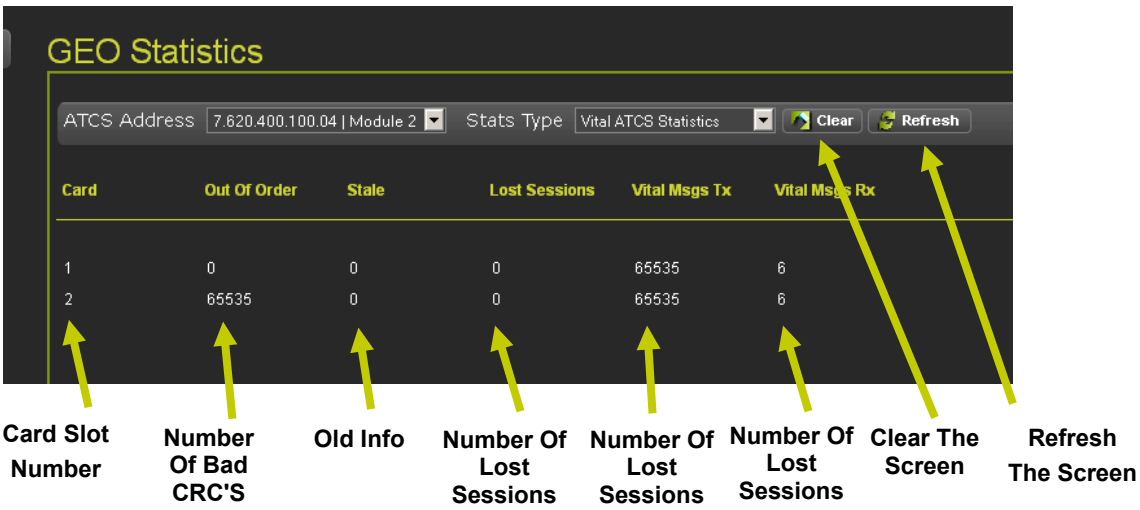


Figure 4-125 ATCS Statistics

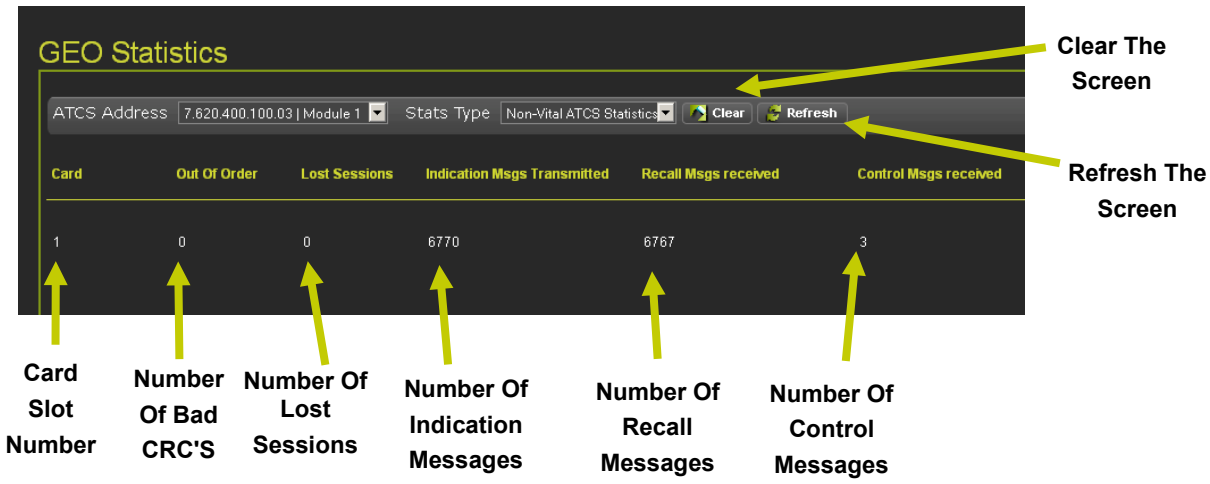


Figure 4-126 Non-Vital ATCS Statistics

Figure 4-127 Time Statistics

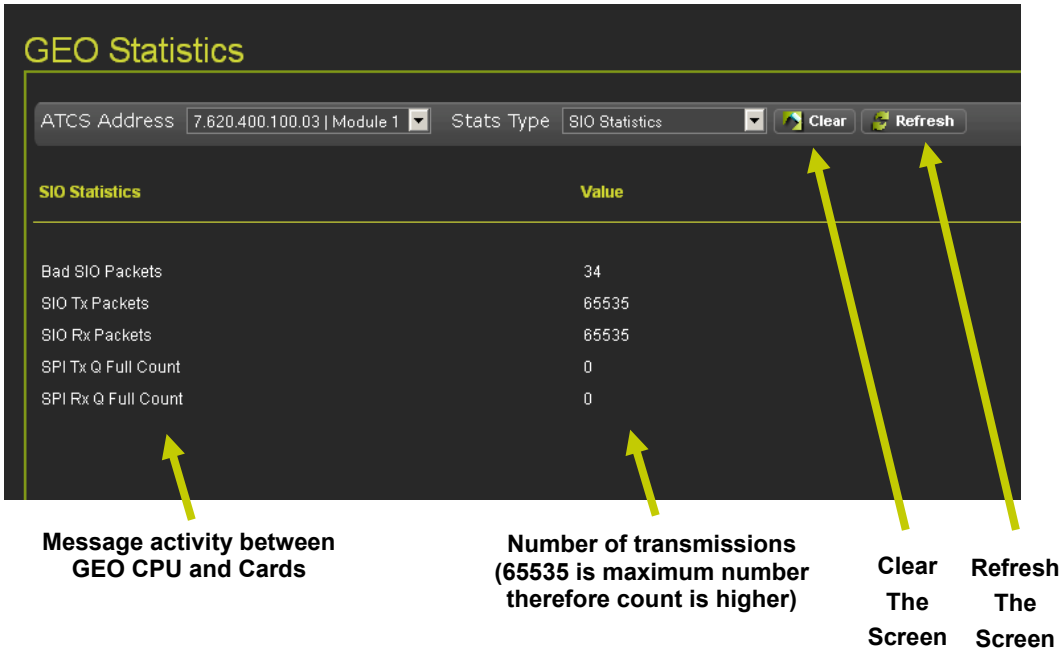


Figure 4-128 SIO Statistics

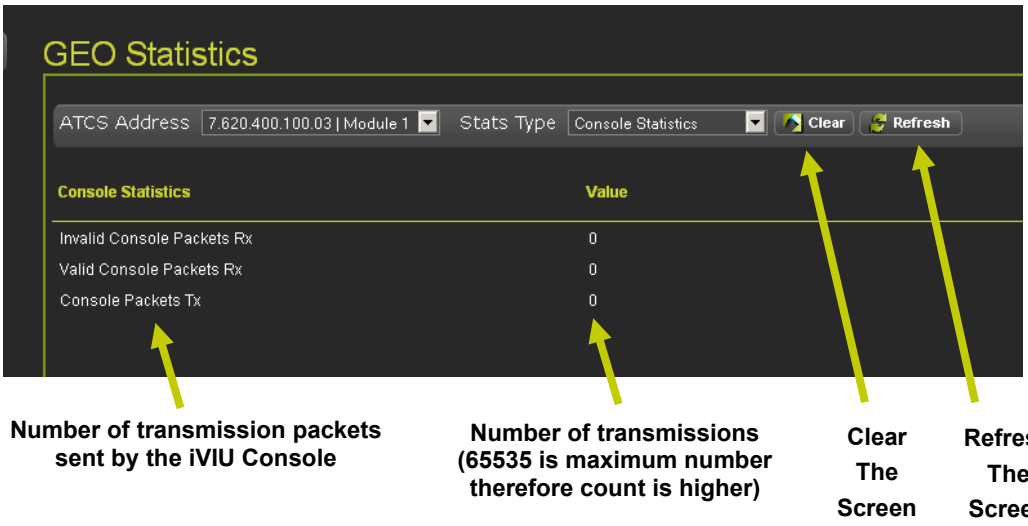


Figure 4-129 Console Statistics

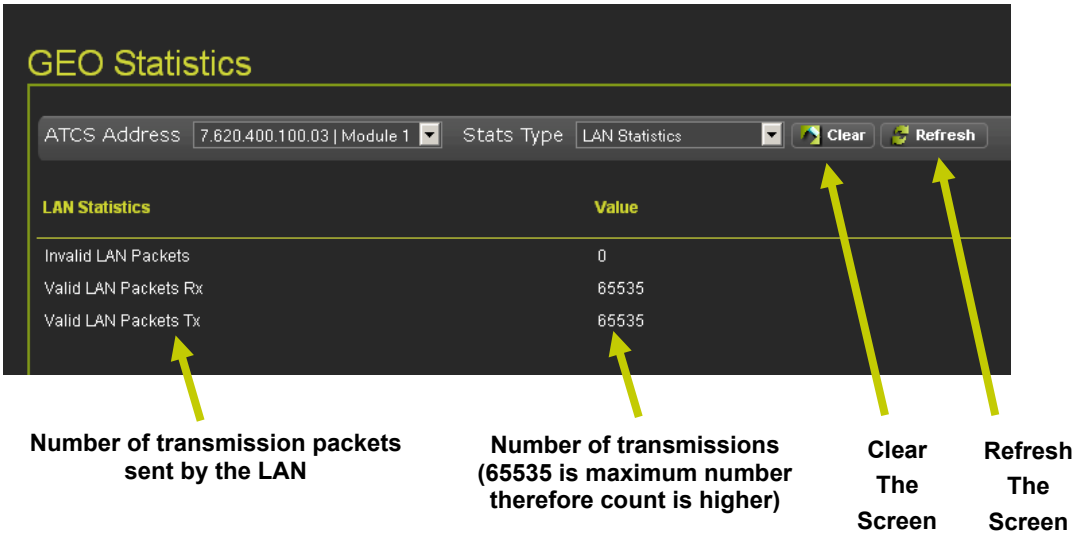


Figure 4-130 LAN Statistics

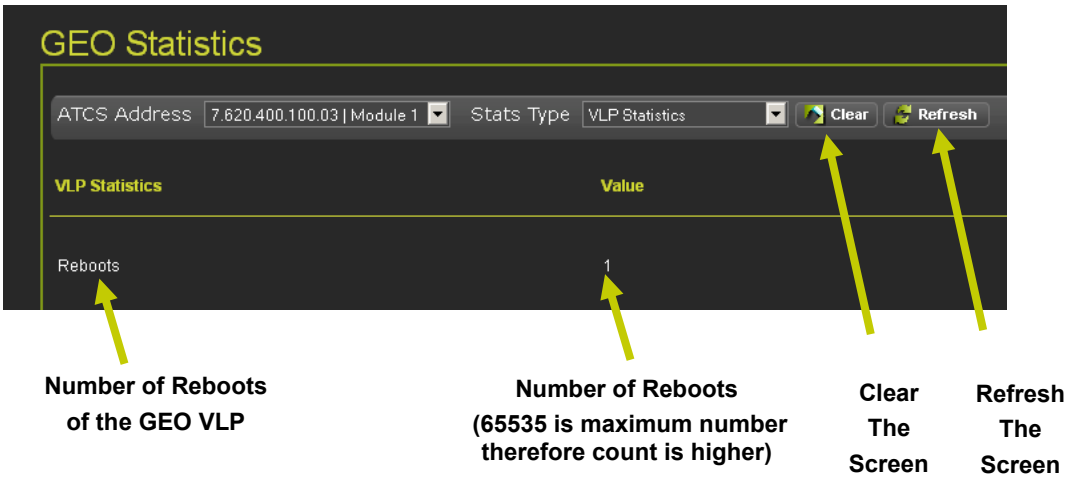


Figure 4-131 VLP Statistics

4.1.7.2 Information

The Information window serves as an alert vehicle to advise the user of a situation present within the system. Monitor and Diagnostic windows will display an information icon in the upper right corner of the page as shown in Figure 4-132. When the information icon is present, click on the Diagnostics Icon and click on the Information to bring up the Information window. The Information window will display active events as shown in Figure 4-133. In the example the information advises the Date and Time of the event Console Vital CPU (Slot 0) is un-configured and the system is in the edit mode.

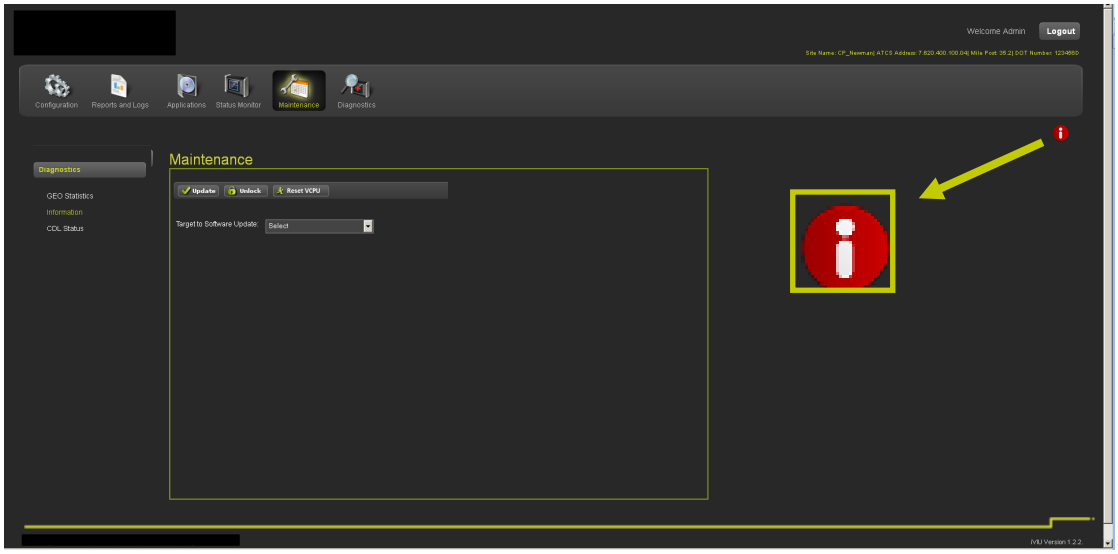


Figure 4-132 Information Alert Icon

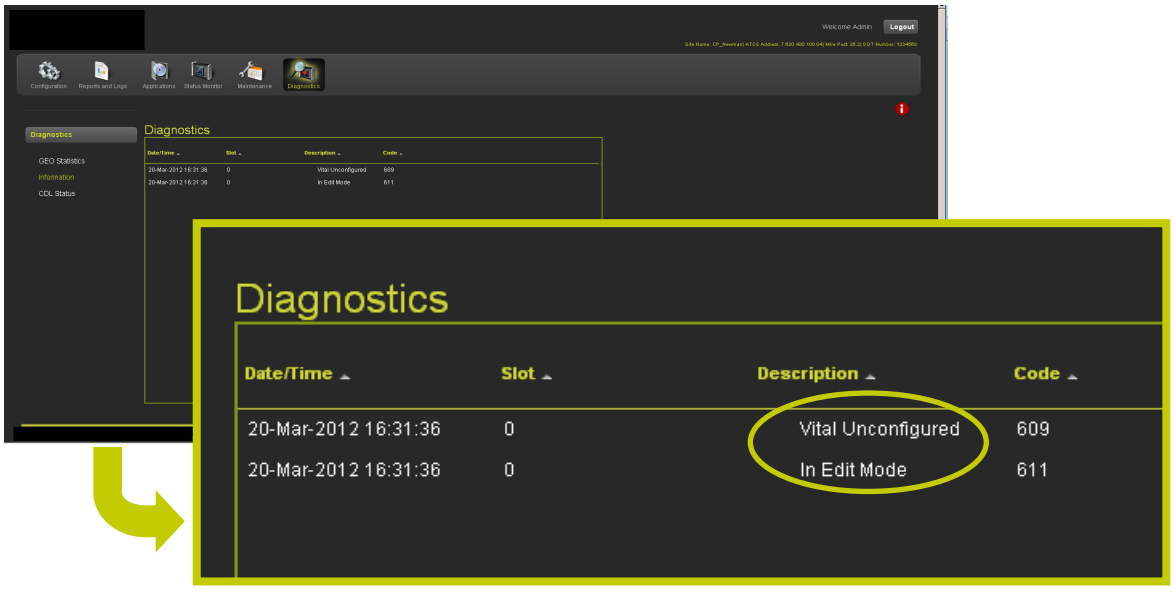


Figure 4-133 Information Display

4.1.7.3 CDL Status

Figure 4-134 displays the CDL Status screen. If a CDL program is installed and is running a Green "C" will appear in the upper right corner. If a CDL program is installed and not running a Red "C" will appear in the upper right corner. A Yellow "C" will appear when a CDL alert is present in the CDL Status window. This icon will appear on all screens in Web UI to alert the user to check the CDL Status for an important alert. If a CDL program is not installed no indication will be present.

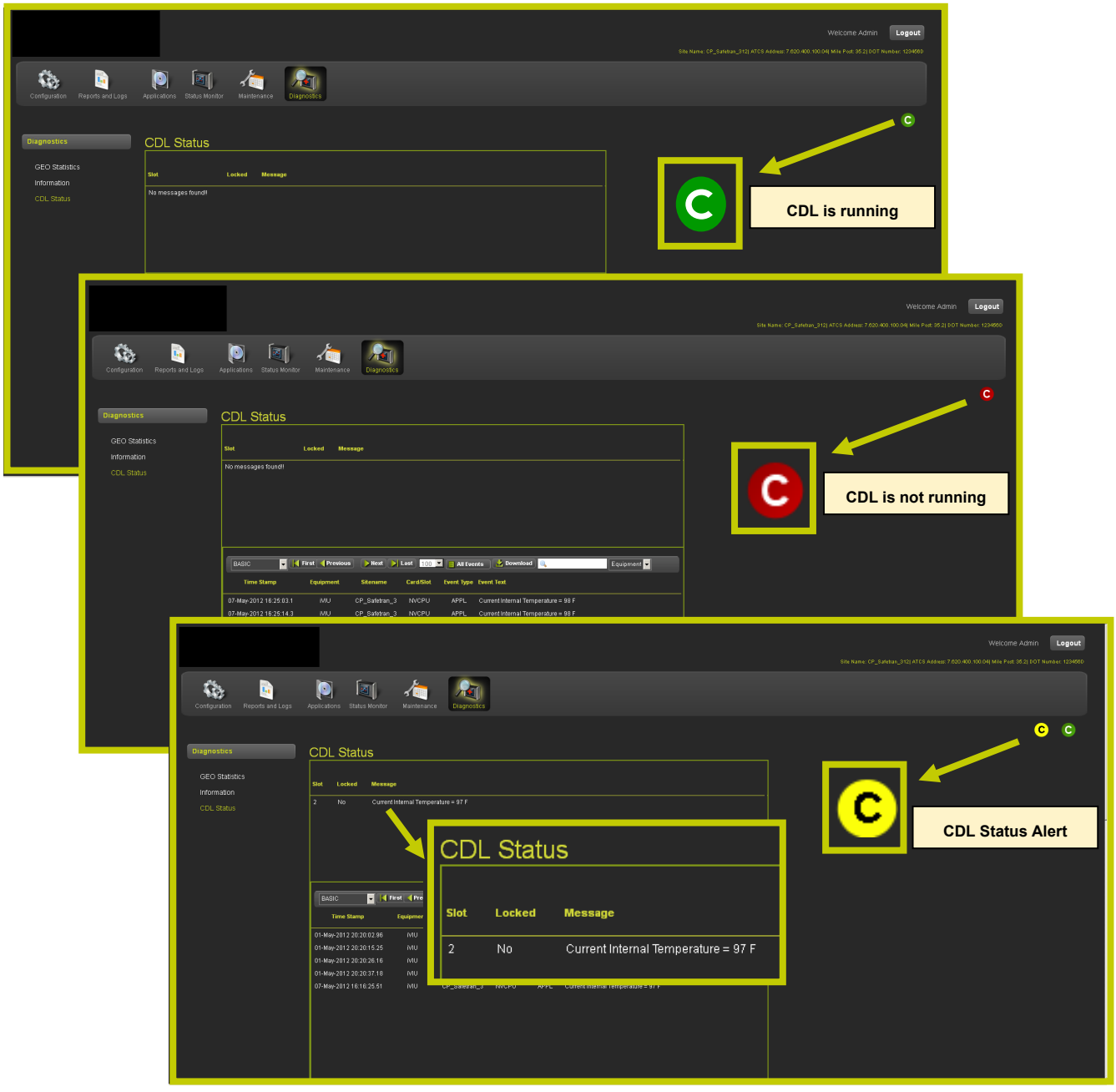


Figure 4-134 Status Monitor - CDL Status

- **CDL Status - CDL Logs**

The CDL Status screen also has the CDL Event Log displayed on the lower portion of the screen. The events may be searched by Equipment, Site Name, Card Slot, Event Type and Event Text. A Search Window provides a means of searching events using keywords.

To view non CDL generated events open the Event Log by clicking on the Report and Logs icon in the menu bar then selecting Events Log in the Reports and Logs menu.

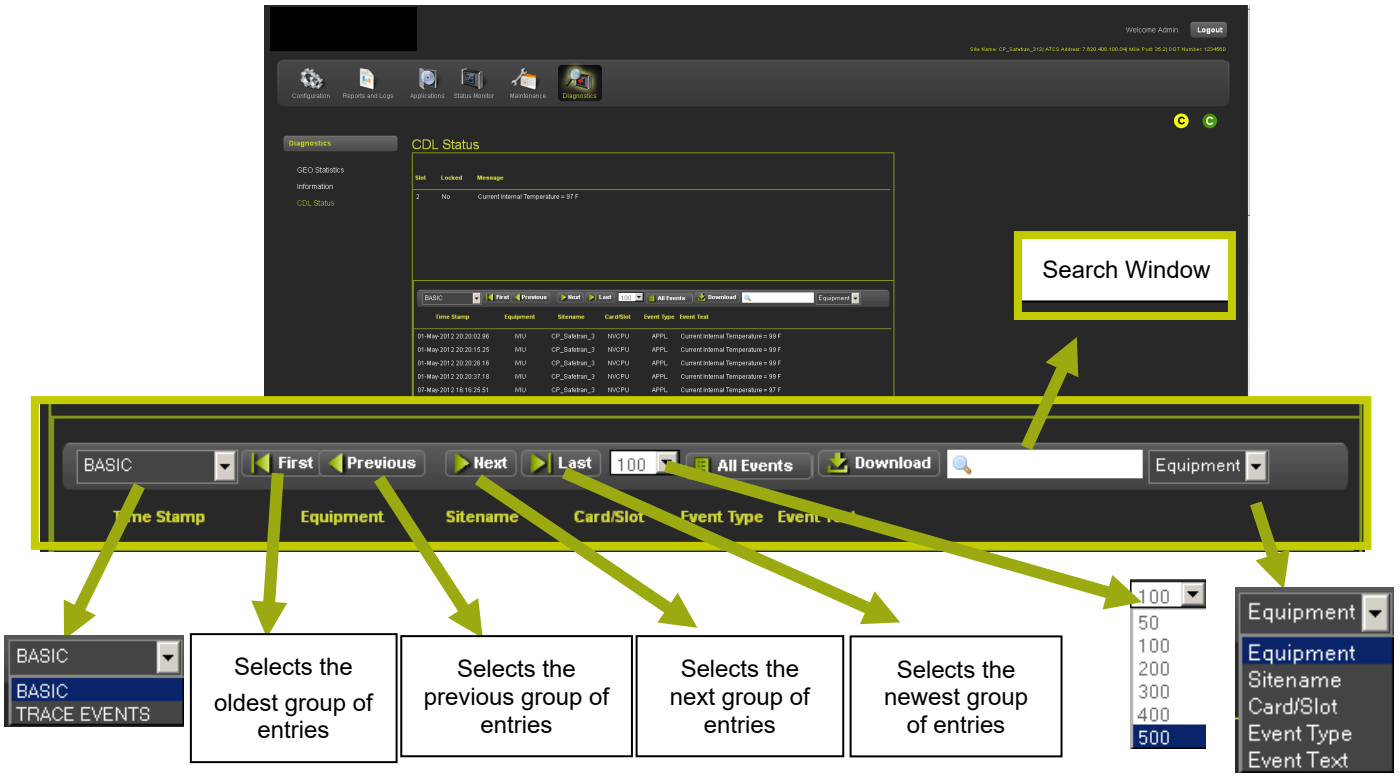


Figure 4-135 CDL Event Logs

The ALL EVENTS button [1] will create all of the logs. Click on the DOWNLOAD button [2] to display the logs.

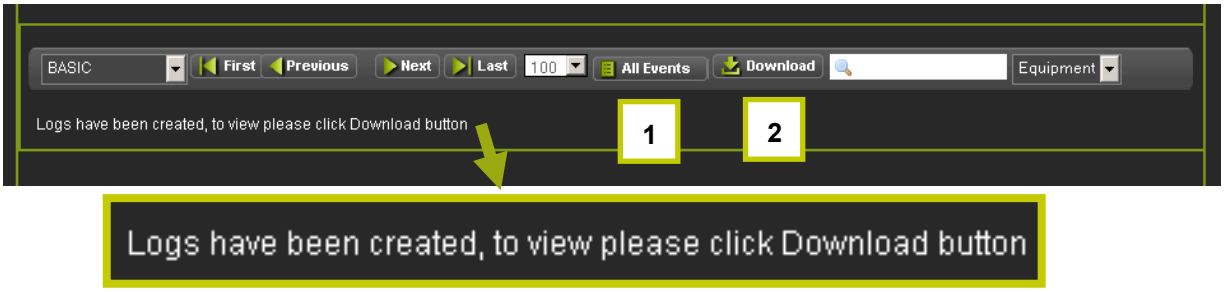


Figure 4-136 Download All CDL Events

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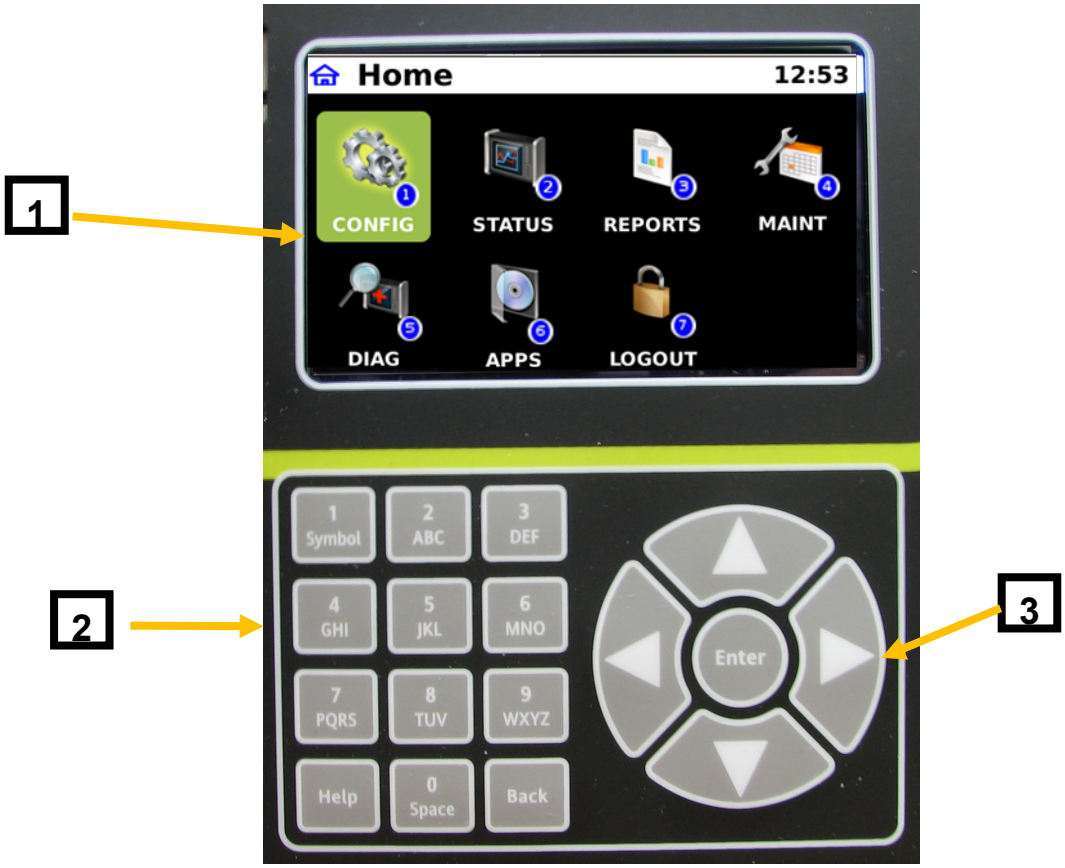
SECTION 5
LOCAL USER INTERFACE

5.0 LOCAL USER INTERFACE

5.1 OVERVIEW

The iVIU Console comes equipped with an Organic Light Emitting Diode (OLED) display and a 12 key membrane keypad with direction key cluster (Navigation Keys).



1 Display

2 Keypad

3 Navigation Keys

Figure 5-1 iVIU Console Local User Interface (LUI)

5.1.1 Keypad

The keypad is used to enter data in an alphanumeric text box. The keys work in a similar fashion to a cell phone. The following order is used on each key:

0 Key - space and 0
1 Key - .+#$:-( )1
2 Key - abcABC2
3 Key - defDEF3
4 Key - ghiGHI4
5 Key - jklJKL5
6 Key - mnoMNO6
7 Key - pqrsPQRS7
8 Key - tuvTUV8
9 Key - wxyzWXYZ9

When entering data in an edit text box the following order is used on each key:

0 Key - space
1 Key - .+#$:-( )
2 Key - abcABC
3 Key - defDEF
4 Key - ghiGHI
5 Key - jklJKL
6 Key - mnoMNO
7 Key - pqrsPQRS
8 Key - tuvTUV
9 Key - wxyzWXYZ

When entering data in a numeric text box keys will generate numeric values only (no alpha characters).

When entering text in a numeric plus text box keys will generate numeric values with the exception of the 1 Key which will also have a period.

1 Key - 1 or Period

5.1.2 Console Screens

5.1.2.1 Startup Screen

Upon start up of the iVIU console the display screen will come up with a blank white screen for a few seconds then the System Initializing screen will appear. A progress bar shows the progress of the console start up.

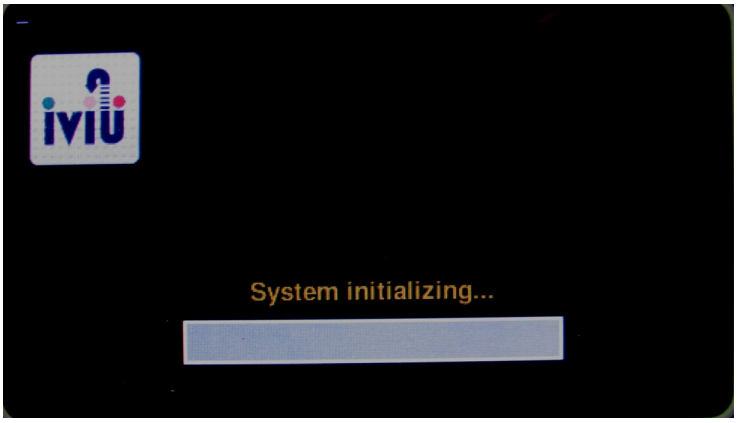


Figure 5-2 System Initializing

5.1.2.2 Home Screen

Figure 5-3 displays the iVIU Console home screen. To navigate between icons use the navigation array or press the number of the icon desired.

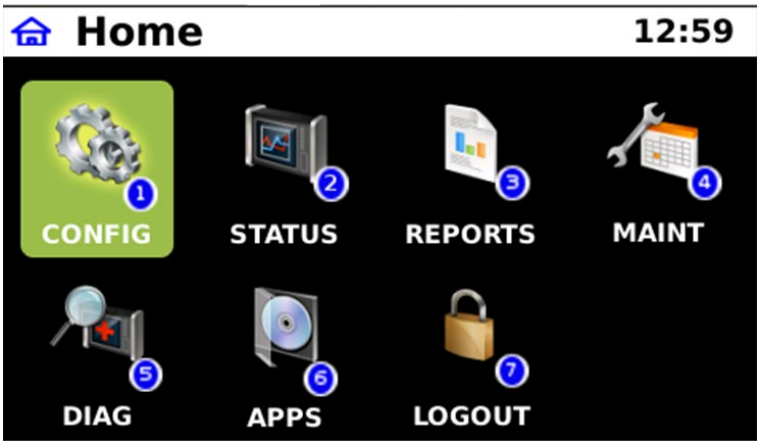


Figure 5-3 iVIU Home Screen

5.1.2.3 USB Device Detection

Connection of any USB device to the USB port will bring up a window with eight menu options as shown below. The USB port is used to download logs, reports, configuration data, and diagnostics information. The USB port is also used to upload Firmware, Applications, and Configuration data.

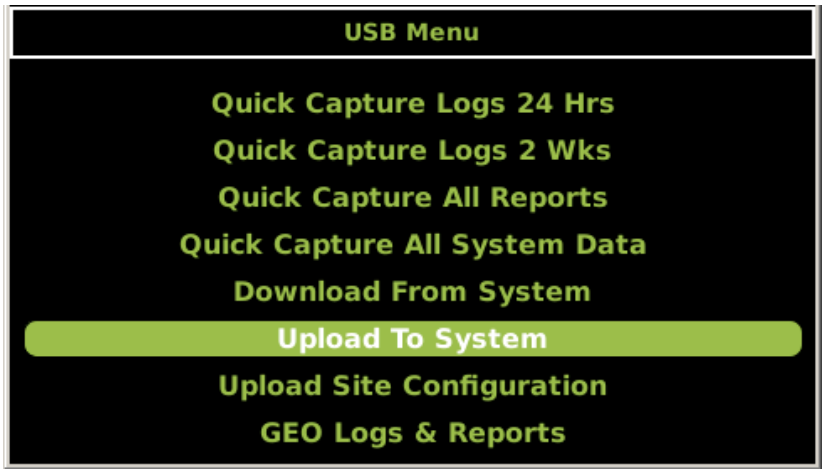


Figure 5-4 USB Device Detection Screen

5.1.2.4 Configuration Screen

Using the Navigation keypad, highlight the Configuration icon and press "ENTER" or press "1" which will bring up the Configuration window. The Configuration window displays of seven sub menus.

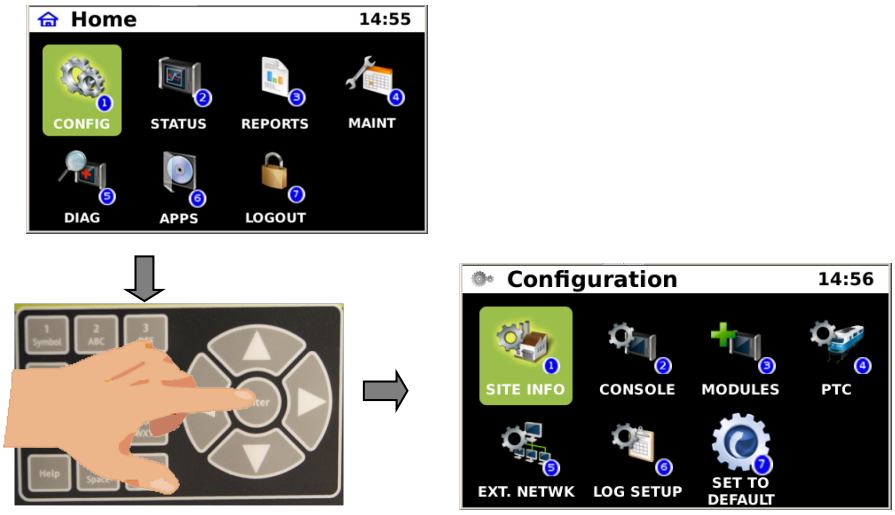


Figure 5-5 Configuration Sub-Menus

- **Site Info Configuration**

Using the Navigation keypad, highlight the Site Info icon and press "ENTER" or press "1" which will bring up the eight Site Info parameters.

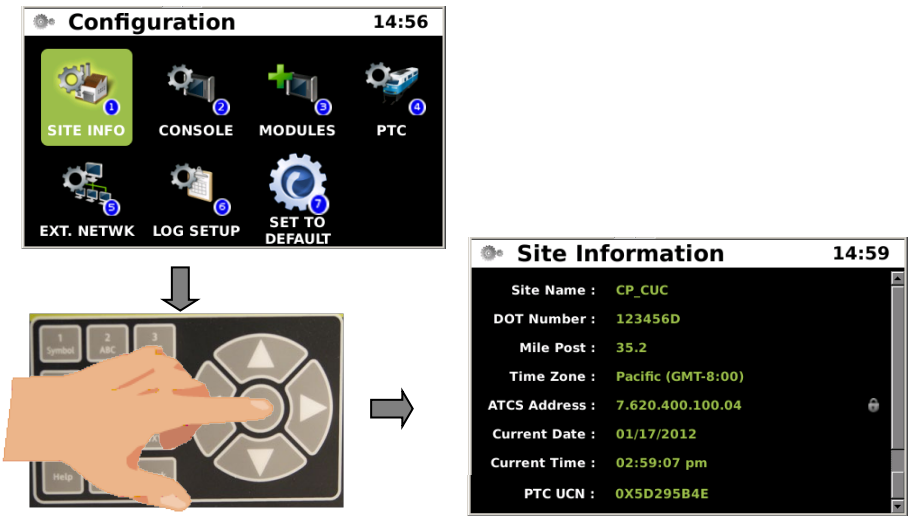


Figure 5-6 Site Info Parameters

- **Console Configuration**

Using the Navigation keypad, highlight the Console icon and press "ENTER" or press "2" which will bring up the Console Configuration window. The Configuration window displays of six sub menus.

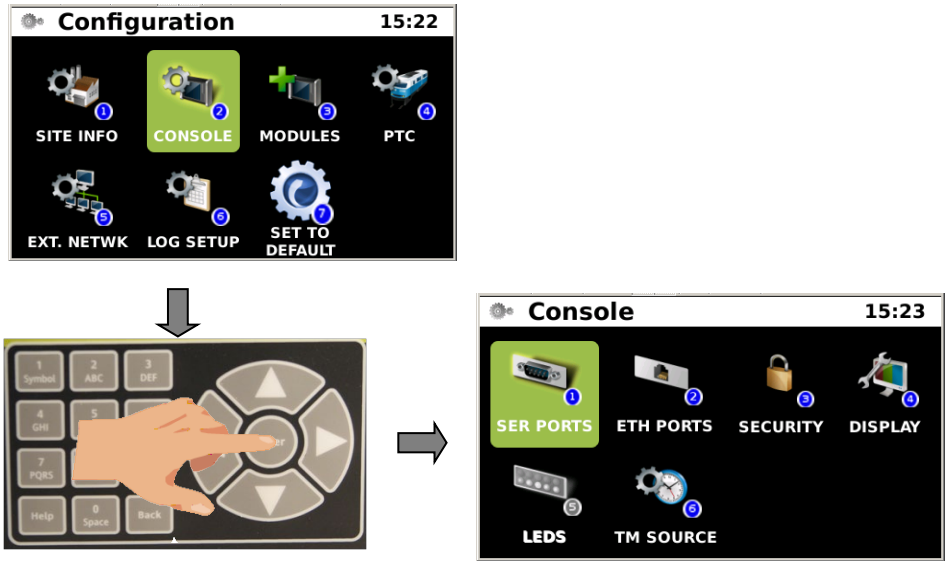


Figure 5-7 Console Configuration

- **Serial Port Configuration**

Using the Navigation keypad, highlight the "SER PORTS" icon and press "ENTER" or press "1" which will bring up the window displaying the four serial ports.

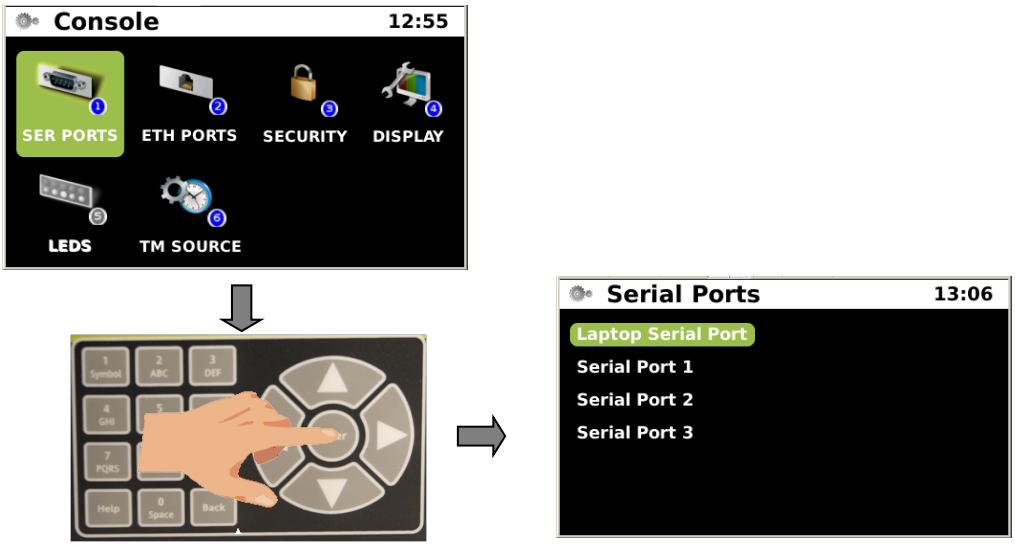


Figure 5-8 Serial Port Configuration

- **Laptop Serial Port Parameters**

The following are the Laptop Serial Port parameters:

CONFIG > CONSOLE > SER PORTS > LAPTOP SERIAL PORT

Parameters:

Baud Rate:	9600 (1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 300)
Data Bits:	8 (8, 7)
Parity:	None (None, Odd, Even)
Stop Bits:	1 (1, 2)
Flow Ctrl:	None (None, Hardware)

- **Serial Port 1, 2, and 3 Parameters**

The following are the various parameters for Serial Ports 1, 2, and 3. All three serial ports have the same options. Each port's parameters will depend on the "Type" of port, Primary, Office Backup 1, 2, or 3 and the "Protocol" to be used. Protocol choices vary depending on the "Type" of port.

Serial Port 1, 2, or 3

Path Type:	**Office Primary**
Baud Rate:	9600 (1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 300)
Data Bits:	8 (8, 7)
Parity:	None (None, Odd, Even)
Stop Bits:	1 (1, 2)
Flow Ctrl:	None (None, Hardware)
Path Type:	Office Primary (Office Primary, Office Backup1, Office Backup2, Office Backup 3, Field, None)
Recovery Time:	300
Test Period:	3
Fail Count:	6
Reserved:	0
Op Traffic Only:	No (No, Yes)
RSSI Value:	0
Protocol:	Genisys Field
Poll Address:	1 Address
Link Fail Timer:	1000

Baud Rate:	9600 (1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 300)
Data Bits:	8 (8, 7)
Parity:	None (None, Odd, Even)
Stop Bits:	1 (1, 2)
Flow Ctrl:	None (None, Hardware)
Path Type:	Office Primary (Office Primary, Office Backup1, Office Backup2, Office Backup 3, Field, None)
Recovery Time:	300
Test Period:	3
Fail Count:	6
Reserved:	0
Op Traffic Only:	No (No, Yes)
RSSI Value:	0
Protocol:	GENATCS Field
Poll Address:	1 Address
Link Fail Timer:	1000
ATCS Address:	7.000.000.000.00.00

Baud Rate:	9600 (1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 300)
Data Bits:	8 (8, 7)
Parity:	None (None, Odd, Even)
Stop Bits:	1 (1, 2)
Flow Ctrl:	None (None, Hardware)
Path Type:	Office Primary (Office Primary, Office Backup1, Office Backup2, Office Backup 3, Field, None)
Recovery Time:	300
Test Period:	3
Fail Count:	6
Reserved:	0
Op Traffic Only:	No (No, Yes)
RSSI Value:	0
Protocol:	NONE

Serial Port 1, 2, or 3
Path Type: Office Backup 1, 2, & 3

Baud Rate:	9600 (1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 300)
Data Bits:	8 (8, 7)
Parity:	None (None, Odd, Even)
Stop Bits:	1 (1, 2)
Flow Ctrl:	None (None, Hardware)
Path Type:	Office Backup 1, 2, & 3 (Office Primary, Office Backup1, Office Backup2, Office Backup 3, Field, None)
Recovery Time:	300
Test Period:	3
Fail Count:	6
Reserved:	0
Op Traffic Only:	No (No, Yes)
RSSI Value:	0
Protocol:	Genisys Field
Poll Address:	1 Address
Link Fail Timer:	1000

Baud Rate:	9600 (1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 300)
Data Bits:	8 (8, 7)
Parity:	None (None, Odd, Even)
Stop Bits:	1 (1, 2)
Flow Ctrl:	None (None, Hardware)
Path Type:	Office Backup 1, 2, & 3 (Office Primary, Office Backup1, Office Backup2, Office Backup 3, Field, None)
Recovery Time:	300
Test Period:	3
Fail Count:	6
Reserved:	0
Op Traffic Only:	No (No, Yes)
RSSI Value:	0
Protocol:	GENATCS Field
Poll Address:	1 Address
Link Fail Timer:	1000
ATCS Address:	7.000.000.000.00.00

Baud Rate:	9600 (1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 300)
Data Bits:	8 (8, 7)
Parity:	None (None, Odd, Even)
Stop Bits:	1 (1, 2)
Flow Ctrl:	None (None, Hardware)

Path Type:	Office Backup 1, 2, & 3 (Office Primary, Office Backup1, Office Backup2, Office Backup 3, Field, None)
Recovery Time:	300
Test Period:	3
Fail Count:	6
Reserved:	0
Op Traffic Only:	No (No, Yes)
RSSI Value:	0
Protocol:	NONE

Serial Port 1, 2, or 3

Path Type:	**Field**
Baud Rate:	9600 (1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 300)
Data Bits:	8 (8, 7)
Parity:	None (None, Odd, Even)
Stop Bits:	1 (1, 2)
Flow Ctrl:	None (None, Hardware)
Path Type:	Field (Office Primary, Office Backup1, Office Backup2, Office Backup 3, Field, None)
Recovery Time:	300
Test Period:	3
Fail Count:	6
Reserved:	0
Op Traffic Only:	No (No, Yes)
RSSI Value:	0
Protocol:	NONE (None GENATCS Office Genisys Office Genisys GEO,CN2000A CN2000B Dumb Terminal Diagnostic Text ACSES BCP
Baud Rate:	9600 (1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 300)
Data Bits:	8 (8, 7)
Parity:	None (None, Odd, Even)
Stop Bits:	1 (1, 2)
Flow Ctrl:	None (None, Hardware)
Path Type:	Field (Office Primary, Office Backup1, Office Backup2, Office Backup 3, Field, None)
Recovery Time:	300
Test Period:	3
Fail Count:	6
Reserved:	0
Op Traffic Only:	No (No, Yes)
RSSI Value:	0

Protocol:	GENATCS Office (None GENATCS Office Genisys Office Genisys GEO, CN2000A, CN2000B, Dumb Terminal, Diagnostic Text, ACSES BCP
Poll Range Start:	1
Number of Stations:	1
Short Poll Delay:	1000
Long Poll Delay:	10000
Retry Count:	5
Response Fail Count:	5

Serial Port 1, 2, or 3

Path Type:	**Field (Continued)**
Baud Rate:	9600 (1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 300)
Data Bits:	8 (8, 7)
Parity:	None (None, Odd, Even)
Stop Bits:	1 (1, 2)
Flow Ctrl:	None (None, Hardware)
Path Type:	Field (Office Primary, Office Backup1, Office Backup2, Office Backup 3, Field, None)
Recovery Time:	300
Test Period:	3
Fail Count:	6
Reserved:	0
Op Traffic Only:	No (No, Yes)
RSSI Value:	0
Protocol:	Genisys Office (None GENATCS Office Genisys Office Genisys GEO, CN2000A, CN2000B, Dumb Terminal, Diagnostic Text, ACSES BCP
Poll Range Start:	1
Number of Stations:	1
Short Poll Delay:	1000
Long Poll Delay:	10000
Retry Count:	5
Response Fail Count:	5
ATCS Address:	7.620.100.100.01.01

Baud Rate:	9600 (1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 300)
Data Bits:	8 (8, 7)
Parity:	None (None, Odd, Even)
Stop Bits:	1 (1, 2)
Flow Ctrl:	None (None, Hardware)
Path Type:	Field (Office Primary, Office Backup1, Office Backup2, Office Backup 3, Field, None)

Recovery Time:	300
Test Period:	3
Fail Count:	6
Reserved:	0
Op Traffic Only:	No (No, Yes)
RSSI Value:	0
Protocol:	Genisys GEO (None GENATCS Office Genisys Office Genisys GEO, CN2000A, CN2000B, Dumb Terminal, Diagnostic Text, ACSES BCP

Serial Port 1, 2, or 3

Path Type:	**Field (Continued)**
Baud Rate:	9600 (1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 300)
Data Bits:	8 (8, 7)
Parity:	None (None, Odd, Even)
Stop Bits:	1 (1, 2)
Flow Ctrl:	None (None, Hardware)
Path Type:	Field (Office Primary, Office Backup1, Office Backup2, Office Backup 3, Field, None)
Recovery Time:	300
Test Period:	3
Fail Count:	6
Reserved:	0
Op Traffic Only:	No (No, Yes)
RSSI Value:	0
Protocol:	CN2000A (None GENATCS Office Genisys Office Genisys GEO, CN2000A, CN2000B, Dumb Terminal, Diagnostic Text, ACSES BCP
Poll Range Start:	1
Number of Stations:	1
Short Poll Delay:	1000
Long Poll Delay:	10000
Retry Count:	5
Response Fail Count:	5
ATCS Address:	7.620.100.100.01.01

Baud Rate:	9600 (1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 300)
Data Bits:	8 (8, 7)
Parity:	None (None, Odd, Even)
Stop Bits:	1 (1, 2)
Flow Ctrl:	None (None, Hardware)
Path Type:	Field (Office Primary, Office Backup1, Office Backup2, Office Backup 3, Field, None)
Recovery Time:	300

Test Period:	3
Fail Count:	6
Reserved:	0
Op Traffic Only:	No (No, Yes)
RSSI Value:	0
Protocol:	CN2000B (None GENATCS Office Genisys Office Genisys GEO, CN2000A, CN2000B, Dumb Terminal, Diagnostic Text, ACSES BCP
Poll Range Start:	1
Number of Stations:	1
Short Poll Delay:	1000
Long Poll Delay:	10000
Retry Count:	5
Response Fail Count:	5
ATCS Address:	7.620.100.100.01.01

Serial Port 1, 2, or 3
Path Type: **Field (Continued)**

Baud Rate:	9600 (1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 300)
Data Bits:	8 (8, 7)
Parity:	None (None, Odd, Even)
Stop Bits:	1 (1, 2)
Flow Ctrl:	None (None, Hardware)
Path Type:	Field (Office Primary, Office Backup1, Office Backup2, Office Backup 3, Field, None)
Recovery Time:	300
Test Period:	3
Fail Count:	6
Reserved:	0
Op Traffic Only:	No (No, Yes)
RSSI Value:	0
Protocol:	Dumb Terminal (None GENATCS Office Genisys Office Genisys GEO, CN2000A, CN2000B, Dumb Terminal, Diagnostic Text, ACSES BCP
SSH Port Number:	10021
Session Timeout:	10 Minutes

Baud Rate:	9600 (1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 300)
Data Bits:	8 (8, 7)
Parity:	None (None, Odd, Even)
Stop Bits:	1 (1, 2)
Flow Ctrl:	None (None, Hardware)
Path Type:	Field (Office Primary, Office Backup1, Office Backup2, Office Backup 3, Field, None)

Recovery Time: 300
Test Period: 3
Fail Count: 6
Reserved: 0
Op Traffic Only: No (No, Yes)
RSSI Value: 0
Protocol: Diagnostic Text (None GENATCS Office Genisys Office Genisys GEO, CN2000A, CN2000B, Dumb Terminal, Diagnostic Text, ACSES BCP

Baud Rate: 9600 (1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 300)
Data Bits: 8 (8, 7)
Parity: None (None, Odd, Even)
Stop Bits: 1 (1, 2)
Flow Ctrl: None (None, Hardware)
Path Type: Field (Office Primary, Office Backup1, Office Backup2, Office Backup 3, Field, None)
Recovery Time: 300
Test Period: 3
Fail Count: 6
Reserved: 0
Op Traffic Only: No (No, Yes)
RSSI Value: 0
Protocol: ACSES BCP (None GENATCS Office Genisys Office Genisys GEO, CN2000A, CN2000B, Dumb Terminal, Diagnostic Text, ACSES BCP

Serial Port 1, 2, or 3
Path Type: Field (Continued)

Baud Rate: 9600 (1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 300)
Data Bits: 8 (8, 7)
Parity: None (None, Odd, Even)
Stop Bits: 1 (1, 2)
Flow Ctrl: None (None, Hardware)
Path Type: Field (Office Primary, Office Backup1, Office Backup2, Office Backup 3, Field, None)
Recovery Time: 300
Test Period: 3
Fail Count: 6
Reserved: 0
Op Traffic Only: No (No, Yes)
RSSI Value: 0
Protocol: None (None GENATCS Office Genisys Office Genisys GEO, CN2000A, CN2000B, Dumb Terminal, Diagnostic Text, ACSES BCP

- **Ethernet Port Configuration**

Using the Navigation keypad, highlight the "ETH PORTS" icon and press "ENTER" or press "2" which will bring up the window displaying the four Ethernet ports.

