



**Voter Remote Interface (VRI)  
for the  
Raytheon<sup>®</sup>  
JPS Communications<sup>™</sup>  
SNV-12 12 Channel DSP Voter**

**Instruction Manual**

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## Licensing Information

### Voter Remote Interface Licensing:

The Voter Remote Interface (VRI) from Fial Incorporated is a Client/Server application. Fial Incorporated grants the individual or company purchasing this software the right to install and use the VRI *Server* program on a *single* computer. The VRI Client software may be installed on multiple computers, but a maximum of ten VRI Client log-ins are allowed concurrent access the VRI Server program.

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## 1 VOTER REMOTE INTERFACE

The SNV-12 12 Channel DSP Voter from Raytheon® JPS Communications™ selects the best audio input signal from up to 12 sites. The SNV-12 voter is a rack-mount shelf unit containing a Power Supply Module (PSM), a Console Interface Module (CIM), a Control Processor Module (CPM), and up to 12 individual Site Voter Modules (SVM) used to determine the best Signal Quality input.

The Voter Remote Interface (VRI) from Fial Incorporated provides a means of remotely monitoring and controlling the individual Site Voter Modules in multiple SNV-12 Voter shelves. The Fial Voter Remote Interface consists of a single Server program and up to 10 instances of the Client program (VRIClient.exe) running on separate computers. There are two versions of the VRI Server program, depending on the maximum number of SNV-12 shelf connections required. For smaller systems, VRIServer14 can connect to a maximum of 14 individual SNV-12 shelves, while larger systems may require VRIServer28, which can connect to a maximum of 28 individual SNV-12 shelves.

The VRI Server program to SNV-12 Shelf connection depends on the CPM module being used. SNV-12 shelves with CPM-1 modules only have an RS-232 serial port for control and monitoring functions. Remote access to this port is typically over a TCP/IP network, using a co-located TCP/IP to RS-232 serial converter (such as the Black Box® Advanced Console Server 8). The VRI Server program communicates with SNV-12 shelves with the CPM-1 module using this type of TCP/IP to RS-232 converter. SNV-12 shelves with CPM-3 modules can communicate via either an RS-232 port or an Ethernet port. The RS-232 port on this module would typically be used only for local control, while the Ethernet port would be used for remote control and monitoring purposes. The VRI Server program communicates with SNV-12 shelves with the CPM-3 module directly, via the Ethernet port. It is recommended that you only make one type of connection to the CPM-3 module at a time (either Ethernet or RS-232 serial).

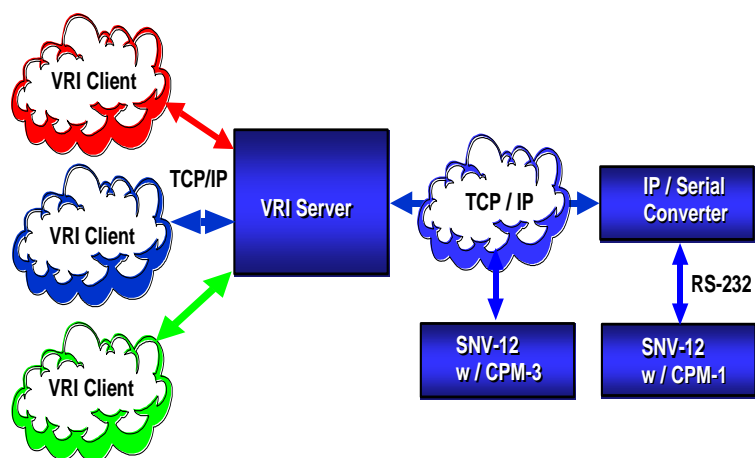


Figure 1-1. VRI System Overview

The VRI Server program reads the state of the individual Site Voter Modules in each of the monitored SNV-12 voter shelves two times per second. The VRI Server program then passes only change of state information over the TCP/IP network to all connected VRI Client programs. All Server/Client communications are encrypted for security. It also forwards any control commands received from VRI Client programs to the target SNV-12 and SVM card.



Figure 1-2. VRI Server Window (14 Shelf version)



Figure 1-3. VRI Server Window (28 Shelf version)

The VRI Client program graphically displays each of the connected SNV-12 Voter shelves and the individual Site Voter Module cards populating each shelf. The

individual Site Voter Modules in each shelf can also be remotely controlled from the VRI Client program. The SNV-12 must be properly configured to allow serial port or Ethernet remote control for this function to operate.



