Joslyn Hi-Voltage

JVRCom

Faultmaster 2500 Communications Software

User Document

Revision 1.2
April 22, 1999

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1. Introduction

This document will discuss the functionality of JVRCom, the Faultmaster 2500 Communications Software, from a user's perspective. JVRCom is a utility which allows remote configuration, monitoring, and control of the Joslyn Hi-Voltage Faultmaster 2500 Recloser.

JVRCom is a 32 bit Microsoft Windows application; it will run on Windows 95 or Windows NT. Communications to the FM2500 is through an RS-232 interface, either directly or remotely through a modem.

In general, JVRCom provides the following functionality:

- Upload, download, compare, view, edit and save to a file the setpoint values of a FM2500.
- Upload, view, and save to a file the system values of a FM2500.
- Monitor the current status, system values, and event logs of a FM2500.
- Remotely control the operations that are available on the FM2500 front panel.

2. User Interface

JVRCom is a dialog based application. I.e. all the windows in the application, including the main application window are dialogs. All flow through the application is controlled by push buttons, no menus are involved.

The user interface is designed to run at all Windows desktop resolutions, from 800x600 and up. It will not run correctly on display resolutions of less than 800x600.

2.1 Main Menu

The Main Menu dialog provides the launch pad for all of the applications major operations. Each operation is displayed in a button on the Main dialog.

Figure 1. Main Menu Dialog

The following table describes the action performed when each button is pressed on the Main dialog. Other dialogs that are referenced in the table are described in the other sections.

Button	Action
File Transfer	Setpoint and System Value transfer.
Setpoint Programming	Offline Setpoint and Protection Curve editing
Status & Control	Online system monitoring and control
Diagnostics	Device status event log
Connect Recloser	Initiate communications with a selected device
Address Book	Communications configuration
Setup	Application parameters
Help	Online help
Enable/Disable Security	Toggles the security on and off. Disabling security requires a password. When security is disabled, the dialog title bar indicates "SECURITY DISABLED".
Exit	Exit JVRCom

2.2 File Transfer Dialog

The File Transfer dialog is a button menu that allows the user to choose what type of file transfer activity is to be done. The dialog is invoked by the Main dialog when the File Transfer button is pressed.

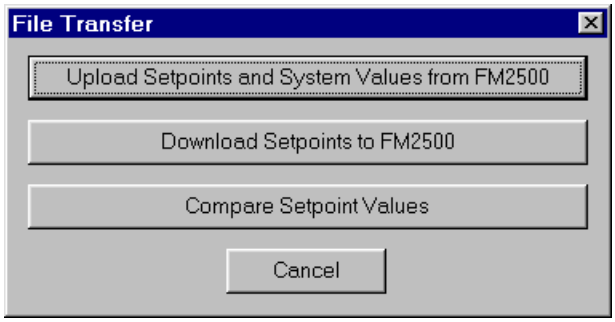

Figure 2. File Transfer Dialog

The following table describes the action performed when each button is pressed on the File Transfer dialog. Other dialogs that are referenced in the table are described in the following sections.

Button	Action
Upload	Upload Setpoints, Protection Curves, and System Values from the Recloser
Download	Download Setpoints and Protection Curves to the Recloser
Compare	Compare Setpoints between the Recloser and a file, or between 2 files
Cancel	Return to the Main Menu

2.2.1 File Upload Dialog

The File Upload dialog provides control for uploading the setpoints and/or the system values currently in the FM2500 and saving them to a file. The dialog is invoked by the File Transfer dialog.

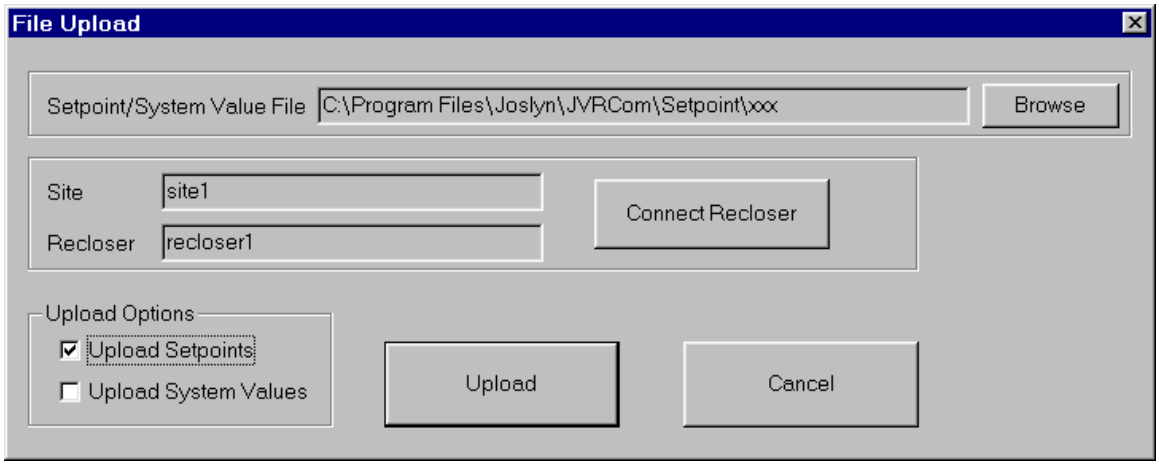

Figure 3. File Upload Dialog

The following table describes the action performed by each control on the File Upload dialog.