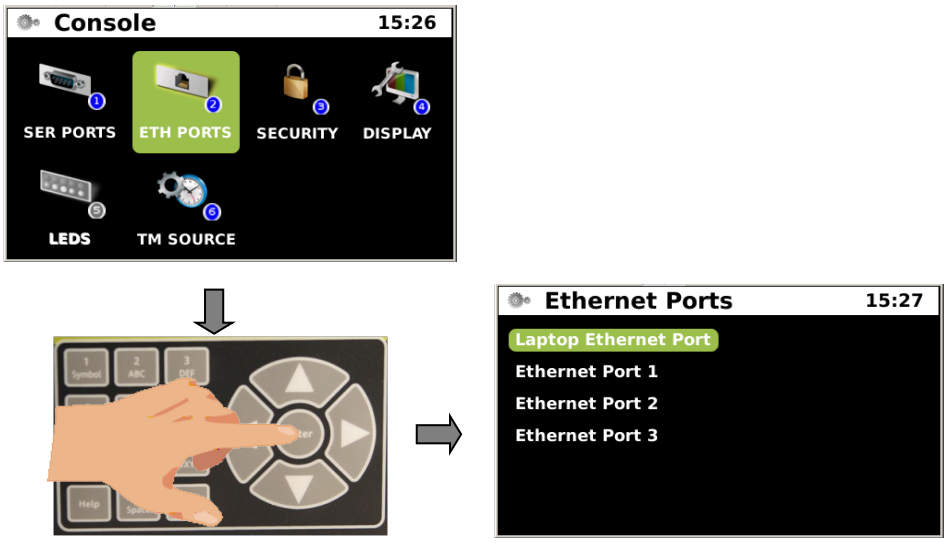


Figure 5-9 Ethernet Port Configuration

- **Laptop Ethernet Port Configuration**

Using the Navigation keypad, highlight the "LAPTOP ETHERNET PORT" icon and press "ENTER" which will bring up the window displaying the Laptop Ethernet Port parameters.

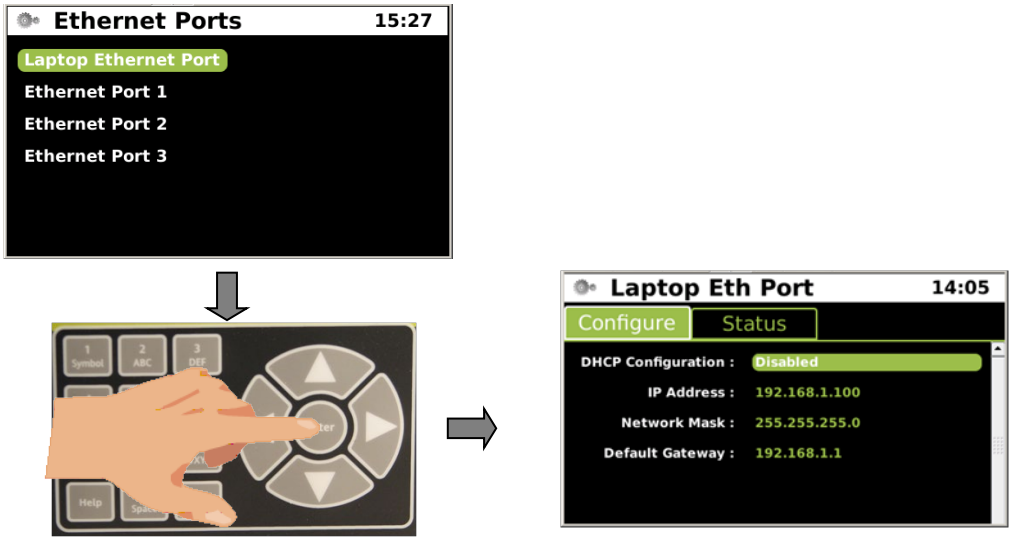


Figure 5-10 Laptop Ethernet Port Configuration

Laptop Ethernet Port

CONFIG > CONSOLE > ETH PORTS > LAPTOP ETHERNET PORT

Parameters:

DHCP Configuration: None (None, Client, Server)
IP Address: 192.168.001.100
Network Mask: 255.255.255.000
Default Gateway: 192.168.001.001

- **Ethernet Ports 1, 2, and 3 Configuration**

Using the Navigation keypad, highlight the "Ethernet Port 1, 2, or 3" icon and press "ENTER" which will bring up the window displaying the Ethernet Port parameters.

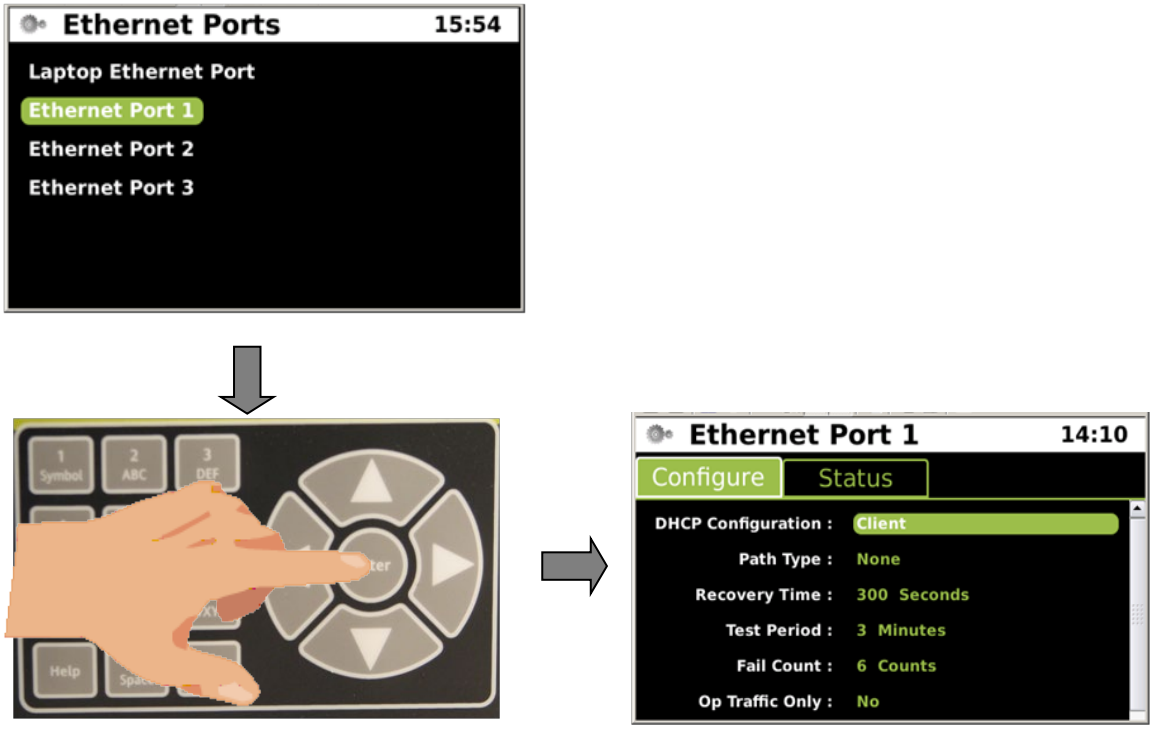


Figure 5-11 Ethernet Port 1, 2, or 3 Configuration

The following are the various parameters for Ethernet Ports 1, 2, and 3. All three Ethernet ports have the same options. Each port's parameters will depend on the "Type" of port, Primary, Office Backup 1, 2, or 3 and the "Protocol" to be used. Protocol choices vary depending on the "Type" of port.

Ethernet Port 1

Type:	**Office Primary**
DHCP Configuration:	Disabled, (Disabled, Client)
IP Address:	192.168.2.100
Network Mask:	255.255.255.000
Default Gateway:	192.168.2.1
Path Type:	Office Primary (Office Primary, Office Backup1, Office Backup 2, Office Backup 3, Field, None)
Recovery Time:	300
Test Period:	3
Fail Count:	6
Op Traffic Only:	No (No, Yes)
RSSI Value:	0
Protocol:	None (None, ATCS IP Office)

DHCP Configuration:	Disabled, (Disabled, Client)
IP Address:	192.168.2.100
Network Mask:	255.255.255.000
Default Gateway:	192.168.2.1
Path Type:	Office Primary (Office Primary, Office Backup1, Office Backup 2, Office Backup 3, Field, None)
Recovery Time:	300
Test Period:	3
Fail Count:	6
Op Traffic Only:	No (No, Yes)
RSSI Value:	0
Protocol:	ATCS IP Office (None, ATCS IP Office)
Circuit ID:	0.0.0
Routing Region 1:	0.0.0.0
Routing Region 2:	0.0.0.0
Port Number:	5361
Path Value:	70
Route Search Time:	15
Route Search Tries:	4
Route Refresh Time:	5

Ethernet Port 1

Type: **Office Backup 1, 2, or 3**

DHCP Configuration: Disabled, (Disabled, Client)
IP Address: 192.168.2.100
Network Mask: 255.255.255.000
Default Gateway: 192.168.2.1
Path Type: Office Backup1, 2, & 3 (Office Primary, Office Backup1, Office Backup 2, Office Backup 3, Field, None)
Recovery Time: 300
Test Period: 3
Fail Count: 6
Op Traffic Only: No (No, Yes)
RSSI Value: 0
Protocol: None (None, ATCS IP Office)

DHCP Configuration: Disabled, (Disabled, Client)
IP Address: 192.168.2.100
Network Mask: 255.255.255.000
Default Gateway: 192.168.2.1
Path Type: Office Backup1, 2, & 3 (Office Primary, Office Backup1, Office Backup 2, Office Backup 3, Field, None)
Recovery Time: 300
Test Period: 3
Fail Count: 6
Op Traffic Only: No (No, Yes)
RSSI Value: 0
Protocol: ATCS IP Office (None, ATCS IP Office)
Circuit ID: 0.0.0
Routing Region 1: 0.0.0.0
Routing Region 2: 0.0.0.0
Port Number: 5361
Path Value: 70
Route Search Time: 15
Route Search Tries: 4
Route Refresh Time: 5

Ethernet Port 1
Type: Field

DHCP Configuration: Disabled, (Disabled, Client)
IP Address: 192.168.2.100
Network Mask: 255.255.255.000
Default Gateway: 192.168.2.1
Path Type: Field (Office Primary, Office Backup1, Office Backup 2, Office Backup 3, Field, None)
Recovery Time: 300
Test Period: 3
Fail Count: 6
Op Traffic Only: No (No, Yes)
RSSI Value: 0
Protocol: None (None, ATCS IP Field)

DHCP Configuration: Disabled, (Disabled, Client)
IP Address: 192.168.2.100
Network Mask: 255.255.255.000
Default Gateway: 192.168.2.1
Path Type: Field (Office Primary, Office Backup1, Office Backup 2, Office Backup 3, Field, None)
Recovery Time: 300
Test Period: 3
Fail Count: 6
Op Traffic Only: No (No, Yes)
RSSI Value: 0
Protocol: ATCS IP Field (None, ATCS IP Field)
Remote Device Port: 7000

Ethernet Port 1
Type: None

DHCP Configuration: Disabled, (Disabled, Client)
IP Address: 192.168.2.100
Network Mask: 255.255.255.000
Default Gateway: 192.168.2.1
Path Type: Field (Office Primary, Office Backup1, Office Backup 2, Office Backup 3, Field, None)
Recovery Time: 300
Test Period: 3
Fail Count: 6

Op Traffic Only: No (No, Yes)
RSSI Value: 0
Protocol: None (None, ATCS IP Field)

Ethernet Port 2
Type: Office Primary

DHCP Configuration: Disabled, (Disabled, Client)
IP Address: 192.168.3.100
Network Mask: 255.255.255.000
Default Gateway: 192.168.3.1
Path Type: Office Primary (Office Primary, Office Backup1, Office Backup 2, Office Backup 3, Field, None)
Recovery Time: 300
Test Period: 3
Fail Count: 6
Op Traffic Only: No (No, Yes)
RSSI Value: 0
Protocol: None (None, ATCS IP Office)

DHCP Configuration: Disabled, (Disabled, Client)
IP Address: 192.168.3.100
Network Mask: 255.255.255.000
Default Gateway: 192.168.3.1
Path Type: Office Primary (Office Primary, Office Backup1, Office Backup 2, Office Backup 3, Field, None)
Recovery Time: 300
Test Period: 3
Fail Count: 6
Op Traffic Only: No (No, Yes)
RSSI Value: 0
Protocol: ATCS IP Office (None, ATCS IP Office)
Circuit ID: 0.0.0
Routing Region 1: 0.0.0.0
Routing Region 2: 0.0.0.0
Port Number: 5361
Path Value: 70
Route Search Time: 15
Route Search Tries: 4
Route Refresh Time: 5

Ethernet Port 2

Type: **Office Backup 1, 2, or 3**

DHCP Configuration: Disabled, (Disabled, Client)
IP Address: 192.168.3.100
Network Mask: 255.255.255.000
Default Gateway: 192.168.3.1
Path Type: Office Backup1, 2, & 3 (Office Primary, Office Backup1, Office Backup 2, Office Backup 3, Field, None)
Recovery Time: 300
Test Period: 3
Fail Count: 6
Op Traffic Only: No (No, Yes)
RSSI Value: 0
Protocol: None (None, ATCS IP Office)

DHCP Configuration: Disabled, (Disabled, Client)
IP Address: 192.168.3.100
Network Mask: 255.255.255.000
Default Gateway: 192.168.3.1
Path Type: Office Backup1, 2, & 3 (Office Primary, Office Backup1, Office Backup 2, Office Backup 3, Field, None)
Recovery Time: 300
Test Period: 3
Fail Count: 6
Op Traffic Only: No (No, Yes)
RSSI Value: 0
Protocol: ATCS IP Office (None, ATCS IP Office)
Circuit ID: 0.0.0
Routing Region 1: 0.0.0.0
Routing Region 2: 0.0.0.0
Port Number: 5361
Path Value: 70
Route Search Time: 15
Route Search Tries: 4
Route Refresh Time: 5

Ethernet Port 2
Type: Field

DHCP Configuration: Disabled, (Disabled, Client)
IP Address: 192.168.3.100
Network Mask: 255.255.255.000
Default Gateway: 192.168.3.1
Path Type: Field (Office Primary, Office Backup1, Office Backup 2, Office Backup 3, Field, None)
Recovery Time: 300
Test Period: 3
Fail Count: 6
Op Traffic Only: No (No, Yes)
RSSI Value: 0
Protocol: None (None, ATCS IP Field)

DHCP Configuration: Disabled, (Disabled, Client)
IP Address: 192.168.3.100
Network Mask: 255.255.255.000
Default Gateway: 192.168.3.1
Path Type: Field (Office Primary, Office Backup1, Office Backup 2, Office Backup 3, Field, None)
Recovery Time: 300
Test Period: 3
Fail Count: 6
Op Traffic Only: No (No, Yes)
RSSI Value: 0
Protocol: ATCS IP Field (None, ATCS IP Field)
Remote Device Port: 7000

Ethernet Port 2
Type: None

DHCP Configuration: Disabled, (Disabled, Client)
IP Address: 192.168.3.100
Network Mask: 255.255.255.000
Default Gateway: 192.168.3.1
Path Type: Field (Office Primary, Office Backup1, Office Backup 2, Office Backup 3, Field, None)
Recovery Time: 300
Test Period: 3
Fail Count: 6

Op Traffic Only: No (No, Yes)
RSSI Value: 0
Protocol: None (None, ATCS IP Field)

Ethernet Port 3
Type: Office Primary

DHCP Configuration: Disabled, (Disabled, Client)
IP Address: 192.168.4.100
Network Mask: 255.255.255.000
Default Gateway: 192.168.4.1
Path Type: Office Primary (Office Primary, Office Backup1, Office Backup 2, Office Backup 3, Field, None)
Recovery Time: 300
Test Period: 3
Fail Count: 6
Op Traffic Only: No (No, Yes)
RSSI Value: 0
Protocol: None (None, ATCS IP Office)

DHCP Configuration: Disabled, (Disabled, Client)
IP Address: 192.168.4.100
Network Mask: 255.255.255.000
Default Gateway: 192.168.4.1
Path Type: Office Primary (Office Primary, Office Backup1, Office Backup 2, Office Backup 3, Field, None)
Recovery Time: 300
Test Period: 3
Fail Count: 6
Op Traffic Only: No (No, Yes)
RSSI Value: 0
Protocol: ATCS IP Office (None, ATCS IP Office)
Circuit ID: 0.0.0
Routing Region 1: 0.0.0.0
Routing Region 2: 0.0.0.0
Port Number: 5361
Path Value: 70
Route Search Time: 15
Route Search Tries: 4
Route Refresh Time: 5

Ethernet Port 3

Type: **Office Backup 1, 2, or 3**

DHCP Configuration: Disabled, (Disabled, Client)
IP Address: 192.168.4.100
Network Mask: 255.255.255.000
Default Gateway: 192.168.4.1
Path Type: Office Backup1, 2, & 3 (Office Primary, Office Backup1, Office Backup 2, Office Backup 3, Field, None)
Recovery Time: 300
Test Period: 3
Fail Count: 6
Op Traffic Only: No (No, Yes)
RSSI Value: 0
Protocol: None (None, ATCS IP Office)

DHCP Configuration: Disabled, (Disabled, Client)
IP Address: 192.168.4.100
Network Mask: 255.255.255.000
Default Gateway: 192.168.4.1
Path Type: Office Backup1, 2, & 3 (Office Primary, Office Backup1, Office Backup 2, Office Backup 3, Field, None)
Recovery Time: 300
Test Period: 3
Fail Count: 6
Op Traffic Only: No (No, Yes)
RSSI Value: 0
Protocol: ATCS IP Office (None, ATCS IP Office)
Circuit ID: 0.0.0
Routing Region 1: 0.0.0.0
Routing Region 2: 0.0.0.0
Port Number: 5361
Path Value: 70
Route Search Time: 15
Route Search Tries: 4
Route Refresh Time: 5

Ethernet Port 3
Type: Field

DHCP Configuration: Disabled, (Disabled, Client)
IP Address: 192.168.4.100
Network Mask: 255.255.255.000
Default Gateway: 192.168.4.1
Path Type: Field (Office Primary, Office Backup1, Office Backup 2, Office Backup 3, Field, None)
Recovery Time: 300
Test Period: 3
Fail Count: 6
Op Traffic Only: No (No, Yes)
RSSI Value: 0
Protocol: None (None, ATCS IP Field)

DHCP Configuration: Disabled, (Disabled, Client)
IP Address: 192.168.4.100
Network Mask: 255.255.255.000
Default Gateway: 192.168.2.1
Path Type: Field (Office Primary, Office Backup1, Office Backup 2, Office Backup 3, Field, None)
Recovery Time: 300
Test Period: 3
Fail Count: 6
Op Traffic Only: No (No, Yes)
RSSI Value: 0
Protocol: ATCS IP Field (None, ATCS IP Field)
Remote Device Port: 7000

Ethernet Port 3
Type: None

DHCP Configuration: Disabled, (Disabled, Client)
IP Address: 192.168.4.100
Network Mask: 255.255.255.000
Default Gateway: 192.168.4.1
Path Type: Field (Office Primary, Office Backup1, Office Backup 2, Office Backup 3, Field, None)
Recovery Time: 300
Test Period: 3
Fail Count: 6

Op Traffic Only: No (No, Yes)
RSSI Value: 0
Protocol: None (None, ATCS IP Field)

- **Ethernet Port Status**

Using the Navigation keypad, highlight the STATUS tab and press "ENTER" which will bring up the window displaying the Ethernet Port connection status.

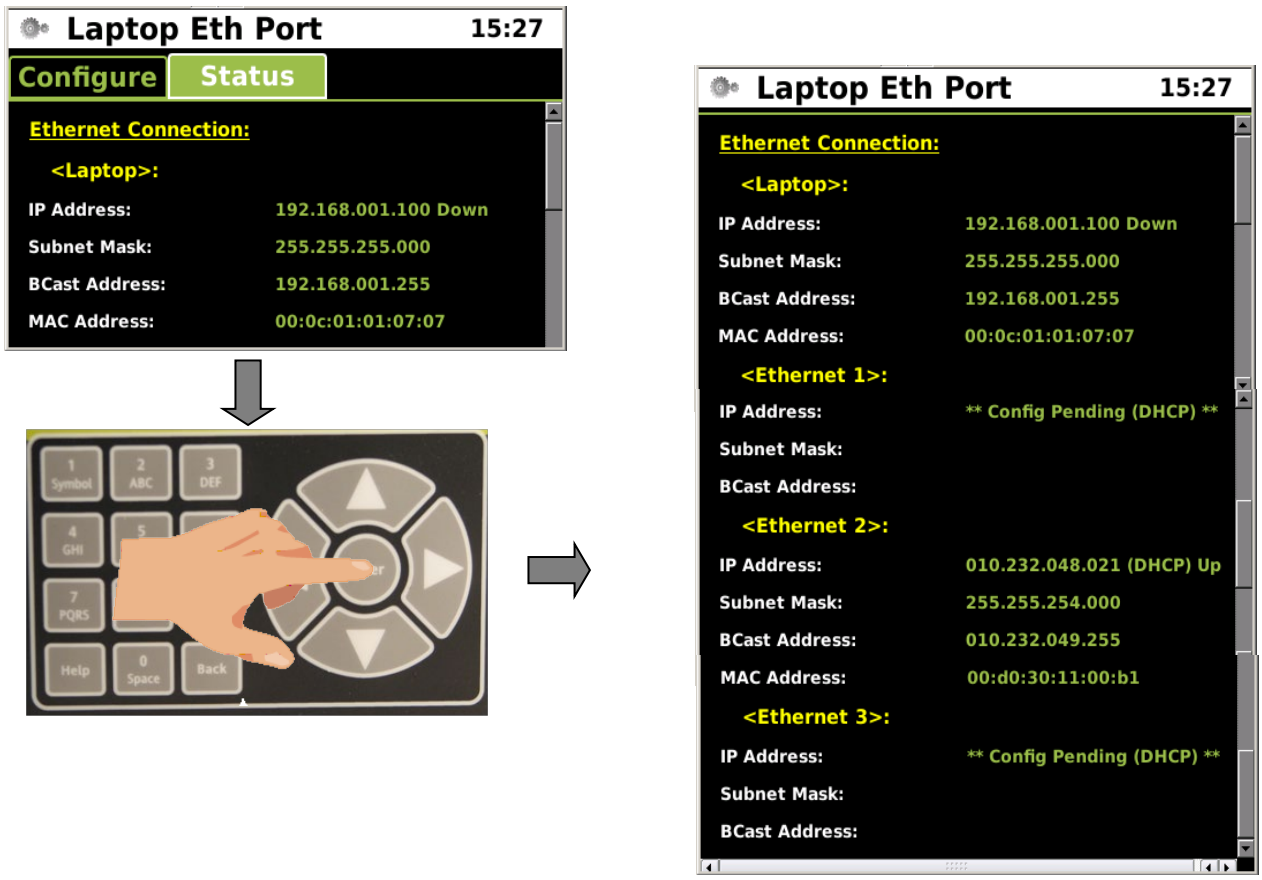


Figure 5-12 Ethernet Port Connection Status

- **Security Configuration**

Using the Navigation keypad, highlight the "SECURITY" icon and press "ENTER" or press "3" which will bring up the window displaying the Security parameters.

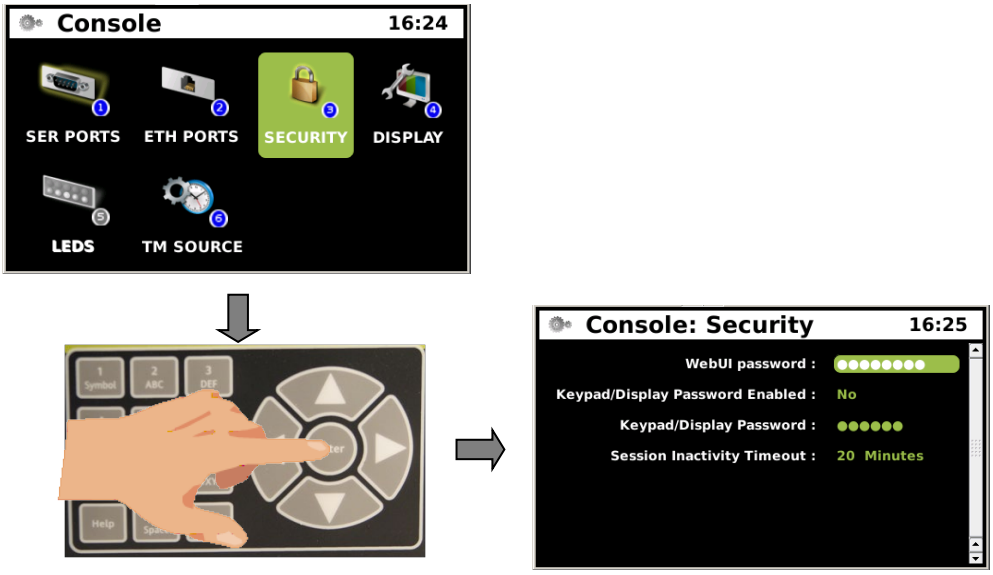


Figure 5-13 Security Configuration

The following security parameters are available for configuration by the user:

CONFIG > CONSOLE > SECURITY

Security

WebUI password: ●●●●●●●●
Keypad/Display Password Enabled: No (No, Yes)
Keyboard/Display password: ●●●●●●●●
Session Inactivity Timeout: 20

NOTE

NOTE

When setting a password, verify with each character entry that the highlighted character becomes an asterisk before entering the next character.

The figure below shows enabling the keyboard password and setting a new password. When entering password characters verify the highlighted character becomes an asterisk before continuing.

Figure 5-14 Enabling and Setting Keyboard Password

- **Display Configuration**

Using the Navigation keypad, highlight the "DISPLAY" icon and press "ENTER" or press "4" which will bring up the window displaying the Security parameters.

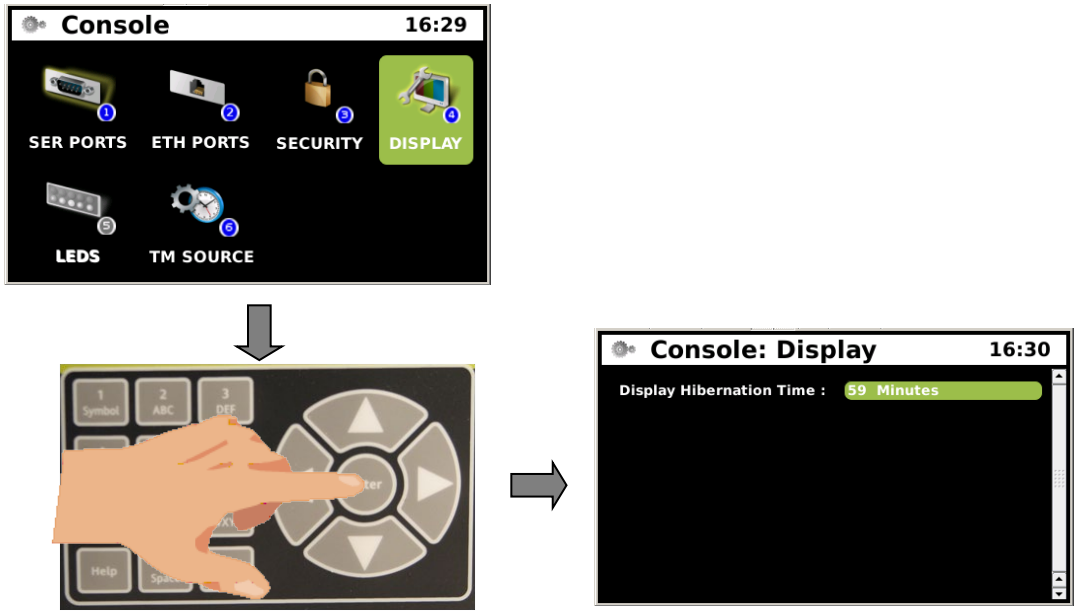


Figure 5-15 Display Configuration

CONFIG > CONSOLE > DISPLAY

Display

Console Hibernate Time: 1 - 59 Minutes (15 minutes default)

- **LEDs Configuration**

Using the Navigation keypad, highlight the "LEDS" icon and press "ENTER" or press "5" which will bring up the window displaying the LEDs parameters. This function is currently not available.

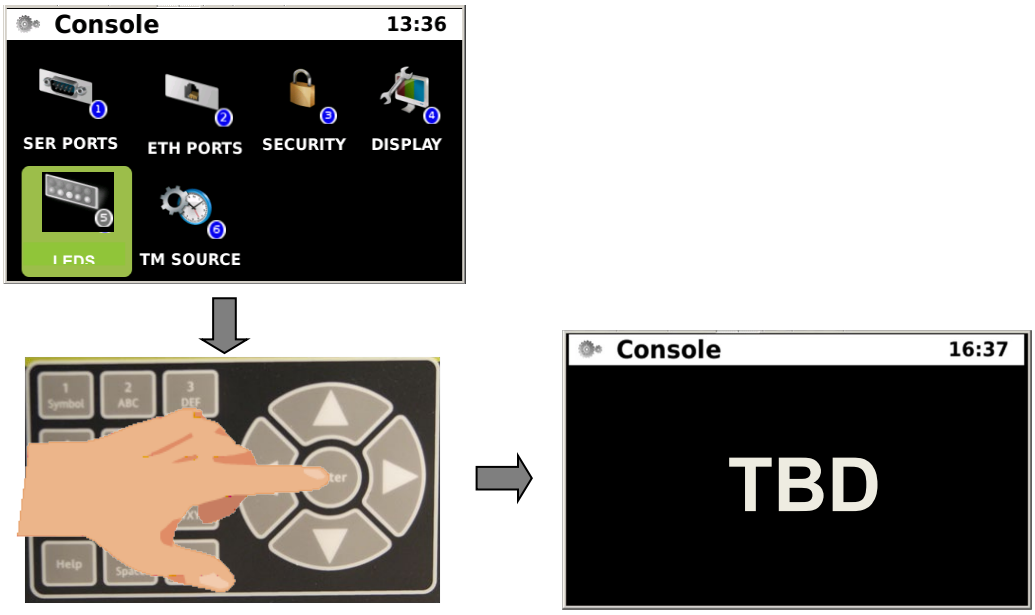


Figure 5-16 LEDs Configuration

Config > Console > LEDS

LEDS

TBD

- **TM (Time) Source Configuration**

Using the Navigation keypad, highlight the "TM SOURCE" icon and press "ENTER" or press "6" which will bring up the window displaying the Time Source parameters.

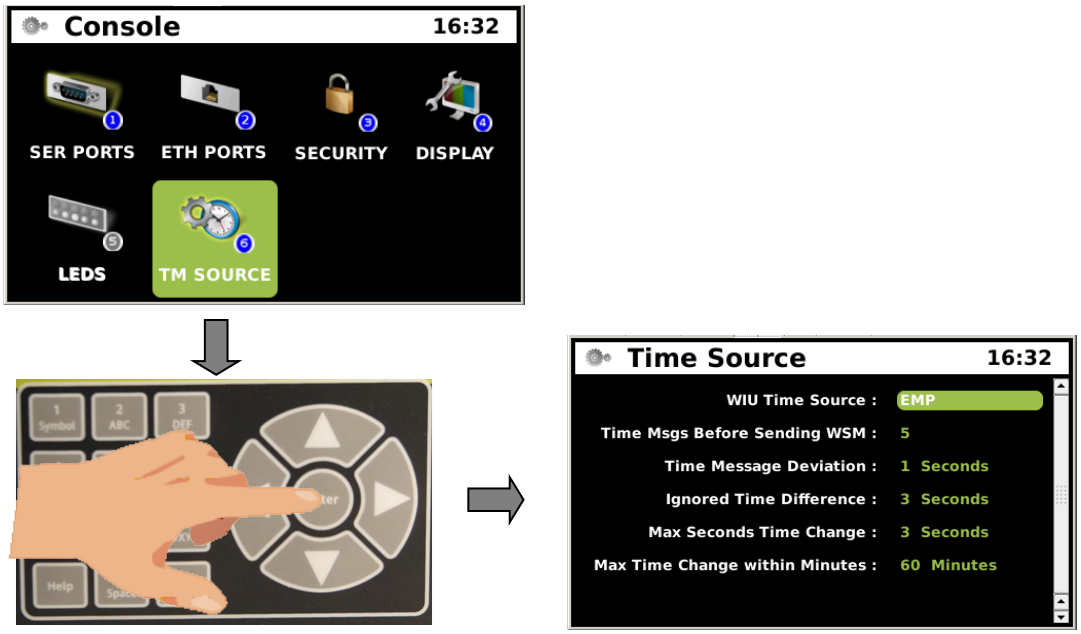


Figure 5-17 TM (Time) Source Configuration

CONFIG > CONSOLE > TM SOURCE

TM Source

WIU Time Source:	EMP (None, EMP, NTP, Internal Receiver)
Time Msgs Before Sending WSM:	5
Time Message Deviation:	1 Seconds
Ignored Time Difference:	3 Seconds
Max Seconds Time Change:	3 Seconds
Max Time Change within Minutes:	60 Minutes

- **Modules**

Using the Navigation keypad, highlight the "MODULES" icon in the Config sub-menus and press "ENTER" or press "3" which will bring up the Modules window. The Modules window displays of five sub menus.

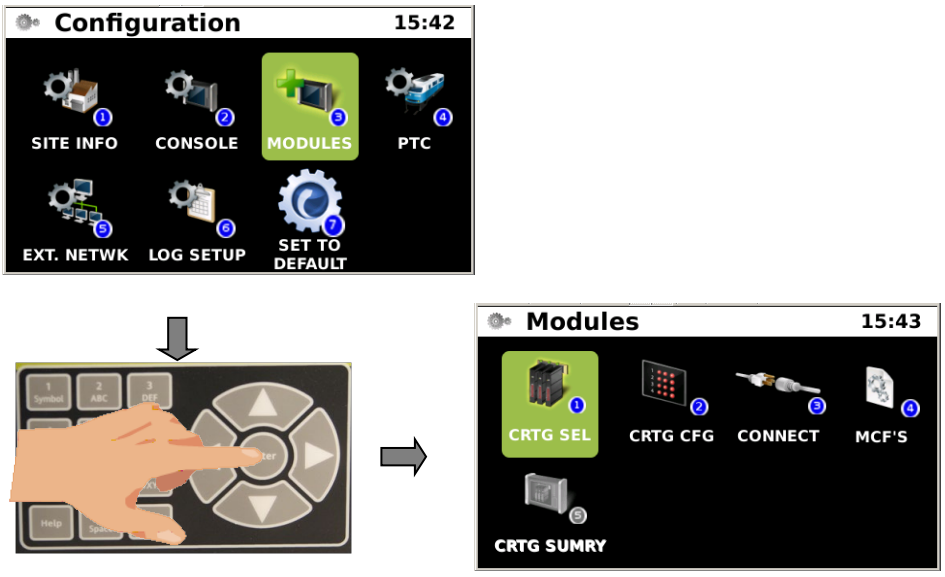


Figure 5-18 Modules Menu

- **Cartridge Selection**

The first menu icon is CRTG SEL (Cartridge Select). Press "ENTER" or press "1" for Cartridge selection. Use the navigation buttons to add a cartridge or select an existing cartridge. Press "ENTER" to select the configuration parameters.

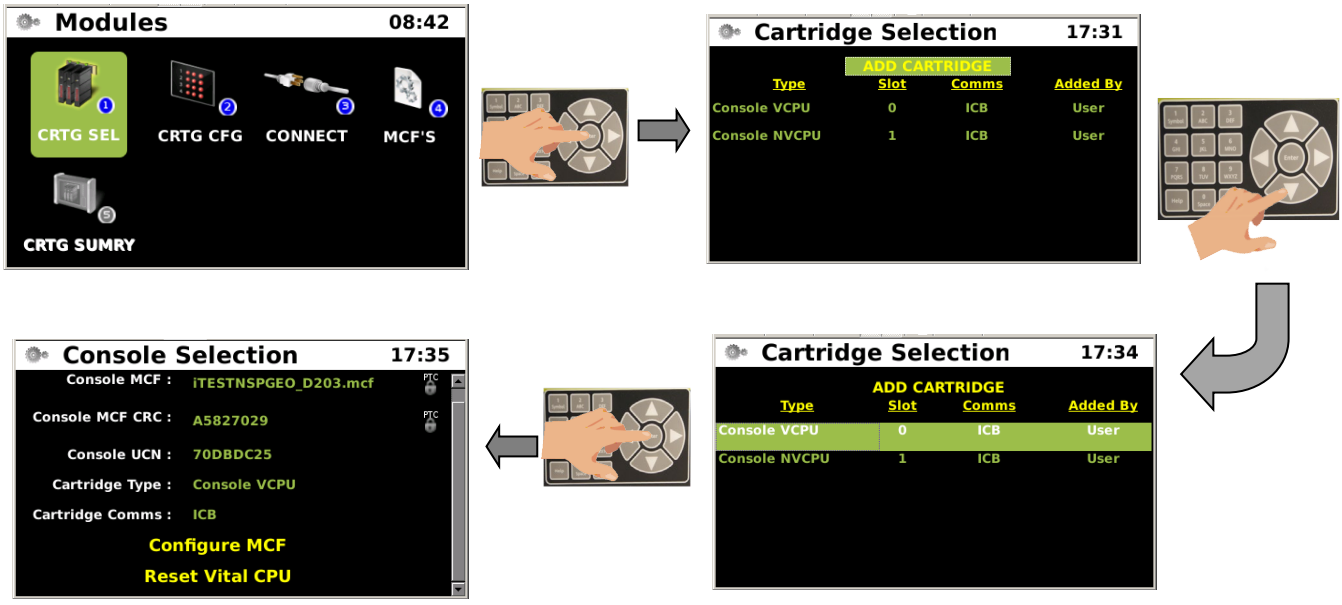


Figure 5-19 Modules Menu - Cartridge Selection (CRTG SEL)

- **Cartridge Selection Parameters**

The following window lists the Cartridge Selection parameters which includes the MCF, MCF CRC, and Console UCN

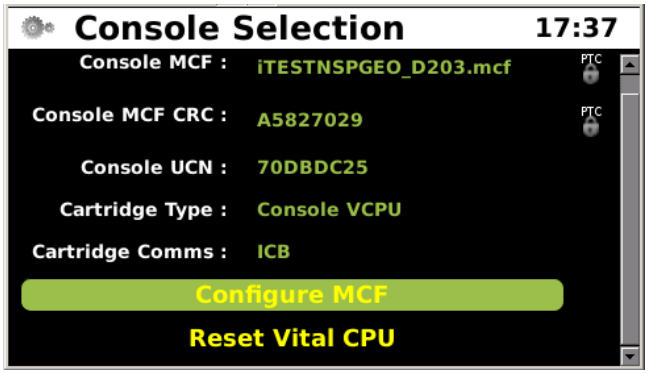


Figure 5-20 Cartridge Selection Parameters

- **Cartridge Configuration**

The next Modules sub-menu is CRTG CFG (Cartridge Configuration). This function enables user configuration of the Cartridge LEDs. Select the CRTG CFG icon and press the "ENTER" button. Use the navigations buttons to select the desired cartridge. Press the "ENTER" button and address points and their corresponding LED will be listed. Select the desired LED and press the "ENTER" button and the LED configuration screen will appear. The user can select names for each of the LED parameters.

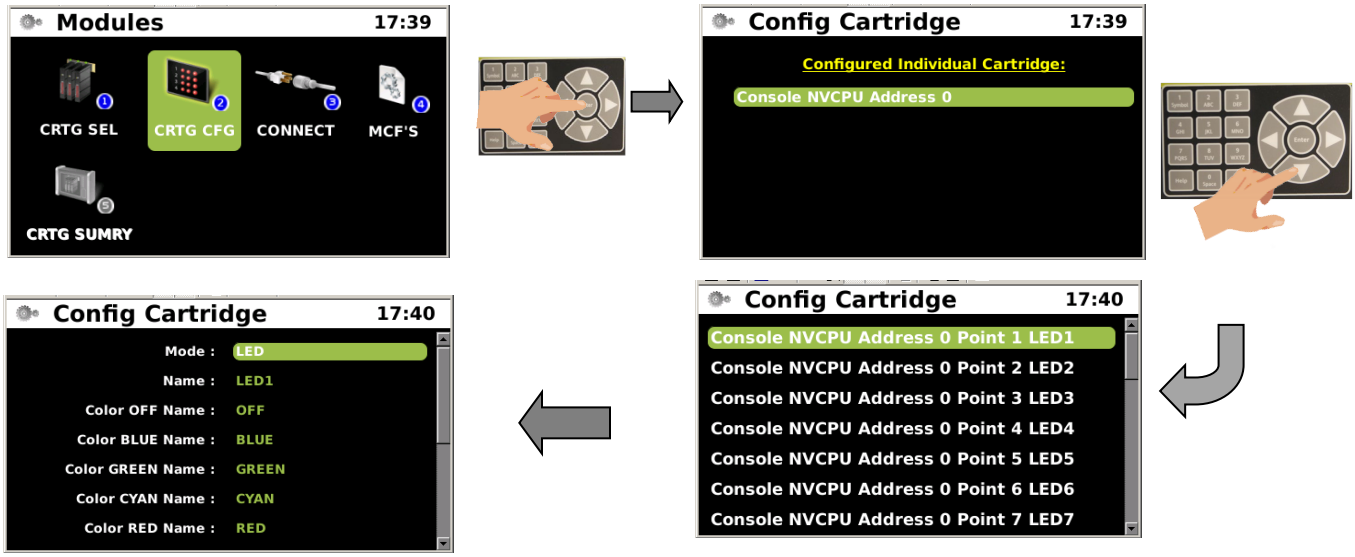


Figure 5-21 Modules Menu - Cartridge Configuration

- **Module Connections**

The "CONNECT" sub-menu icon opens the Module connections window as shown in Figure 5-22.

Figure 5-22 Module Menu - Connections

- **Module Configuration**

Press the "Enter" button on the navigation array. The first available module slot will appear in the next screen. If no modules are installed "Module 1" will appear as shown in Figure 5-23.

Figure 5-23 Module Menu - Connections - Module Configuration

Press the "Down" button on the navigation array to highlight the "Type" menu as shown in Figure 5-24.

Figure 5-24 Module Menu - Connections - Module Type

Press the "ENTER" button to bring up the Type Menu listing the available module types.

Figure 5-25 Module Menu - Connections - Module Type Selection

Press the "DOWN" button to select the desired module to configure as shown in Figure 5-26.

Figure 5-26 Module Menu - Connections - Select Module

Press the "ENTER" button to bring up the configuration screen for the module selected. Figure 5-27 shows a select of a GEO to be configured.

Figure 5-27 Module Menu - Connections - Configure Module Parameters

Upon completion, press the "BACK" button to return to the Module Configuration Menu.

Figure 5-28 Module Menu - Connections - Module Configure Complete

- **Module Menu - Echelon® Module Connection - Parameters**

The following are the Module Configuration parameters for each type of module:

VHFC Parameters
Receiver Mode: DTMF Only

Name:	VHFC X (X= Module Number)
Type:	VHFC
Receiver Mode:	DTMF Only (Framed, Stream, DTMF Only)
STX List:	F9F5F1FB00
ETX List:	F600000000
Data/DTMF Channel:	1 (1-8)
Voice Channel:	1 (1-8)
Tone Length:	250
Tone Space:	250
Key-Up Delay:	200
Key-Down Delay:	250
TX FSK Mode:	Bell 202 1200bps (Bell 202 1200bps, Bell 202 150bps)
RX FSK Mode:	Bell 202 1200bps (Bell 202 1200bps, Bell 202 150bps)

VHFC Parameters
Type: VHFC
Receiver Mode: Stream

Name:	VHFC X (X= Module Number)
Type:	VHFC
Receiver Mode:	Stream (Framed, Stream, DTMF Only)
STX List:	F9F5F1FB00
ETX List:	F600000000
Data/DTMF Channel:	1 (1-8)
Voice Channel:	1 (1-8)
Tone Length:	250
Tone Space:	250
Key-Up Delay:	200
Key-Down Delay:	250
TX FSK Mode:	Bell 202 1200bps (Bell 202 1200bps, Bell 202 150bps)
RX FSK Mode:	Bell 202 1200bps (Bell 202 1200bps, Bell 202 150bps)

VHFC Parameters

Type:	**VHFC**
Receiver Mode:	**Framed**
Name:	VHFC X (X= Module Number)
Type:	VHFC
Receiver Mode:	Framed (Framed, Stream, DTMF Only)
STX List:	F9F5F1FB00
ETX List:	F600000000
Data/DTMF Channel:	1 (1-8)
Voice Channel:	1 (1-8)
Tone Length:	250
Tone Space:	250
Key-Up Delay:	200
Key-Down Delay:	250
TX FSK Mode:	Bell 202 1200bps (Bell 202 1200bps, Bell 202 150bps)
RX FSK Mode:	Bell 202 1200bps (Bell 202 1200bps, Bell 202 150bps)

ULCP Parameters

Type:	**ULCP**
Name:	ULCP X (X= Module Number)
Type:	ULCP
Indication Holdoff:	50ms (50ms, 100ms, 200ms, 500ms, 1 sec, 2 sec)
Control Delivery:	50ms (50ms, 100ms, 200ms, 500ms, 1 sec, 2 sec)
Switch Offset:	0
LED Offset:	1 (1-8)

GEO Parameters

Type:	**GEO**
Connection Type:	**Echelon**
Name:	GEO X (X= Module Number)
Type:	GEO
Connection Type:	Echelon (Echelon, Serial)
ATCS Address:	7.620.100.100.03
Indication Offset:	0
Indication Size:	1
Control Offset:	0
Control Size:	1
UCN:	E756FD0A

GEO Parameters

Type:	**GEO**
Connection Type:	**Serial**
Name:	GEO X (X= Module Number)
Type:	GEO
Connection Type:	Serial (Echelon, Serial)
ATCS Address:	7.620.100.100.03
Indication Offset:	0
Indication Size:	1
Control Offset:	0
Control Size:	1
UCN:	E756FD0A

Panel I/O Parameters

Type:	**PANEL I/O**
Name:	PANEL I/O
Type:	PANEL I/O
Input Size:	9
Input Offset:	0
Output Offset:	0
Indication Holdoff:	50ms (50ms, 100ms, 200ms, 500ms, 1 sec, 2 sec)
Control Delivery:	50ms (50ms, 100ms, 200ms, 500ms, 1 sec, 2 sec)

- **MCF'S**

The MCF'S icon opens the Module Configuration File information. Click on the ATCS Address to open the Main Program menu as shown in Figure 5-29.