Figure 1-4. VRI Client Window (6 shelves displayed - 14 Shelf version)



Figure 1-5. VRI Client Window (partial display with thumb-bar enabled - 28 Shelf version)

## 1.1 VRI Server Installation and Setup

Load the VRI Server program (VRIServer\_14.exe or VRIServer\_28.exe) on any computer that has access to the JPS SNV-12 Voter rear panel serial port via a TCP/IP connection and co-located converter box. If the CD install program does not start automatically, run "setup.exe" in the folder Disk1. Your license agreement allows you to install the VRI Server program on a single computer. The VRI Client software may be installed on multiple computers. When installing the VRI Server program, check both Server and Client program files options in the Select Features installation dialog. Accept all other installation defaults. The installation program installs the VRI programs and support documents in the **C:\VRI** directory.

When you run the Server program for the first time, an initial *Settings* dialog window opens (see Figure 1-6). This dialog allows you to specify the port number the VRI Client programs will use to connect to this server. Enter a **unique** and **unused** port number in the Network **Port Number** entry field. This same port number is used when setting up the VRI Client program. They must match.

Define the number of shelves to display in the VRI Client in the **Set Up** section. The number of shelves displayed can be set from the minimum of 4, up to the maximum of 14 for VRIServer\_14, or 28 for VRIServer\_28 (only by multiples of 2, since there are always 2 columns). Use the up-arrow and down-arrow to select the desired number of shelves.

The VRI Server program restricts which VRI Client users are allowed to send control commands to the Site Voter Modules by specifying individual users login names and passwords. Enter a unique login name in the **Login** field and a password in the **Password** field. Push the **Save** button to accept this user login and password. All users can use the same login name and password, or - you can specify a login name and password for each individual user.

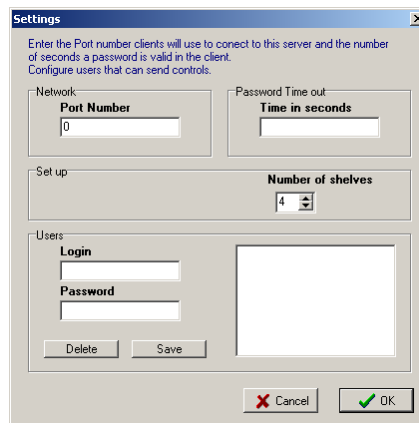


Figure 1-6. VRI Server Setup Dialog Window

The Server program also controls how long a Client password remains valid before it must be re-entered. This insures that if a VRI Client connection is left open, it does not allow unauthorized users control access. Enter the desired value in the **Time in Seconds** input field. Enter a **Time Out** value of **0** if you do not require password entry for any control operations. This effectively disables the login/password feature.

Push the **OK** button to accept the setup choices and create the VRIServer.ini file. This then opens the main VRI Server window (see Figure 1-7). If you need to edit the Server setup parameters **after** the initial start-up, left-click on the Fial Incorporated logo (upper-right corner of the rack graphic in the VRI Server window - see Figure 1-7). This opens the VRI Server setup dialog window again for editing.



Figure 1-7. VRI Server Window (14 Shelves)



Figure 1-8. VRI Server Window (28 Shelves)

The VRI Server window also displays the connection status of up to ten different VRI Client programs in a simulated rack graphic. VRI Client connection information is displayed on *shelf-like* graphic placeholders on the right side of the display. Each Client connection has an individual placeholder that either displays a message of “Waiting for connection”, or “Connected: NNN.NNN.NNN.NNN”. The connected message includes the Client computer’s IP address. Clients are listed in the order they connect. This section of the display is for VRI Client connection information purposes only, no settings are performed from this section.

### 1.1.1 VRI Server Configuration of SNV-12 Shelves

The VRI Server program can connect to a maximum of 14 (or 28) different SNV-12 shelves. Individual SNV-12 shelves are represented as *shelf-like* graphic placeholders on the Server window. These shelf placeholders are arranged in an array of 2 columns by 7 (or 14) rows, to display the number of SNV-12 shelves configured in the VRI Server set-up. The VRI Server numbers the placeholders from the upper-left corner (Shelf #1) down to the lower-left corner (Shelf #7), then from upper-middle (Shelf #8) down to the middle-right (Shelf #14) for the 14 shelf version, and (Shelf #1) down to the lower-left corner (Shelf #14), then from upper-middle (Shelf #15) down to the middle-right (Shelf #28) for the 28 shelf version. The placeholders are in the same location and order as found on the VRI Client program window (see Figure 1-12). For VRI systems with fewer shelves, you can configure the server to display anywhere from a minimum 4 to the maximum number of shelves.

To configure the VRI Server for a particular SNV-12 shelf, find the desired shelf placeholder location, move the mouse pointer over it and left-click. This opens the *Shelf X Settings* dialog window (see Figure 1-9). Use this window to enter *Network* parameters for the SNV-12 shelf and card names for the individual Site Voter Modules populating the shelf.

Enter a unique name for the SNV-12 shelf in the **Name** field. The shelf name should be limited to 12 characters. This is so that the entire name can be displayed on the placeholder in the VRI Server window and also on the left side of the corresponding shelf display in the VRI Client program window.