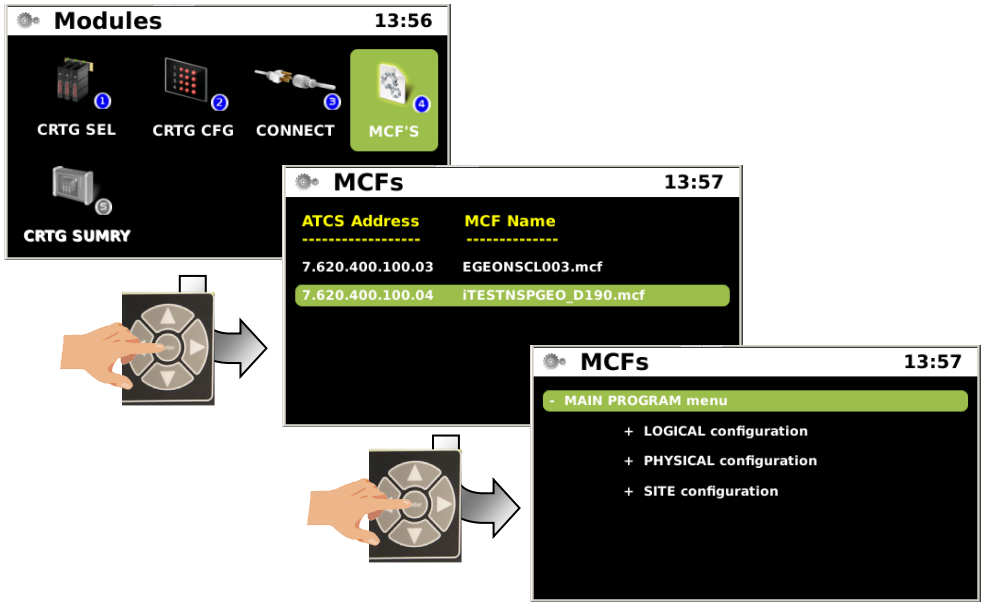


Figure 5-29 Module Menu - Module MCF Configuration

- **MCF Main Program Menu**

The MCF Main Program Menu has three sub-menus, Logical Configuration, Physical Configuration, and Site Configuration.

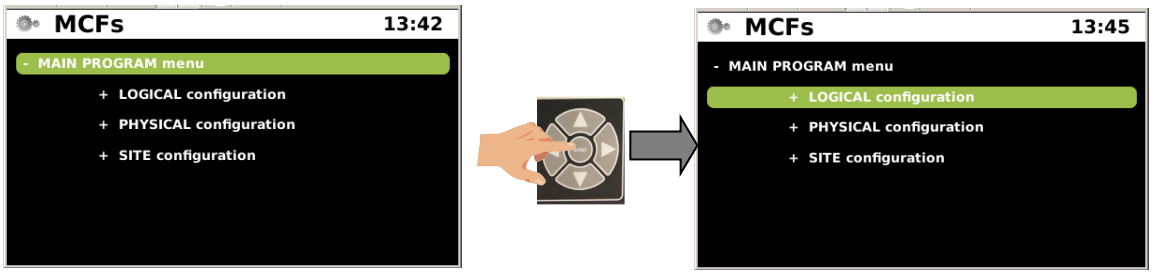


Figure 5-30 MCF Main Program Menu - Logical Configuration

Each MCF has various parameters depending on the application. For details on the installation and set up of a MCF refer to the Installation & Setup manual for that specific application.

- **Cartridge Summary**

The CRTG SUMRY (Cartridge Summary) icon is not available in this release.

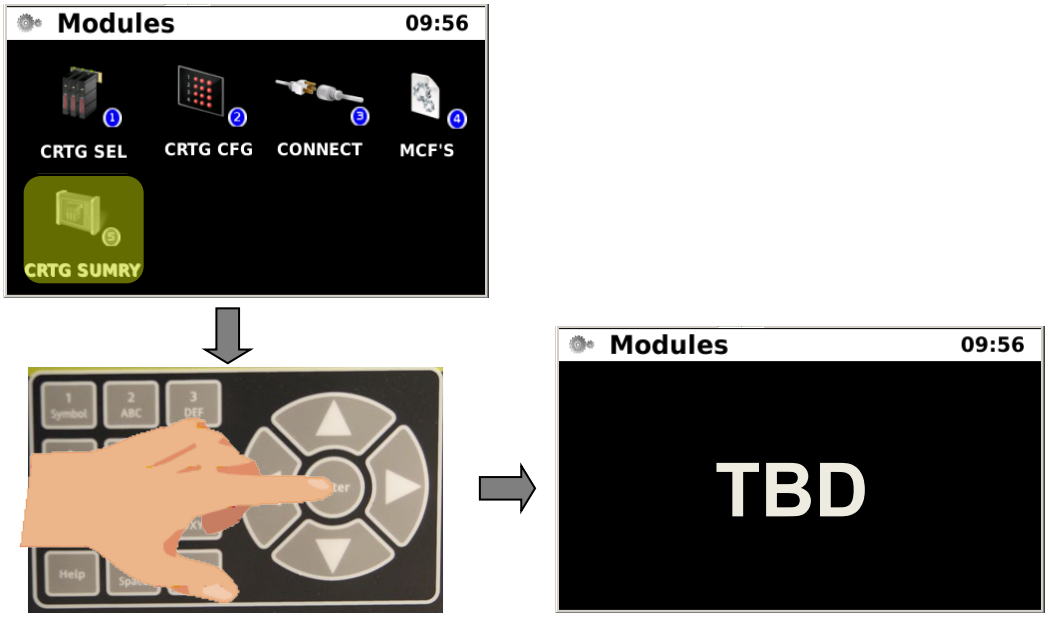


Figure 5-31 Module Menu - Cartridge Summary

- **PTC**

The PTC icon opens the menu to set PTC parameters. Five sub-menu icons are available GENERAL, EMP, Class C-D, BEACON MSG, and TM SOURCE.

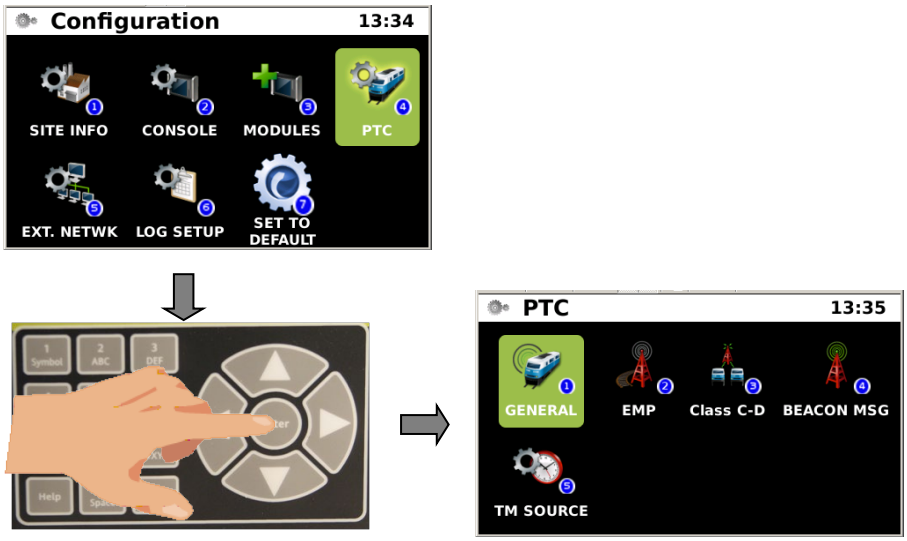


Figure 5-32 Module Menu - PTC

- **General**

The GENERAL sub-menu addresses PTC enabling of GEOs and WIU Channel. Some parameters may have a key lock or a PTC designator. These parameters affect applicable UCN (Unique Check Number) and CRC (Cyclic Redundancy Code). Changing these parameters will place the system in the safe mode and render the console in an unconfigured state. The proper UCN or CRC number will be required and entered into the console to restore normal operation.

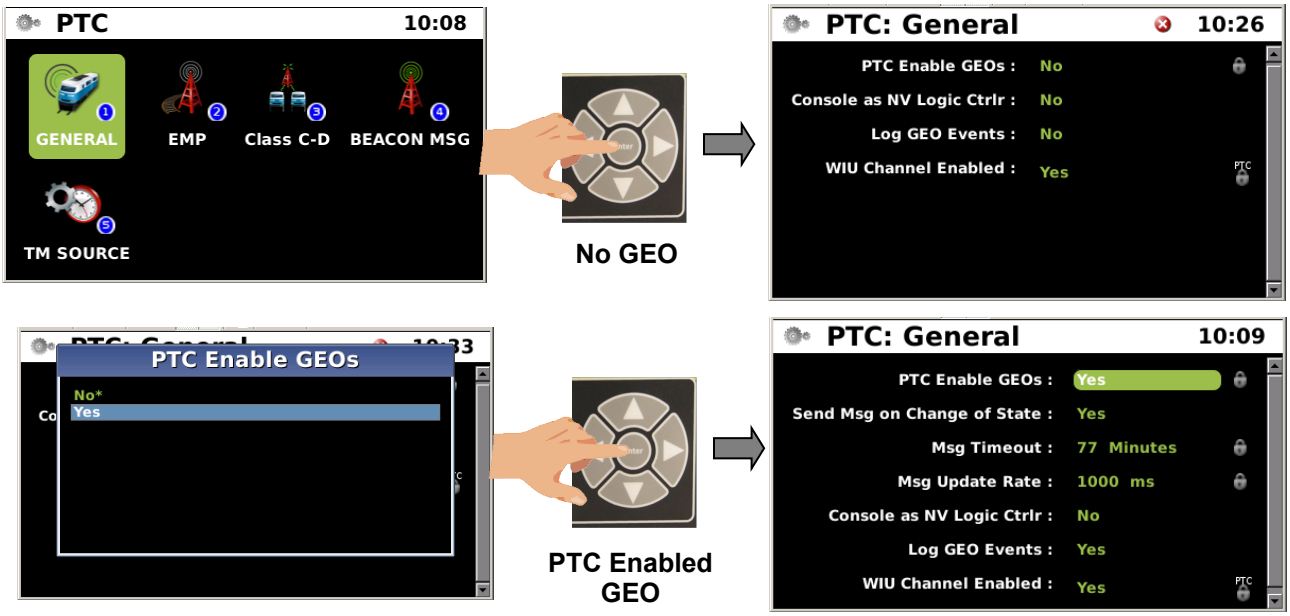


Figure 5-33 PTC - General

PTC - General
PTC Enable GEOs: No

PTC Enable GEOs: Yes (No, Yes)
Console as NV Logic Ctrlr: Yes (No, Yes)
Log GEO Events: Yes (No, Yes)
WIU Channel Enabled: Yes (No, Yes)

PTC - General
PTC Enable GEOs: Yes

PTC Enable GEOs: Yes (No, Yes)
Send Msg on Change of State: Yes (No, Yes)
Msg Timeout: 77 Minutes (Range = 5 - 240)
Msg Update Rate: 1000 ms (Range = 500 - 30000)
Console as NV Logic Ctrlr: Yes (No, Yes)
Log GEO Events: Yes (No, Yes)
WIU Channel Enabled: Yes (No, Yes)

- **EMP (Edge Messaging Protocol)**

The EMP icon opens the Edge Messaging Protocol parameters as shown below. Refer to AAR_S-9202 AAR specifications for proper values in setting up the PTC-EMP.

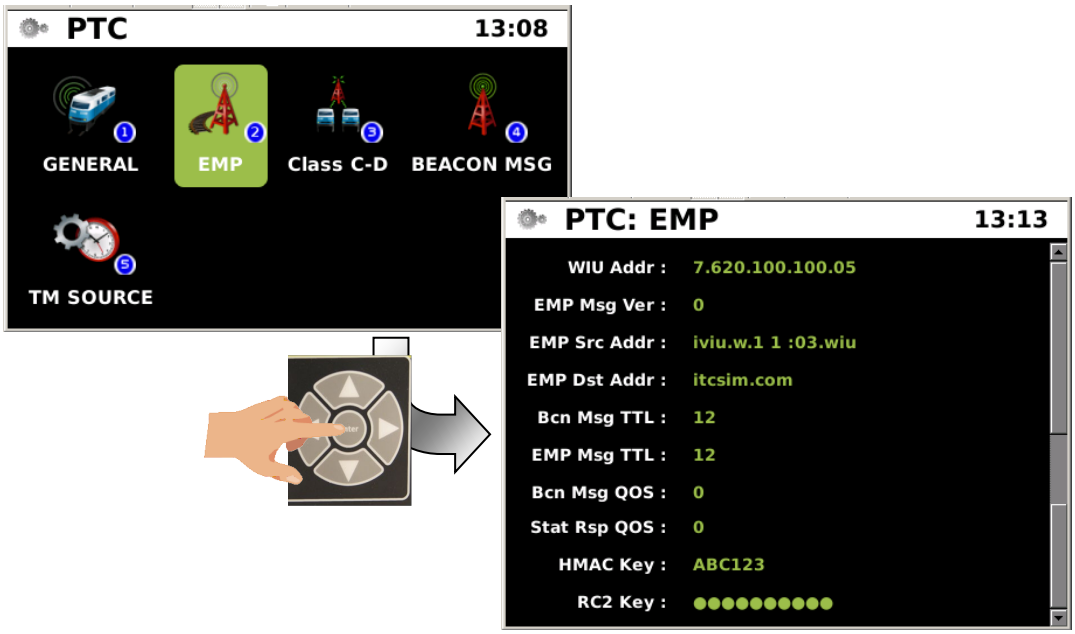


Figure 5-34 PTC - EMP Parameters

PTC - EMP

WIU Address:	7.620.100.100.05
EMP Message Version:	0 (Range = 0 - 98)
EMP Source Address:	iviu.w.100100:03.wiu
EMP Destination Address:	itcsim.com
Beacon Message Time to Live:	12 (Range = 0 - 98)
EMP Message Time to Live:	12 (Range = 0 - 98)
Beacon Message QOS:	0 (Range = 0 - 98)
Status Response QOS:	0 (Range = 0 - 98)
HMAC Key:	ABC123
RC2 Key:	●●●●●●●●●●●●

- **Class C-D**

The Class C-D icon opens the Class C and D messaging parameters as shown below. Refer to AAR_S-9280 (Class C) and AAR_S-9356 (Class D) AAR specifications when setting up PTC - Class C&D messaging.

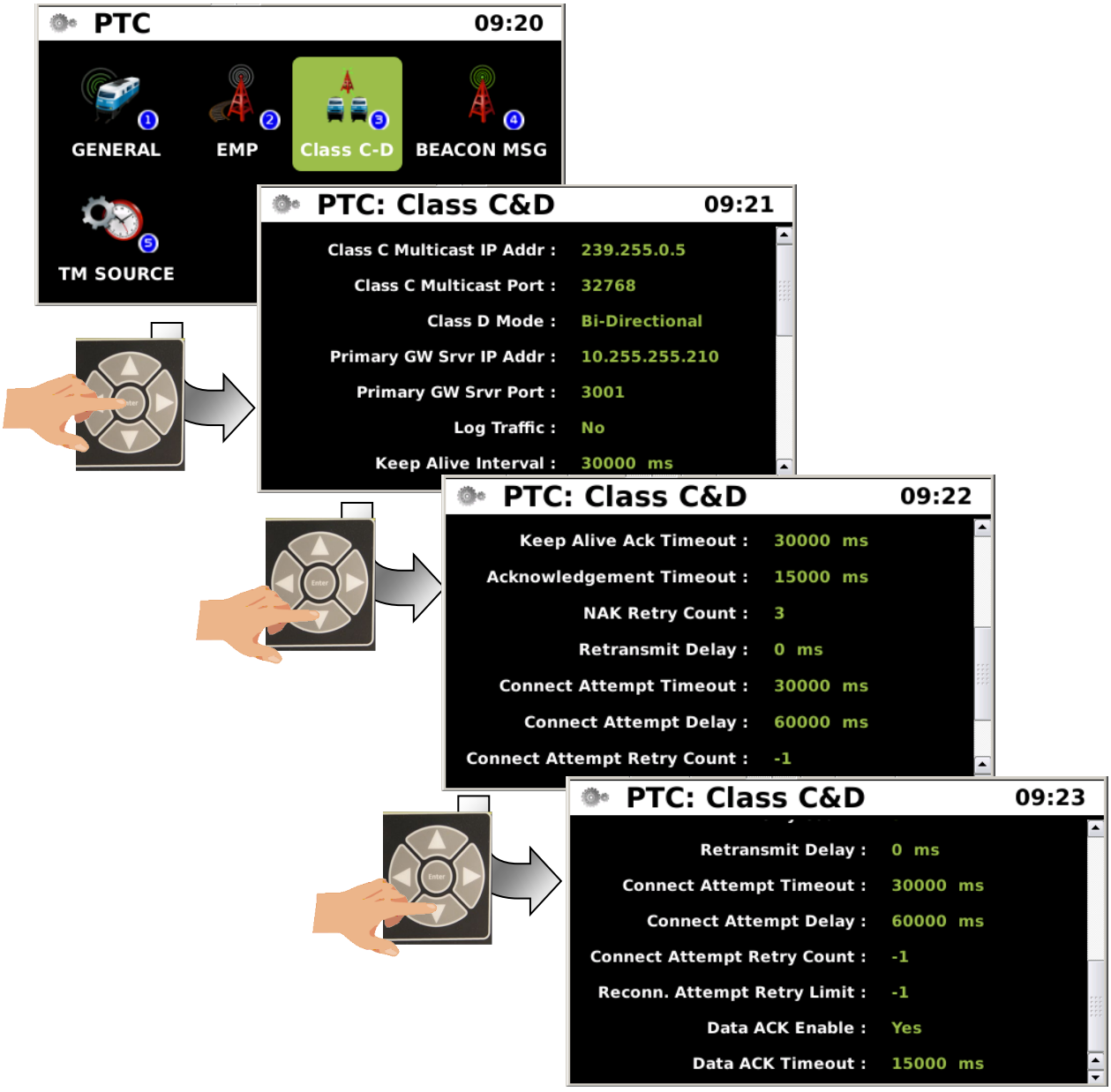


Figure 5-35 PTC - Class C-D Parameters

PTC - Class C-D

Class C Multicast IP Address: 239.255.0.5
Class C Multicast UDP Port: 32768
Class D Mode: Bi-Directional (Send Only, Receive Only, Bi-Directional)
Primary Gateway Server IP Address: 10.232.48.93 (Text Box)
Primary Gateway Server Port: 12000
Log Traffic: Yes (Yes, No)
Keep Alive Interval: 9000 ms (Range 540 - 30000)
Keep Alive Ack Timeout: 30000 ms (Range 540 - 30000)
NAK Retry Count: 3
Retransmit Delay: 1000 ms (Range 540 - 30000)
Connect Attempt Timeout: 1000 ms (Range 540 - 30000)
Connect Attempt Delay: 1000 ms (Range 540 - 30000)
Connect Attempt Retry Count: -1
Connect Attempt Limit: -1
Data ACK Enable: Yes (Yes, No)
Data ACK Timeout: 15000 ms (Range 540 - 30000)

- **Beacon Message**

The BEACON MSG icon opens the Beacon Message parameters as shown below.

Beacon Continuous: Continuous

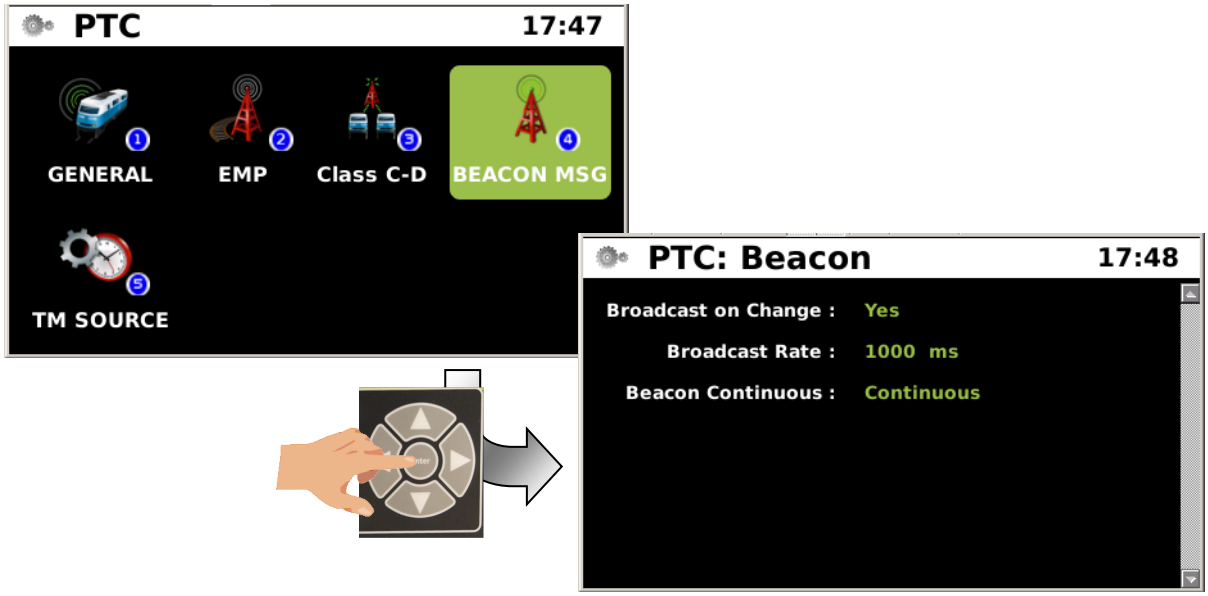


Figure 5-36 PTC - Beacon Message

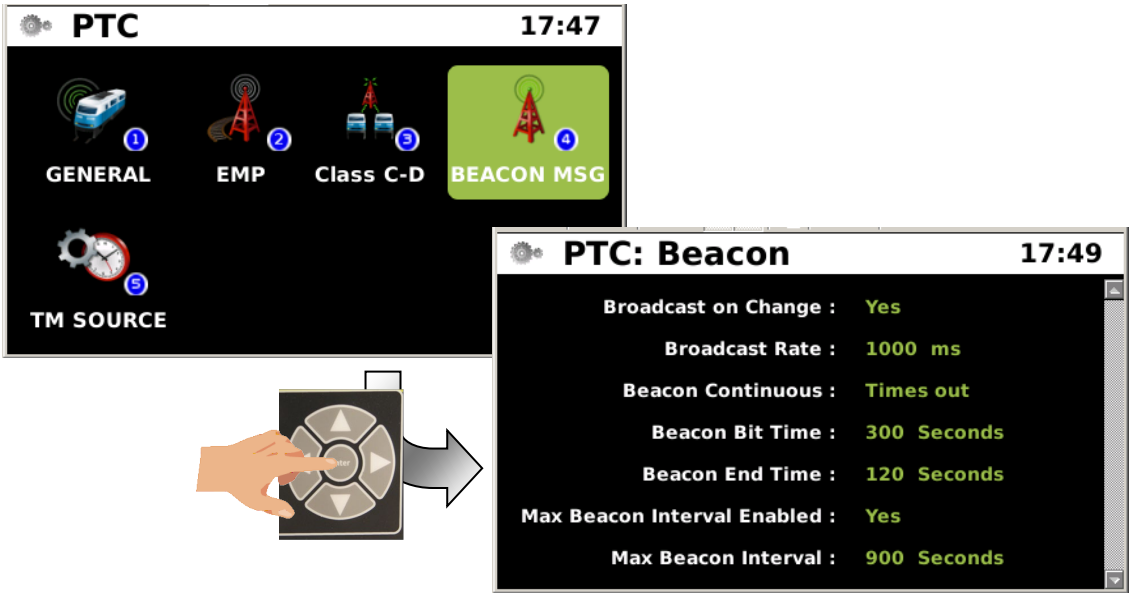
CONFIG > PTC > BEACON MSG

BEACON MSG

Broadcast on Change: No (No, Yes)
Broadcast Rate: 1000 ms (Range 540 - 30000)
Beacon Continuous: Times out (Times out, Continuous)

The BEACON MSG icon opens the Beacon Message parameters as shown below.

Beacon Continuous: Times out



CONFIG > PTC > BEACON MSG

BEACON MSG

Broadcast on Change: No (No, Yes)
Broadcast Rate: 1000 ms (Range 540 - 30000)
Beacon Continuous: Times out (Times out, Continuous)
Beacon Bit Time: 300 Seconds (Range 60 to 1800)
Beacon End Time: 300 Seconds (Range 60 to 1800)
Max Beacon Interval: 900 Seconds (Range 60 to 86400)

- **Time Source**

The TM SOURCE icon opens the Time Source parameters as shown below.

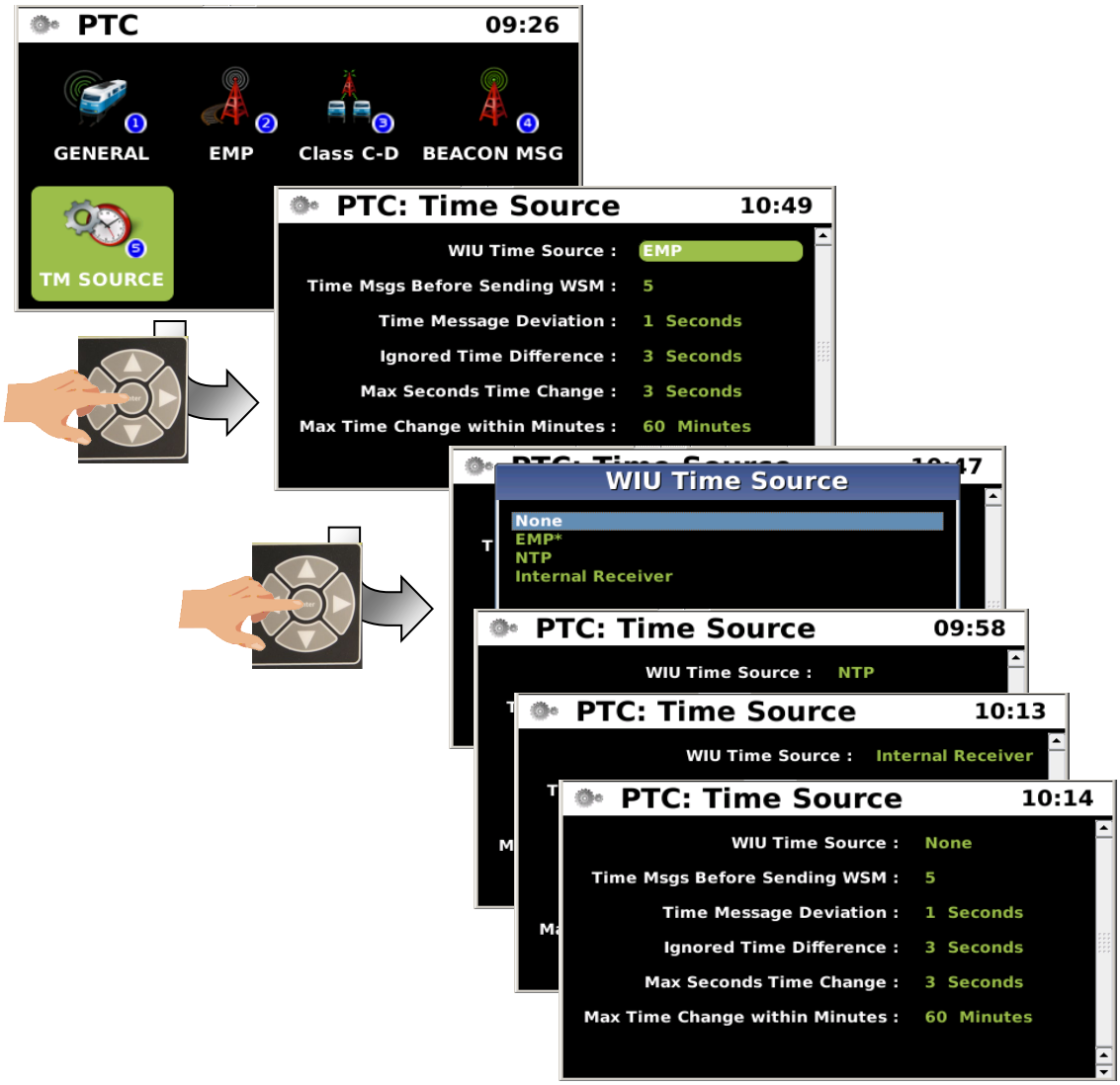


Figure 5-37 PTC - Time Source (TM Source)

CONFIG > PTC > TM Source

TM Source

WIU Time Source:	EMP (None, EMP, NTP, Internal Receiver)
Time Msgs Before Sending WSM:	5
Time Message Deviation:	1 Seconds
Ignored Time Difference:	3 Seconds
Max Seconds Time Change:	3 Seconds
Max Time Change within Minutes:	60 Minutes

- **External Networks**

The EXT NETWK icon opens the External Network parameters menu. There are five network applications support as shown below.

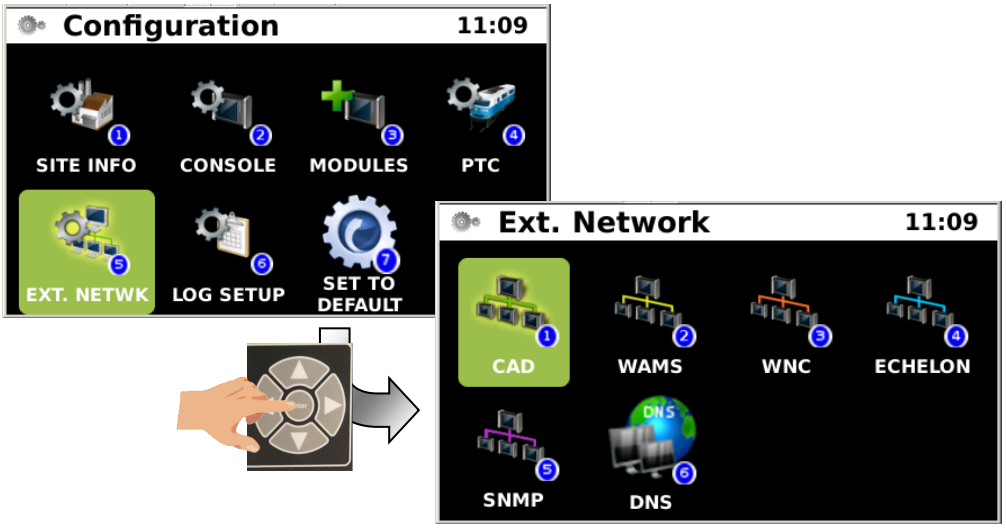


Figure 5-38 External Networks

- **CAD**

Computer Aided Dispatch (CAD) parameters are in the first sub-menu as shown below.

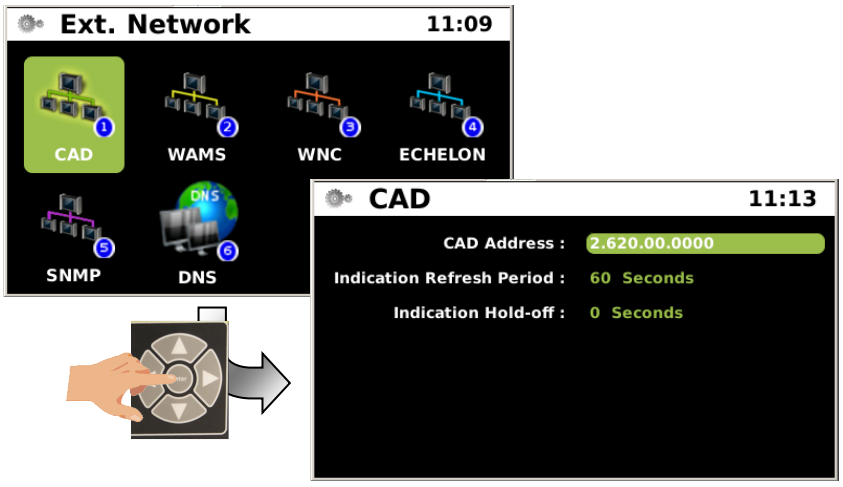


Figure 5-39 External Networks - CAD

CAD

CAD Address:	2.620.00.0000
Ind. Refresh:	60 Seconds
Ind. Holdoff:	0 Seconds

- **WAMS**

The Wayside Automated Maintenance System (WAMS) sub-menu parameters are displayed in the figure below.

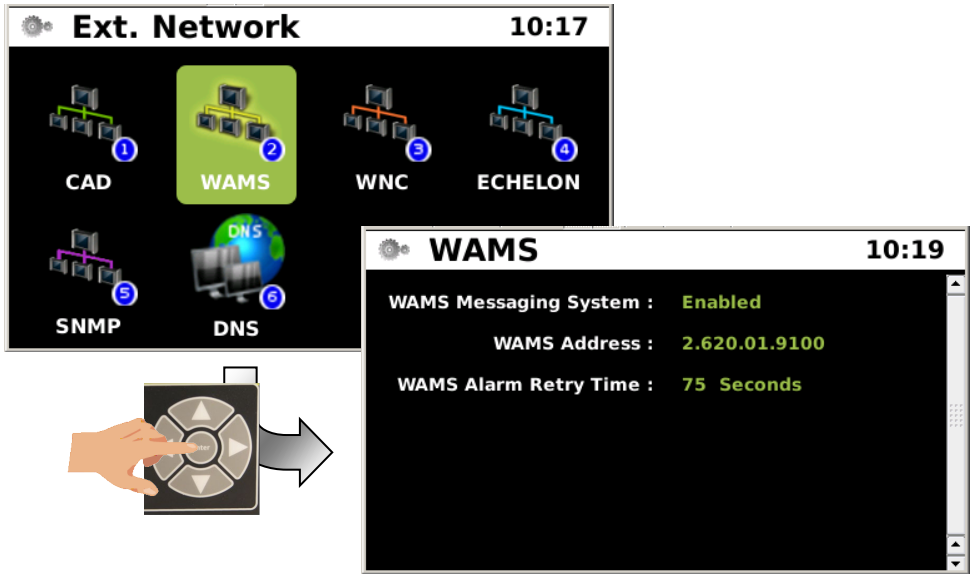


Figure 5-40 External Networks - WAMS

CONFIG > EXT. NETWK > WAMS

WAMS

WAMS Messaging System Enabled: Enabled (Disabled, Enabled)
WAMS Address: 2.620.01.9100
WAMS Alarm Retry Time: 75 Seconds

- **WNC**

The WNC sub-menu has a single parameter for WNC Installation Address as shown below.

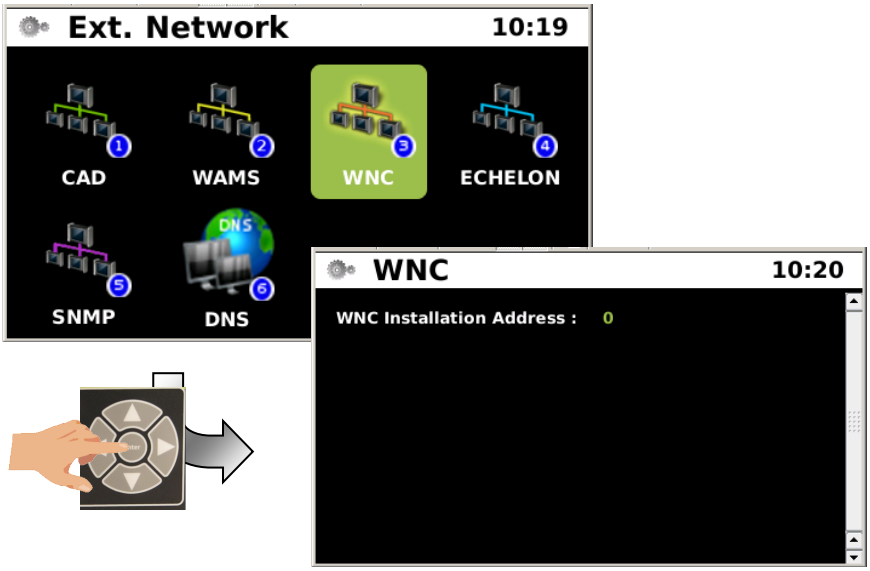


Figure 5-41 External Networks - WNC

CONFIG > EXT. NETWK > WNC

WNC

WNC Installation Address: 0

- **Echelon®**

The Echelon® Network sub-menu provides the node assignment parameters as shown in Figure 5-42

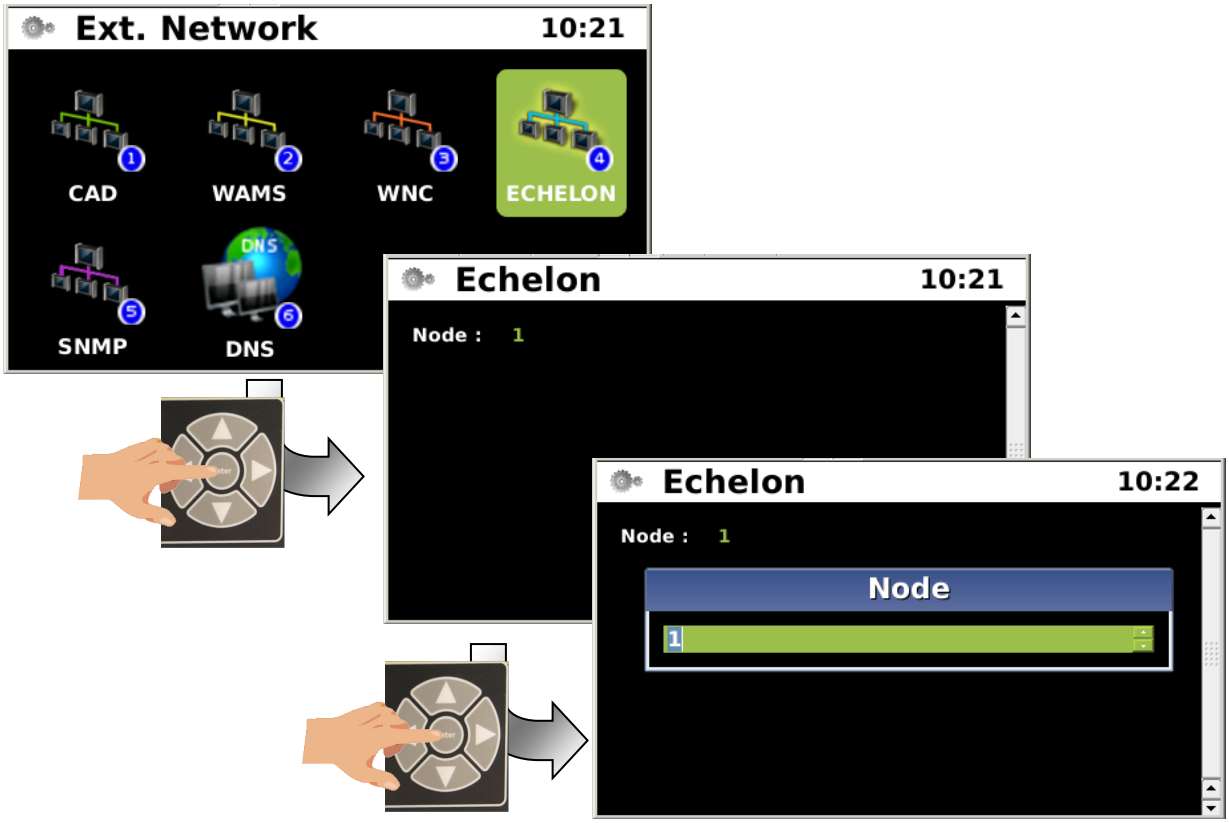


Figure 5-42 External Networks - Echelon®

ECHELON

Node: 1

- **SNMP**

The SNMP sub-menu opens the SNMP configuration parameters. Figure 5-43 displays the SNMP parameter options in Figure 5-43. Alerts for device status may use SNMP traps to gather the information required. It will be necessary to setup the SNMP Destination IP and the Destination Port information. The iVIU Console has the capability for up to four Destination IP addresses. To setup the SNMP Destination IP and Port navigate through the screens as shown in the figure below. Enter each Destination IP and Port for the number of destinations available in the network. Verify the entry before pressing the Enter key.

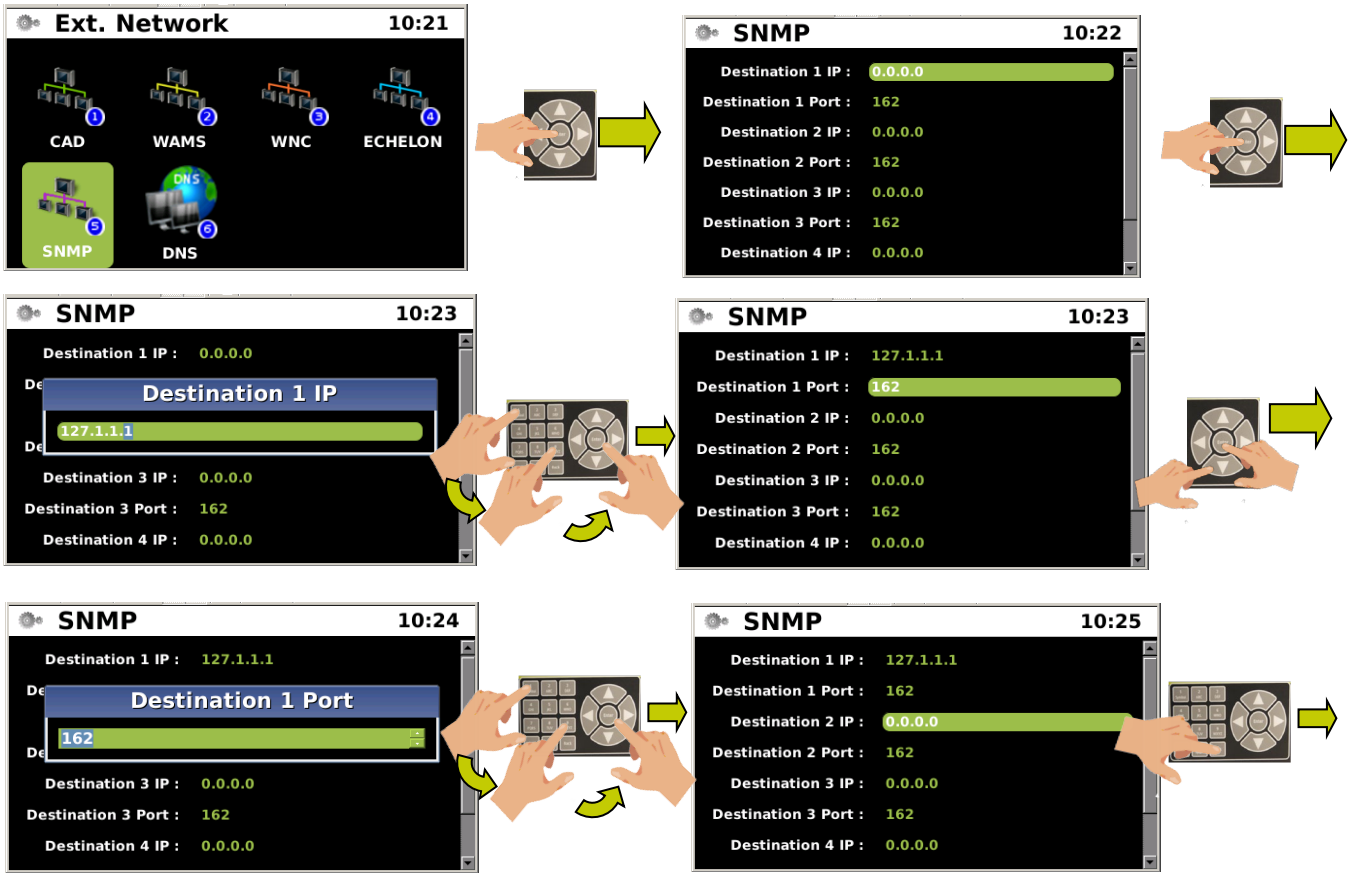


Figure 5-43 SNMP Configuration

SNMP

Destination 1 IP:	0.0.0.0
Destination 1 Port:	162
Destination 2 IP:	0.0.0.0
Destination 2 Port:	162
Destination 3 IP:	0.0.0.0
Destination 3 Port:	162
Destination 4 IP:	0.0.0.0
Destination 4 Port:	162

- **DNS**

The DNS sub-menu provides entry of up to three DNS Server IP Addresses as shown in Figure 5-44.

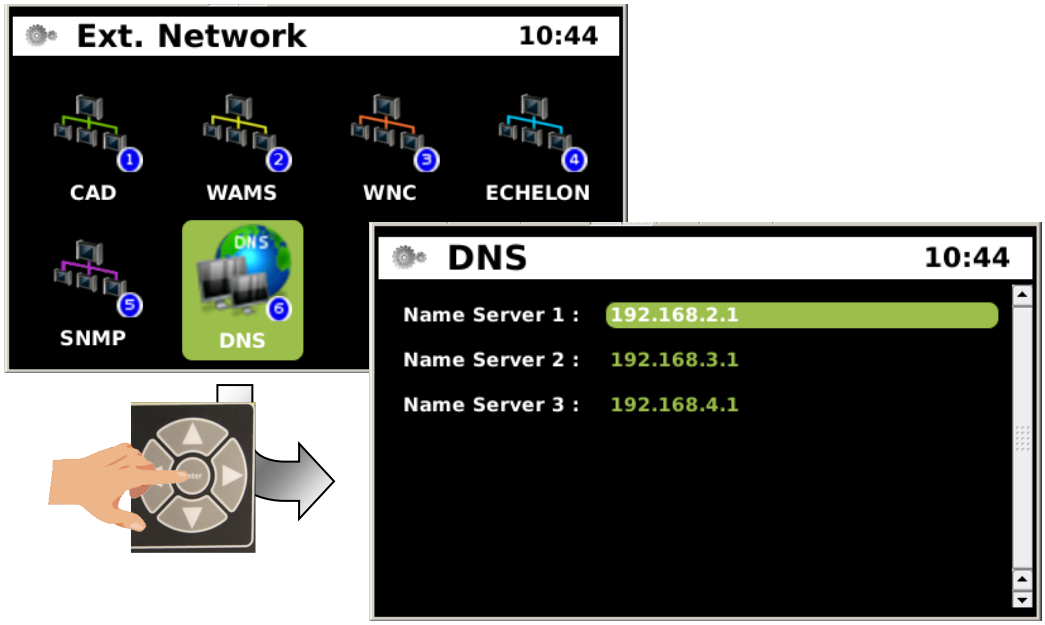


Figure 5-44 External Networks - DNS

CONFIG > EXT. NETWK > DNS

DNS

Name Server 1:	192.168.002.001
Name Server 2:	192.168.003.001
Name Server 3:	192.168.004.001

- **Log Setup**

The LOG SETUP menu opens the Log Setup parameters as shown below.

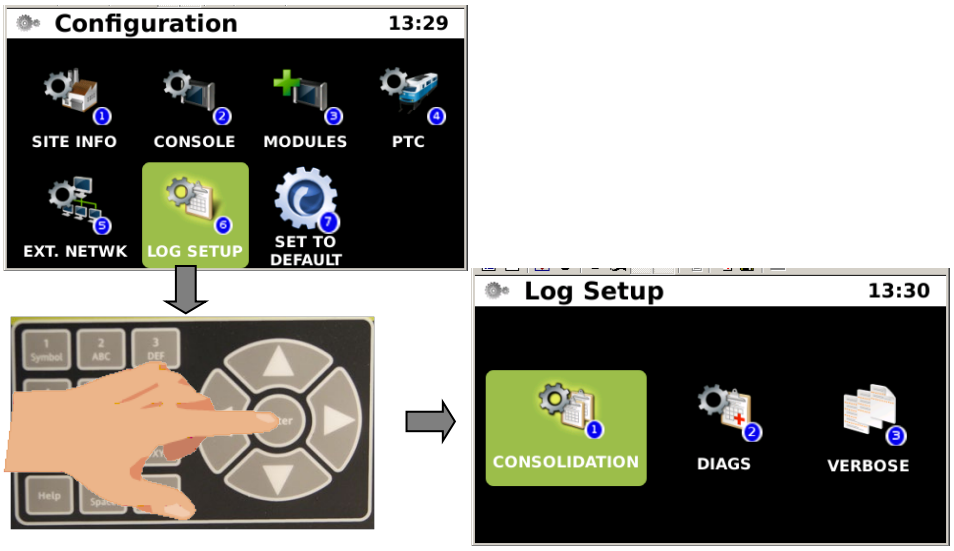


Figure 5-45 Log Setup

- **Consolidation**

Consolidation enables logs to be sent to a designated server from multiple iVIU systems. Logs will be maintained within the local unit as well.