For co-located TCP/IP to RS-232 serial converters, enter the address of the converter box used to connect to the target SNV-12 shelf (CPM-1 module) in the **IP Address** field. Each RS-232 connection port on the converter box is assigned a unique port number. Enter the number assigned to this connection in the **Port Number** field. Refer to the operations manual supplied with your IP to RS-232 converter box for complete configuration instructions.

For direct Ethernet connections (CPM-3 module), enter the IP address of the SNV-12 shelf in the **IP Address** field. Enter the SNV-12 port number in the **Port Number** field.

The Login and Password security settings are for a future enhancement and are not enabled at this time. When enabled, you would assign the required **Login** and **Password** to access the IP to RS-232 converter box that accesses the selected SNV-12 shelf.

**Figure 1-9. Shelf Settings Window**

Use the **Expansion Shelves** drop-down list to set the number of additional expansion shelves physically connected to the selected “master” shelf. A maximum of two additional shelves can be daisy-chained to a “master” shelf. One expansion shelf extends a voting system to 24 possible sites. Two expansion shelves extend a system to 36 possible sites. If there are no expansion shelves connected, leave the setting at the default No Slaves.

**IMPORTANT NOTE:** Expansion shelves are always displayed directly **following** their parent “master” shelf on the VRI display (regardless of their physical location in your rack). For example, if you defined the 6<sup>th</sup> shelf placeholder (bottom-left, Shelf #6) as a “master” with 2 expansion shelves, then the following two placeholders (Shelf #7 bottom-left and Shelf #8 top-middle) would be dedicated to that “master”. Because of this, Shelf #13 placeholder would only allow 1 expansion shelf, and Shelf #14 placeholder would not allow any expansion shelves.

**IMPORTANT NOTE:** Make sure that you do not attempt to define a “master” shelf with one or two expansion shelves that will overlap previously defined shelves on the VRI Server display (placeholders immediately following the “master” shelf placeholder). If an expansion shelf

would overlap a configured shelf, the program will warn you and not allow the change. Assign the “master” shelf to a different placeholder location, or un-configure the defined shelve(s) by deleting their IP Address setting.

Check the **Signal Quality Log** box to create a log file of the Signal Quality levels for each Site Voter Module populated in this shelf. These values drive the bar graph display on each SVM card graphic on the VRI Client shelf. The log file is saved as a **COMMA** delimited file for simple import into any spreadsheet program. Data is retrieved once a minute and logged.

New data is appended to the file if the file already exists. You should disable this function when not needed, in order to keep the log file from growing too large. The log files are saved in the VRI Server program’s home directory. The files are named “**Signal Quality Log** – “, appended with the selected shelf name (i.e. Signal Quality Log - Test Shelf 1.csv).

Timestamp	SVM1	SVM2	SVM3	SVM4	SVM5	SVM6	SVM7	SVM8	SVM9	SVM10	SVM11	SVM12
5/6/2009 13:42	0	13	0	11	0	0	0	0	0	0	0	0
5/6/2009 13:43	0	7	0	5	0	0	0	0	0	0	0	0
5/6/2009 13:44	0	7	0	4	0	0	0	0	0	0	0	0
5/6/2009 13:45	0	9	0	7	0	0	0	0	0	0	0	0
5/6/2009 13:46	0	5	0	1	0	0	0	0	0	0	0	0
5/6/2009 13:47	0	5	0	2	0	0	0	0	0	0	0	0
5/6/2009 13:48	0	8	0	5	0	0	0	0	0	0	0	0

**Figure 1-10. Sample Signal Quality Log**

The above sample log shows data for a shelf that is populated with only two SVM cards (SVM2 & SVM4). There are columns for the twelve possible module positions in the shelf. Each row of data is time-stamped.

Enter a name for each of the Site Voter Module cards populating this shelf in the appropriate **Card Names** entry fields (see Figure 1-9). These card names are displayed on the individual Site Voter Module graphics of the appropriate SNV-12 shelf, in the VRI Client window. Card name entry is optional. The name should be limited to 6 characters in order to fit in the limited space available at the top of the individual card graphic.

## 1.2 VRI Client Installation and Setup

The VRI Client and Server programs communicate over an IP network connection. Load the VRI Client program (VRIClient.exe) on any computer that has network connectivity to the computer hosting the VRI Server program. If the CD install program does not start automatically, run "setup.exe" in the folder Disk1. Your license agreement allows you to install the VRI Server program on only one computer, but you may install the VRI Client program on multiple computers. To install just the VRI Client program, check the "Client program files" option and leave the "Server program files" option *unchecked* in the *Select Features* installation dialog. Accept all other installation defaults. The installation program installs the VRI programs and support documents in the **C:\VRI** directory.

When you run the Client program for the first time, an initial setup dialog window opens (see Figure 1-11). This dialog allows you to specify the IP address of the VRI Server program computer.

Because of the amount of detail that needs to be displayed by the VRI Client program, the computer running the Client program requires a minimum monitor resolution setting of 1280 by 960. A monitor display resolution of 1280 by 1024 is highly recommended.

Enter the appropriate address in the *IP Address* entry field. You must also enter the port number used to connect to the VRI Server program. Enter the *same* port number in the Client's *Port Number* entry field that you entered for the port number in the initial VRI Server setup. These port numbers must match. Check the *Invert SQ Level* box if you want to change the way the SQ Level bar graph displays its data. This is a customer preference setting, since this information is not present on the SVM cards. This is explained in more detail in section 1.2.1 Site Voter Module Cards.

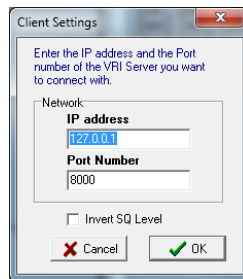


Figure 1-11. VRI Client Setup Dialog Window

Push the **OK** button to accept the initial Client settings and open the VRI Client window displaying a graphical view of the SNV-12 shelf (see Figure 1-12). If you need to edit the Client setup parameters *after* the initial start-up, left-click over the Fial Incorporated logo on the top-right SNV-12 shelf graphic (the top-right corner of shelf - see Figure 1-12). This opens the Client Settings dialog window again for editing.

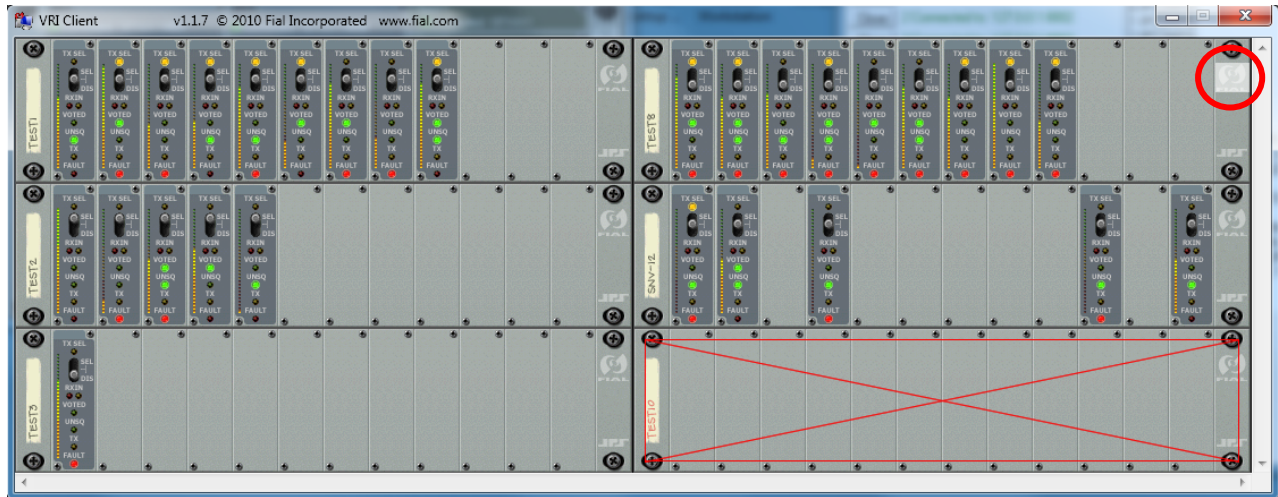


Figure 1-12. VRI Client Window with 1 non-responding SNV-12 Shelf

The VRI Client window displays the SNV-12 shelves as configured in the VRI Server window and displays the individual Site Voter Module cards populating each shelf. The order of the SVM cards displayed in the shelf graphic is based on the left-to-right order of the cards populating in the physical shelf, to the right of the CPM module. For space reasons, the PSM, CIM and CPM modules are *not* displayed on the shelf graphic. The SNV-12 shelves configured in the Server, but not responding, are represented by a red “X” over the shelf graphic on the Client window (bottom-right of Figure 1-12).

### 1.2.1 Site Voter Module Cards

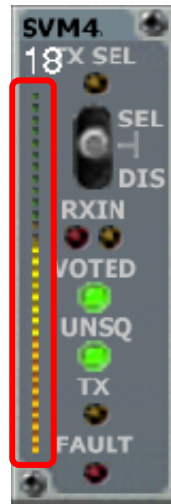
The Site Voter Modules are graphically represented in the shelf display using the SVM-2 faceplate as the template for both SVM-1 and SVM-2 cards (see Figure 1-13). Real-time selection switch position and LED indicator states (ON/OFF) for each SVM are accurately reproduced on the graphic.