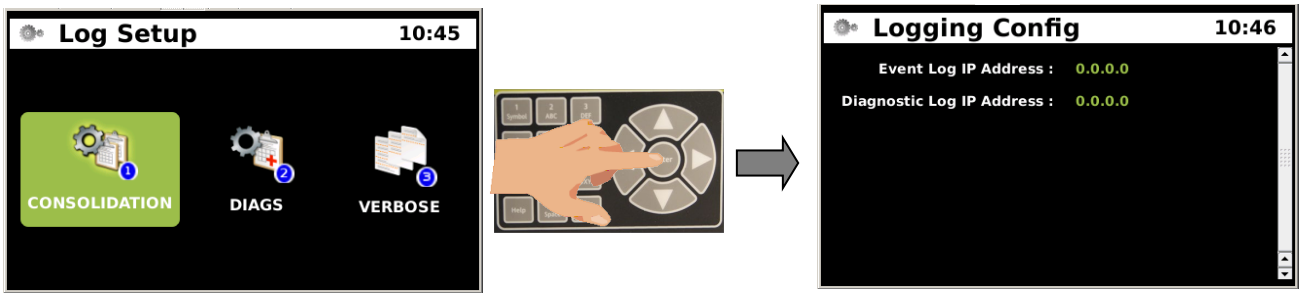


Figure 5-46 Log Setup - Consolidation

CONFIG > LOG SETUP > CONSOLIDATION

CONSOLIDATION

Event Log IP Address: 0.0.0.0
Diagnostic Log IP Address: 0.0.0.0

- **Diagnostics**

The Diagnostics Log setup may be customized by the User to collect specific information. Log parameters may be enables or disabled by the user.

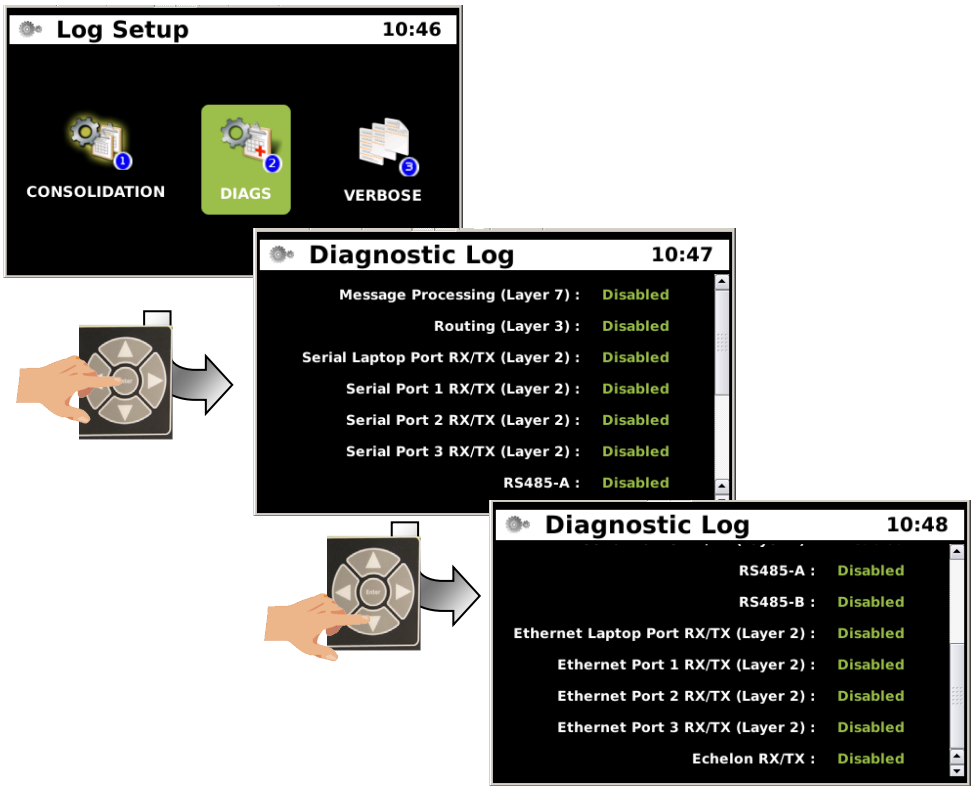


Figure 5-47 Log Setup - Diagnostic Logs

CONFIG > LOG SETUP > DIAGS

DIAGS

Message Processing (Layer 7):	Disabled (Disabled, Enabled)
Routing (Layer 3):	Disabled (Disabled, Enabled)
Serial Laptop Port Rx/Tx (Layer 2):	Disabled (Disabled, Enabled)
Serial Port 1 Rx/Tx (Layer 2):	Disabled (Disabled, Enabled)
Serial Port 2 Rx/Tx (Layer 2):	Disabled (Disabled, Enabled)
Serial Port 3 Rx/Tx (Layer 2):	Disabled (Disabled, Enabled)
RS485-A:	Disabled (Disabled, Enabled)
RS485-B:	Disabled (Disabled, Enabled)
Ethernet Laptop Port Rx/Tx (Layer 2):	Disabled (Disabled, Enabled)
Ethernet Port 1 Rx/Tx (Layer 2) :	Disabled (Disabled, Enabled)
Ethernet Port 2 Rx/Tx (Layer 2):	Disabled (Disabled, Enabled)
Ethernet Port 3 Rx/Tx (Layer 2):	Disabled (Disabled, Enabled)
Echelon Rx/Tx:	Disabled (Disabled, Enabled)

- **Verbose**

There are two logs and a global category, each with five verbosity settings available, Basic, Error, Warning, Info, and Debug. The verbosity may be set for the Console Diagnostic Log and the Console CDL Log. A Global verbosity level may be used to set a single level for all logs.

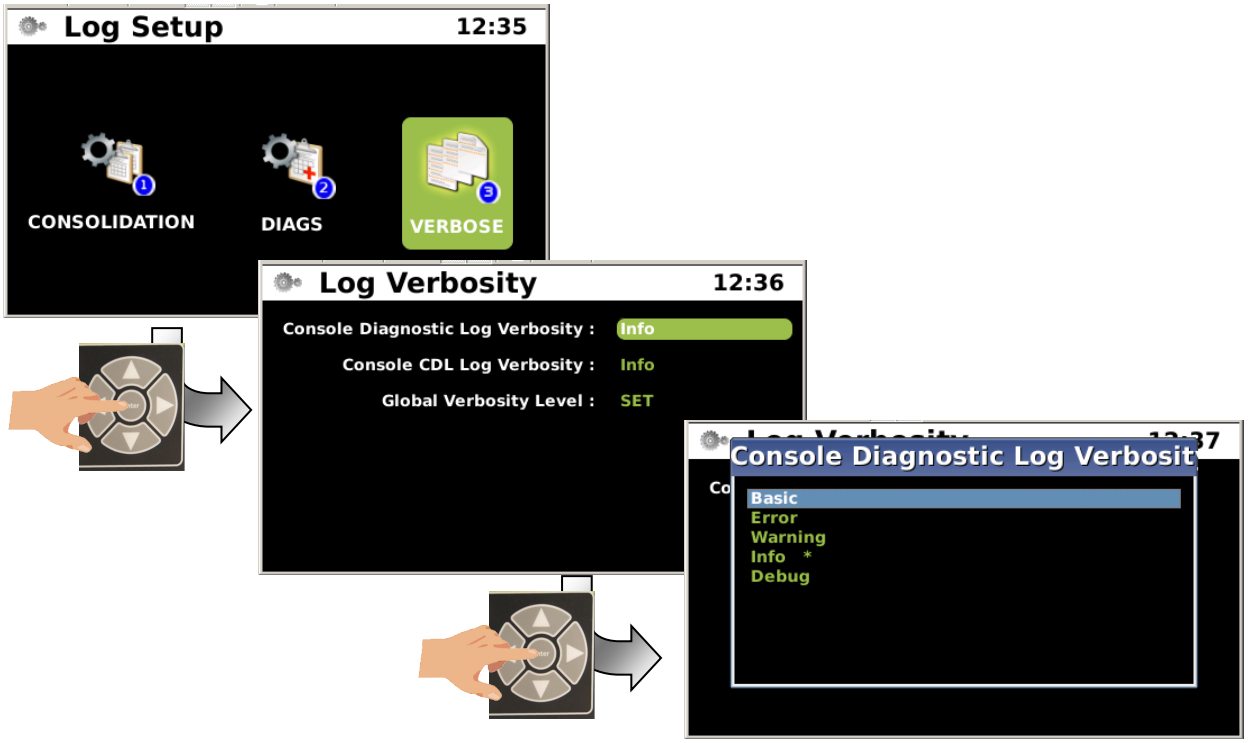


Figure 5-48 Log Setup - Verbose - Console Diagnostic Log

CONFIG > LOG SETUP > VERBOSE >

Console Diagnostic Log Verbosity

Console Diagnostic Log Verbosity: Basic (Basic, Error, Warning, Info, Debug)

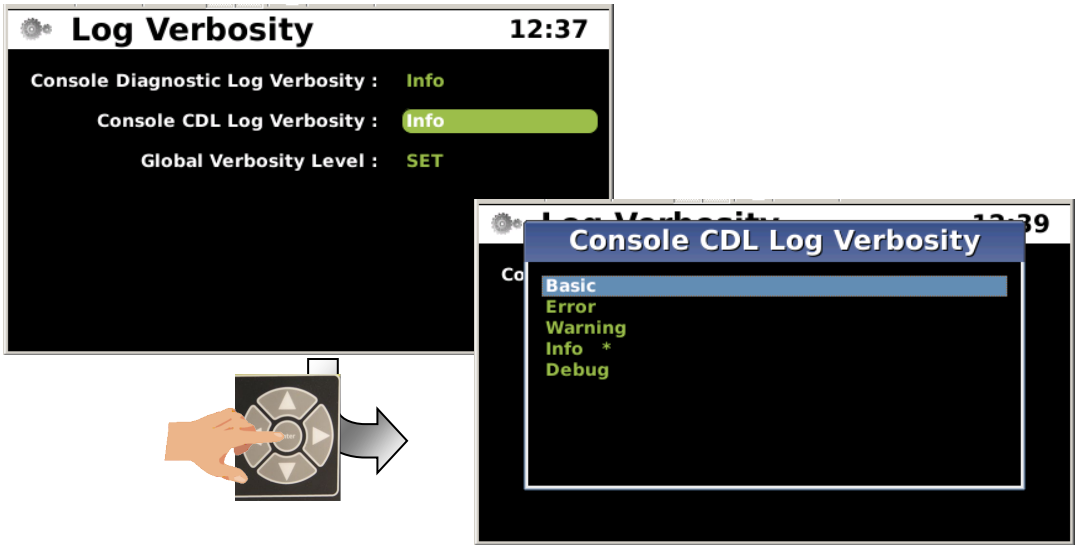


Figure 5-49 Log Setup - Verbose - Console CDL Log

CONFIG > LOG SETUP > VERBOSE >

Console Diagnostic Log Verbosity

Console Diagnostic Log Verbosity: Basic (Basic, Error, Warning, Info, Debug)

Figure 5-50 Log Setup - Verbose - Global Verbosity Level

CONFIG > LOG SETUP > VERBOSE >

Console CDL Log Verbosity

Console CDL Log Verbosity: Basic (Basic, Error, Warning, Info, Debug)

- **Configuration - Set to Default**

The Set to Default function is a one button command that returns all configuration parameters to original factory default values. A warning screen appears verifying the user's desire to return all parameters to their default values.

⚠ WARNING

WARNING

INITIATING THE SET TO DEFAULT FUNCTION WILL SET ALL CONFIGURATION PARAMETERS TO ORIGINAL FACTORY VALUES AND UN-CONFIGURE THE SYSTEM. ANY USED I/O WILL BE PLACED IN SAFE MODE. THERE IS NO UNDO CAPABILITY TO RECOVER CONFIGURATION PARAMETER VALUES.

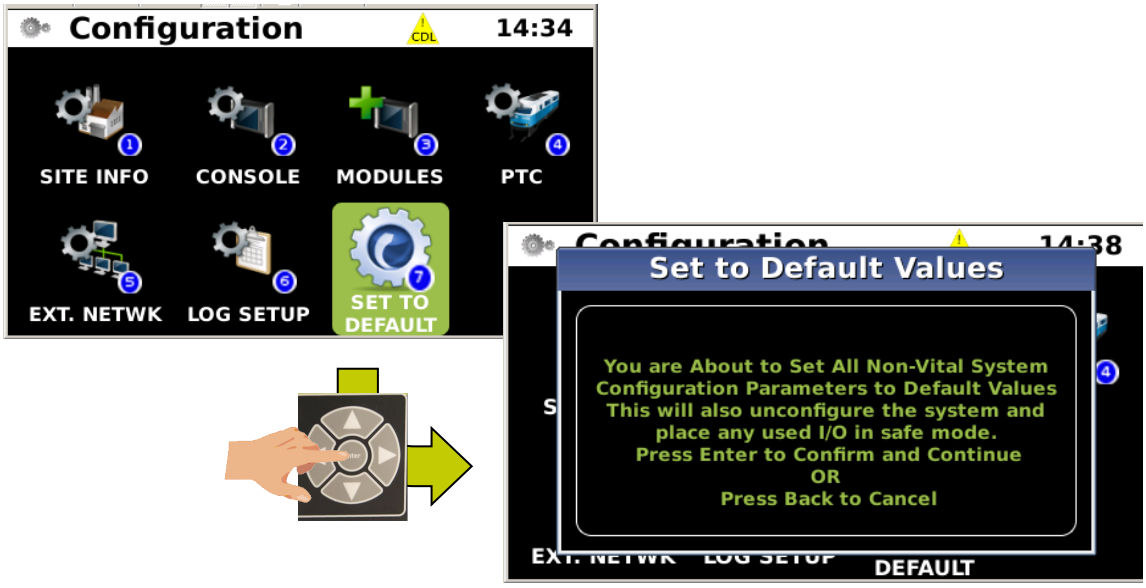


Figure 5-51 Configuration - Set to Default

5.1.2.5 Status

The Status icon opens five sub-menus that provide current status of Cartridge Status, PTC, GEO State, GEO I/O, GEO Online, and ATCS Communications. Cartridge Status is not available at this time and will be made available in a future release.

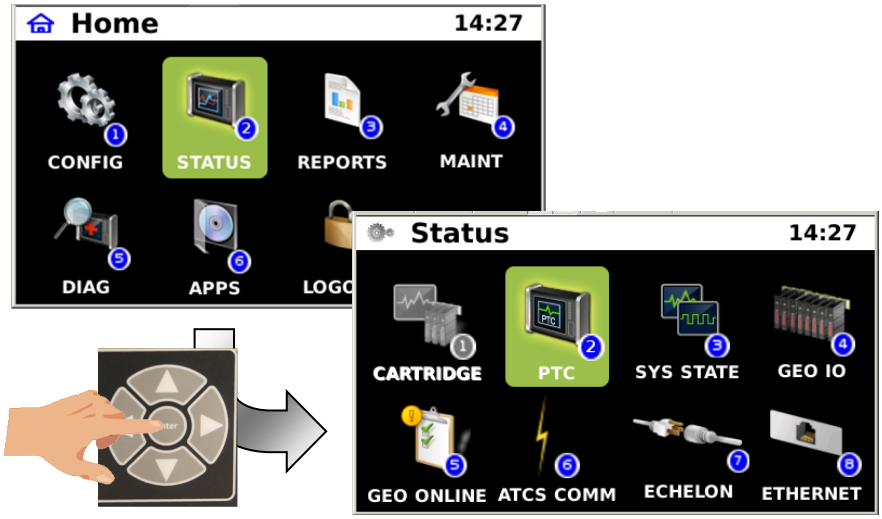


Figure 5-52 Status Menu

- **Cartridge Status (CRTG STATUS)**

The Cartridge Status function will provide current cartridge operational status. The feature will be available in a future release.

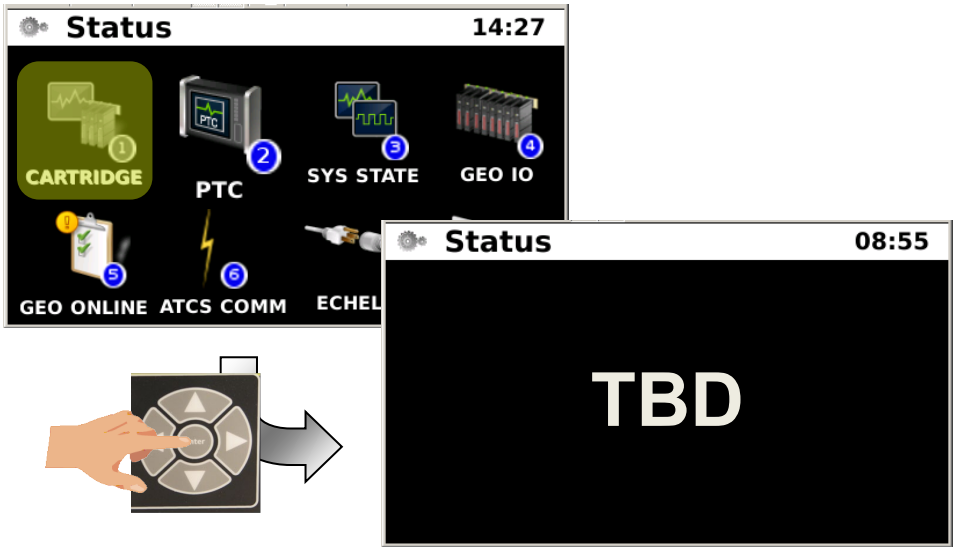


Figure 5-53 Status - Cartridge Status

- **PTC Status**

The PTC Status menu provides Signal and Switch information monitored for PTC applications.

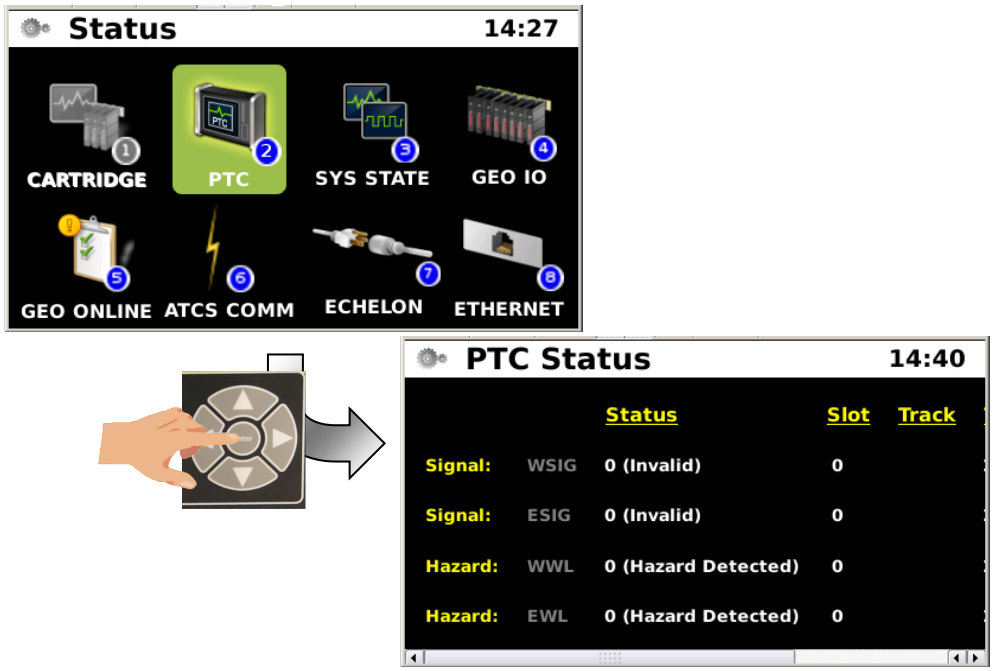


Figure 5-54 Status - PTC Status

- **SYS State**

The SYS State (System State) menu enables the user to view the status of iVIU Console or GEO connected devices, including their respective connections, inputs, outputs, internal variables, and configuration parameters. The figure below displays an example of the iVIU Console Signal01 information.

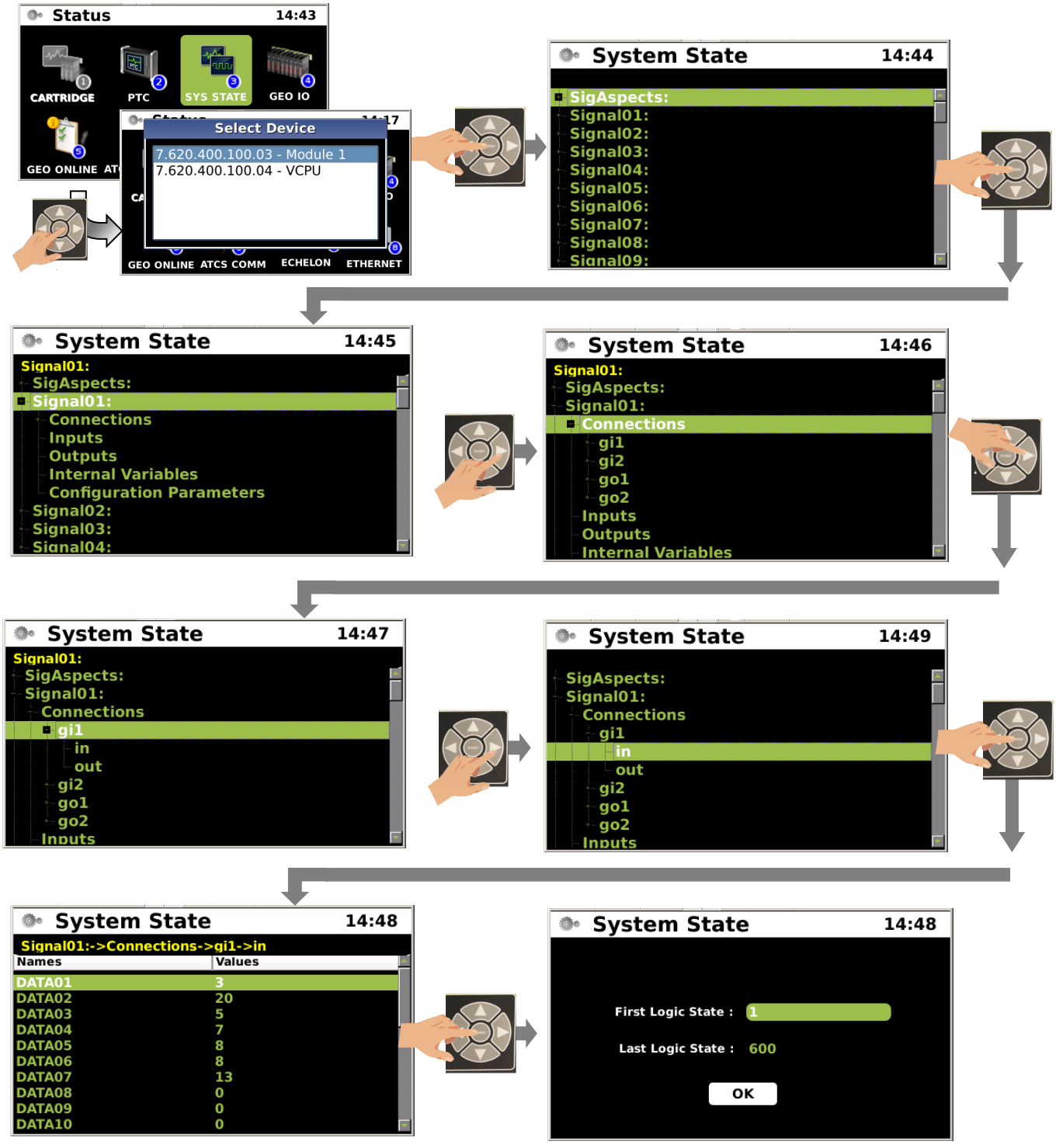


Figure 5-55 SYS Status Screens

- **GEO I/O**

The GEO I/O menu lists the track circuits connected to the attached GEO unit(s). Each GEO attached will have its ATCS address listed. The track circuits of the selected GEO will be listed. Navigate through the list and press "ENTER" on the desired circuit to bring up a graphical display of the circuit. The View is similar to that of a GEO DT screen. The figures below display a sample of GEO circuits.

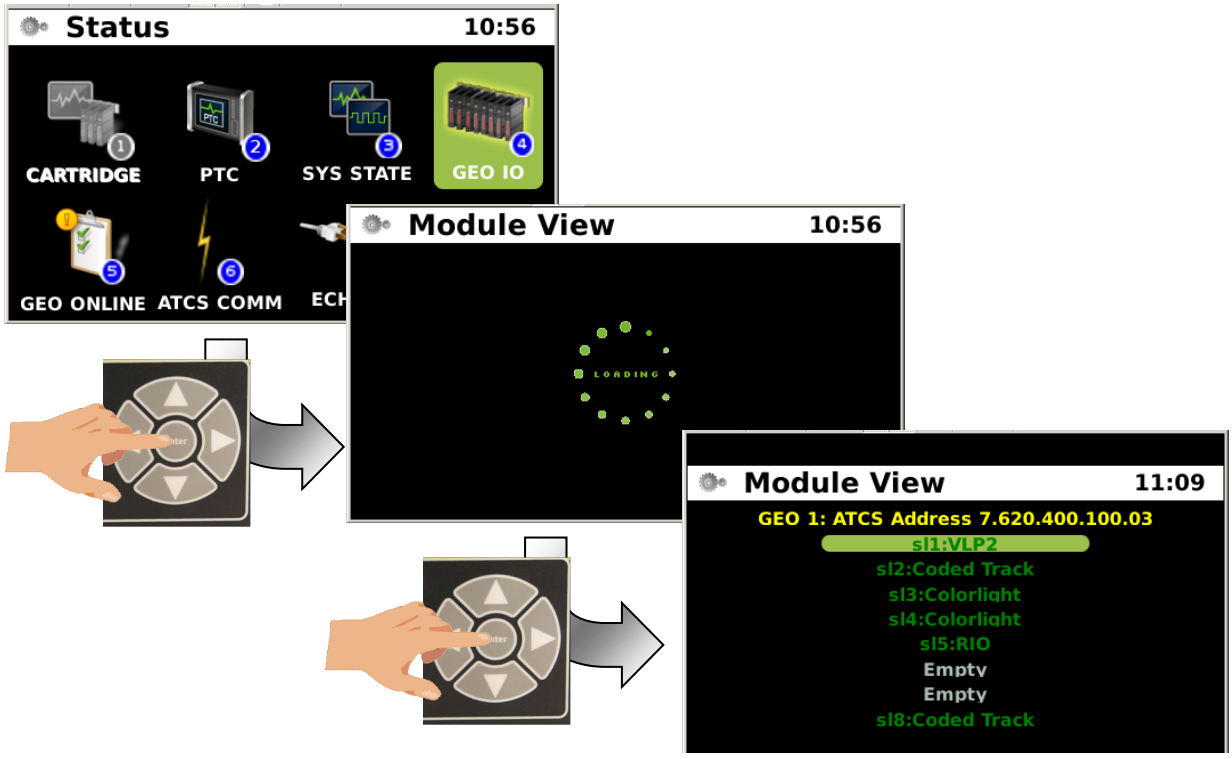


Figure 5-56 Status - GEO I/O

The following figures show an example of the GEO track circuit graphics that may be viewed on the console.

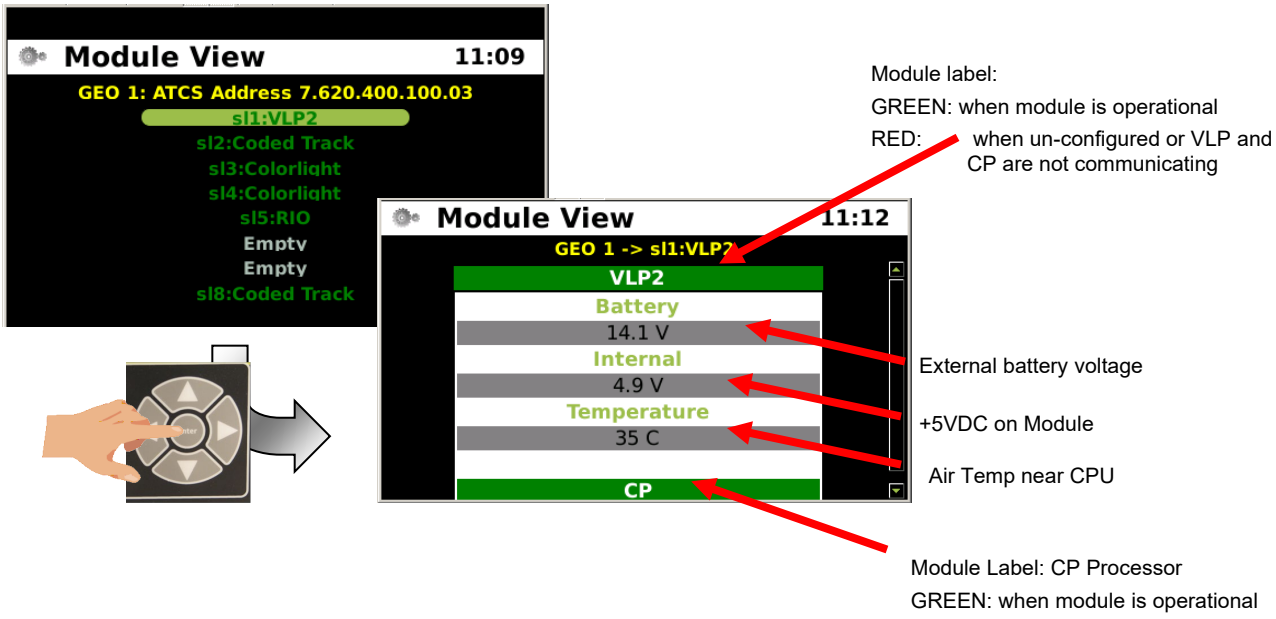


Figure 5-57 VLP2

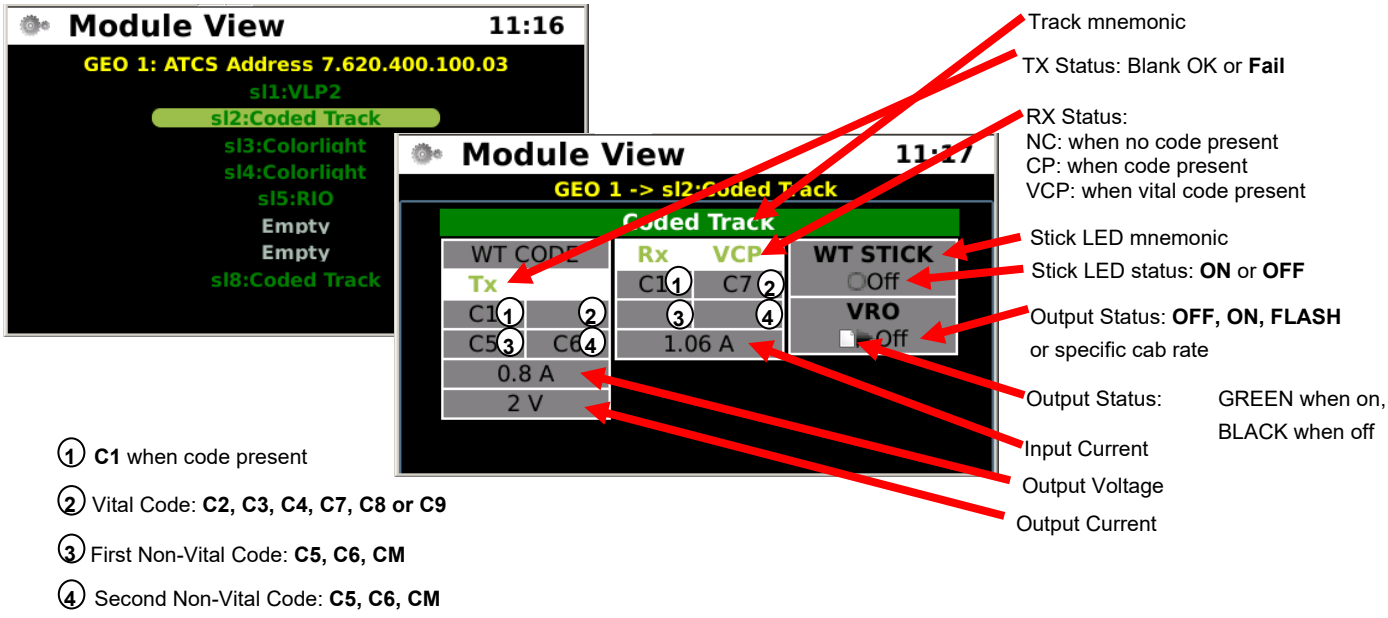


Figure 5-58 Coded Track

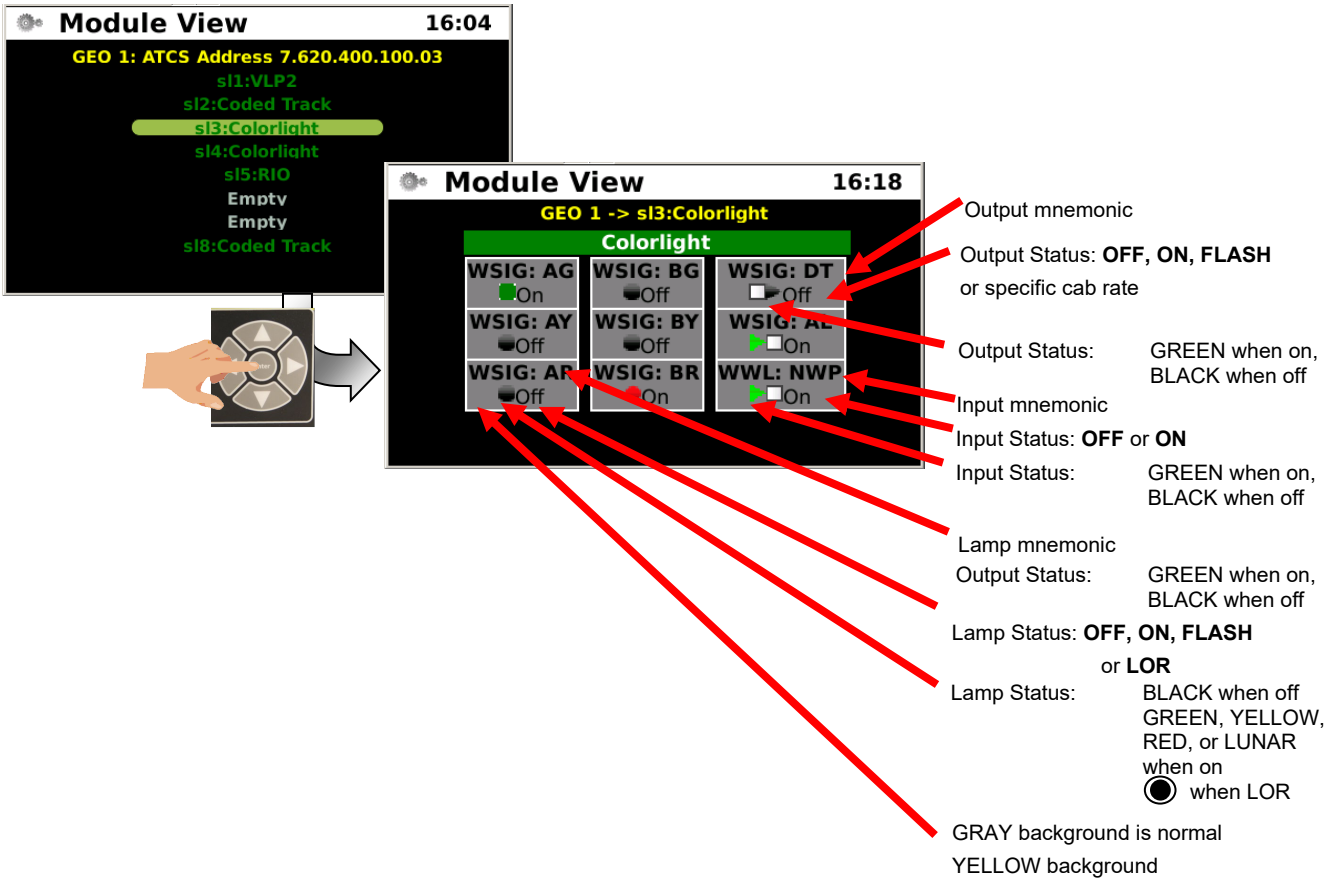


Figure 5-59 Colorlight

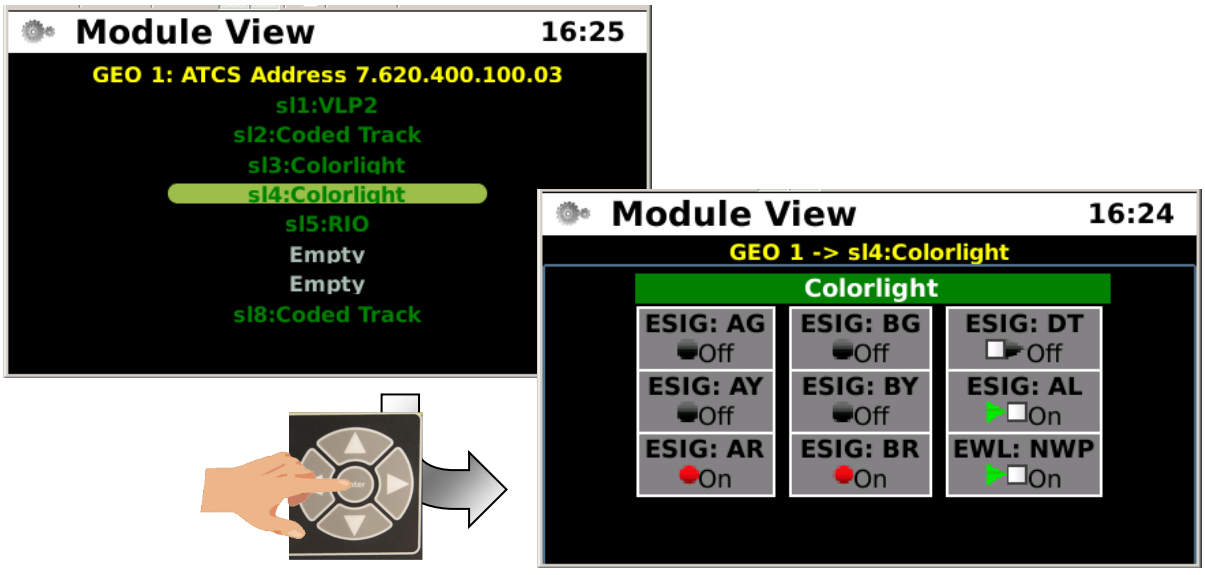


Figure 5-60 Second Colorlight

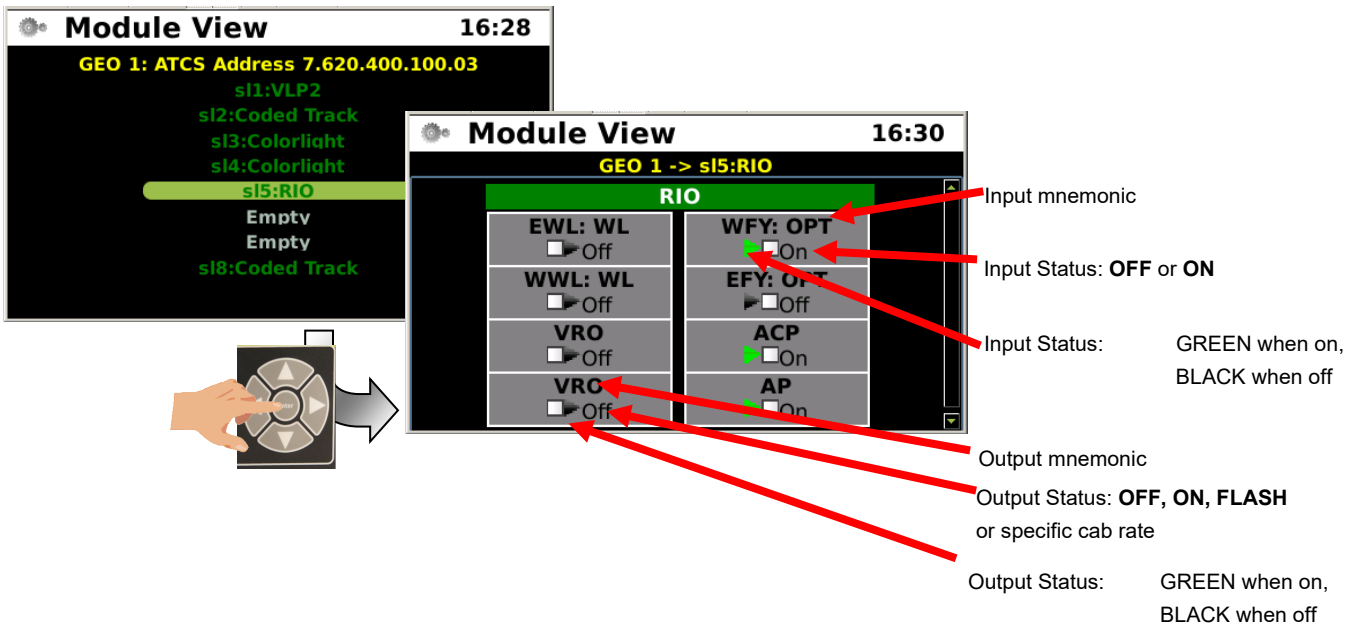


Figure 5-61 RIO

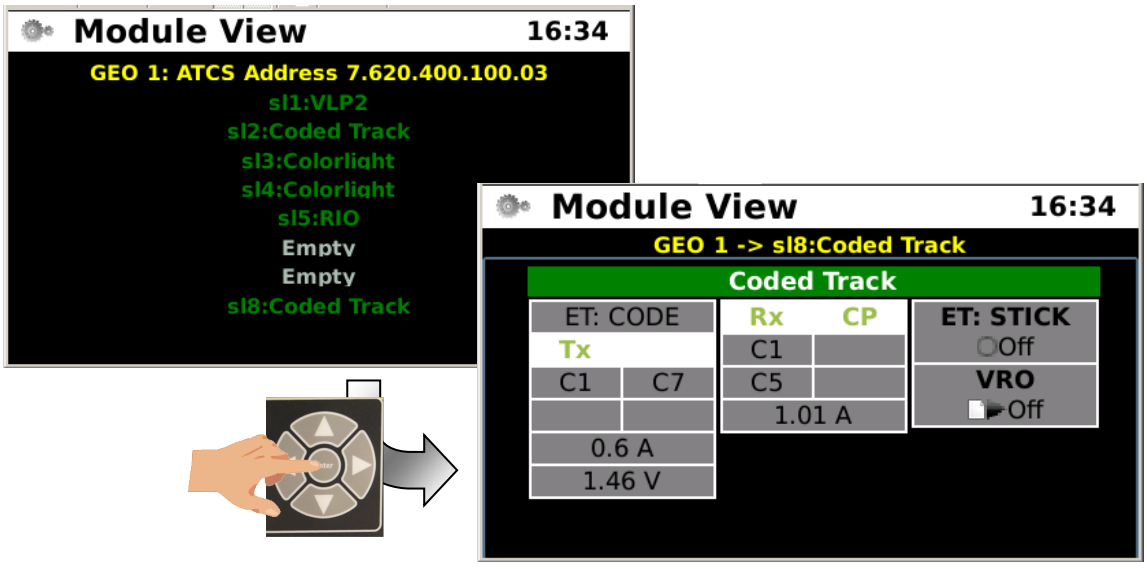


Figure 5-62 Second Coded Track

- **GEO Online**

The GEO Online icon enables monitoring of the track circuits of any one the connected GEO units. Select the GEO Online icon and press the "ENTER" button. A list of connected GEO units will appear. Select the desired unit and press the "ENTER" button. To monitor another GEO unit repeat the above procedure and select the desired GEO unit.

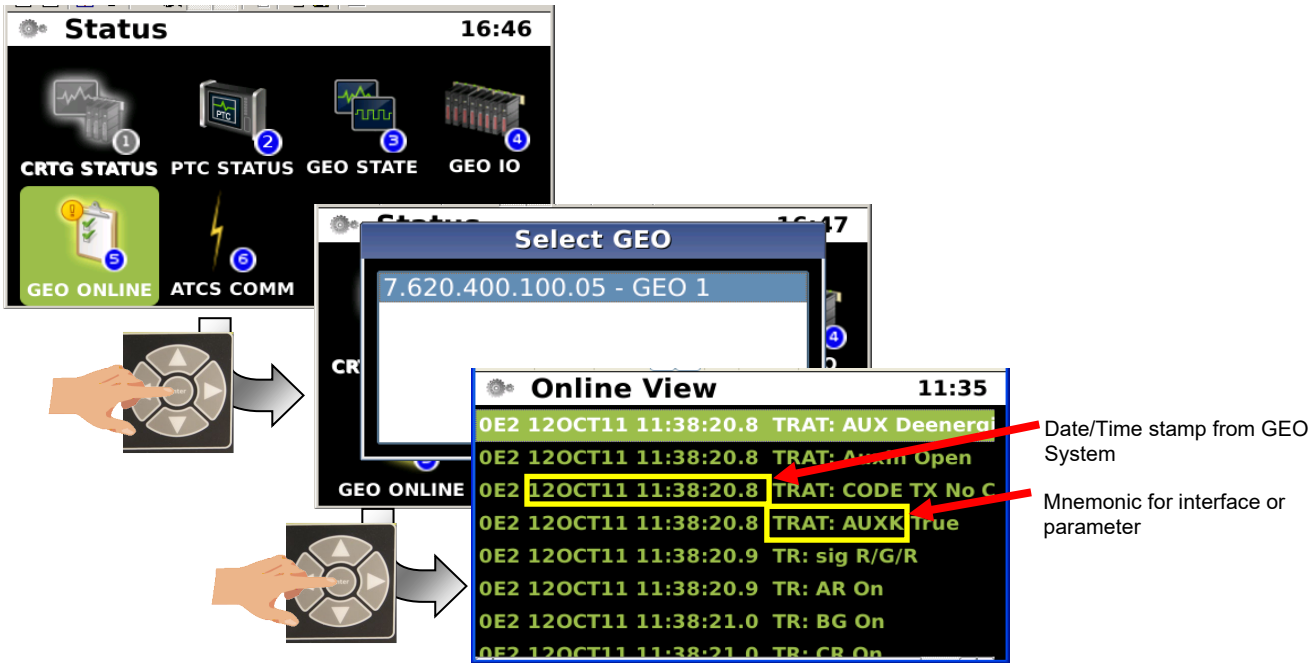


Figure 5-63 Status - GEO Online

- **ATCS Communications Link (ATCS COMM)**

The ATCS Comm icon enables viewing of any ATCS communications links that have been established from iVIU to other devices.

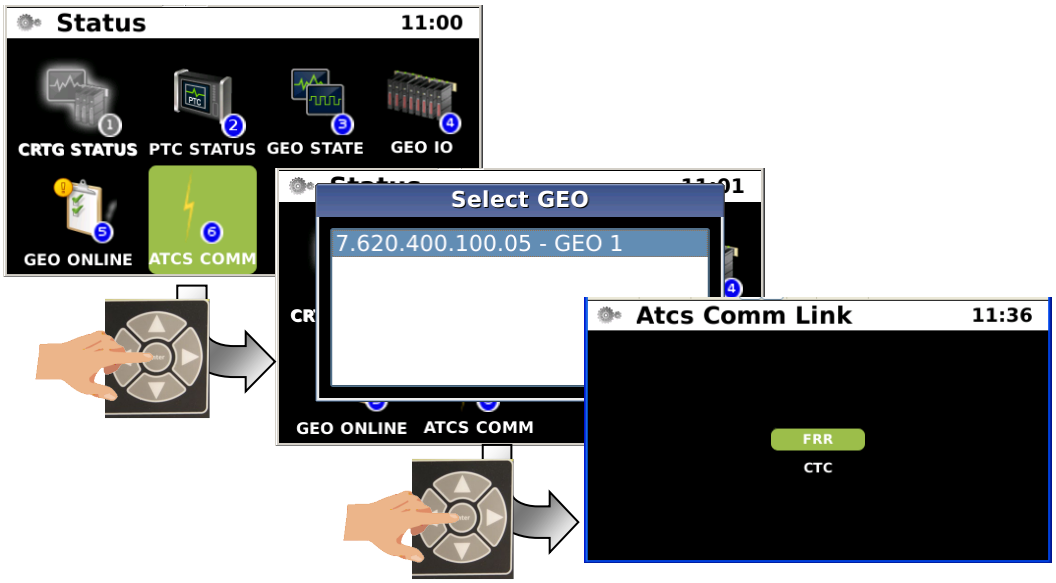


Figure 5-64 Status - ATCS Communications - ATCS Comm Link

- **ATCS Communications Link - FRR**

The example below is the FRR track circuits from the GEO unit.

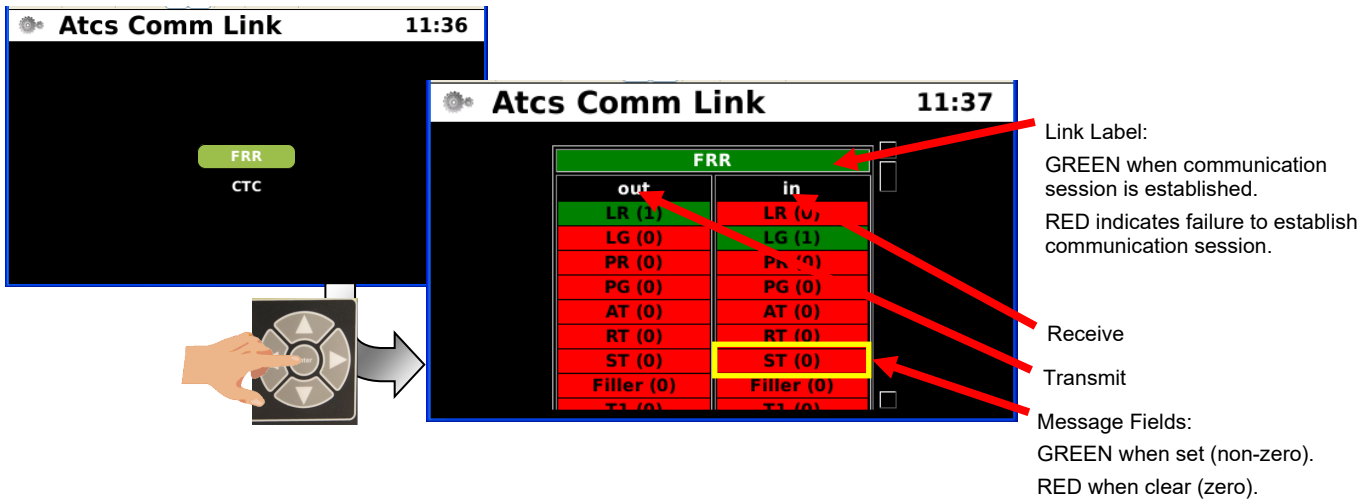


Figure 5-65 ATCS Communications Link - FRR Information

1. ATCS Communications Link - CTC

The example below is the CTC track information from the GEO unit.

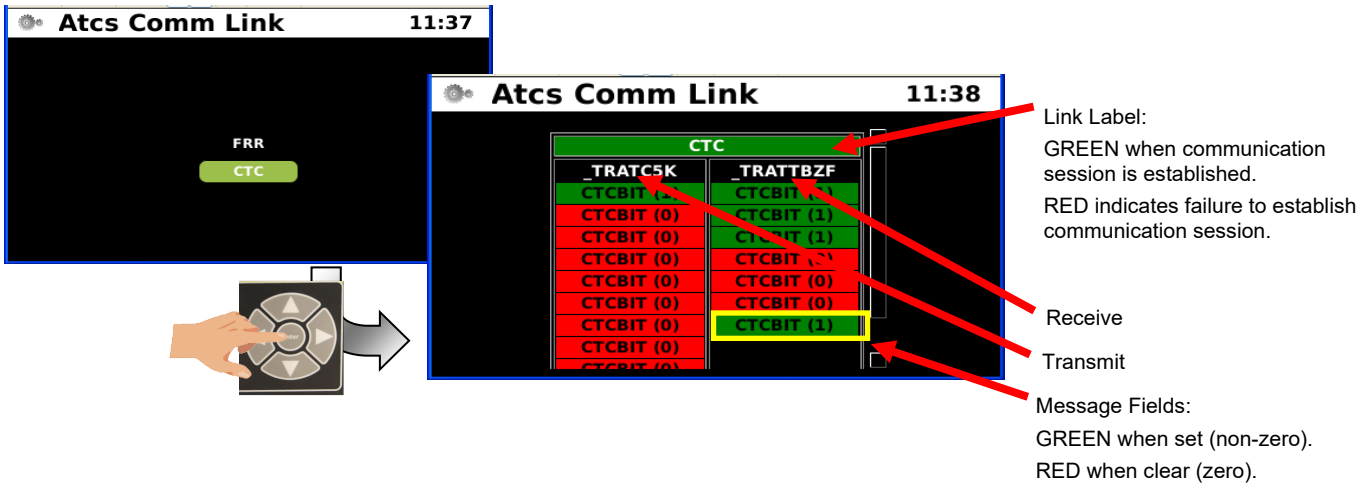


Figure 5-66 ATCS Communications Link - CTC Information

- **Echelon Status**

The Echelon Status menu displays the status of the connected Echelon nodes. The node name, ID, TX Count, RX Count, Acknowledge Fl, and Nron Rst are displayed in real time.

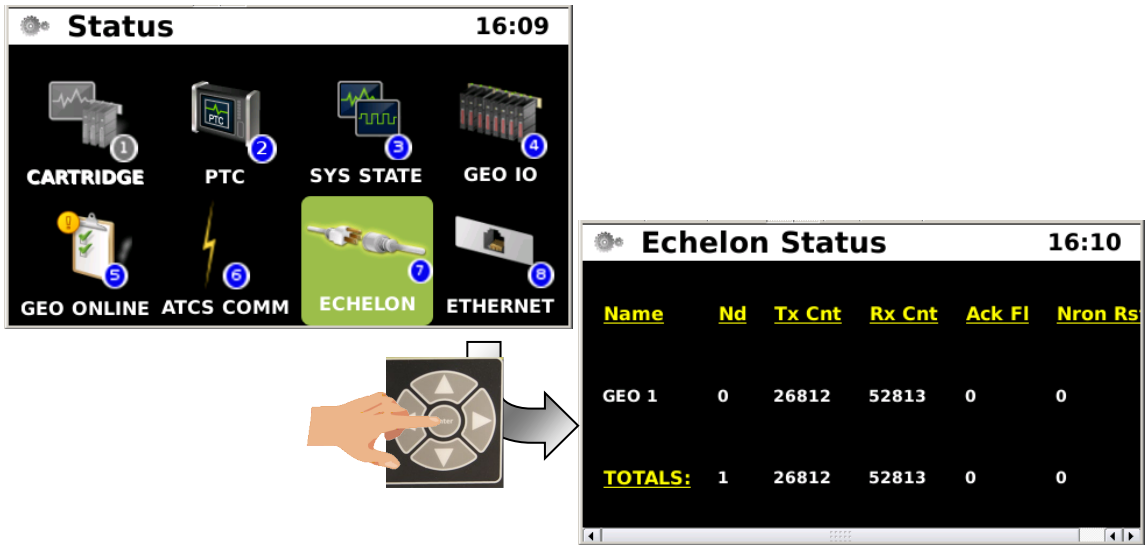


Figure 5-67 Echelon Status

- **Ethernet Status**

The Ethernet Status menu displays the Ethernet connections and their current parameters.

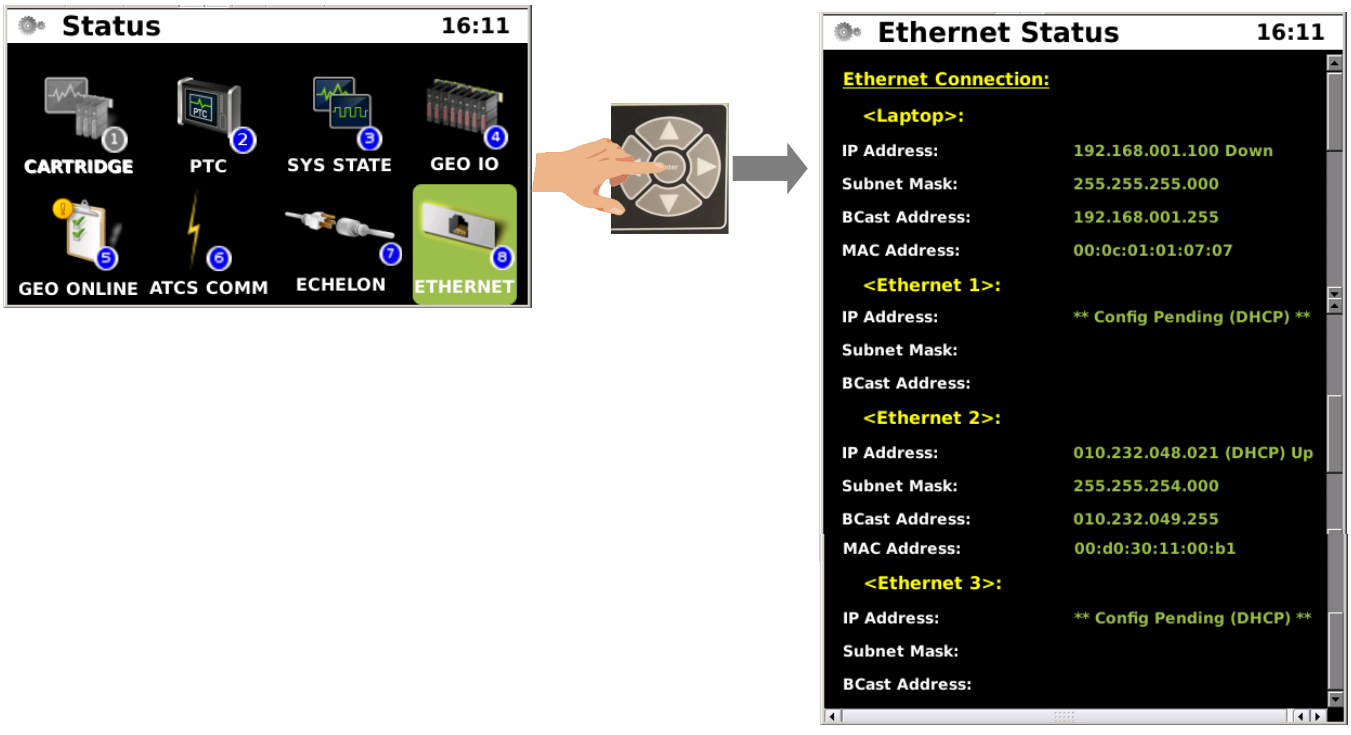


Figure 5-68 Ethernet Status

5.1.2.6 Reports

The Reports menu has five sub-menus for gathering reports and logs as well as a sixth menu for Log setup.

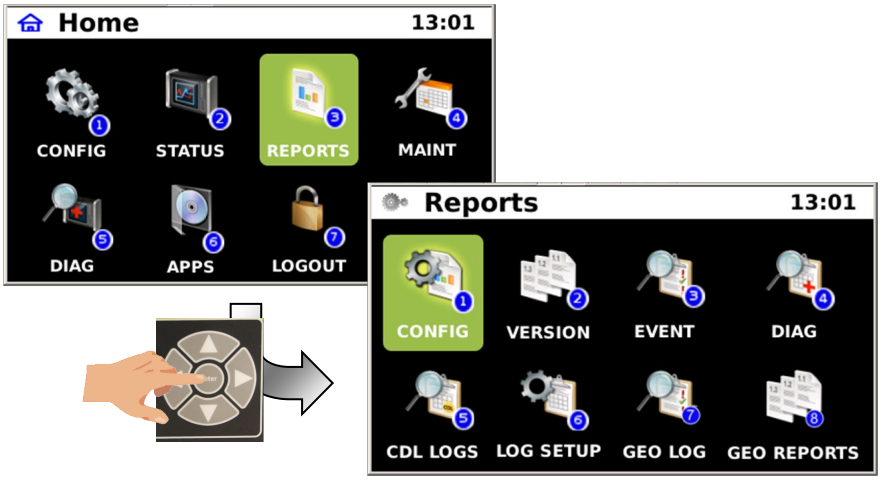


Figure 5-69 Reports

- **Configuration Report (CONFIG)**

The Configurations Report (CONFIG) menu generates a series of reports on the various configurations of the iVIU console.

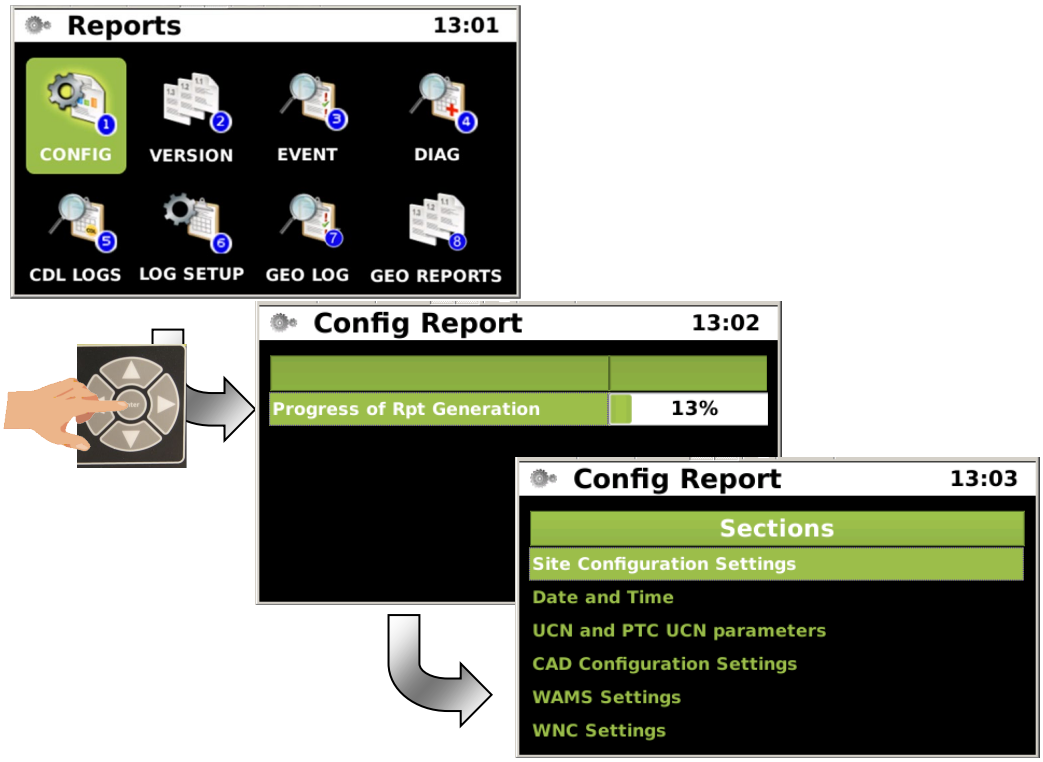


Figure 5-70 Configuration Report

- **Configuration Reports - Site Configuration Settings**

The first configuration report is the Site Configurations. Select the report to view the current site configuration settings.

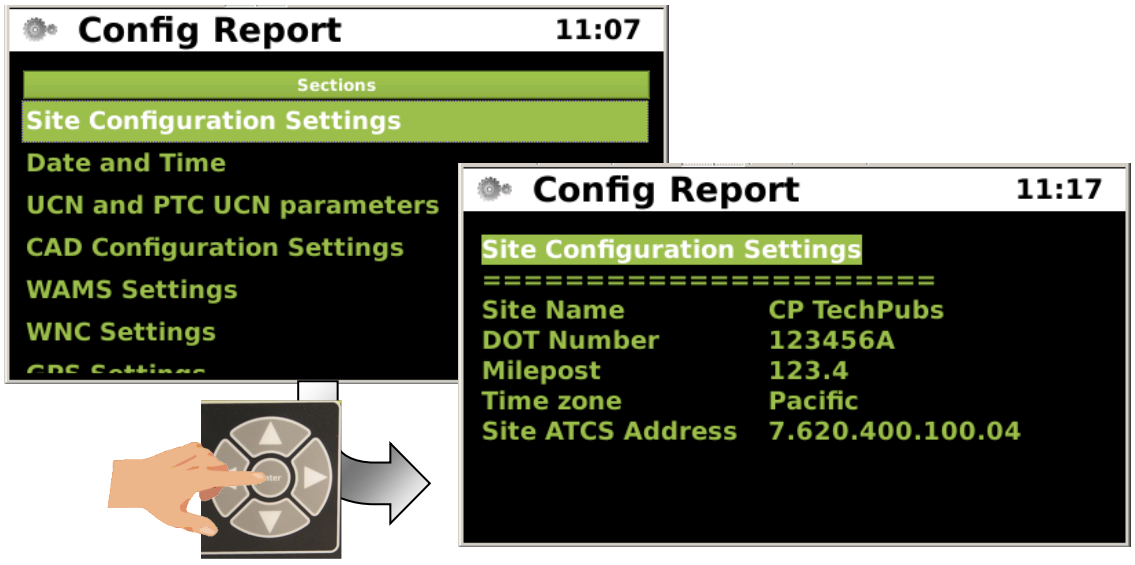


Figure 5-71 Configuration Report - Site Configuration Settings

- **Configuration Reports - Date and Time**

The second report is Date and Time. Select the report to view the current date and time settings.

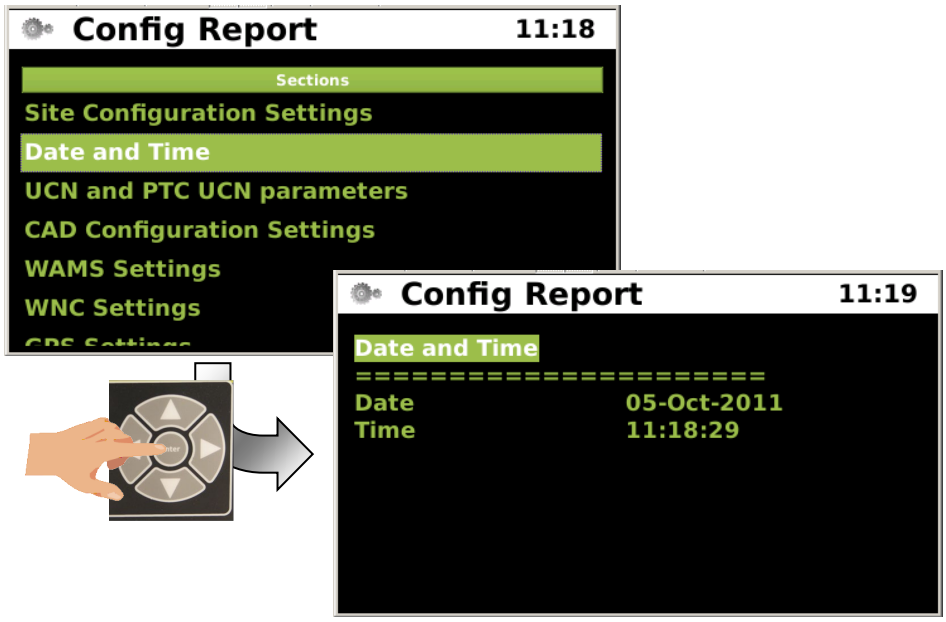


Figure 5-72 Configuration Report - Date and Time

- **Configuration Reports - UCN and PTC UCN Parameters**

The third report displays the UCN and PTC UCN parameters.

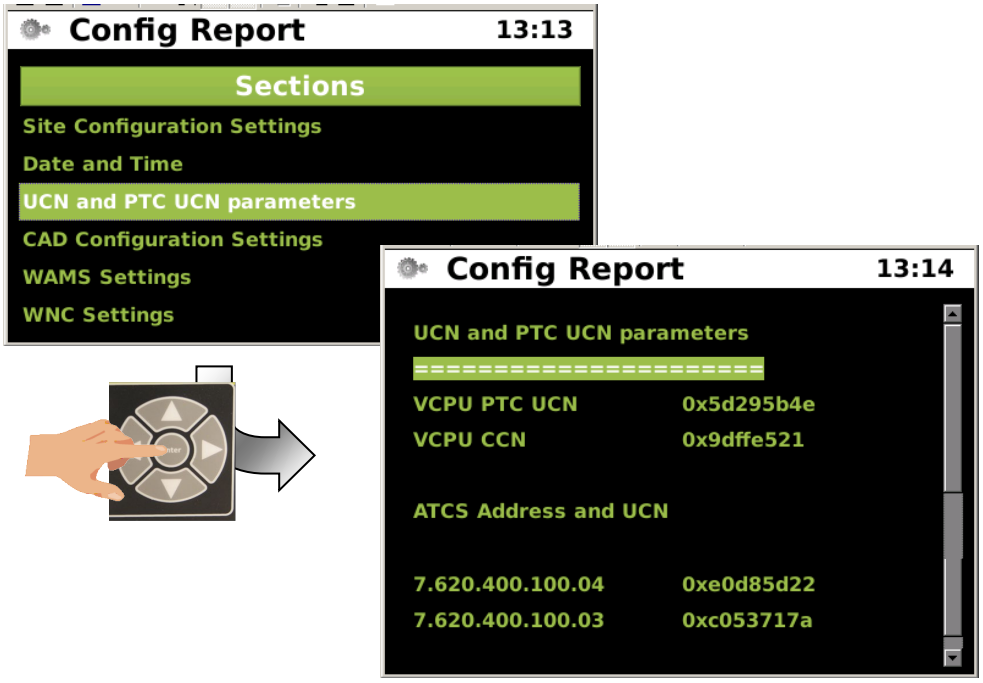


Figure 5-73 Configuration Reports - UCN and PTC UCN Parameters

- **Configurations Reports - CAD Configurations Settings**

The fourth report is the CAD configuration settings as shown in the figure below.

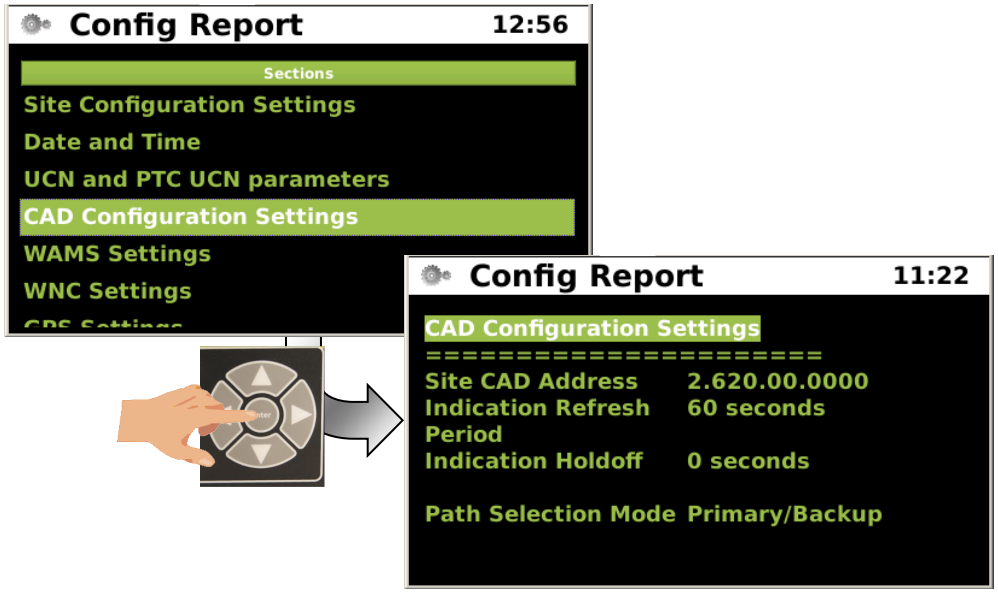


Figure 5-74 Configuration Reports - CAD Configuration Settings

- **Configuration Reports - WAMS Settings**

The fifth report in the configuration report series contain the WAMS settings.

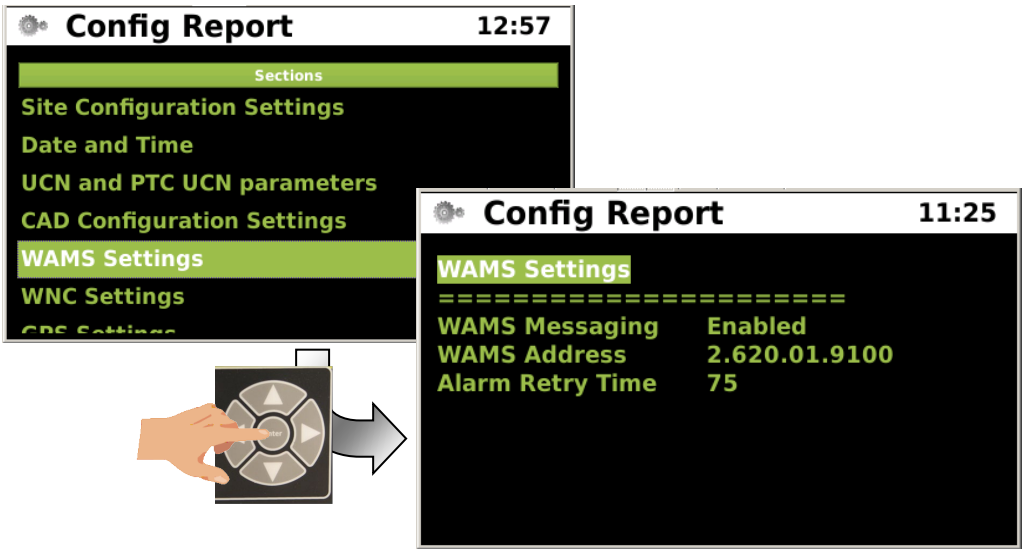


Figure 5-75 Configuration Reports - WAMS Settings

- **Configuration Reports - WNC Settings**

The sixth report displays the WNC Settings as shown below.

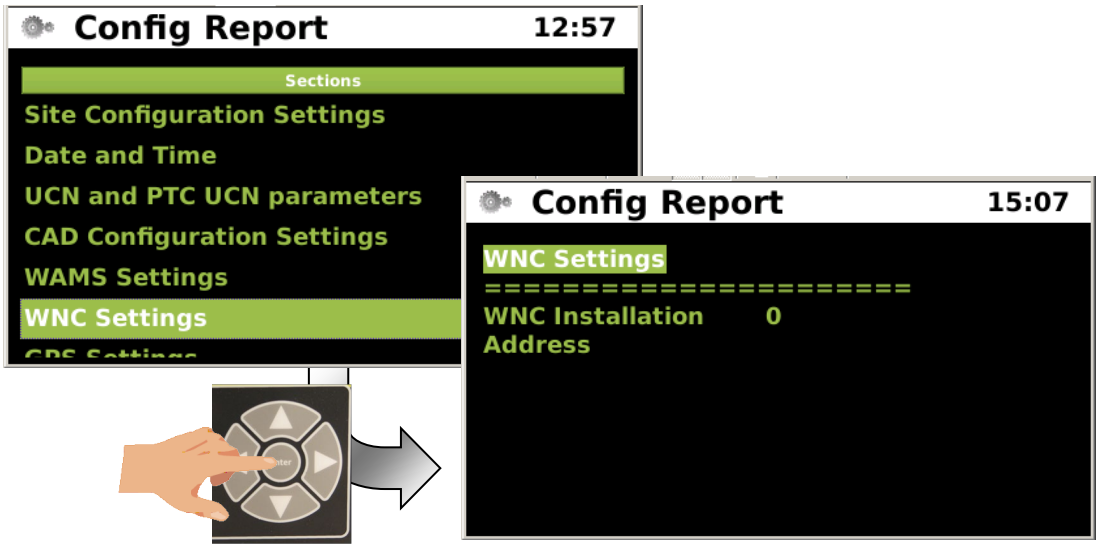


Figure 5-76 Configuration Reports - WNC Settings

- **Configuration Reports - GPS Settings**

The seventh report in the series provides the GPS settings.

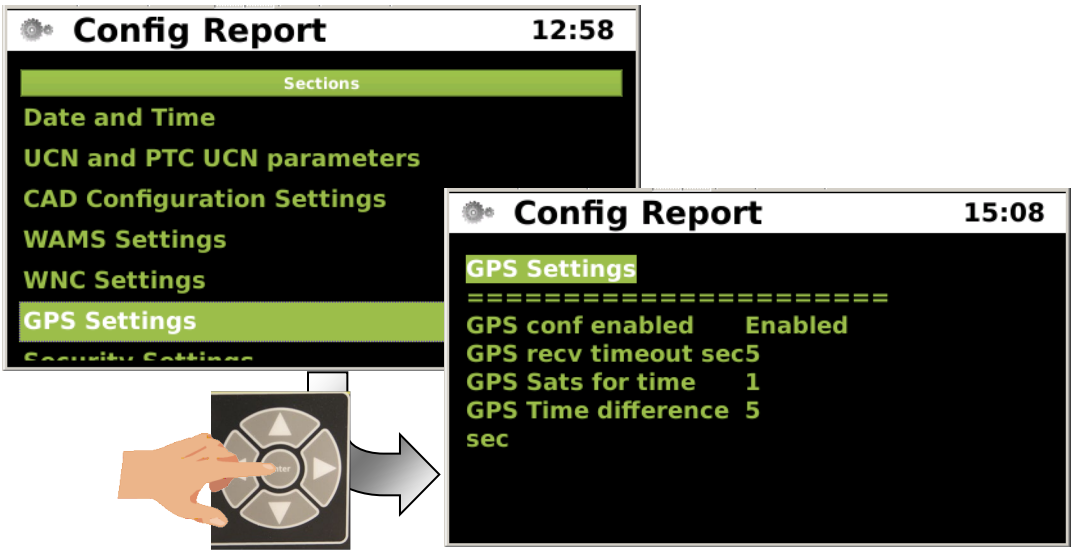


Figure 5-77 Configuration Reports - GPS Settings

- **Configuration Reports - Security Settings**

The eight configuration report lists the security settings as shown in the figure below.

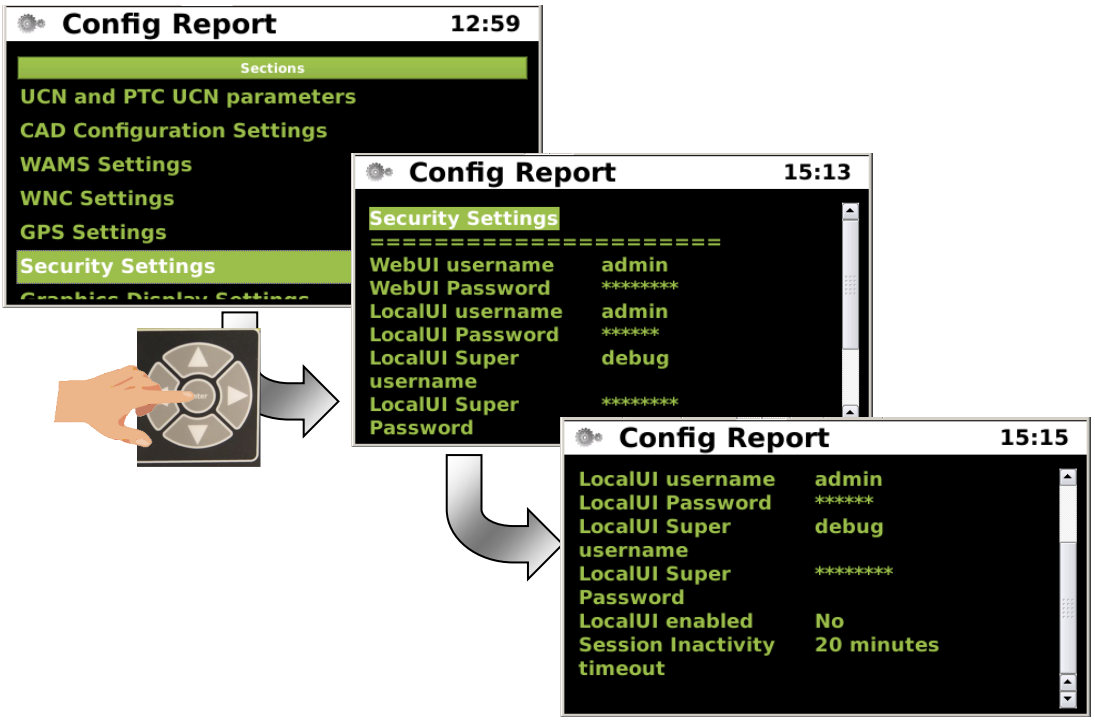


Figure 5-78 Configuration Reports - Security Settings

- **Configuration Reports - Graphics Display Settings**

The ninth configuration report provides current setting for the graphics display hibernate timeout.

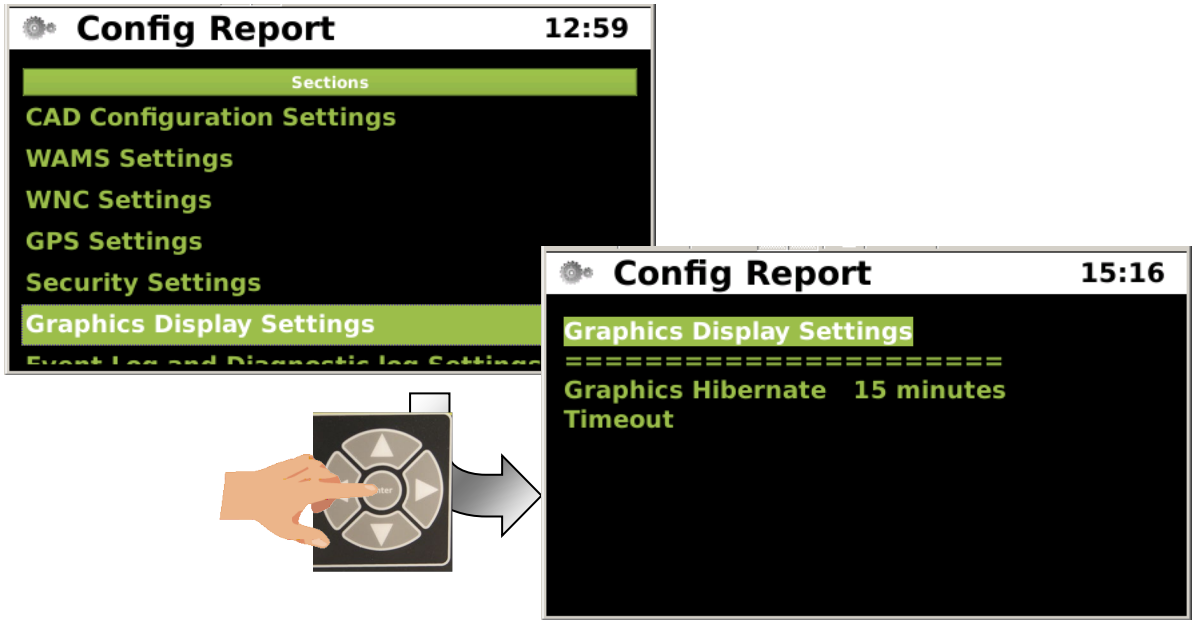


Figure 5-79 Configuration Reports - Graphics Display Setting

- **Configuration Reports - Event Log and Diagnostic Log Settings**

The eleventh configuration report lists the Event and Diagnostic Log server settings.

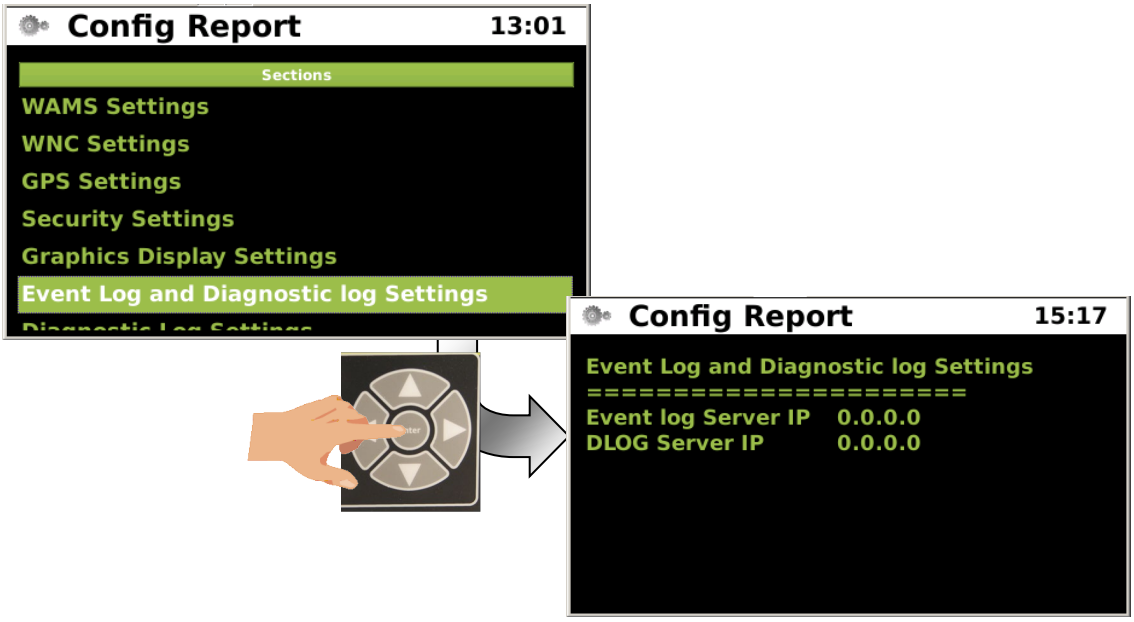


Figure 5-80 Configuration Reports - Event Log and Diagnostic Log Settings

- **Configuration Reports - Diagnostic Log Settings**

The twelfth report is the Diagnostic Log Settings. Press the "ENTER" button to view the report and scroll through the settings as shown below.

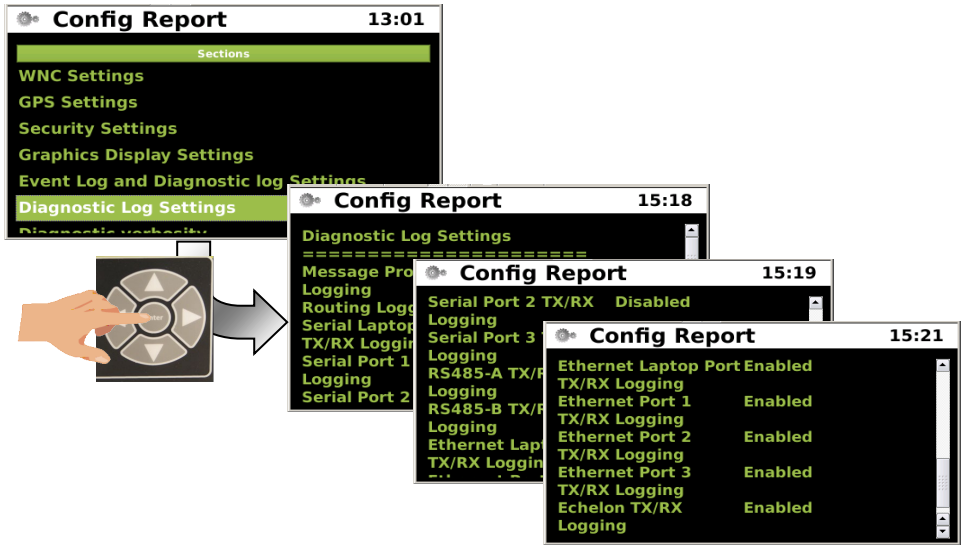


Figure 5-81 Configuration Reports - Diagnostic Log Settings

- **Configuration Reports - Diagnostic Verbosity**

The thirteenth report lists the verbosity levels assigned to the Diagnostic Log as shown in the figure below.

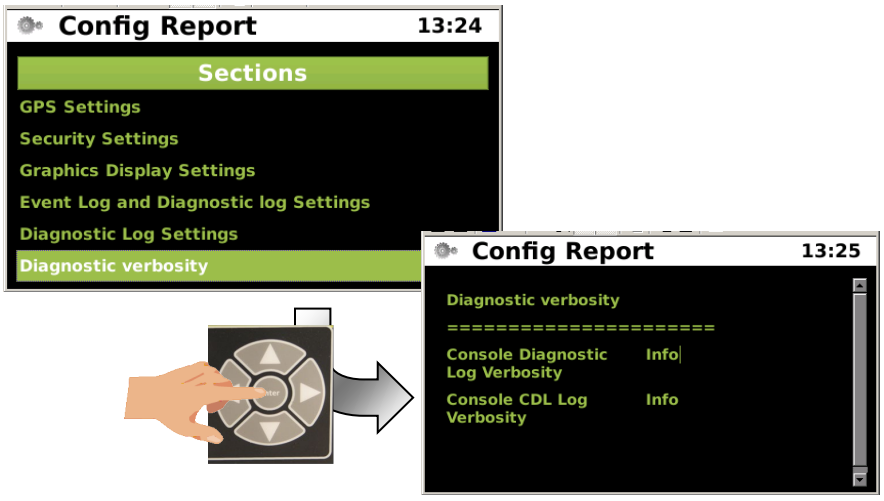


Figure 5-82 Configuration Report - Diagnostic Log Verbosity

- **Configuration Reports - DNS Settings**

The fourteenth report is the DNS Settings. This report displays the DNS Server IP addresses.

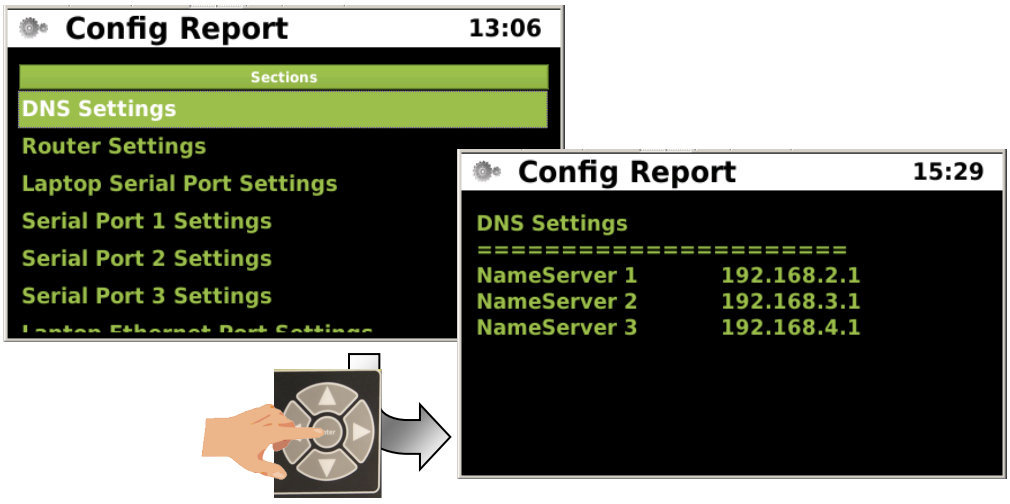


Figure 5-83 Configuration Reports - DNS Settings

- **Configuration Reports - Router Settings**

The fifteenth report displays the Router settings as shown below.

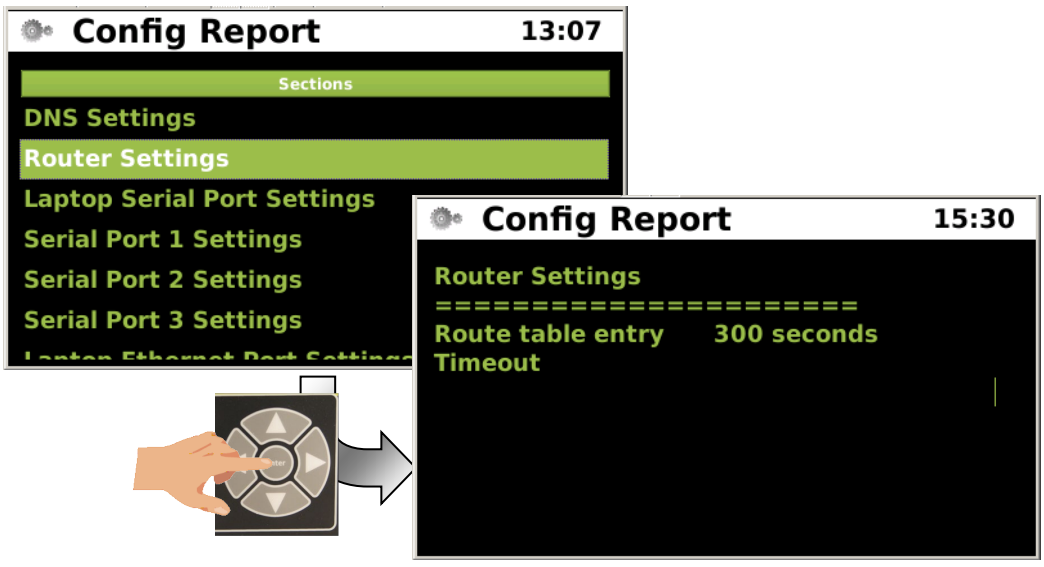


Figure 5-84 Configuration Reports - Router Settings

- **Configuration Reports - Laptop Serial Port and Serial Ports 1 - 3 Settings**

The four reports display the Laptop Serial Port and Serial Ports 1 - 3 settings that are currently programmed in the console.

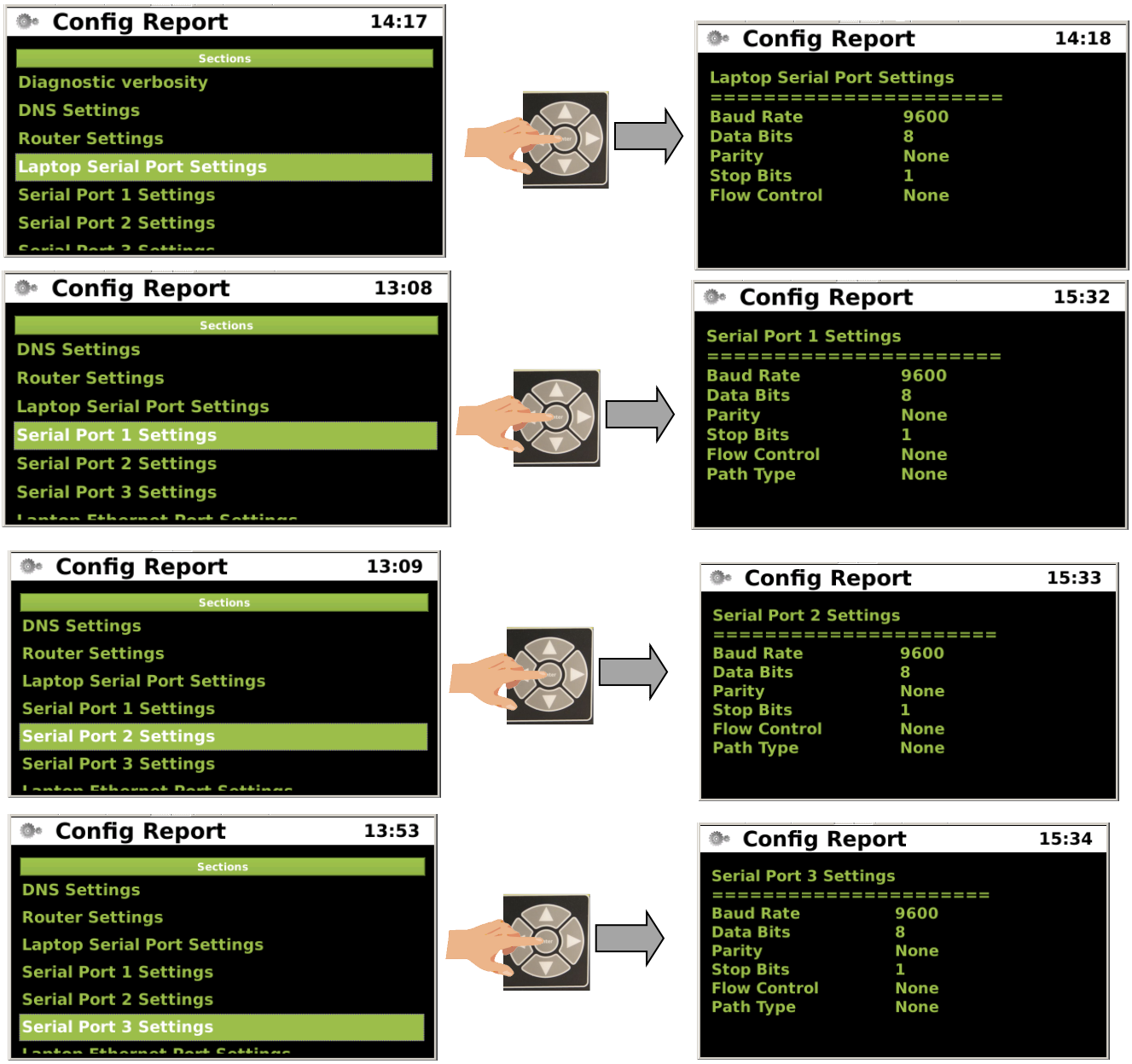


Figure 5-85 Configuration Reports - Laptop Serial Port Settings

- **Configuration Reports - Laptop and Ethernet Ports 1-3 Settings**

The next four reports cover the Laptop Ethernet Port and Ethernet Ports 1 - 3 currently programmed parameters.