Figure 1-13. SVM Cards in SNV-12 Shelf Graphic

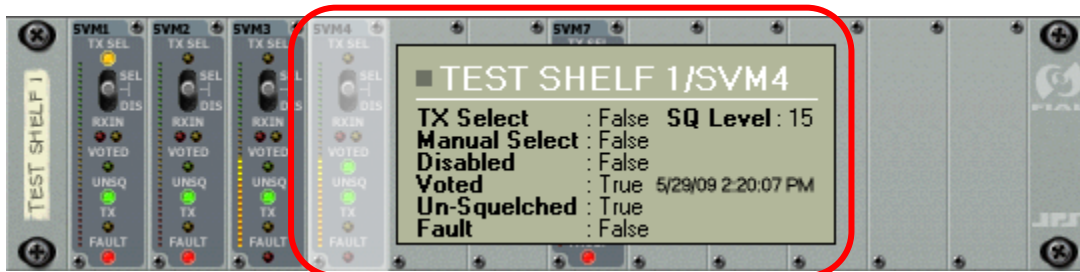
Representation of the Signal Quality level (not displayed on the real SVM cards) is displayed as a color-coded vertical LED bar graph on the left edge of each SVM card graphic, along with the numeric value above the graph (in

the expanded shelf view), see Figure 1-14. The default setting shows the better the Signal Quality level, the higher the SQ level numeric value and higher the bar graph. If the Invert SQ Level box is checked, then the worse the SQ level, the higher the SQ level numeric value and the higher the bar graph display.



**Figure 1-14. Site Voter Module Signal Quality Level Bar Graph Display**

Moving the mouse cursor over the SVM cards automatically opens a status window for the selected (highlighted gray) SVM (see Figure 1-15). This is a textual display of the current switch position and LED states of the SVM card, with additional information of the current Signal Quality Level (SQ Level) and the date and time this SVM card was last voted (to the right of the current Voted status).



**Figure 1-15. Selected SVM Card Status Window**

### 1.2.1.1 Manual Control of Site Voter Modules

To manually control individual SVM cards, select the desired card by positioning the mouse cursor over the SVM card graphic (highlight it) and then left-click. This opens the selected SVM card's Option Menu (see Figure 1-16).

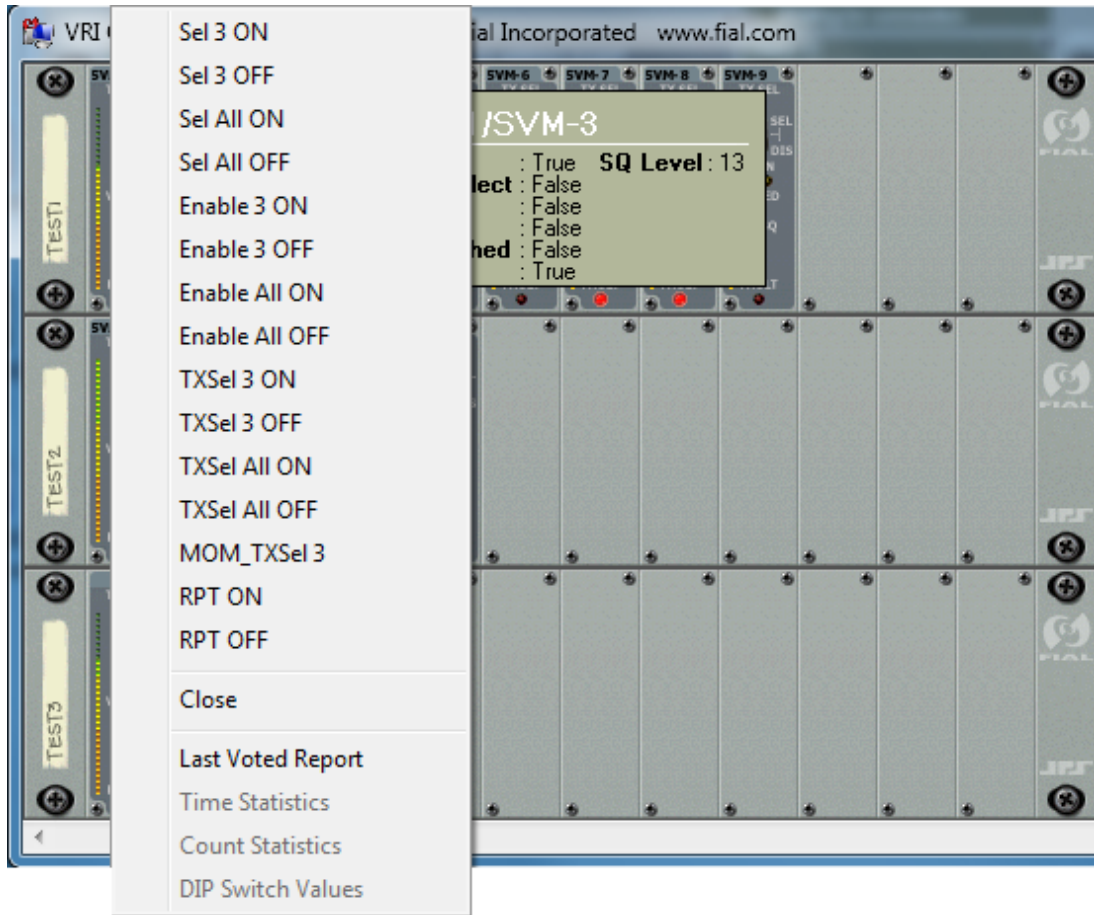


Figure 1-16. Selected SVM Card Option Menu

Select any one of the listed commands as required. Refer to the *SNV-12 Operations Manual* supplied with your system for complete explanations of the various commands listed in the VRI options menu.

The **Sel X ON/OFF** commands select (forced-vote) or de-select the current site (SVM). The **Sel All ON/OFF** commands act on all modules in the shelf.

The **Enable X ON/OFF** commands enable or disable voting for the current site (SVM). The **Enable All ON/OFF** commands act on all modules in the shelf.

The **TXSel X ON/OFF** commands selects the current site (SVM) to send or not send console audio out its transmitter. The **TXSel All ON/OFF** commands act on all modules in the shelf.

The **MOM\_TXSel X ON/OFF** command selects the current site (SVM) to send or not send console audio out its transmitter. This is a momentary action, valid only until another site is selected, or the Holdover Timer expires.

The **RPT ON/OFF** commands enables or disables repeat mode.

To close the Option Menu, click anywhere outside of the Option Menu list, or select the **Close** options.

Selecting and left-clicking on any of the commands (upper section) will open an authentication dialog window asking for a **Login** and **Password** (see Figure 1-17). The previously entered login and password is retained for the **Password Time-out** period (as configured earlier in the VRI Server set-up), so you will not have to re-enter these parameters within this time period.



**Figure 1-17. Authentication Dialog Window**

If the **Password Time Out** value was set to **0**, then you will not get the login dialog window.

If the Password Time-out period has expired, the entry fields are cleared and you will have to re-enter the **Login** name and **Password**. Push the **OK** button to send the selected command to the target SNV-12 module. Push the **Cancel** button to cancel this command.

After the command has been sent, a status message is displayed across the front of the shelf indicating the success or failure of the attempted command from the VRI Client to the target SVM card (see Figure 1-18).

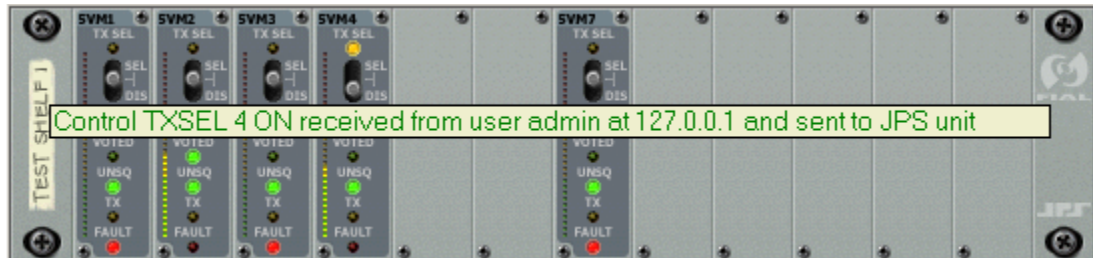


Figure 1-18. Command Execution Status Message

### 1.2.1.1 Expanded Shelf View

Left-clicking on an individual shelf label (the vertical tag on the left-side of each shelf), opens an expanded view of the selected SNV-12 shelf graphic (see Figure 1-19).



Figure 1-19. Expanded View Label Hot Spot

This expanded shelf view is centered in the VRI Client window and displays the same graphical information as the standard shelf view, with the addition of the *numeric* Signal Quality level value at the top of the bar graph for each module (see Figure 1-20). All standard control operations can be initiated from the expanded

view as well. Left-clicking on the label of the expanded view closes the expanded view window.