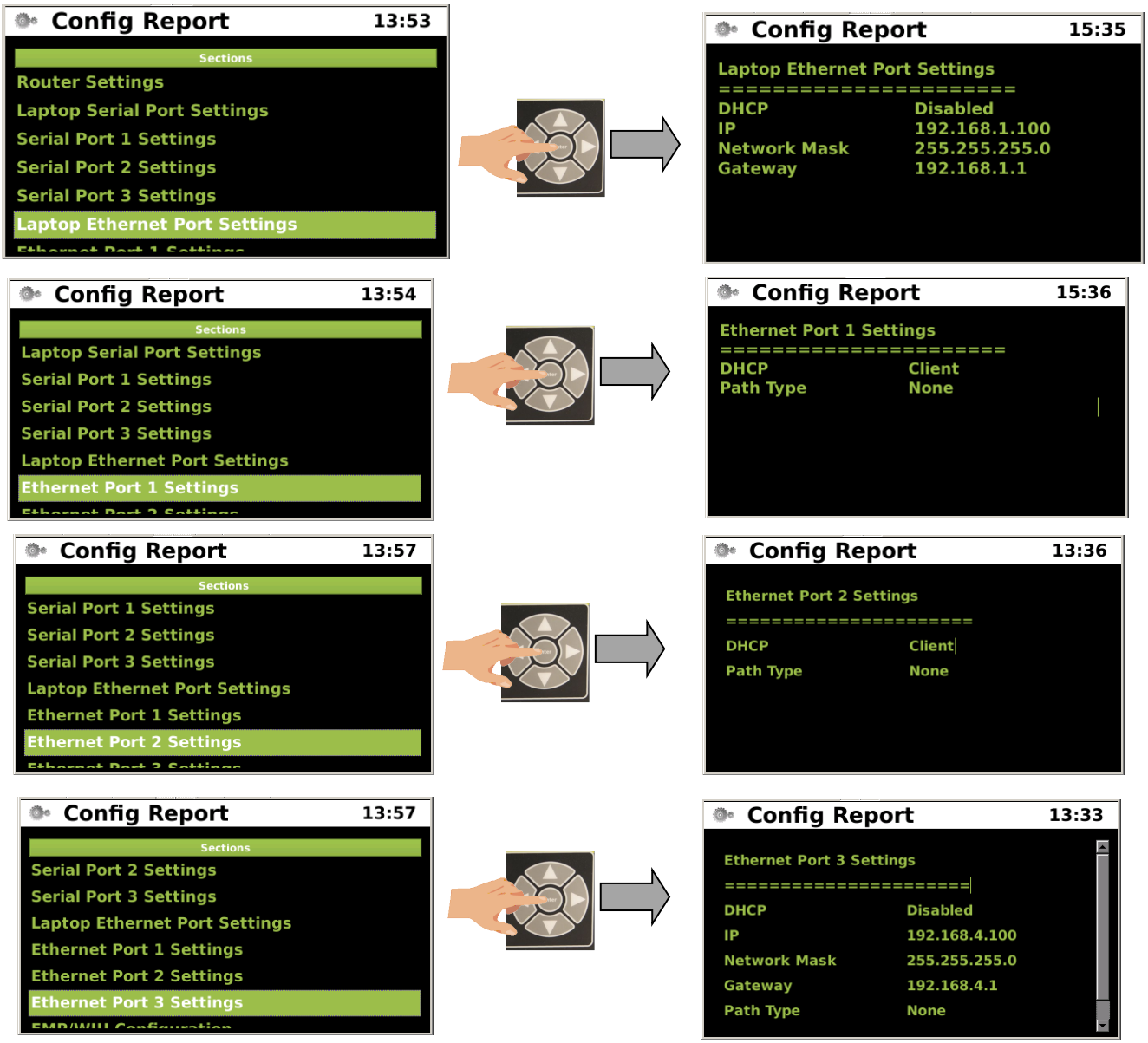


Figure 5-86 Configuration Reports - Serial Ports 1 through 3

- **Configuration Reports - EMP/WIU Configuration**

The twenty fourth configuration report lists the EMP/WIU configuration information as shown below.

Figure 5-87 Configuration Report - EMP/WIU Configuration

- **Configuration Report - EMP Class C and Class D Configuration**

The twenty fifth configuration report displays the EMP Class C and Class D configuration parameters.

Figure 5-88 Configuration Reports - EMP Class C and Class D Configuration

- **Configuration Reports - EMP Class C/D Alternate Gateway Config**

The figure below displays the EMP Class C/D Alternate Gateway configuration report.

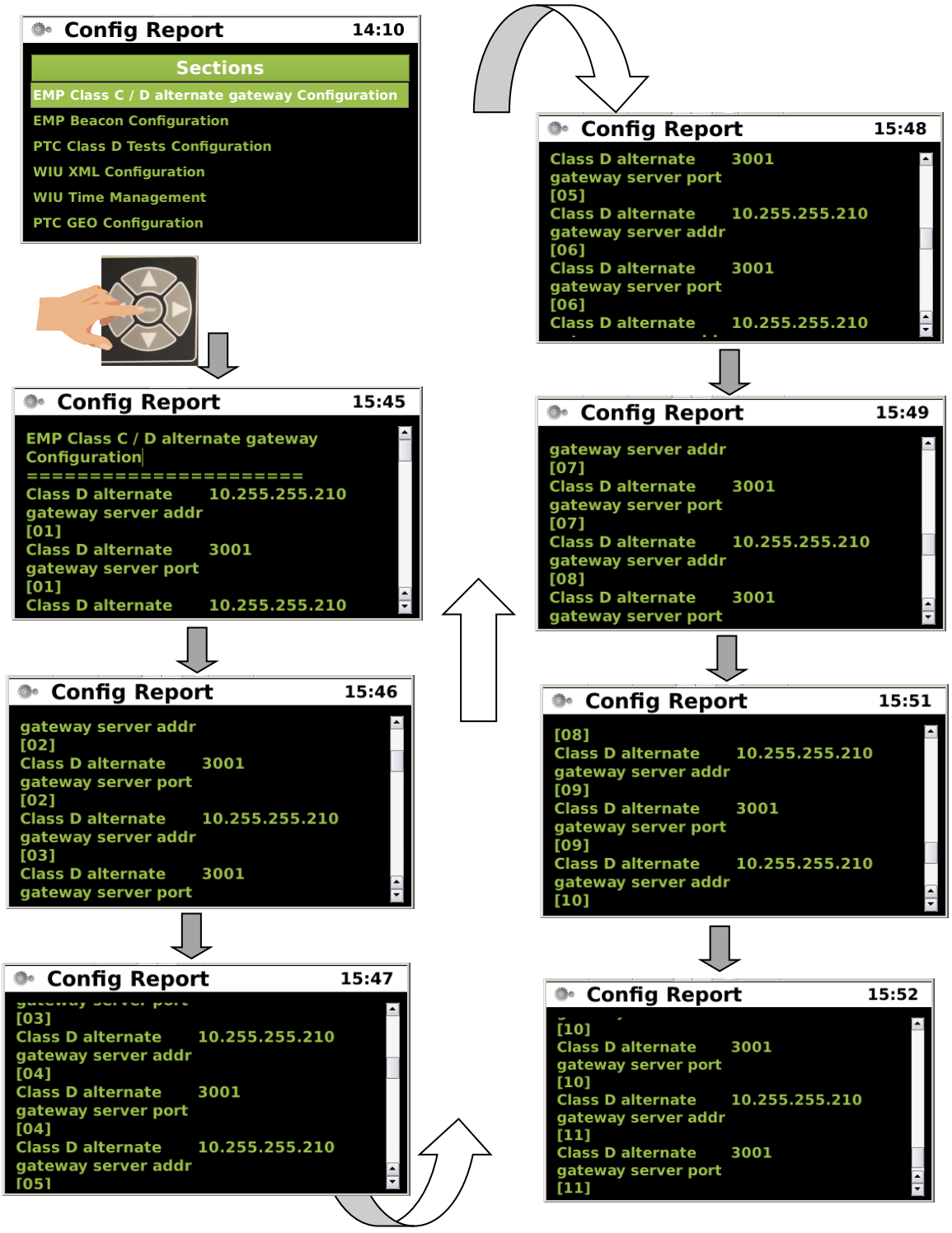


Figure 5-89 Configuration Reports - EMP Class C/D Alternate Gateway Config

- **Configuration Reports - EMP Beacon Configuration**

The EMP Beacon Configuration report displays the current settings applied to the EMP Beacon as shown in the figure below.

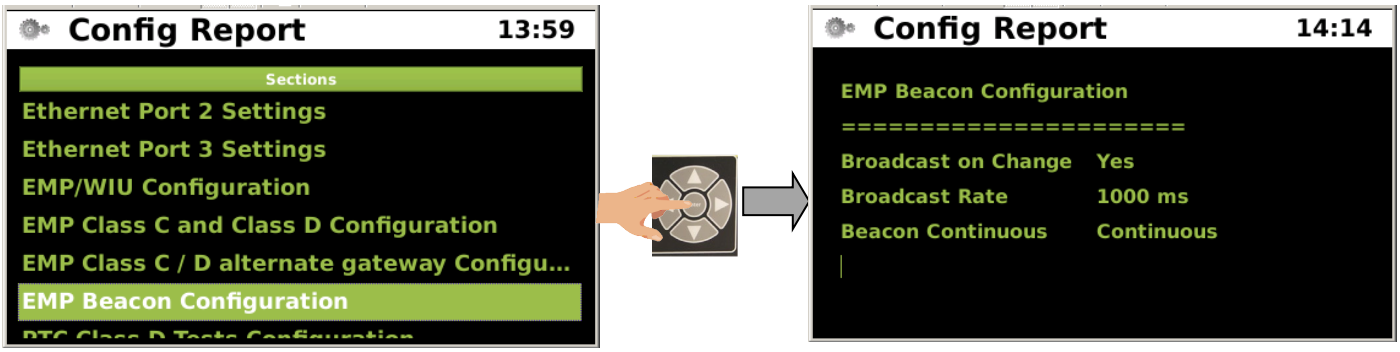


Figure 5-90 Configuration Reports - EMP Beacon Configuration

- **Configuration Reports - PTC Class D Tests Configuration**

The PTC Class D Tests configuration report lists the currently programmed parameters as shown in the figure below.

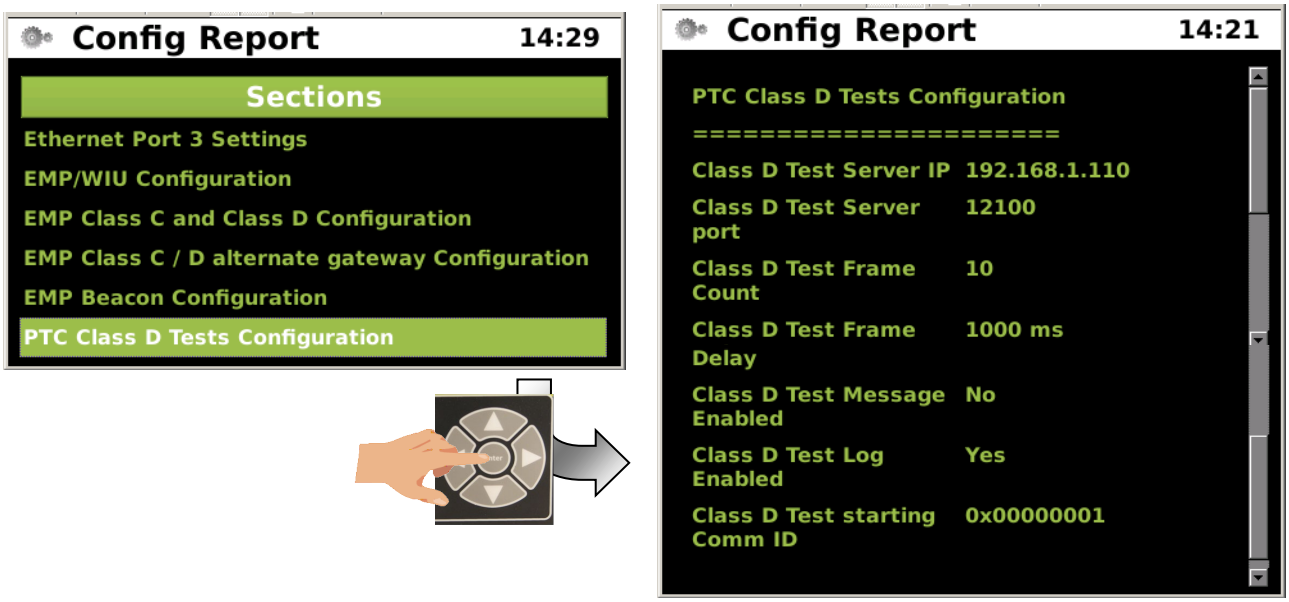


Figure 5-91 Configuration Reports - PTC Class D Tests Configuration

- **Configuration Reports - WIU XML Configuration**

The next report is the WIU XML configuration.

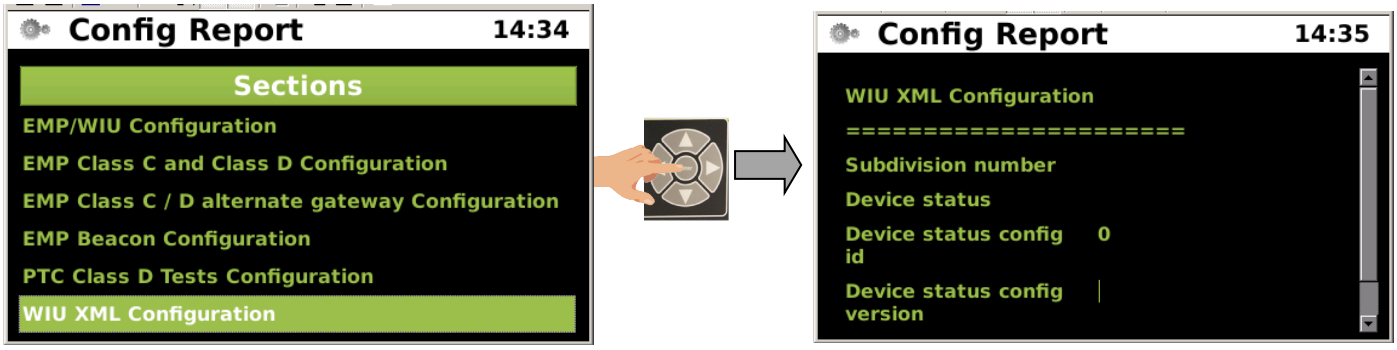


Figure 5-92 Configuration Reports - WIU XML Configuration

- **Configuration Reports - WIU Time Management**

The WIU Time Management report displays the currently applied parameters.

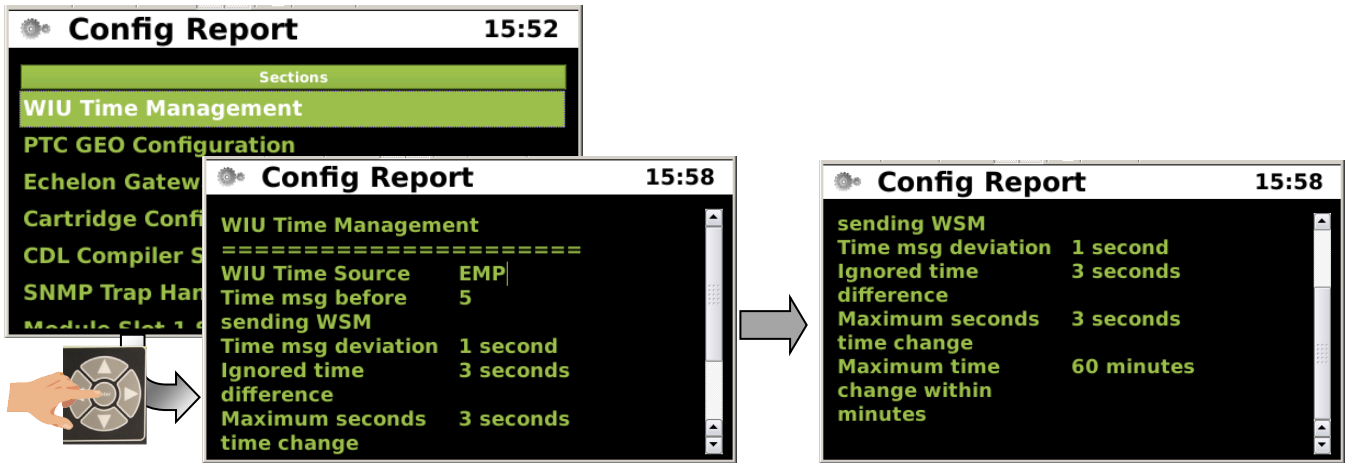


Figure 5-93 Configuration Report - WIU Time Management

- **Configuration Reports - PTC GEO Configuration**

The PTC GEO configuration report shows the current GEO parameters.

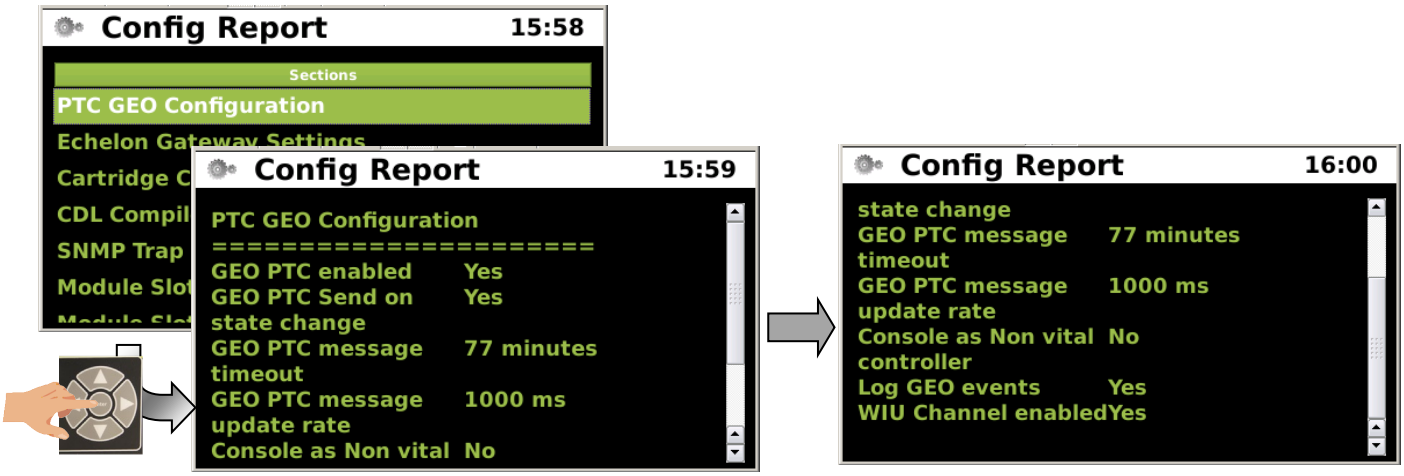


Figure 5-94 Configuration Reports - PTC GEO Configuration

- **Configuration Reports - Echelon Gateway Settings**

The Echelon Gateway settings report displays the node setting for the gateway.

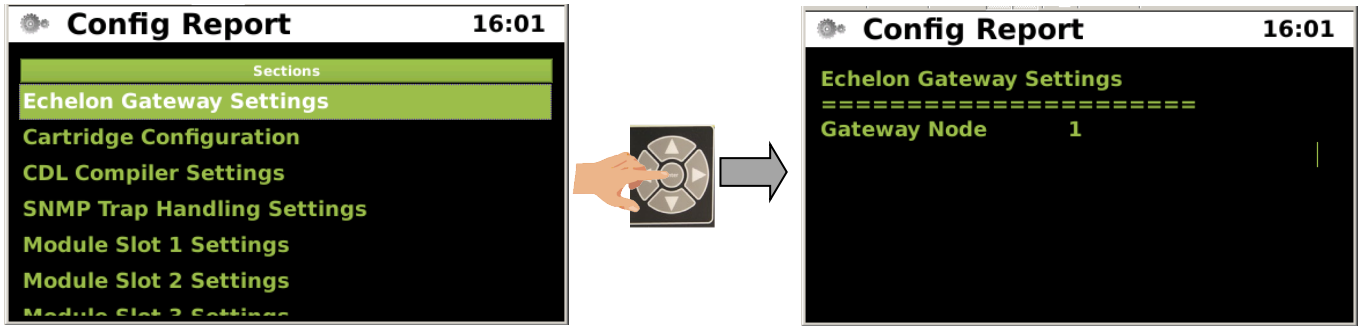


Figure 5-95 Configuration Reports - Echelon Gateway Settings

- **Configuration Reports - Cartridge Configuration**

The Cartridge configuration report lists the parameters of the installed cartridges.

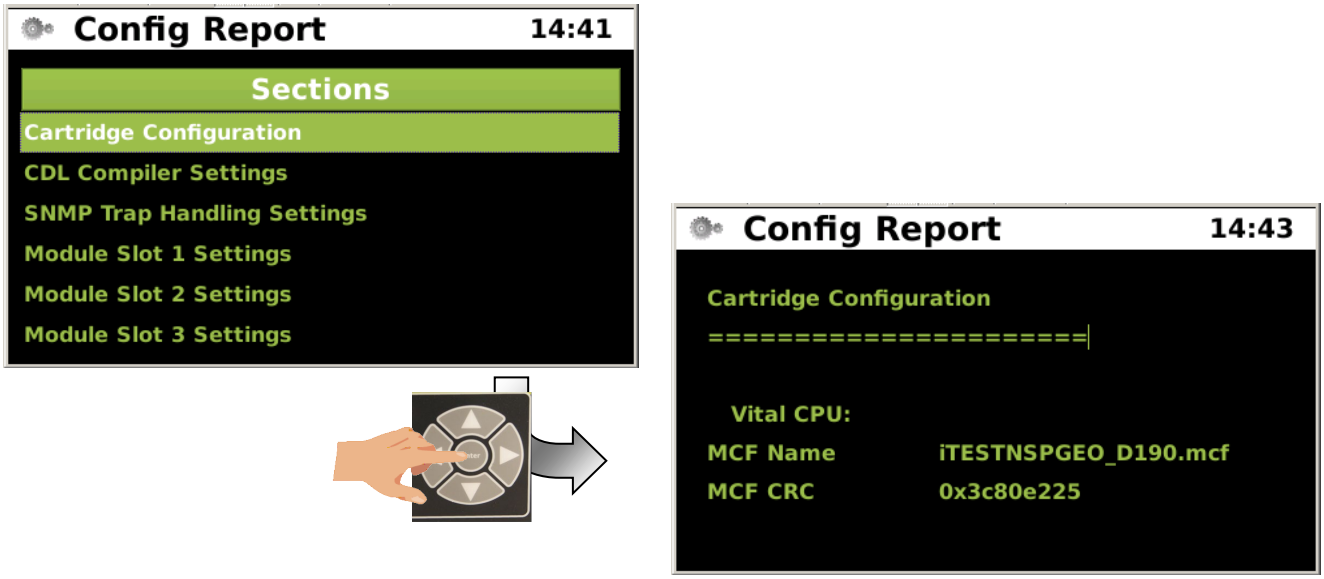


Figure 5-96 Configuration Reports - Cartridge Configuration

- **Configuration Reports - CDL Compiler Settings**

The CDL Compiler settings lists the CDL Logging level currently programmed into the console.

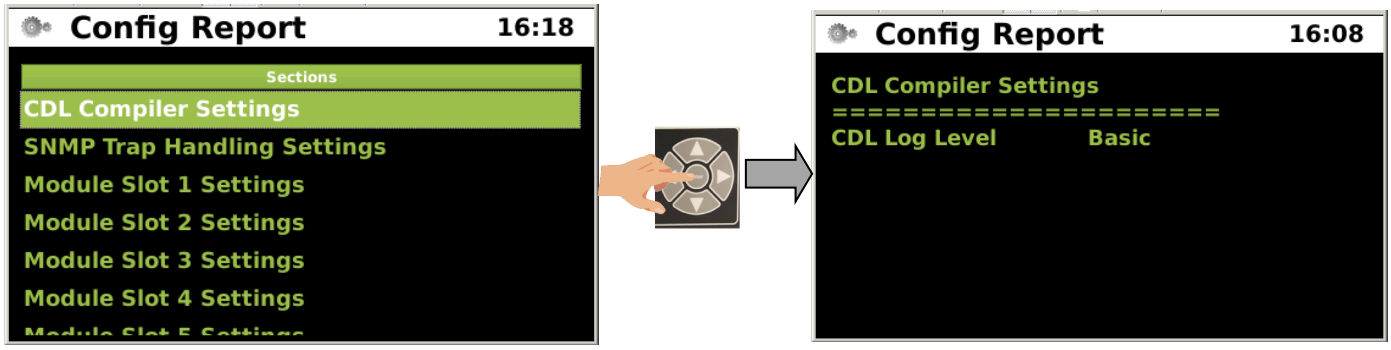


Figure 5-97 Configuration Reports - CDL Compiler Settings

- **Configuration Reports - SNMP Trap Handling Settings**

The SNMP Trap Handling settings report shows the primary and backup IP addresses and ports used for the SNMP traps.

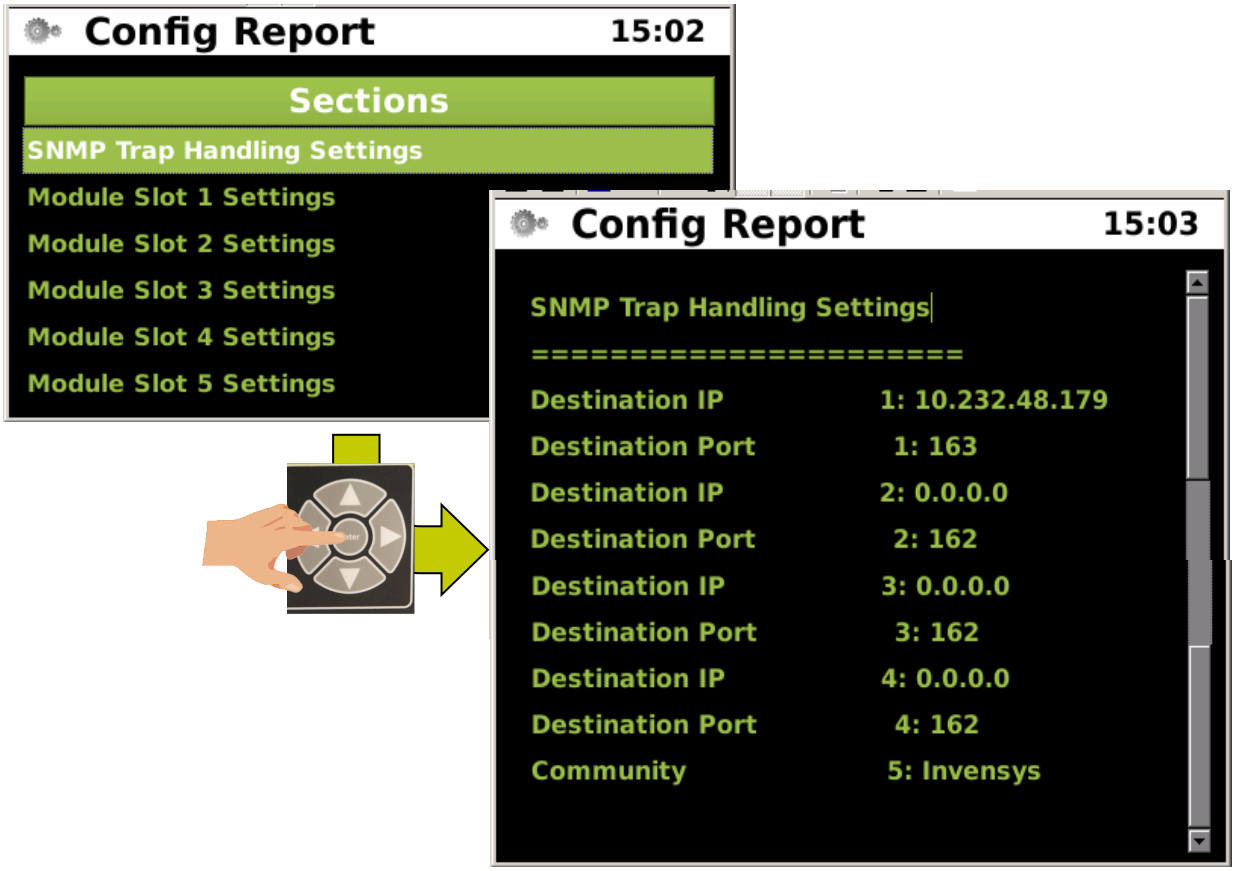


Figure 5-98 Configuration Reports - SNMP Trap Handling Settings

- **Configuration Reports - Module Slot Settings - Slots 1 - 16**

The Module Slot settings reports display the parameters of each of the installed modules. In the figure below only one Module Slot 1 Settings are shown. Each slot will display the same parameters for that particular slot.

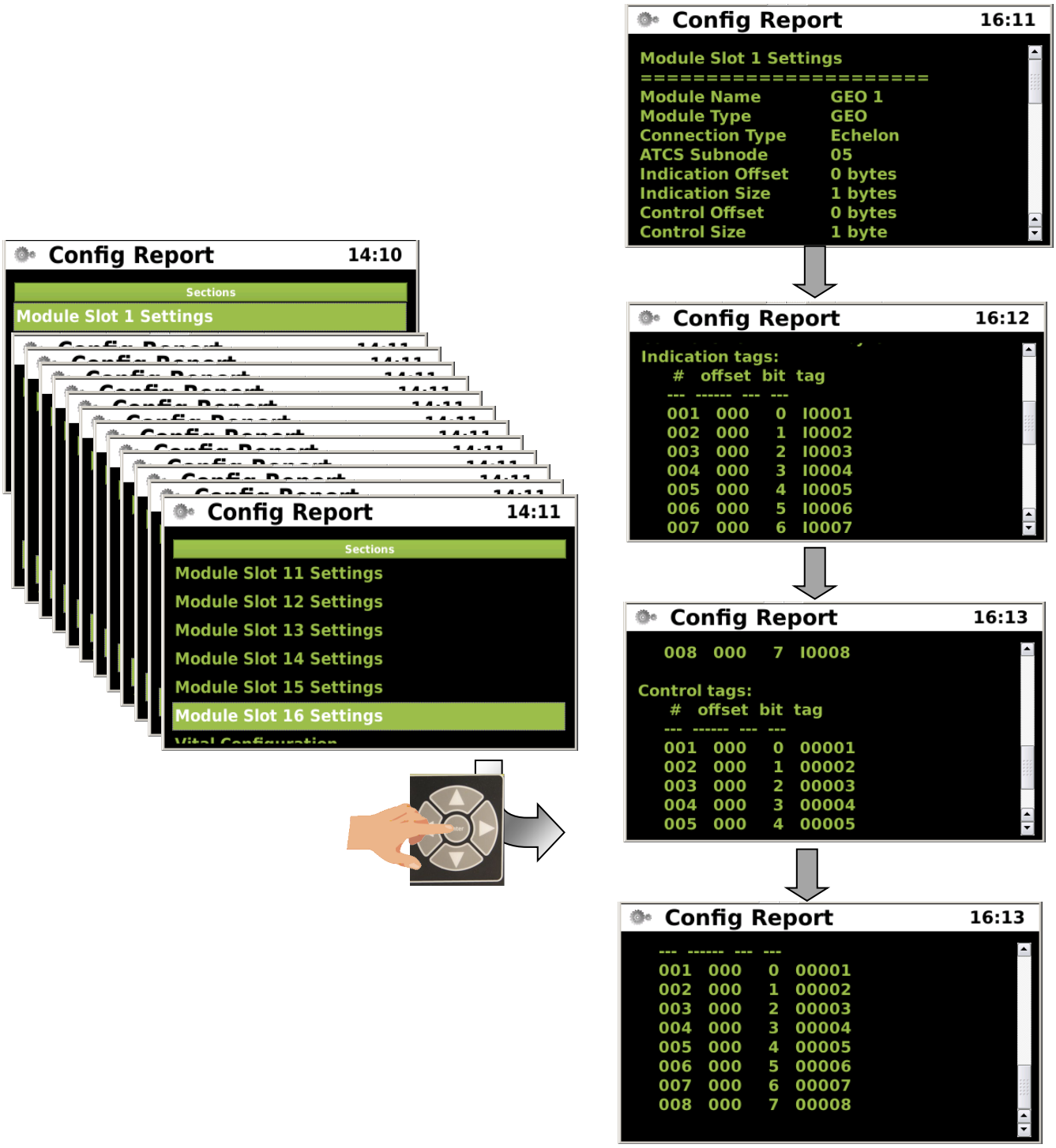


Figure 5-99 Configuration Reports - Module Slot Settings - Slots 1 - 16

- **Configuration Reports - MCF Configuration**

The MCF Configuration report lists currently installed MCF configurations.

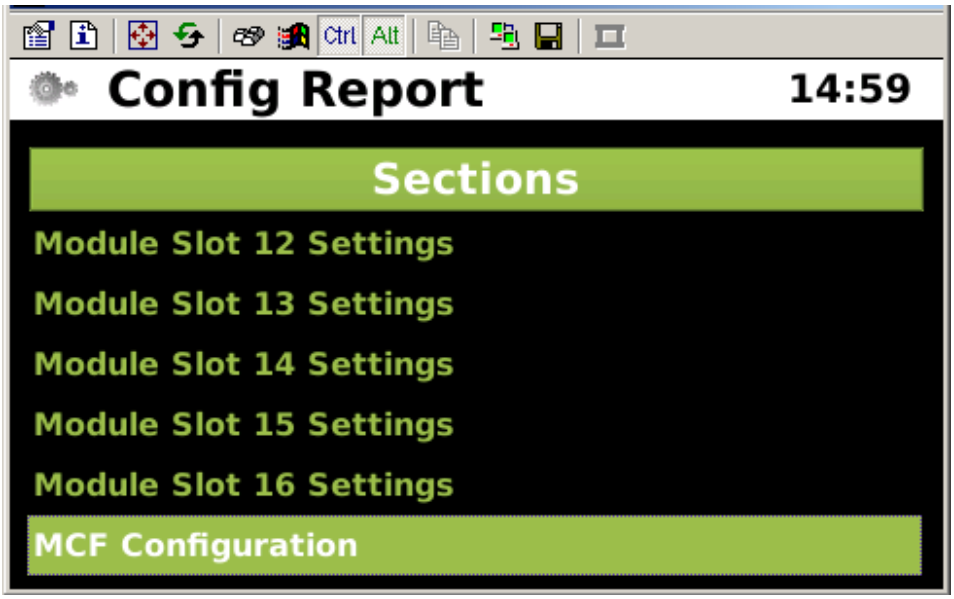


Figure 5-100 MCF Configuration Report

- **Version Report (VER REP)**

The Version Report (VER REP) menu creates a report listing the hardware and software version information currently operating.

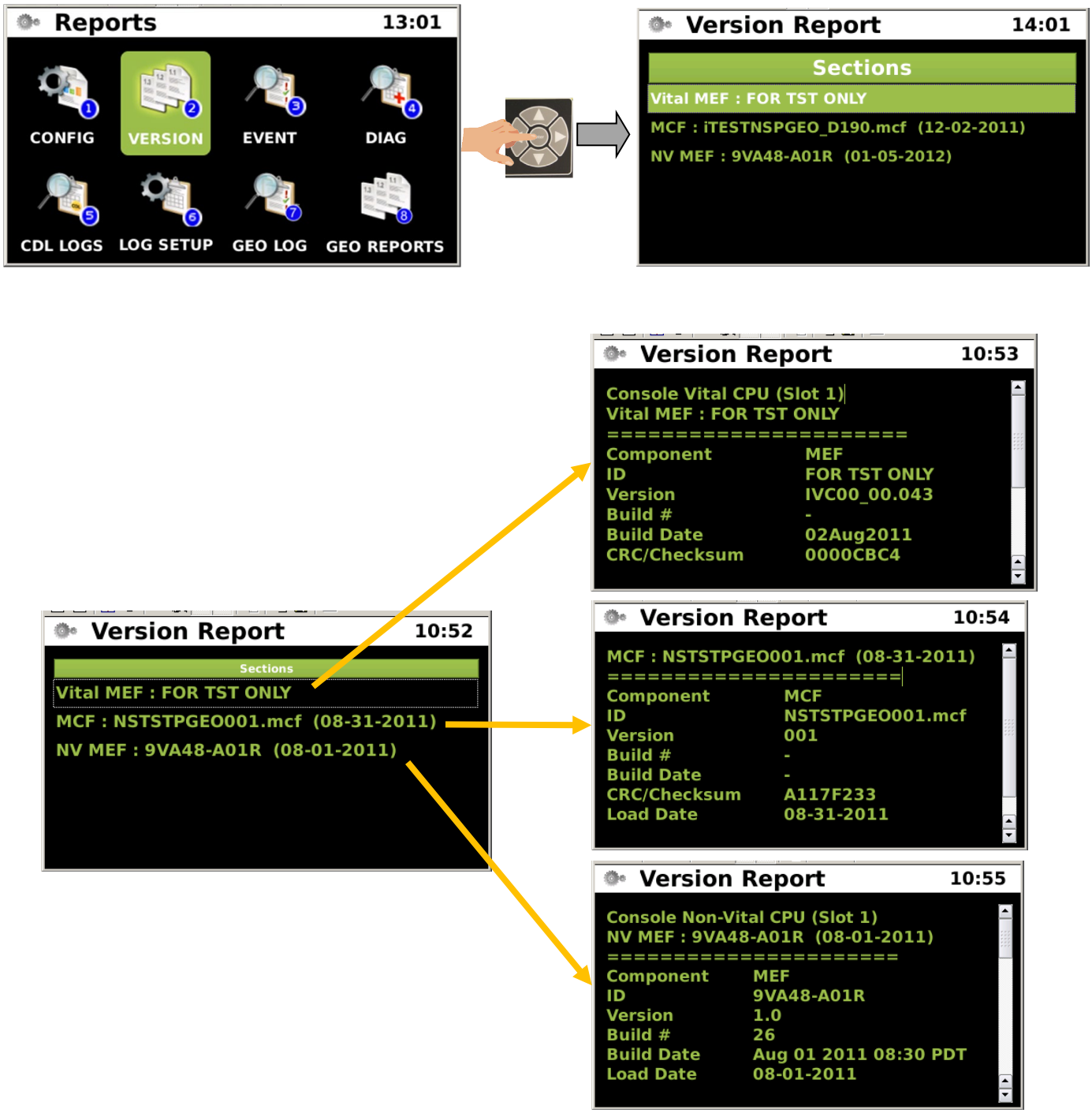


Figure 5-101 Version Report

- **Events Log (EVT LOG)**

The Event Log lists the events within the period designated in the Event Log Filter by the user. The keypad may be used to navigate through the pages.

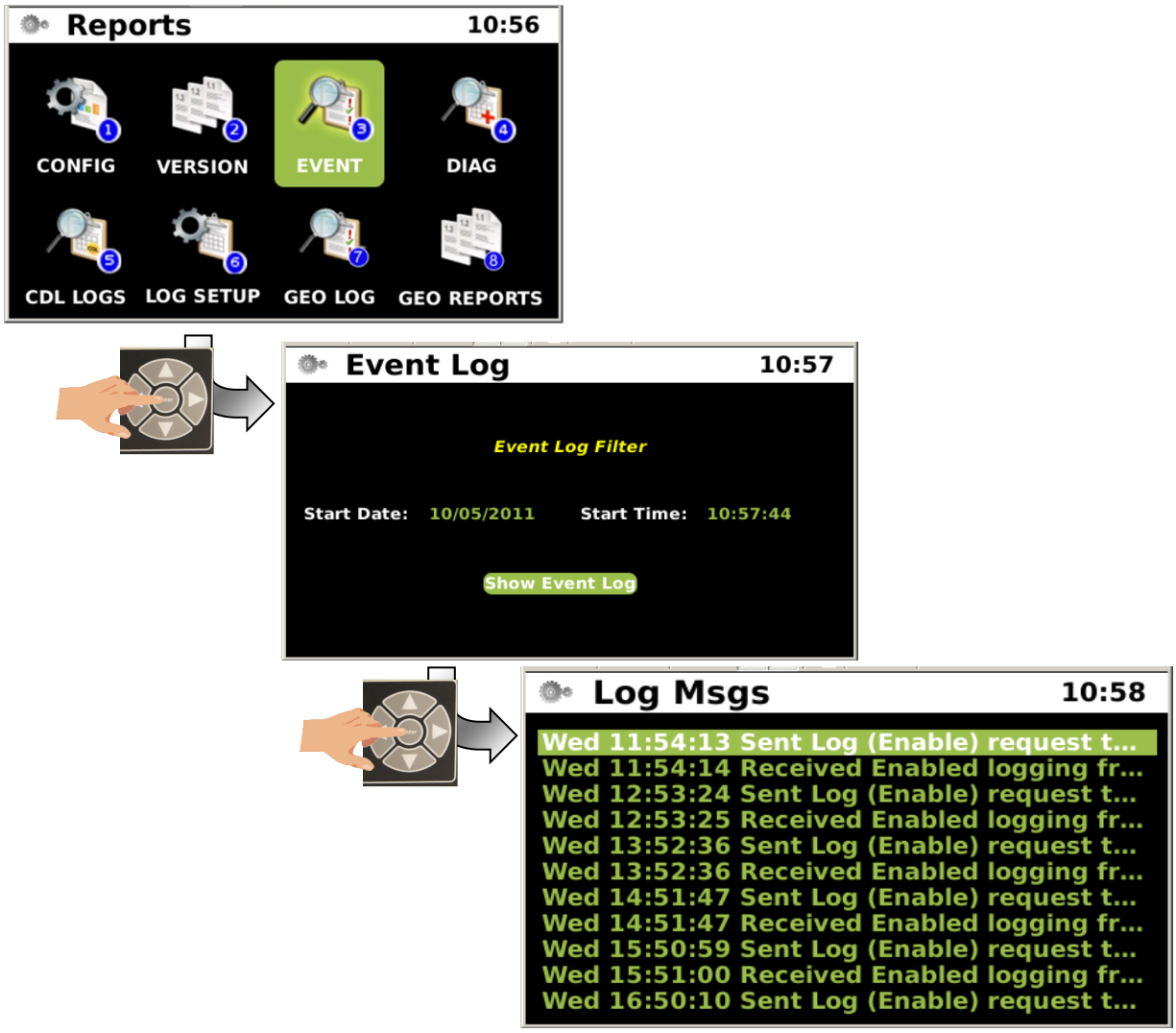


Figure 5-102 Event Log

- **Diagnostic Log (DIAG LOG)**

The Diagnostic Log lists the events within the period designated in the Diagnostic Log Filter by the user. The keypad may be used to navigate through the pages.

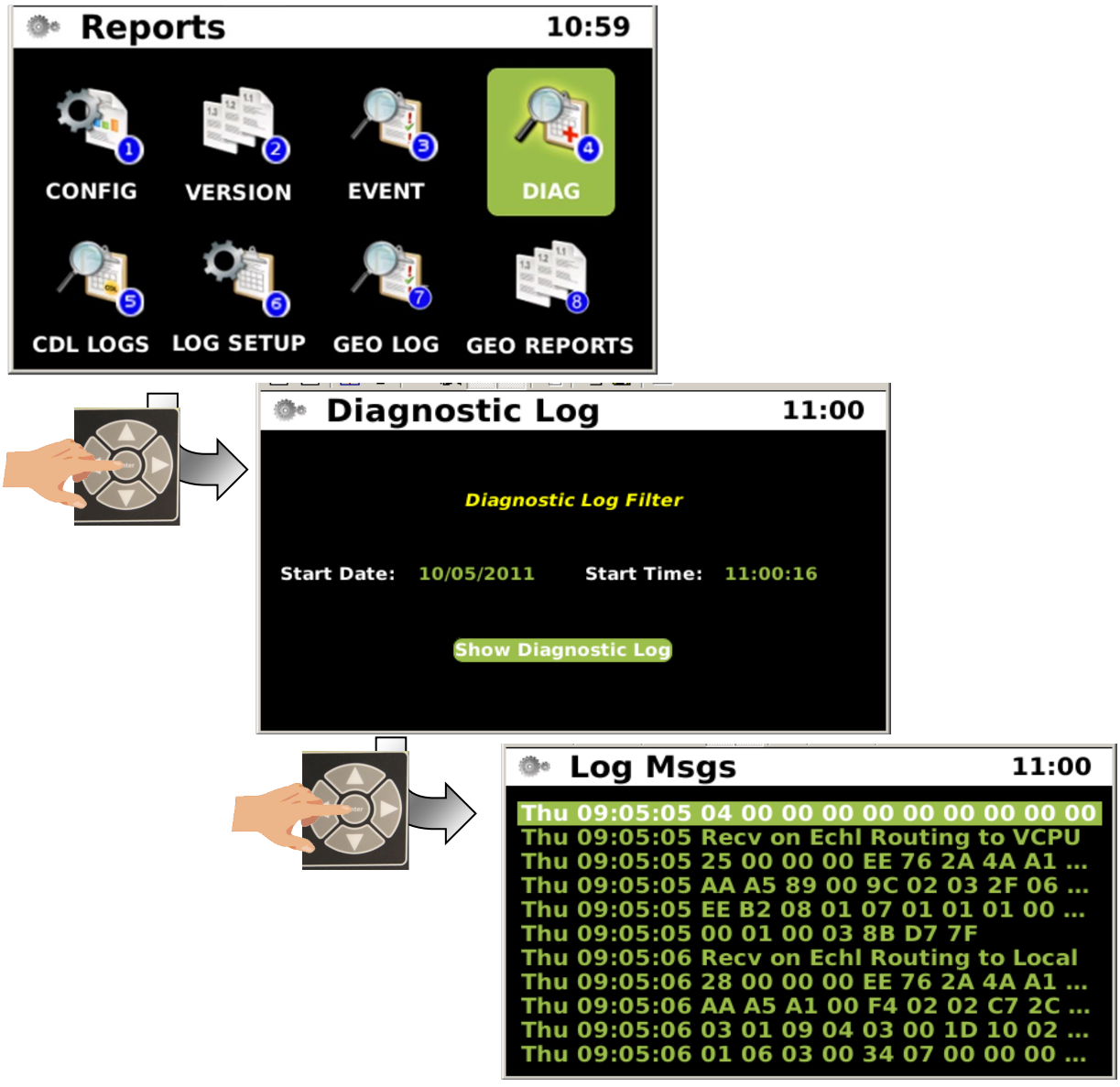


Figure 5-103 Diagnostic Log

- **CDL Log**

The CDL Log lists the CDL events that are available. The keypad may be used to navigate through the pages.

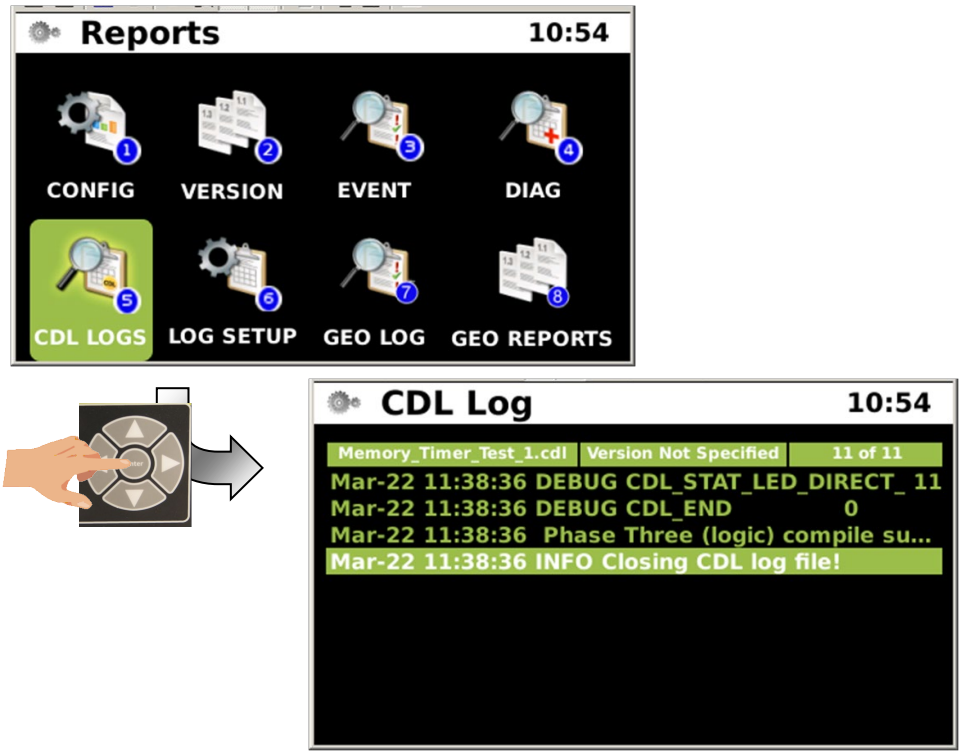


Figure 5-104 CDL Log

- **Log Setup**

The LOG SETUP menu opens the Log Setup parameters as shown below.

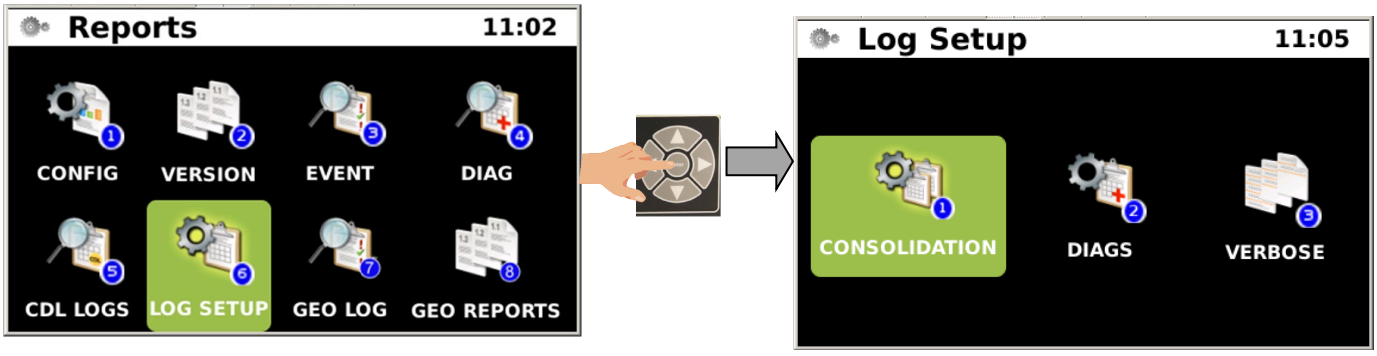


Figure 5-105 Log Setup

- **Consolidation of Logs**

Consolidation enables logs to be sent to a designated server from multiple iVIU systems. Logs will be maintained within the local unit as well.

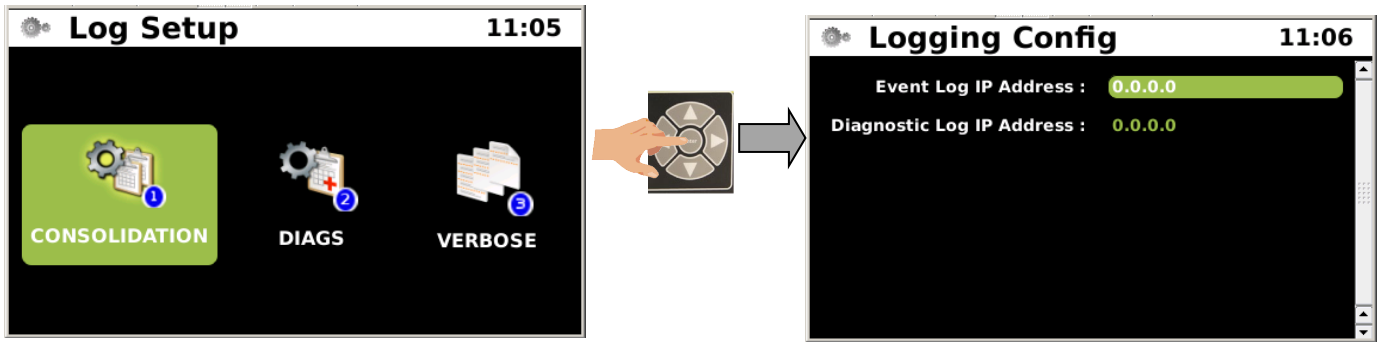


Figure 5-106 Consolidation of Event and Diagnostic Logs

CONSOLIDATION

Event Log Storage IP Address: 0.0.0.0

Diag Log Storage IP Address: 0.0.0.0

- **Diagnostic Logs**

The Diagnostics Log setup may be customized by the User to collect specific information. Log parameters may be enables or disabled by the user.

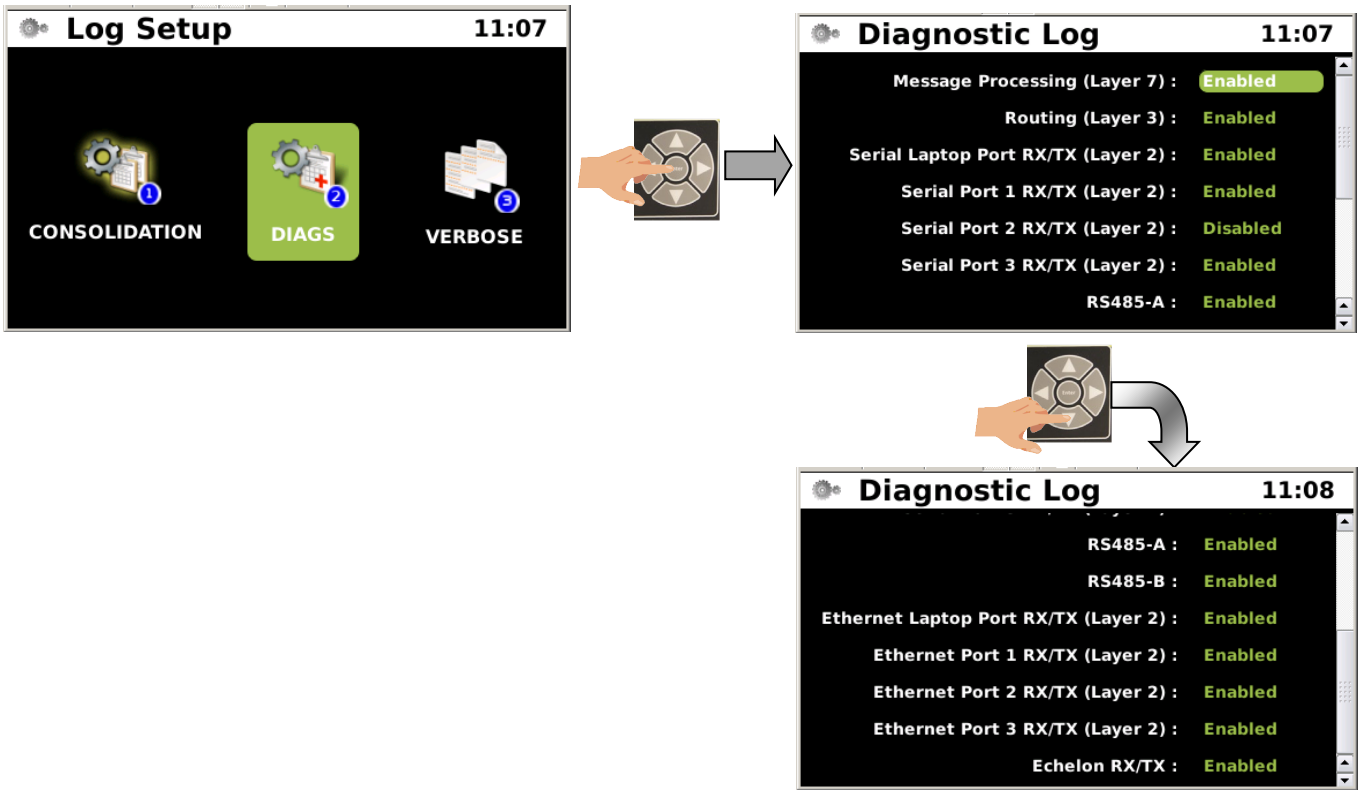


Figure 5-107 Set Diagnostic Log Parameters

DIAGS

Message Processing (Layer 7):	No (No, Yes)
Routing (Layer 3):	No (No, Yes)
Serial Laptop Port Rx/Tx (Layer 2):	No (No, Yes)
Serial Port 1 Rx/Tx (Layer 2):	No (No, Yes)
Serial Port 2 Rx/Tx (Layer 2):	No (No, Yes)
Serial Port 3 Rx/Tx (Layer 2):	No (No, Yes)
RS485-A:	No (No, Yes)
RS485-B:	No (No, Yes)
Ethernet Laptop Port Rx/Tx (Layer 2):	No (No, Yes)
Ethernet Port 1 Rx/Tx (Layer 2) :	No (No, Yes)
Ethernet Port 2 Rx/Tx (Layer 2):	No (No, Yes)
Ethernet Port 3 Rx/Tx (Layer 2):	No (No, Yes)
Echelon Rx/Tx:	No (No, Yes)

- **Log Verbosity**

There are five verbosity settings available for iVIU logs, Basic, Error, Warning, Info, and Debug. The verbosity of each component's log may be set individually.

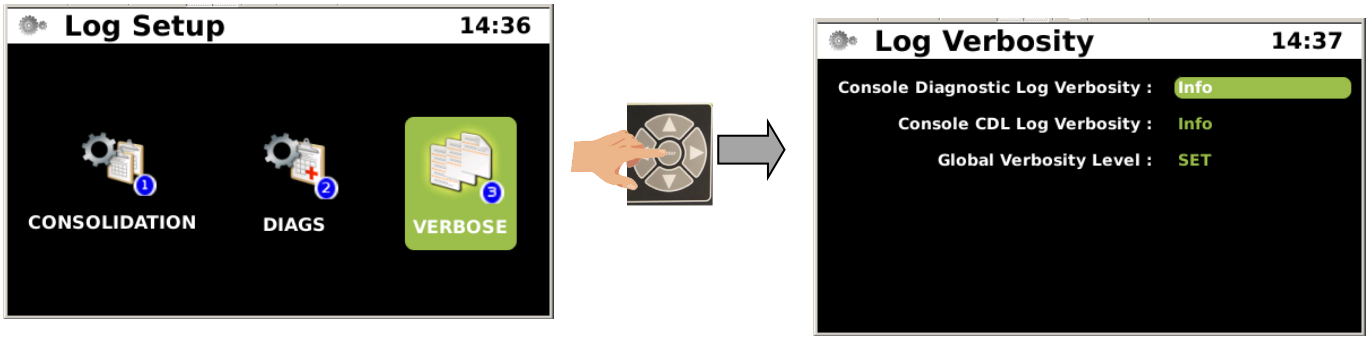


Figure 5-108 Set Log Verbosity

VERBOSE

Console Verbosity: Basic (Basic, Error, Warning, Info, Debug)
CDL Verbosity: Basic (Basic, Error, Warning, Info, Debug)

- **GEO Log**

The GEO Log contains information on the status of the components within the GEO system. The log contains a Status Log and a Summary Log. The verbosity setting is programmable for the GEO Log.

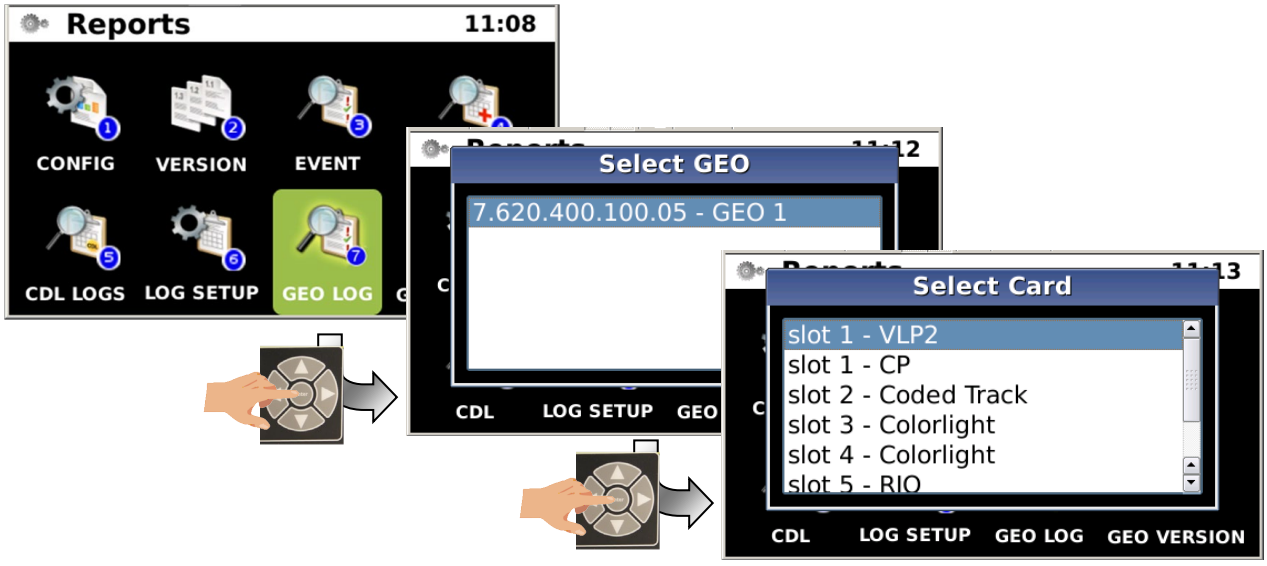


Figure 5-109 GEO Log

- **GEO Log - Status Log**

The Status Log displays the current status of the GEO components.

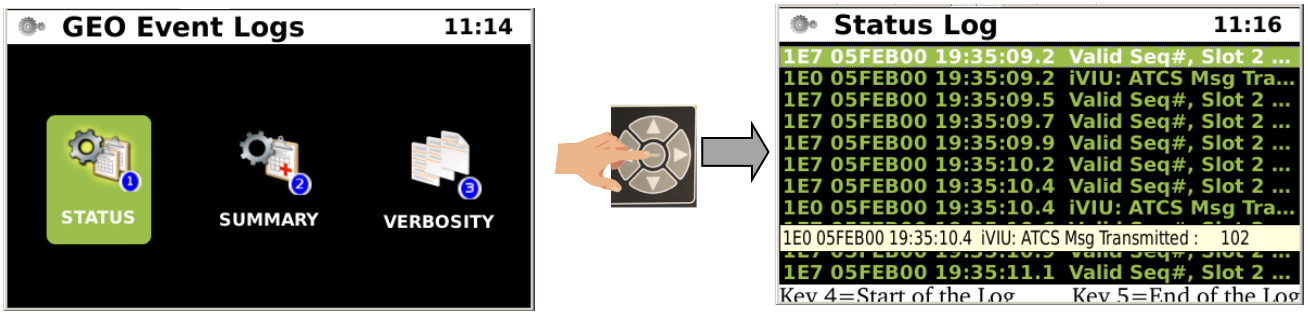


Figure 5-110 GEO Log - Status Log

- **GEO Log - Summary Log**

The Summary Log provides a summary of events from the GEO unit.

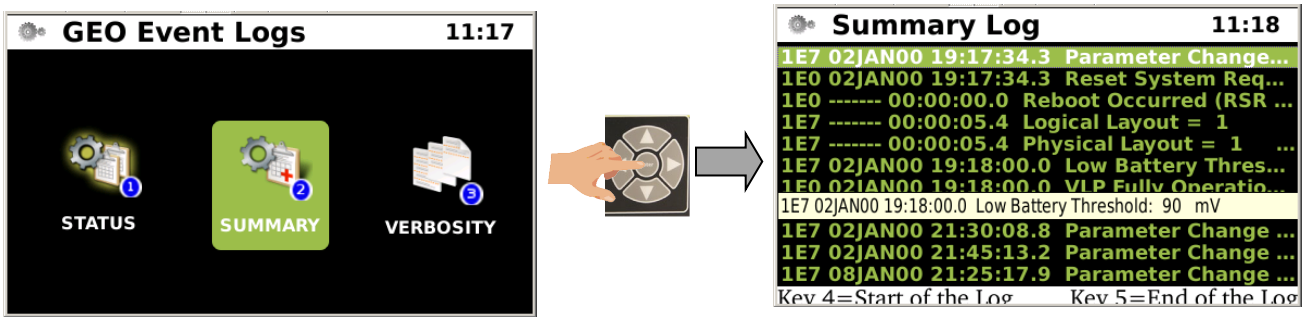


Figure 5-111 GEO Log - Summary Log

- **GEO Log - Verbosity**

The verbosity is user programmable to set the detail level for the GEO event status and summary logs. Highlight the Verbosity icon and press the Enter key. To set the verbosity highlight the verbosity value and press the Enter key. The verbosity level options will appear. Select the desired option and press the Enter key to set the verbosity.

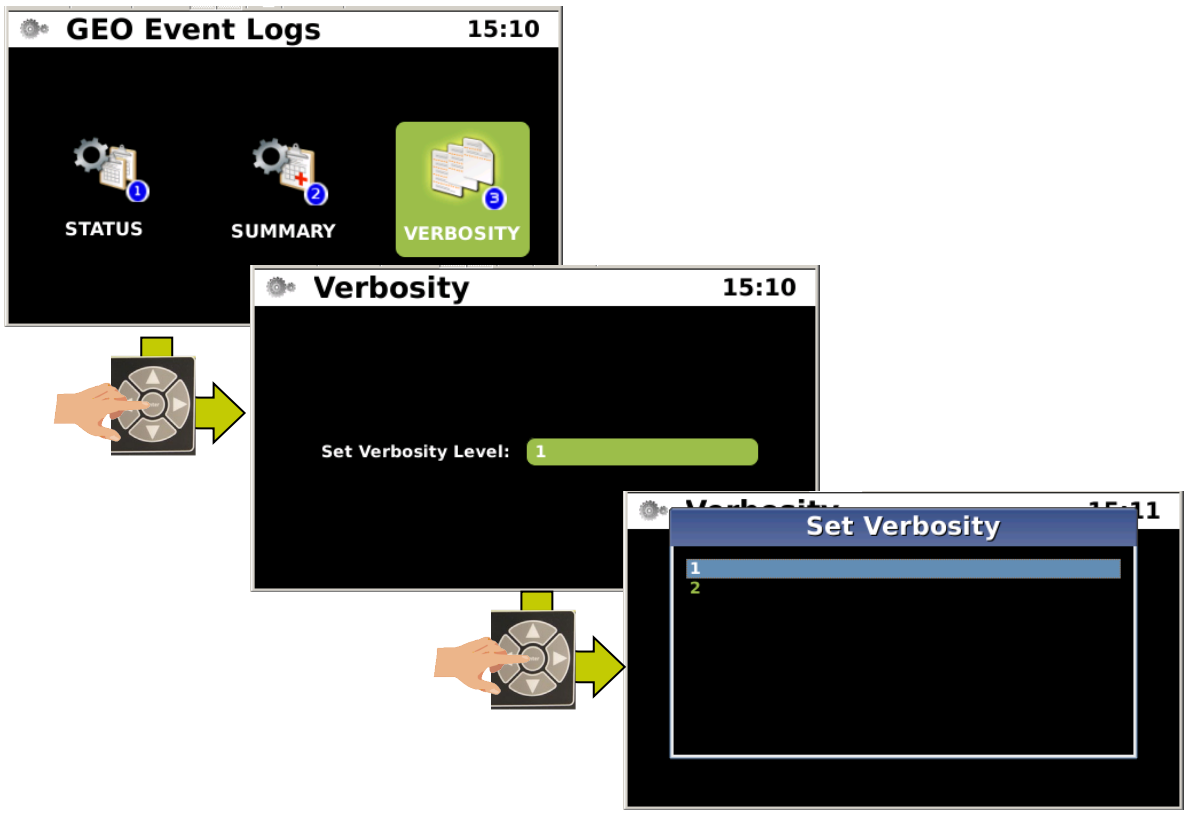


Figure 5-112 GEO Log - Verbosity Settings

- **GEO Log - GEO Reports**

The GEO Reports menu provides a Configuration Report and a Version Report. Click on the GEO Reports icon and press the ENTER key. Select the desired GEO and press the Enter key. A screen will appear for selection of the Configuration or Version Report.

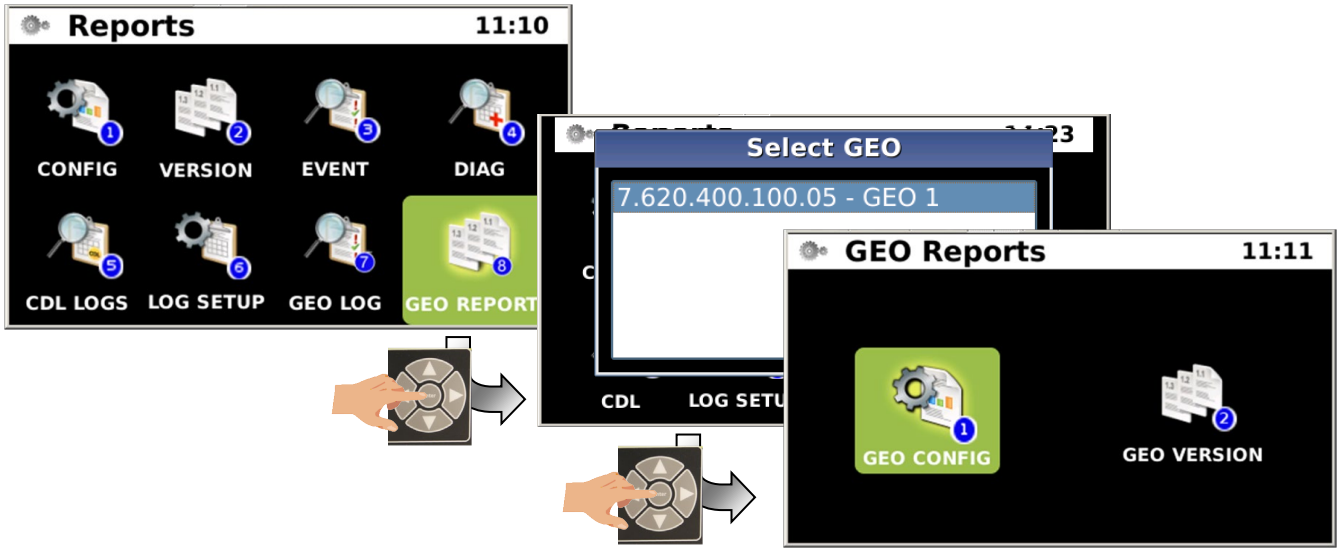


Figure 5-113 GEO Log - GEO Reports

- **GEO Logs - GEO Reports - GEO Config**

The GEO Configuration Report provides configuration information for Location and Site ID, MCF Version, Date and Time, Hardware Information, and MCF Configuration

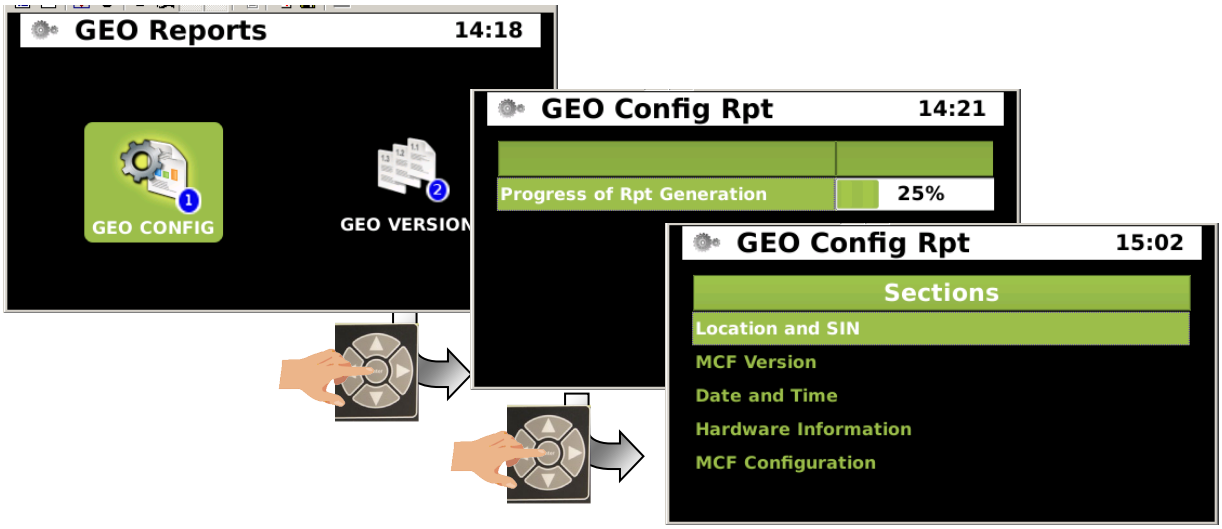


Figure 5-114 GEO Log - GEO Config Report

- **GEO Config - Location and SIN**

The Location and SIN displays the Location DOT Number, Milepost, Site Name, and Site ID Number as shown below.

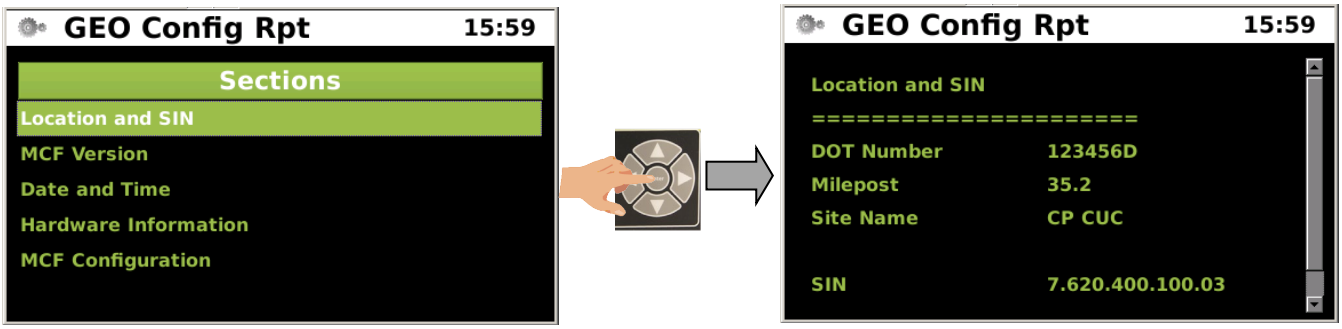


Figure 5-115 GEO Config - Location and SIN

- **GEO Config - MCF Version**

The next selection displays the MCF Version information.

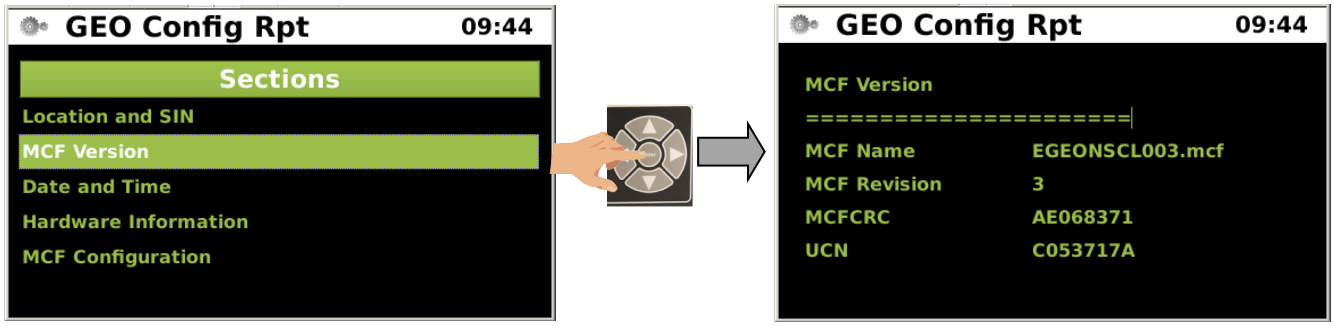


Figure 5-116 GEO Config - MCF Version

- **GEO Config - Date and Time**

The next selection displays the current date and time.

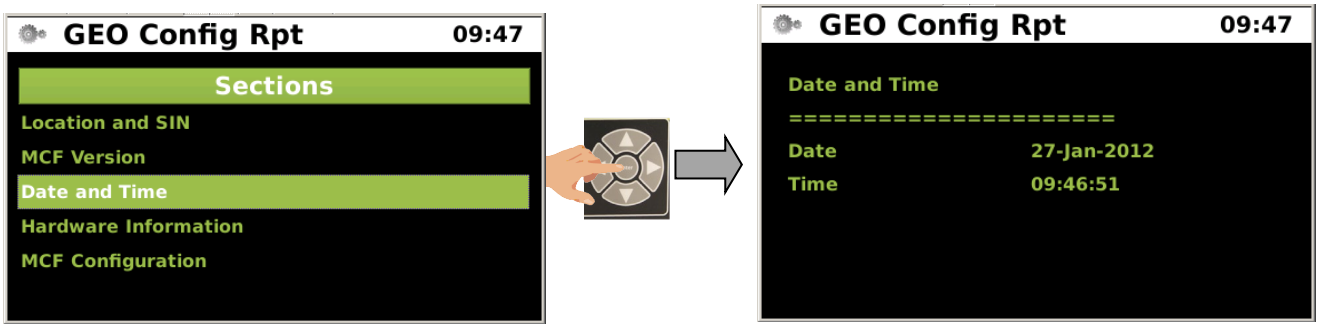


Figure 5-117 GEO Config - Date and Time

- **GEO Config - Hardware Information**

The Hardware Information screen displays the installed GEO card information.

Figure 5-118 GEO Config - Hardware Information

- **GEO Config - MCF Configuration**

The figure below displays the MCF Configuration information for the installed GEO Cards.

Figure 5-119 GEO Config - MCF Configuration

- **GEO Reports - GEO Version Report**

The GEO version information is provided in the GEO Version Report.

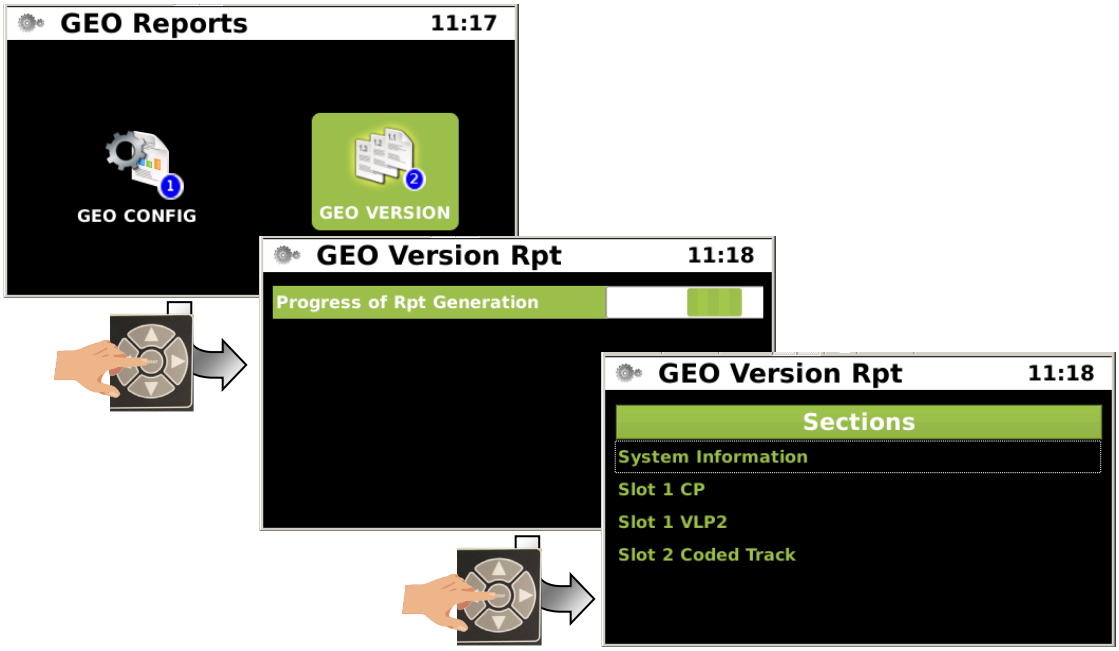


Figure 5-120 GEO Reports - GEO Version Report Sub Menu

- **GEO Reports - GEO Version Report - System Information**

The System Information screen displays information for MEF, UCN, and MCF as shown below.

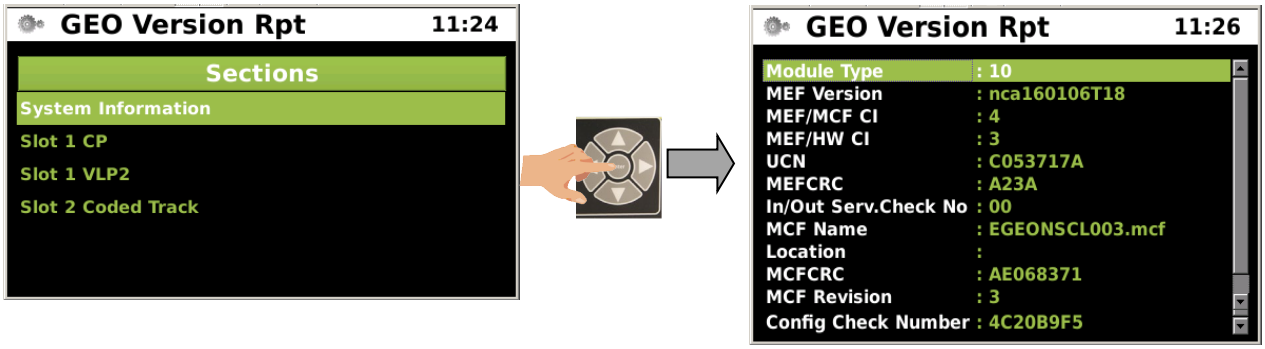


Figure 5-121 GEO Version System Information

- **GEO Reports - GEO Version Report - Slot 1 CP**

The next selection shows the GEO Slot 1 CP card version information.

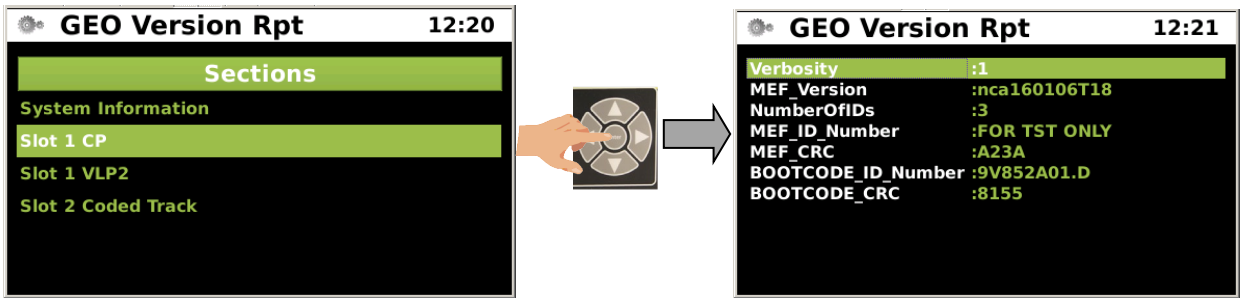


Figure 5-122 GEO Version Report - Slot 1 CP

- **GEO Reports - GEO Version Reports - Slot 1 VLP2**

The next selection shows the GEO Slot 1 VLP2 card version information.

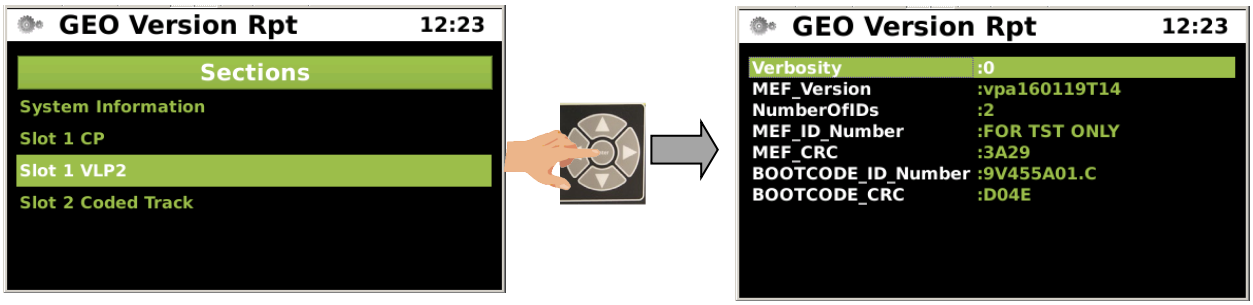


Figure 5-123 GEO Version Reports - Slot 1 VLP2

- **GEO Reports - GEO Version Reports - Slot 2 Coded Track**

The next selection shows the GEO Slot 1 VLP2 card version information.

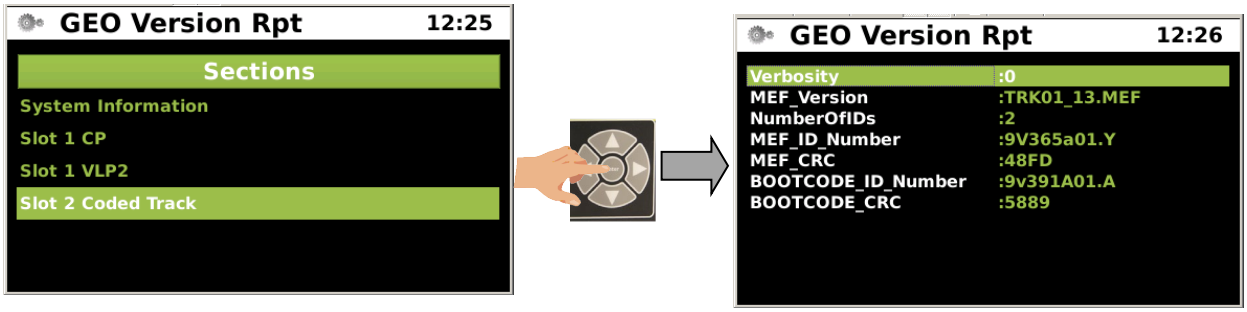


Figure 5-124 GEO Version Reports - Slot 2 Coded Track

5.1.2.7 Maintenance (MAINT)

The Maintenance Menu has two sub-menus, PTC Class D and USB Menu.

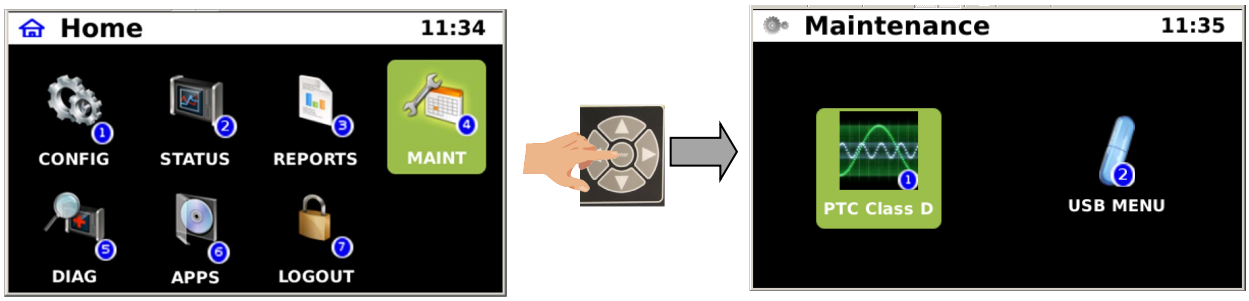


Figure 5-125 Maintenance Menu

- **Maintenance - PTC Class D**

The PTC Class D maintenance menu displays parameters for setting up a test messaging for Class D protocol PTC messages as shown in Figure 5-126.

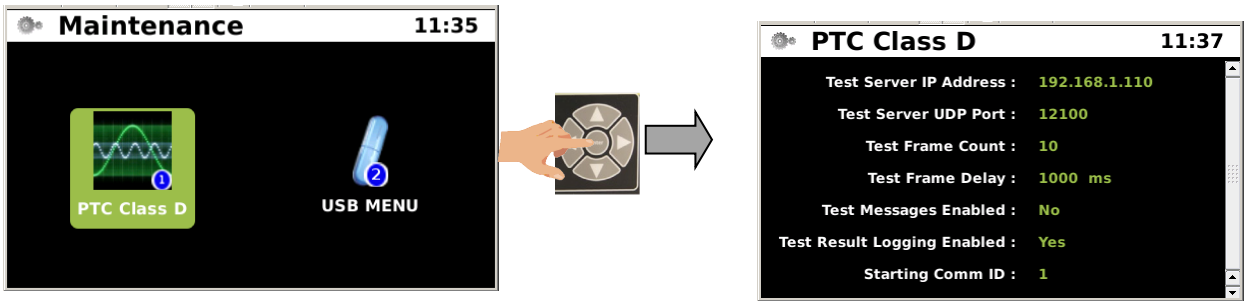


Figure 5-126 Maintenance - PTC Class D Test Parameters

- **Maintenance - USB Menu**

The USB Menu is used in conjunction with a USB drive. Insert a USB Drive into the USB port on the Console front panel. The USB Drive menu will appear as shown in Figure 5-127. Logs and Reports may be downloaded as well as systems data. New software can also be uploaded into the console via this menu.

Figure 5-127 USB Port Menu

5.1.2.8 Diagnostics (DIAG)

The Diagnostic menu contains a GEO Statics menu which contains information on the GEO cards, Vital and Non-Vital ATCS, Time, SIO, DT, LAN, and VLP. The Info menu provides any active diagnostic information. The CDL Status will be available in a future release.

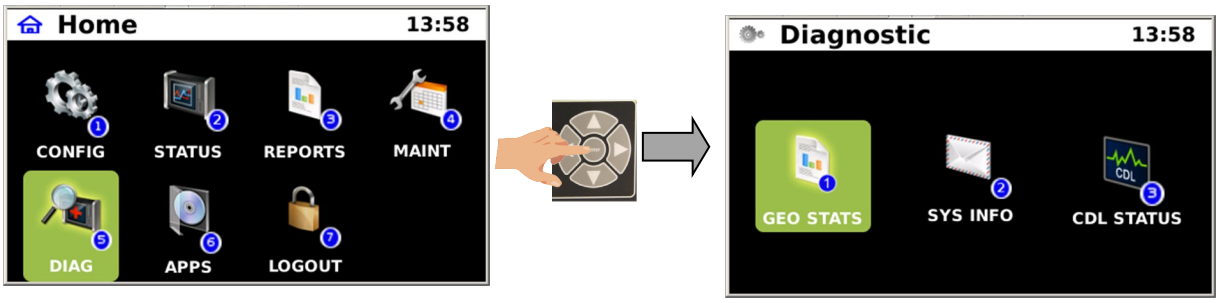


Figure 5-128 Diagnostic Menu

- **Diagnostics - GEO Stats**

The GEO Stats menu will display a list of GEO components which can be viewed to show available statistical information. Select the GEO STATS icon and press the "ENTER" button. A list of connected GEO units will appear. Highlight the desired GEO unit and press the "ENTER" button to bring up the statistics views for that GEO unit.

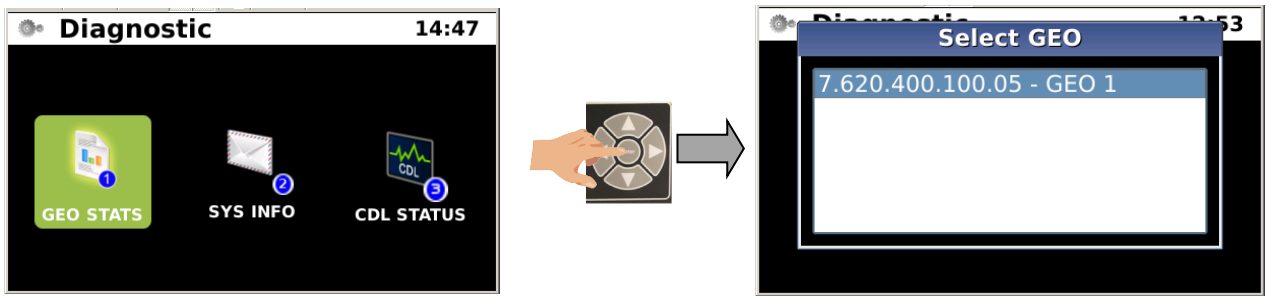


Figure 5-129 Diagnostics - GEO Stats

- **Diagnostics - GEO Stats - Statistics Views**

The following are the statistics views of the GEO components and functions.

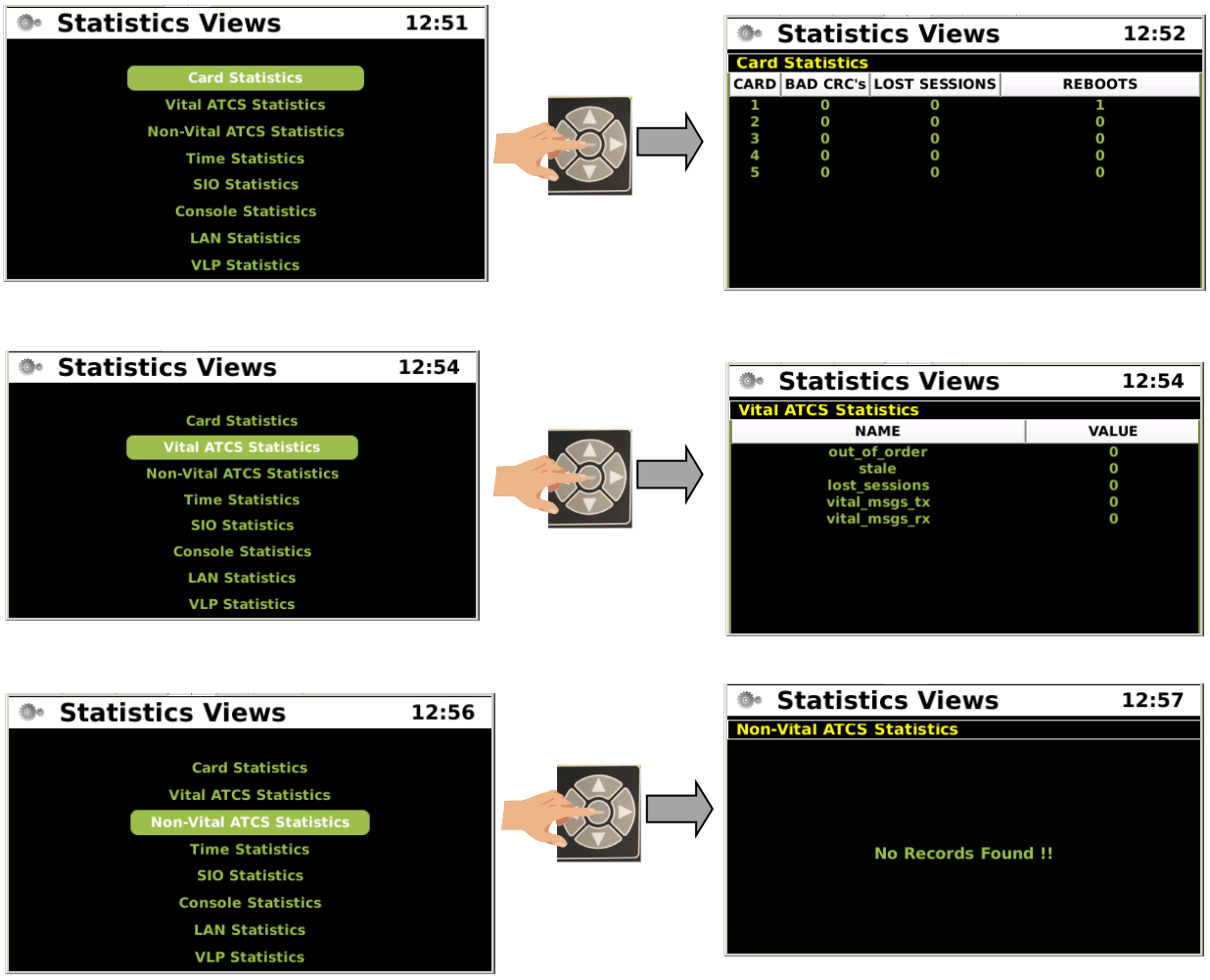


Figure 5-130 Diagnostics - GEO Stats - Statistics View

- **Diagnostics - GEO Stats - Statistics Views (Continued)**

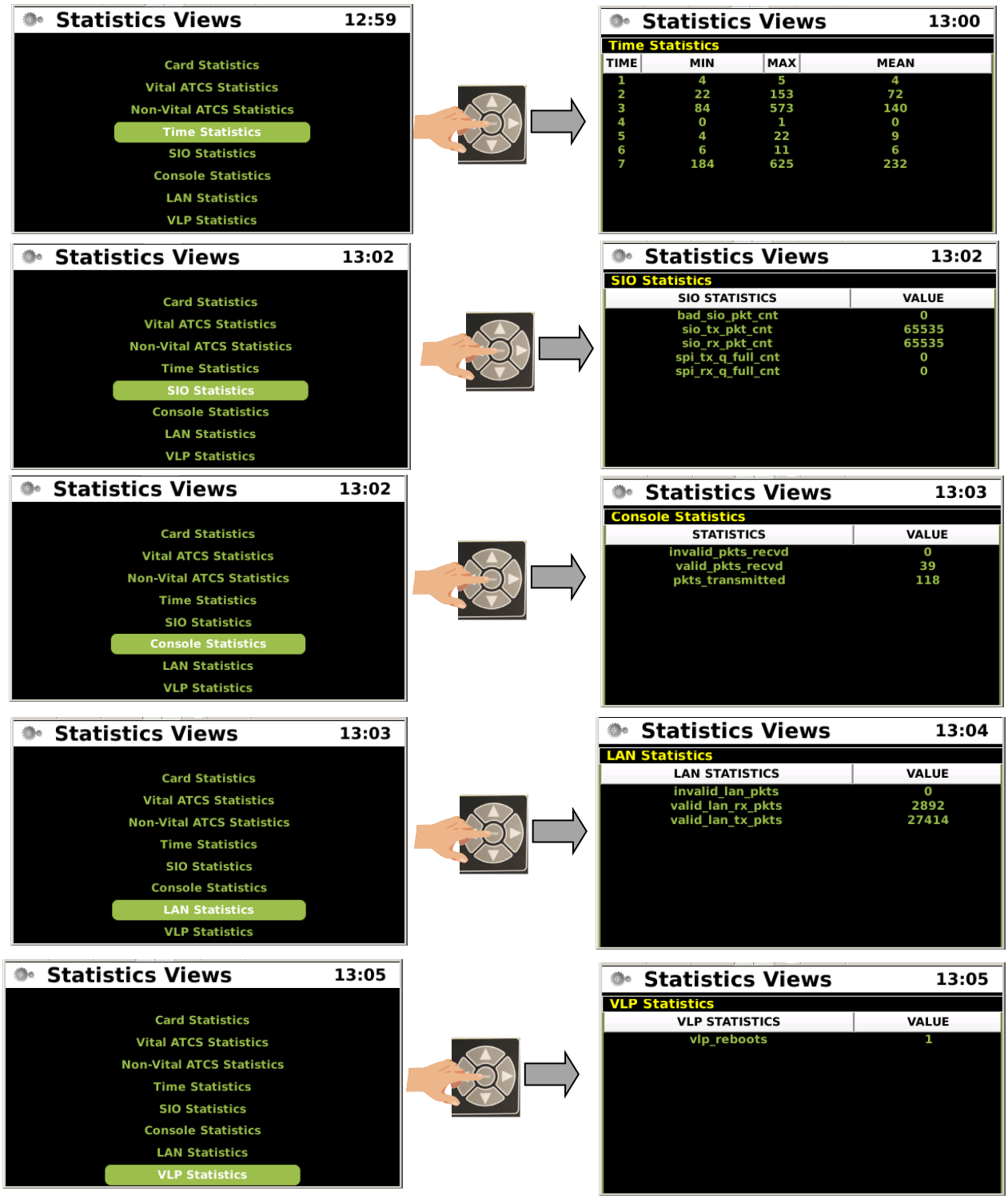


Figure 5-131 Diagnostics - GEO Stats - Statistics Views (Continued)

- **Diagnostics - Sys Info**

The Sys Info Menu will display any active diagnostic messages. Highlight the INFO icon and press the "ENTER" button to view any diagnostic information.