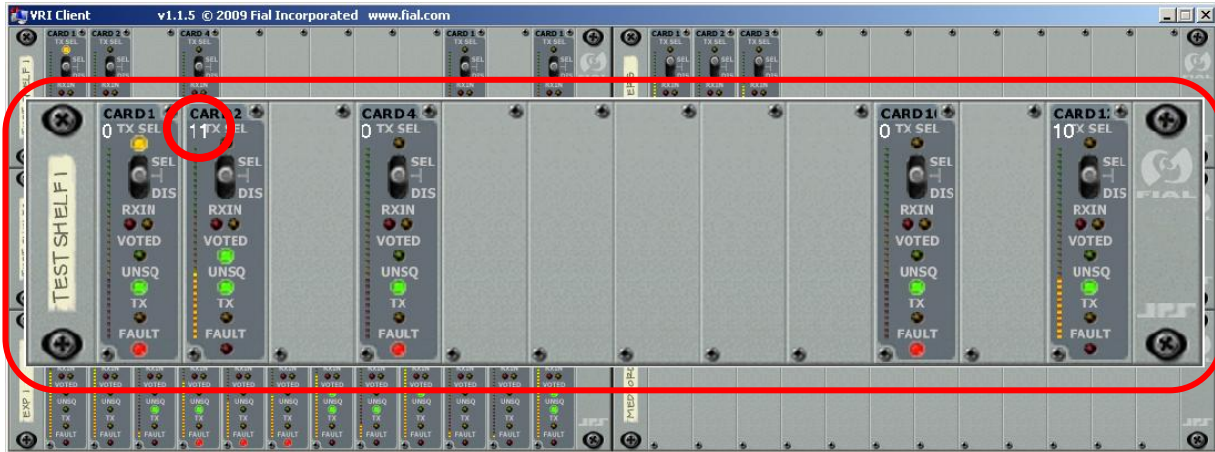


Figure 1-20. Expanded Shelf View with Numeric Signal Quality Reading

### 1.2.1.2 Reports

Depending on the type of CPM module in your SNV-12 shelf, the VRI system provides one or more reports. Both the CPM-1 and CPM-3 modules provide the **Last Voted Report**. Only the newer CPM-3 module provides the additional **Time Statistics**, **Count Statistics** and **DIP Switch Values** reports.

Select the **Last Voted Report** option to generate a report showing the last date and time that every populated module in each shelf was voted. Modules that have never been voted have blank entries (see Figure 1-21).

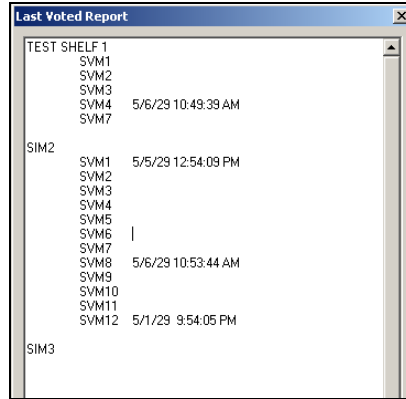


Figure 1-21. Sample Last Voted Screen Report

Select the *Time Statistics* option to generate a report showing the time that every module spent in the Unsquelled, Voted and Faulted conditions, for the current partial hour, day and week, as well as the last full hour, day and week. The report can be directed to a printer by pushing the *Print* button in the upper-right corner of the report window.

The screenshot shows a window titled "Time Statistics for ROSEBERG" containing a table with columns for SVM, Part Hour, Prev Hour, and Part Day. Each of these columns is further divided into UNSQ, VOTE, and FAULT sub-columns. The table lists 36 SVMs, each with corresponding time values in HH:MM:SS format. A "Print" button is visible in the top right corner of the window.

SVM	Part Hour			Prev Hour			Part Day		
	UNSQ	VOTE	FAULT	UNSQ	VOTE	FAULT	UNSQ	VOTE	FA
1	00d 00:02:32	00d 00:00:00	00d 00:02:32	00d 00:58:50	00d 00:00:00	00d 00:58:50	00d 18:38:44	00d 00:00:26	00d 18
2	00d 00:02:32	00d 00:00:00	00d 00:02:32	00d 00:58:50	00d 00:00:00	00d 00:58:50	00d 18:38:44	00d 00:00:00	00d 18
3	00d 00:02:32	00d 00:00:00	00d 00:02:32	00d 00:58:50	00d 00:00:00	00d 00:58:50	00d 18:38:44	00d 00:00:00	00d 18
4	00d 00:02:32	00d 00:00:00	00d 00:02:32	00d 00:58:50	00d 00:00:00	00d 00:58:50	00d 18:38:44	00d 00:00:00	00d 18
5	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00
6	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00
7	00d 00:02:32	00d 00:00:00	00d 00:02:32	00d 00:58:50	00d 00:00:00	00d 00:58:50	00d 18:38:44	00d 00:00:00	00d 18
8	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00
9	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00
10	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00
11	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00
12	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00
13	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00
14	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00
15	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00
16	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00
17	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00
18	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00
19	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00
20	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00
21	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00
22	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00
23	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00
24	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00
25	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00
26	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00
27	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00
28	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00
29	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00
30	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00
31	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00
32	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00
33	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00
34	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00
35	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00
36	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00:00:00	00d 00

Figure 1-22. Time Statistics Report

Select the **Count Statistics** option to generate a report showing the number of times that every module was Unsquelched, Voted and Faulted, for the current partial hour, day and week, as well as the last full hour, day and week. The report can be directed to a printer by pushing the **Print** button in the upper-right corner of the report window.

The screenshot shows a window titled "Count Statistics for ROSEBERG" with a sub-header "SNV-12 SVM Count Statistics for ROSEBERG". A "Print" button is visible in the top right corner. The table below contains the data:

SVM	Part Hour			Prev Hour			Part Day			Prev Day			Part Week			Prev Week		
	U	V	F	U	V	F	U	V	F	U	V	F	U	V	F	U	V	F
1	0	0	0	0	0	0	1	1	6	0	0	0	1	1	6	0	0	0
2	0	0	0	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0
3	0	0	0	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0
4	0	0	0	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Figure 1-23. Count Statistic Report

Select the **DIP Switch Values** option to generate a report showing the current DIP switch settings of the CPM-3, CIM and SVM modules populating the SNV-12 shelf. The report can be directed to a printer by pushing the **Print** button in the upper-right corner of the report window.

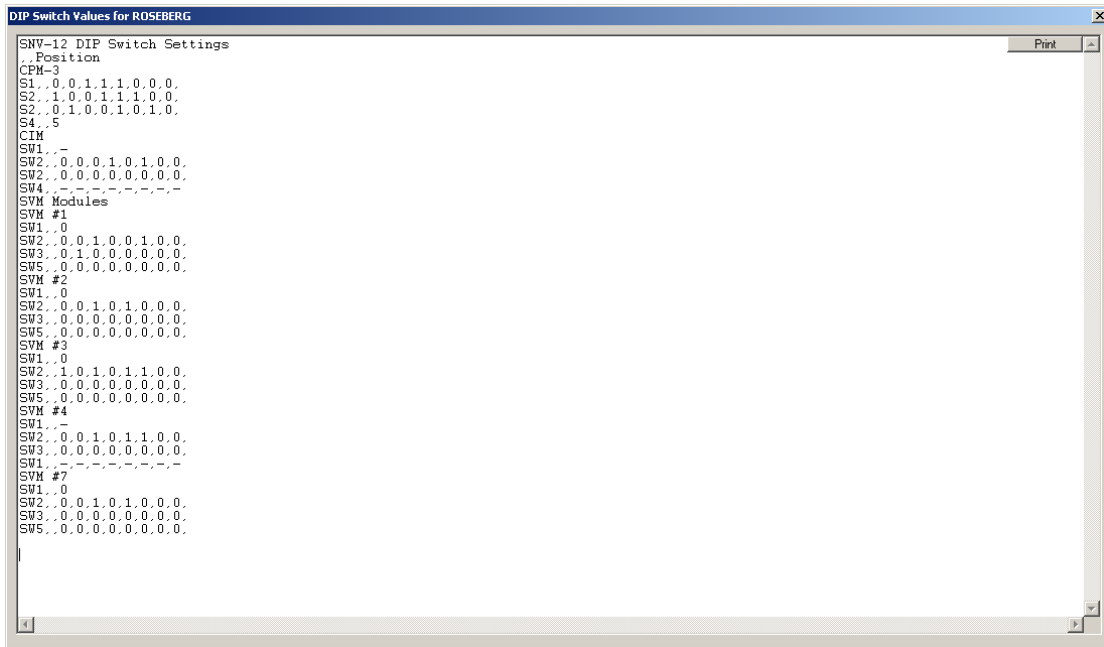


Figure 1-24. DIP Switch Values Report

### 1.2.1.3 Manual Control Log

A log of all manual controls is available in the file named *Control log.txt*. This file is kept in the same folder as the VRI Server program (C:\VRI). Entries are time-stamped and indicate the shelf name (shelf number if name is blank), command executed, SVM card number, ON/OFF/All request and which user and their IP address sent the command.

Sample Control Log entries.

```
2/19/2008 9:36:22 AM Shelf 8 "ENABLE 3 ON" sent by user admin from 192.168.0.34
2/19/2008 9:38:33 AM Shelf 8 "TXSEL 3 ON" sent by user ntl from 192.168.0.34
```

### 1.2.1.4 Module Fault Log

A log of all module fault state changes is available in the file named *Fault log.txt*. This file is kept in the same folder as the VRI Server program (C:\VRI). Entries are time-stamped and indicate the shelf number and name (shelf number duplicated if

name blank), card number and name (card number duplicated if name blank), and Fault state change.

Sample Fault Log entries.

5/5/2009 11:58:45 AM	Shelf 10 Medford	card 8 SVM 8	Fault True
5/5/2009 11:58:55 AM	Shelf 10 Medford	card 9 SVM 9	Fault False
5/5/2009 11:58:55 AM	Shelf 11 Gresham	card 1 SVM 1	Fault True
5/5/2009 11:58:58 AM	Shelf 11 Gresham	card 1 SVM 1	Fault False

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