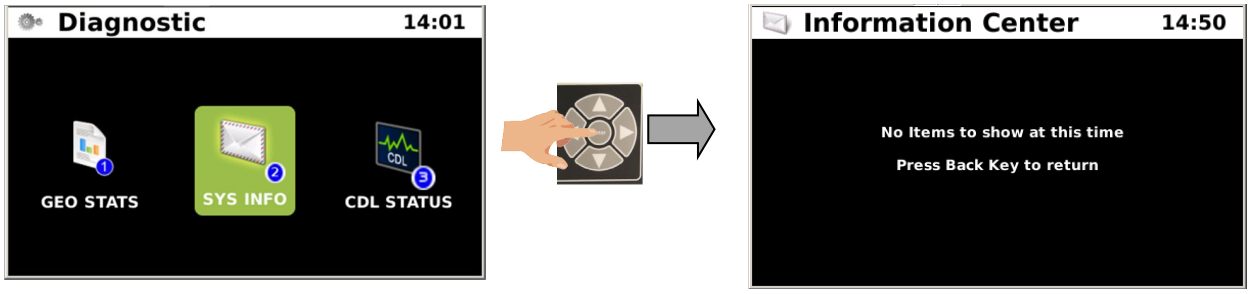


Figure 5-132 Diagnostics - Sys Info

- **Diagnostics - CDL Status**

To view the CDL Status navigate to the DIAG icon and press the Enter key. Navigate to the CDL STATUS icon and press the Enter key. If no CDL is running the status screen will advise accordingly. If a CDL is running, the CDL Status screen will display all CDL generated events as shown below. If an urgent status is detected, a CDL triangle icon will appear on the name bar of the display regardless of what type of screen is being displayed. This icon warns the user of an out of tolerance condition present.

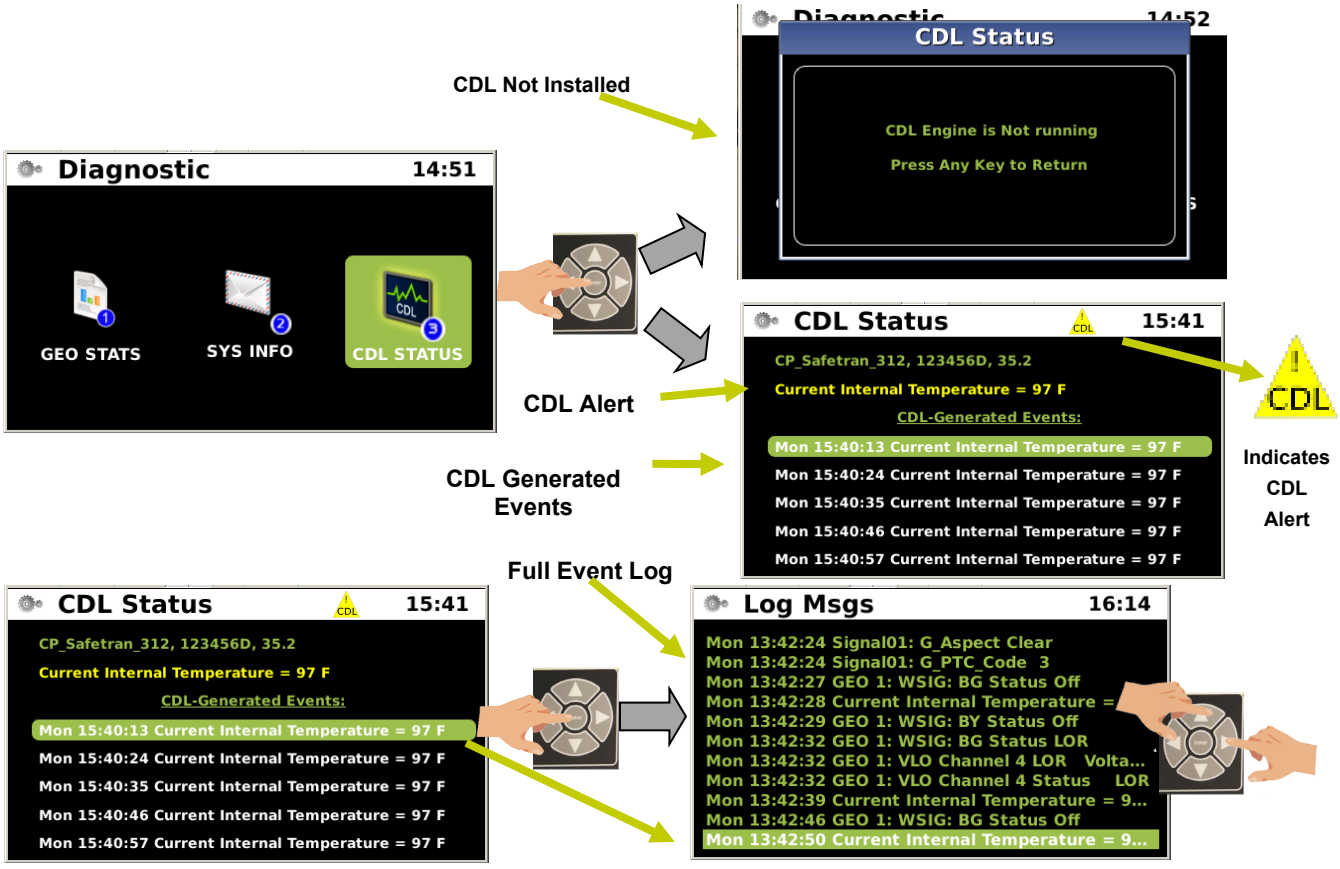


Figure 5-133 Diagnostics - CDL Status

5.1.2.9 Applications (APPS)

The Applications menu includes five sub-menus Vital Apps, Non-Vital Ladder Logic, CDL Setup, CDL Logs, and CDL OP PARAMS (Operational Parameters). Select the APPS icon to open the sub-menu screen as shown below.

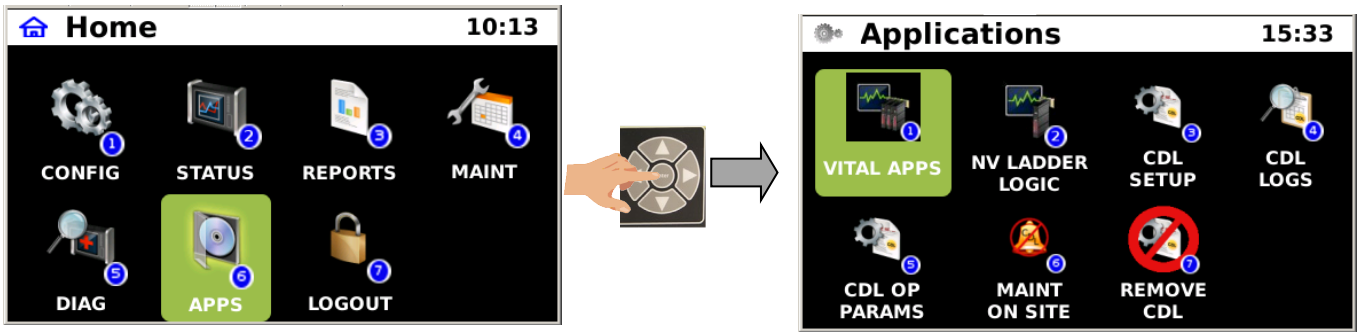


Figure 5-134 Applications (APPS)

- **Applications - Vital Applications (VITAL APPS)**

The Vital Apps menu will display the vital applications currently installed on the iVIU console as shown below.

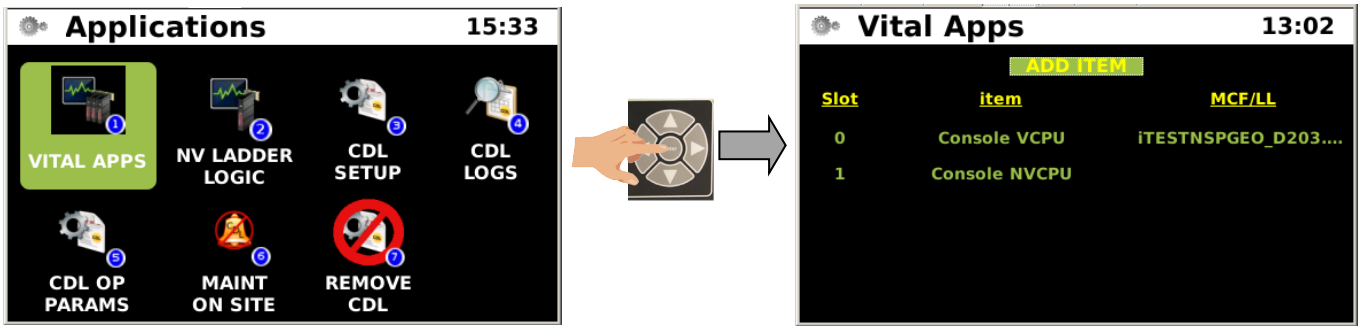


Figure 5-135 Applications - Vital Applications (VITAL APPS)

- **Applications - Non-Vital Ladder Logic**

The Non-Vital Ladder Logic menu will open a screen to display any installed ladder logic files. The USB menu is used to install ladder logic files. Refer to Sections 5.1.2.3 and 5.1.2.7.2 for information on uploading files using a USB drive.

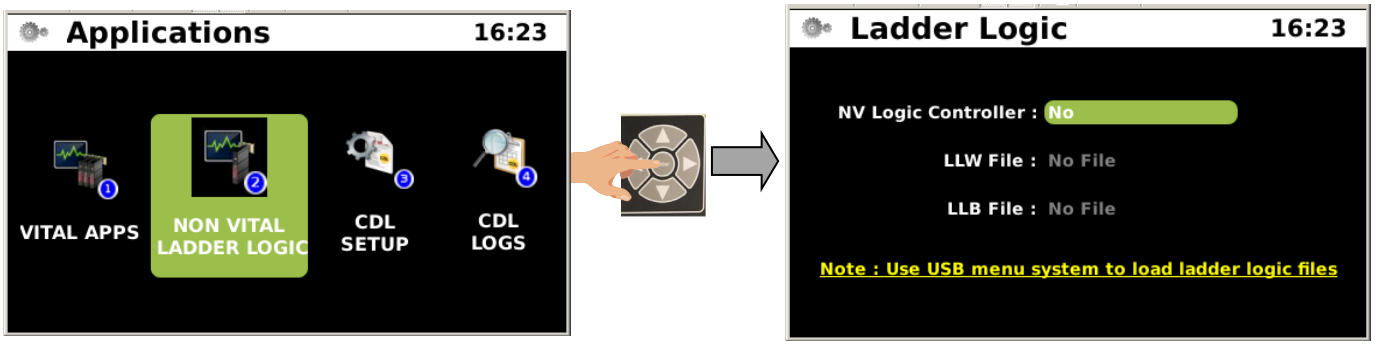


Figure 5-136 Applications - Non-Vital Ladder Logic

- **Non-Vital Ladder Logic - NV Logic Controller**

The user can activate or de-activate the non-vital logic controller by selecting "YES" to activate or "NO" to de-activate the controller.

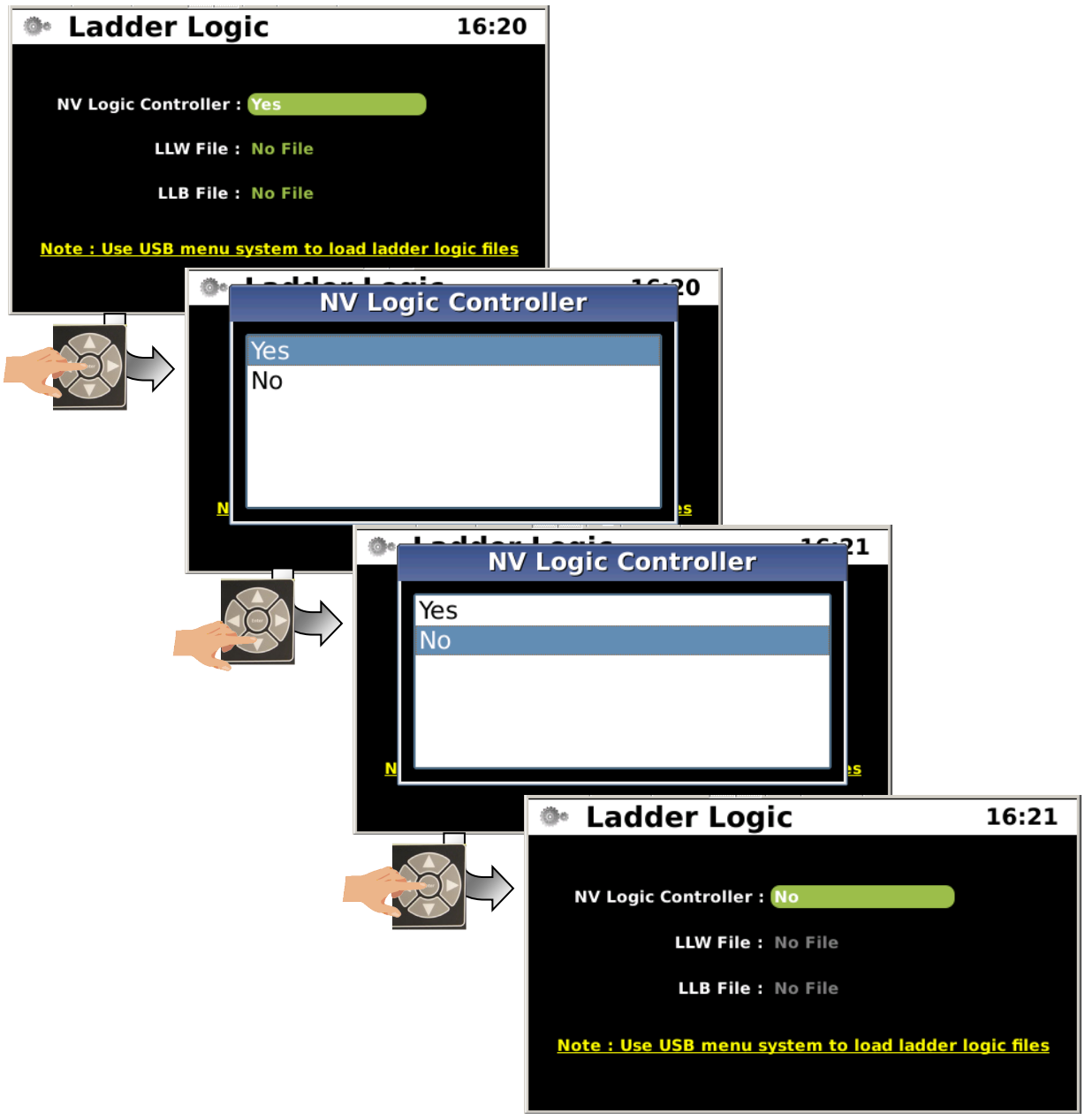


Figure 5-137 Non-Vital Ladder Logic - NV Logic Controller

- **Uploading Ladder Logic Files**

Ladder Logic files are uploaded using the USB Port. The figure below shows the sequence for uploading the Ladder Logic files.

Figure 5-138 Uploading Ladder Logic Files

Ladder logic requires two files the first file will have a LLB extension and the second a LLW extension.

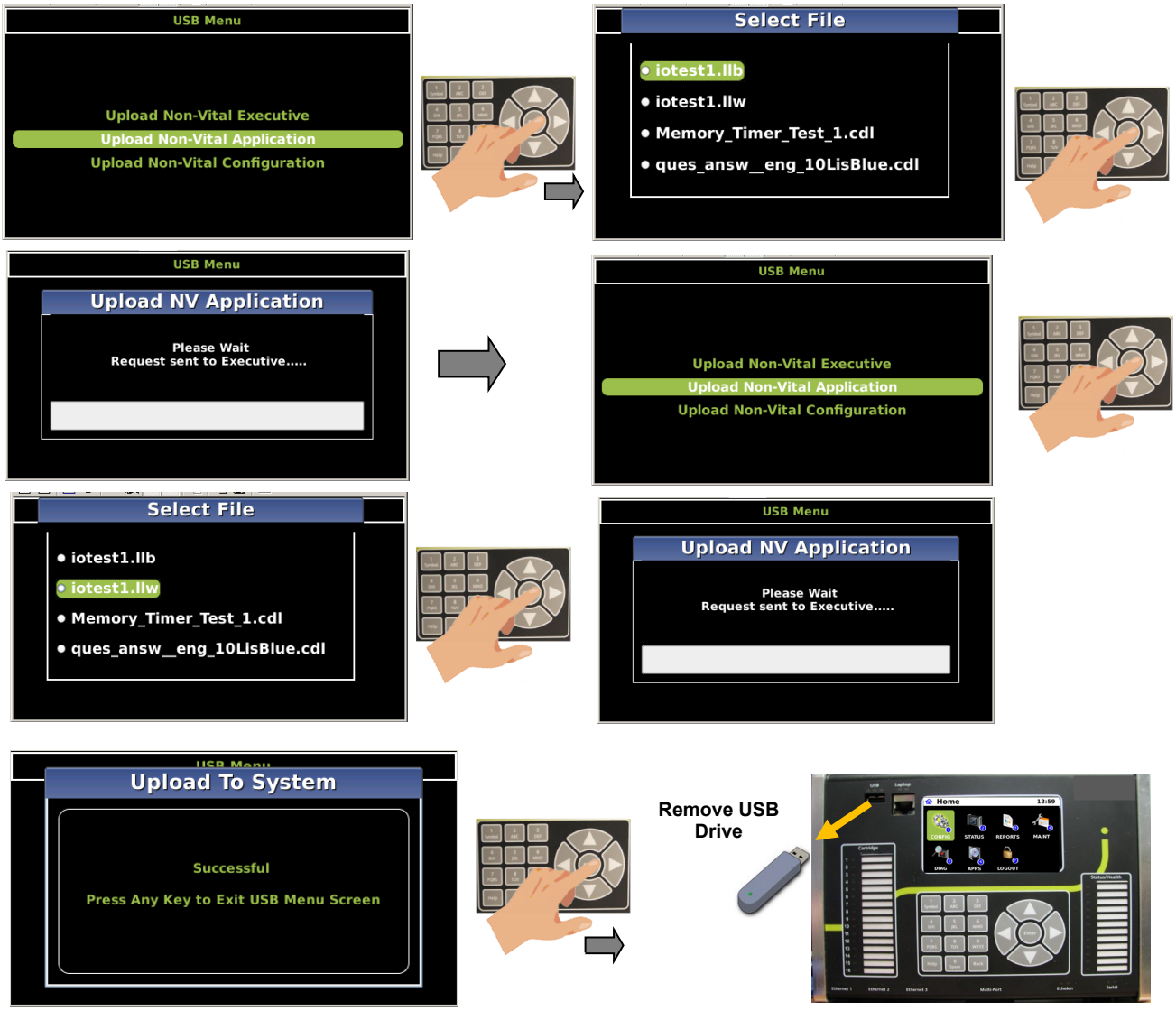


Figure 5-139 Selecting Ladder Logic Files

- **CDL Setup**

The following information will describe installation and set up of a CDL program.

CDL Setup - Installing A CDL File

CDL files are installed using the USB port. The figure below shows a typical CDL file being installed.

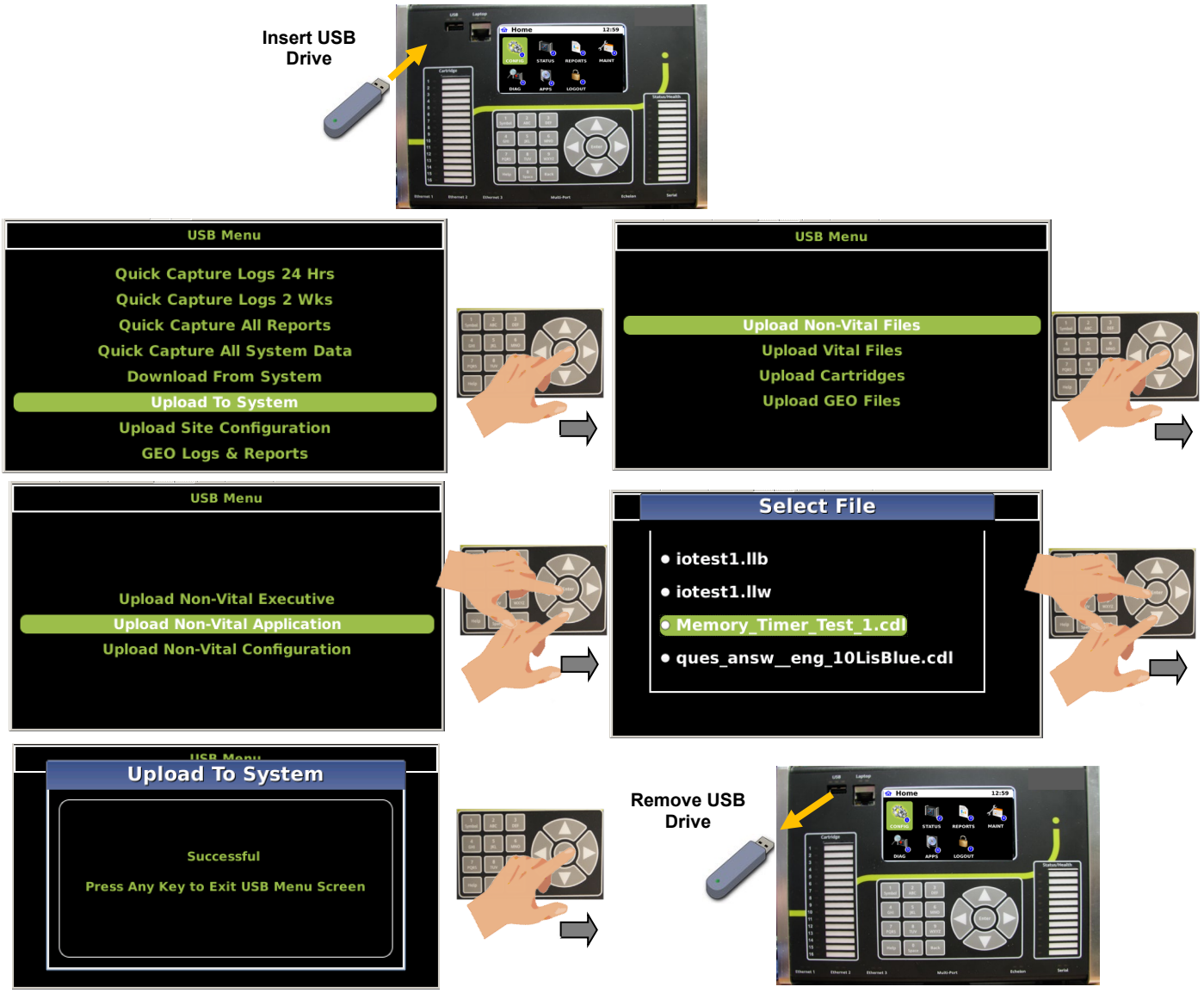


Figure 5-140 CDL Setup - Installing A CDL File

- **CDL Setup - Setting Up A CDL File**

After installing a CDL file navigate to the Applications Menu and select the CDL Setup sub-menu. The CDL will be prepared and the first question will appear on the screen. Select the answers for the questions. The last question will ask to finish compiling the CDL. Upon completion of the compiling function the CDL Log will be displayed showing the compiling results. The CDL is now running.

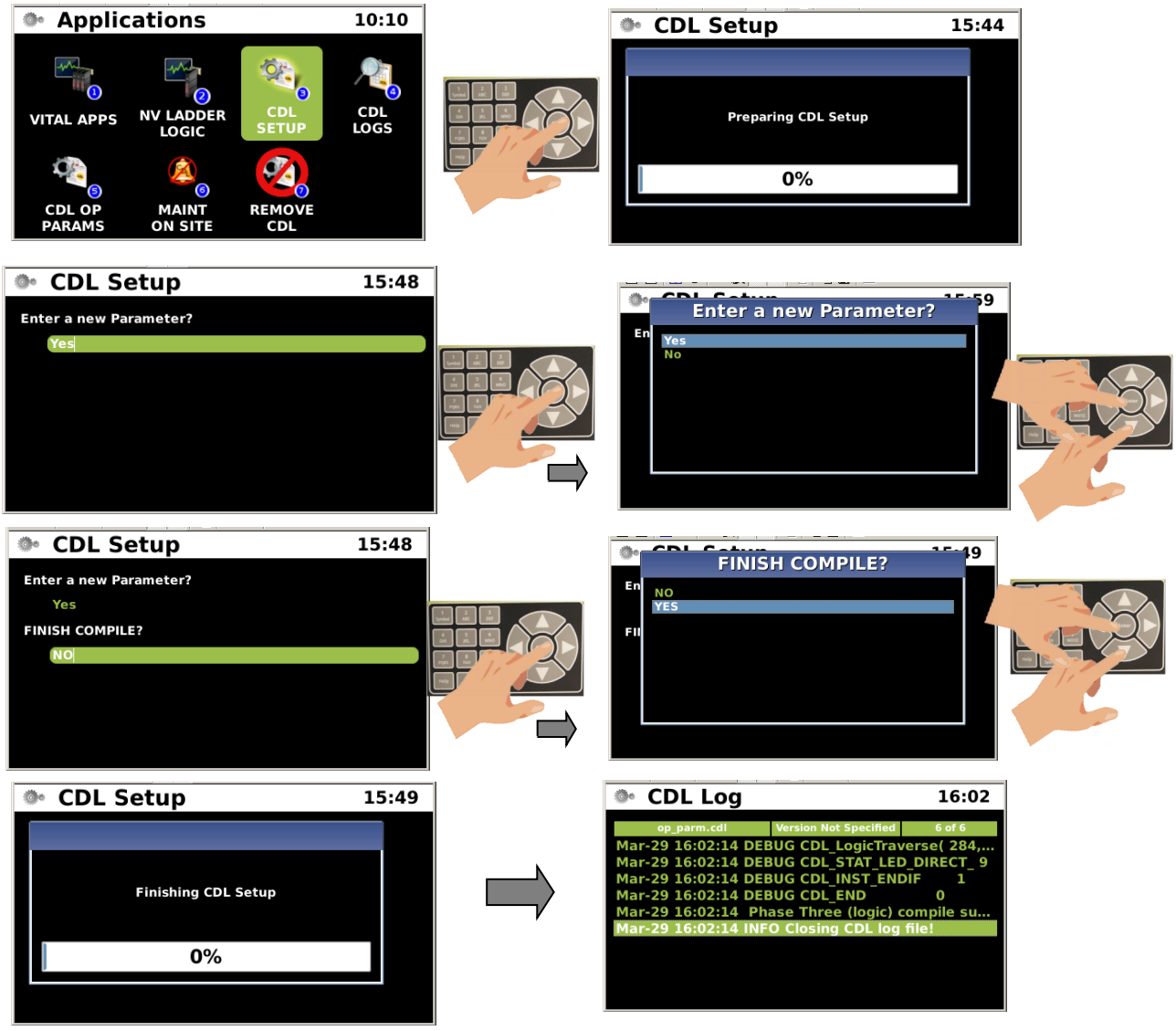


Figure 5-141 Applications - CDL Setup- Setup and Compiling

- **CDL Logs**

The CDL Logs application opens the CDL Log. The CDL Log displays the compilation results as shown in the figure below. The first example displays a successful CDL compilation. The second example shows a failed compilation.

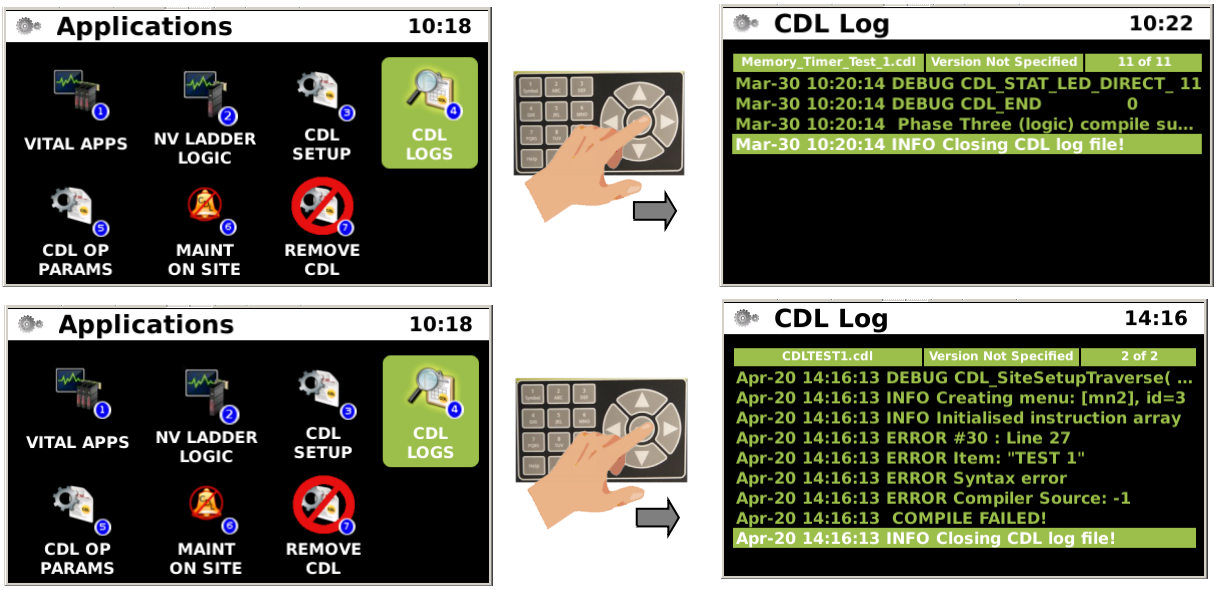


Figure 5-142 CDL Logs

- **CDL OP PARAMS (Operational Parameters)**

The CDL OP PARAMS sub-menu shows and operational parameters built in to the CDL program. The user answers the questions to configure the parameters. The example below the user can enable or disable messaging.

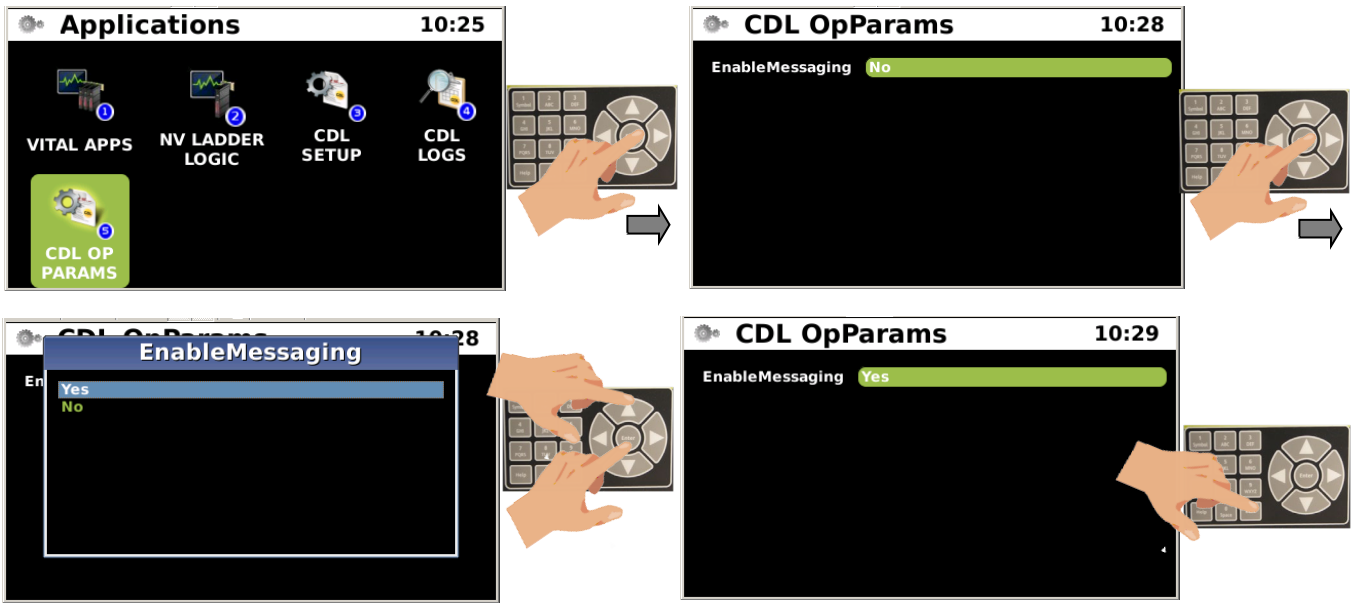


Figure 5-143 CDL Operational Parameters

- **Removing a CDL File**

To remove a CDL file navigate to the Remove CDL icon. Press the icon and the CDL file will be completely removed from the console as shown in the figure below.

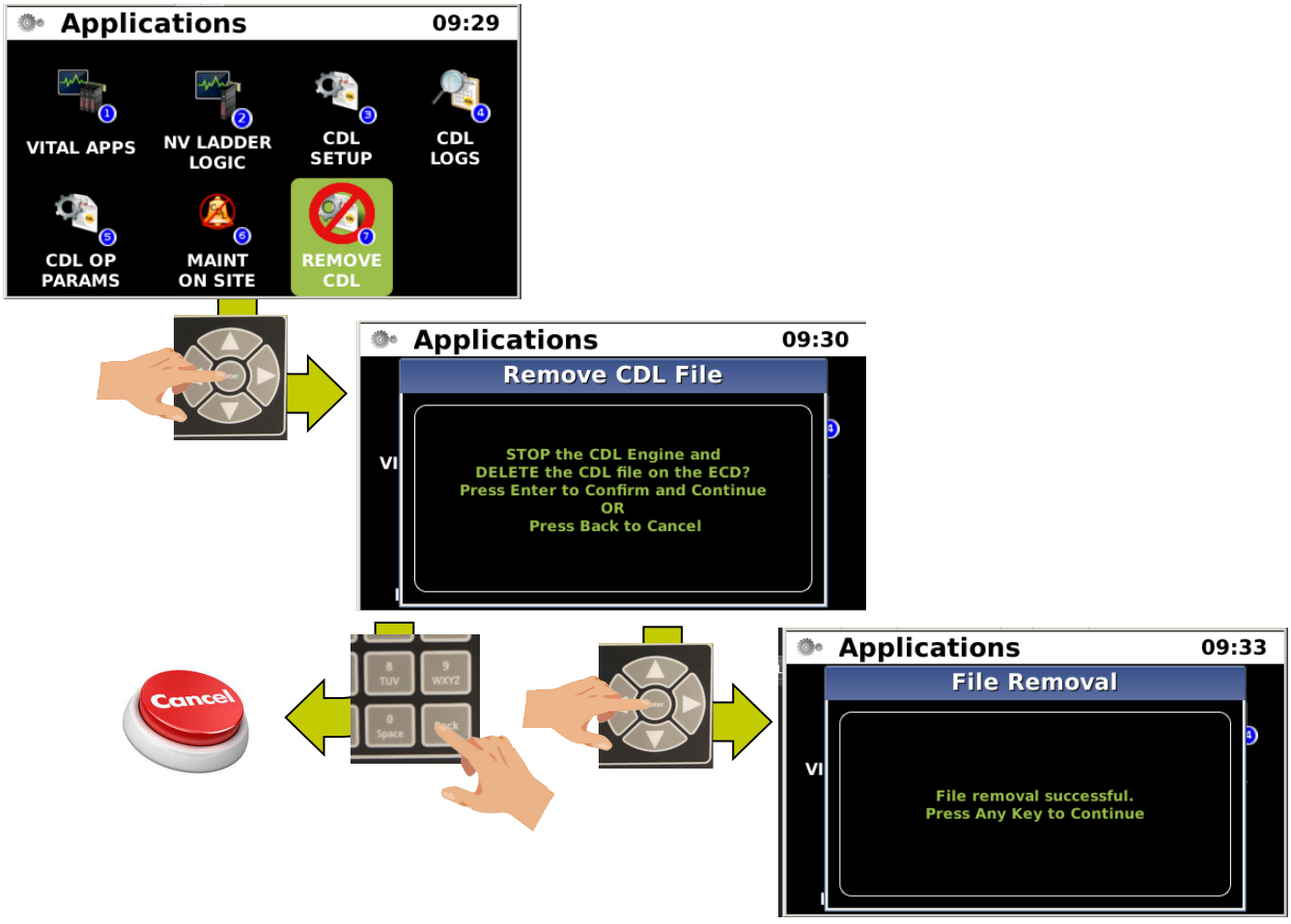


Figure 5-144 Remove a CDL File - Local UI

- **Maintainer On Site (MOS)**

The MOS feature allows the maintainer to perform testing and maintenance without triggering false alarms. The maintainer will use the keypad/display of the iVIU console to enable the MOS mode. The maintainer can select the duration of the mode in the range of 10 minutes to 3 hours.

When MOS mode is activated, the iVIU console automatically disables sending SNMP traps, or ITCSM alarms to the office. The iVIU Console local UI allows the maintainer to disable MOS mode, if the mode is currently enabled. He does not need to wait for the timeout to expire. When the MOS mode expires or when the maintainer has disabled MOS mode, the iVIU Console will again send SNMP traps and alarms to the back office.

Figure 5-145 shows the sequence of accessing the Maintainer On Site function. The Console checks to see if the CDL Engine is running.

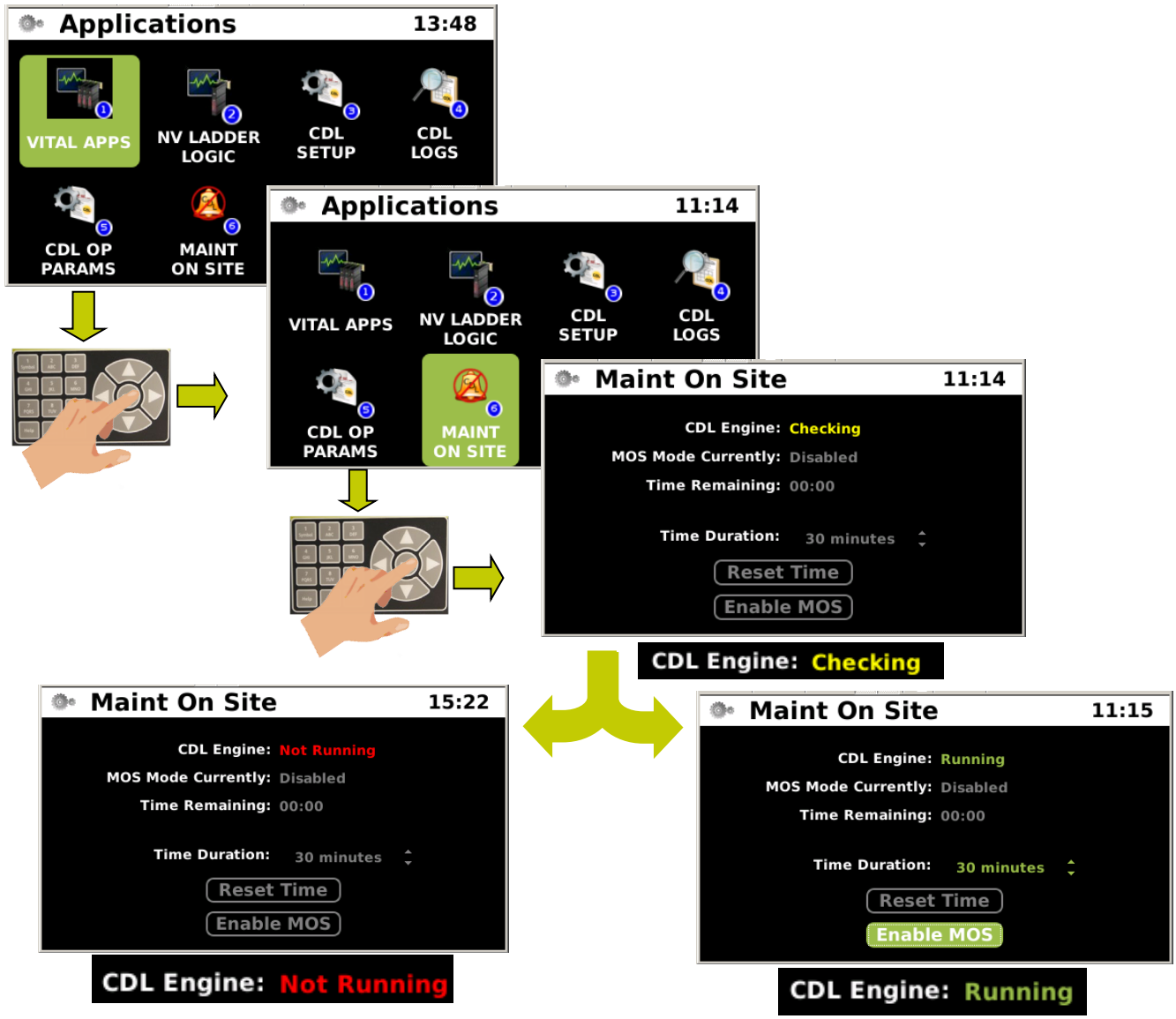


Figure 5-145 Maintainer On Site Mode

- **MOS Mode - Setting Timer**

Figure 5-146 shows how to set the timer for the MOS mode. The timer range is from 10 minutes to 3 hours. Click on the Enable MOS button to start the timer.

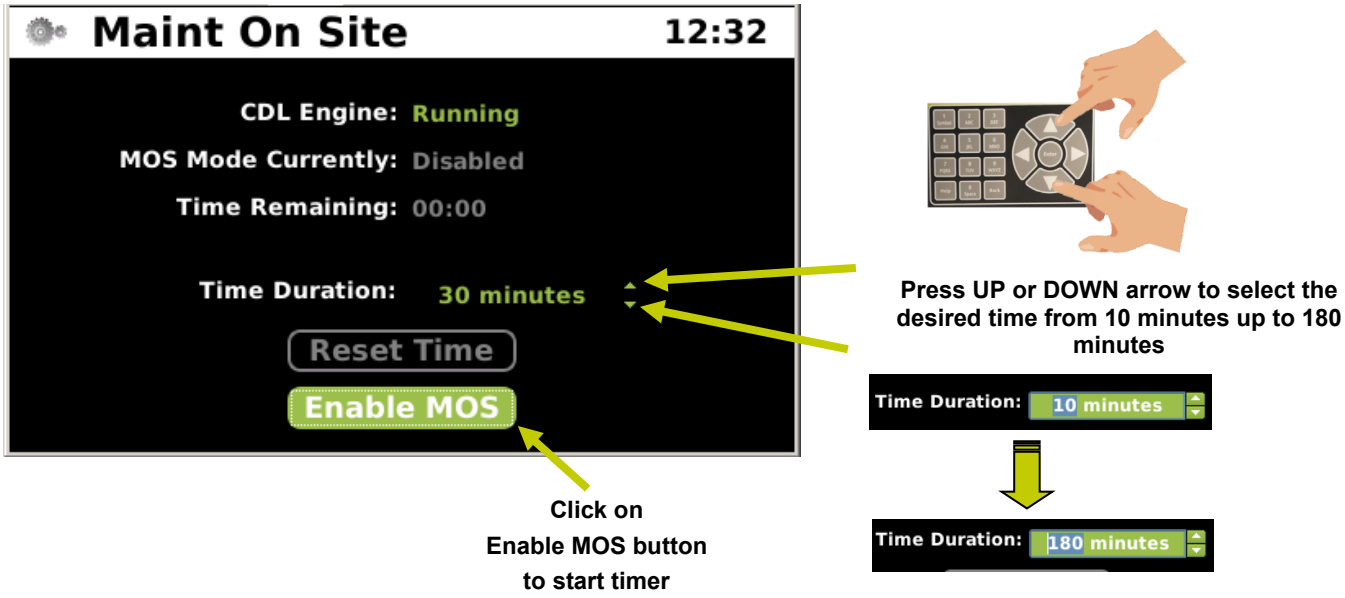


Figure 5-146 MOS Mode - Setting Timer

- **MOS Mode - Reset Timer or Disable MOS**

The MOS timer can be reset to the previously set time in the event more time is required. The Maintainer can also disable the MOS at any time by simply navigating to the Disable MOS button and press the Enter button. The console will resume sending alarm messages once MOS is disabled.

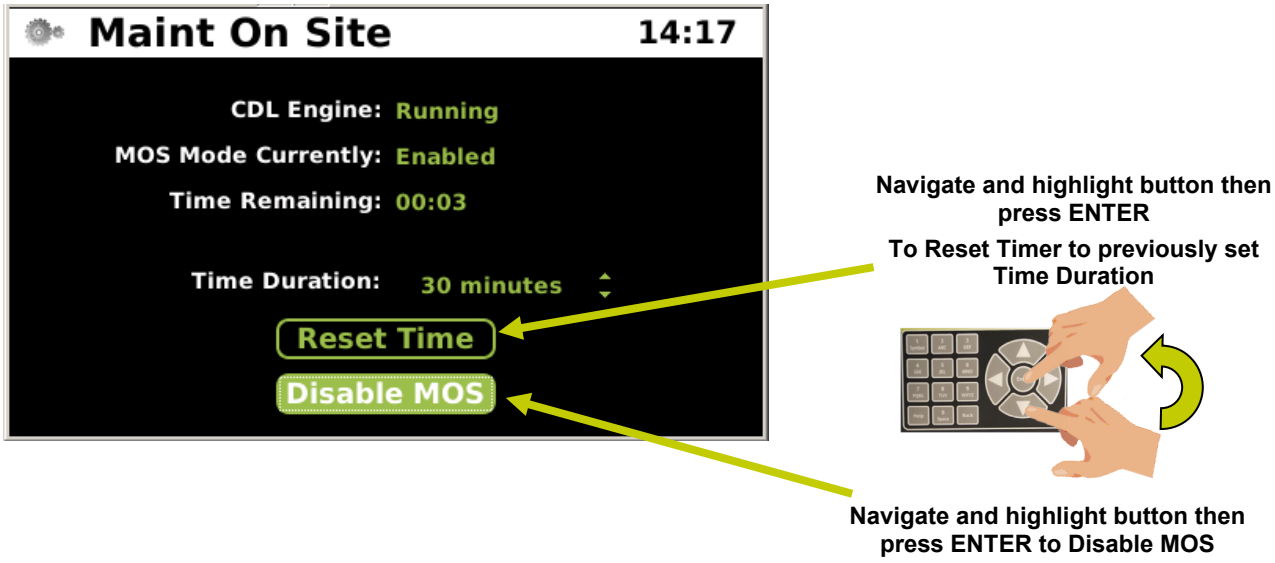
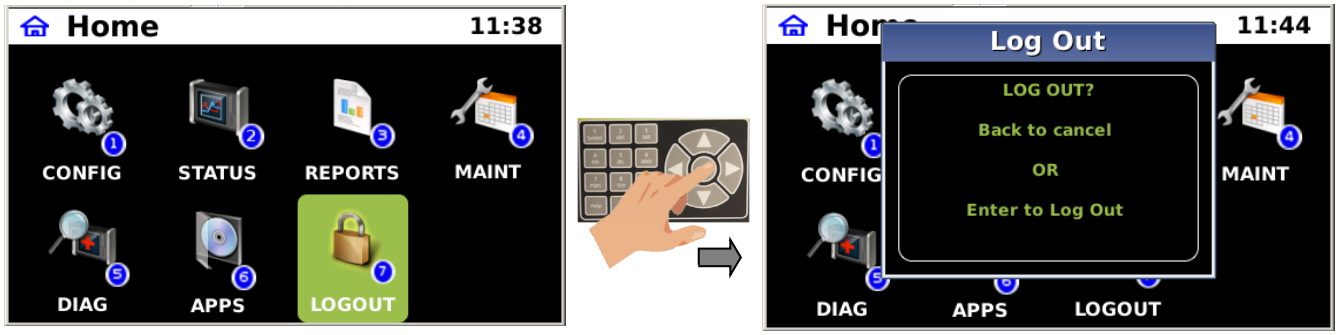


Figure 5-147 Reset MOS Timer or Disable MOS

5.1.2.10 Logout of Local UI

The Logout menu is used when the Security has been configured for a password for access to the iVIU Console keypad. Navigating to the Logout icon and pressing the ENTER key will bring up a pop-up screen confirming the desire to Logout. Press the ENTER key to logout or the BACK key to cancel. Logging out will lock the display and the keyboard and require a password to activate the keypad and display.



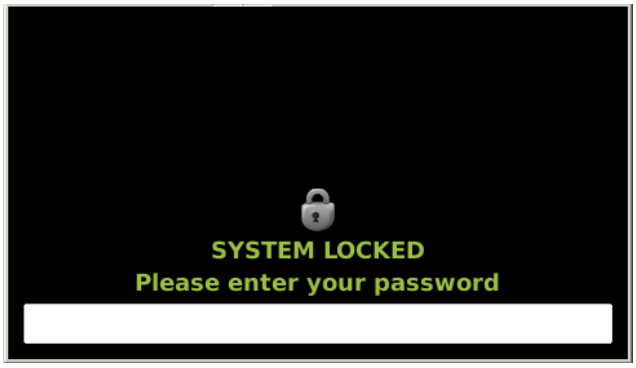


Figure 5-148 Logout of Local UI

SECTION 6
MAINTENANCE

6.0 MAINTENANCE

6.1 GENERAL

There is no maintenance required on the iVIU console. Standard housekeeping is recommended to keep dirt and debris from accumulating around the console. There are no user serviceable parts within the console. Failed units should be returned to Siemens Mobility, Inc. for repair or replacement.

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SECTION 7
TROUBLESHOOTING

7.0 TROUBLESHOOTING

7.1 GENERAL

Operation of the iVIU in most cases will be transparent. If a problem arises, use the following troubleshooting chart to identify possible problem areas. Contact Siemens Mobility Inc. Customer Service for assistance.

Table 7-1 Troubleshooting Chart

Problem	Possible Solution
No Power	Verify the power connector is firmly secured. Check for proper polarity. Check wiring into the power plug.
No Display, LEDs are illuminated	Press the BACK button on the keyboard to verify if the console is in the hibernate mode.
Status/Health LED is red or blue	Verify console configuration.
Cartridge LED is red	Verify Cartridge has been properly configured. Verify Cartridge is operational.
Cannot read USB drive	Verify USB drive has the proper file configuration. Verify USB Drive is compatible with the console. If USB drive LED is red the drive cannot be read by the console. Insertion of USB drive should illuminate the green LED.

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