Control	Action
Setpoint/System Value File	The file name for the file(s) that are to store the uploaded data. The file name is set by the Browse button.
File Browse button	Displays the file selection dialog to allow the user to select, or enter, the file that is to hold the uploaded data.
Site	The currently connected Site.
Recloser	The currently connected Recloser at the Site
Connect Recloser button	Initiate communications with a selected device
Upload Options	Determine what information is to be uploaded, either the Setpoints, System Values, or both.
Upload button	Starts the upload from the currently connected Recloser to the selected file(s). The setpoints and/or system values uploaded will be determined by the Upload Options check boxes.
Cancel button	Return to the File Transfer Menu.

The Site and Recloser edit boxes will be loaded with the currently connected recloser if JVRCom has been connected to a recloser via the Connect dialog. If no connection has been made prior to entering the Upload dialog, the boxes will be empty and the user can use the Connect Recloser button to establish communication with the desired recloser.

The file name displayed in the File edit box will be displayed without an extension. The appropriate extensions will be added to the file name when data is saved.

When the Upload button is pressed, a wait cursor will be displayed indicating upload is in progress. When the upload has completed, the Upload dialogs will be closed and control will return to the File Transfer dialog.

2.2.2 File Download Dialog

The File Download dialog provides control for downloading the setpoint values in a setpoint file to the FM2500. The dialog is invoked by the File Transfer dialog.

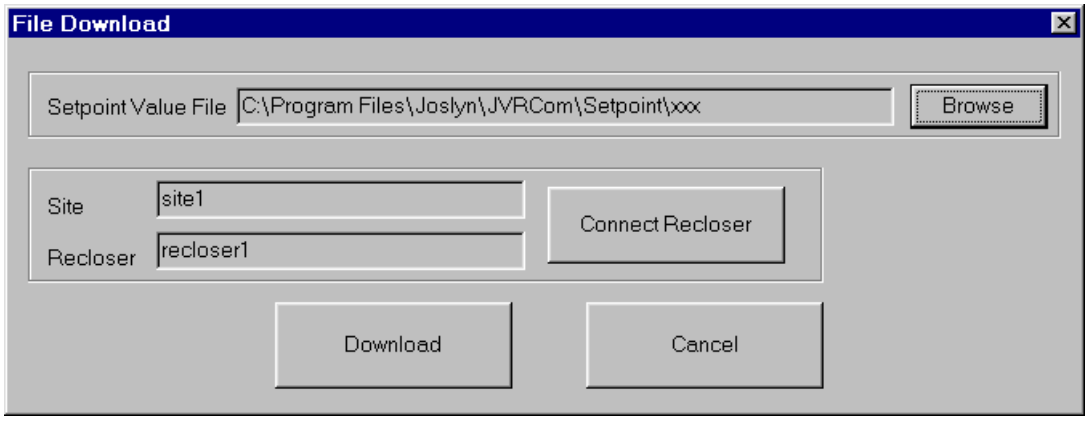

Figure 4. File Download Dialog

The following table describes the action performed by each control on the File Download dialog.

Control	Action
Setpoint File	The file name for the file that is to be downloaded to the Recloser. The file name is set by the Browse button.
File Browse button	Displays the file selection dialog to allow the user to select the file that is to be downloaded.
Site	The currently connected Site.
Recloser	The currently connected Recloser at the Site
Connect Recloser button	Initiate communications with a selected device
Download button	Starts the download to the given Site and Recloser from the selected file.
Cancel button	Return to the File Transfer Menu.

The Site and Recloser edit boxes will be loaded with the currently connected relcoser if JVRCom has been connected to a recloser via the Connect dialog. If no connection has been made prior to entering the Download dialog, the boxes will be empty and the user can use the Connect Recloser button to establish communication with the desired recloser.

The file name displayed in the File edit box will be displayed without an extension. The appropriate extensions will be added to the file name when it is accessed for the download.

When the Download button is pressed, a wait cursor will be displayed indicating download is in progress. When the download has completed, the Download dialogs will be closed and control will return to the File Transfer dialog.

2.2.3 File Compare Dialog

The File Compare dialog provides control for comparing the setpoint values in a setpoint file with those currently in the FM2500. The dialog is invoked by the File Transfer dialog.

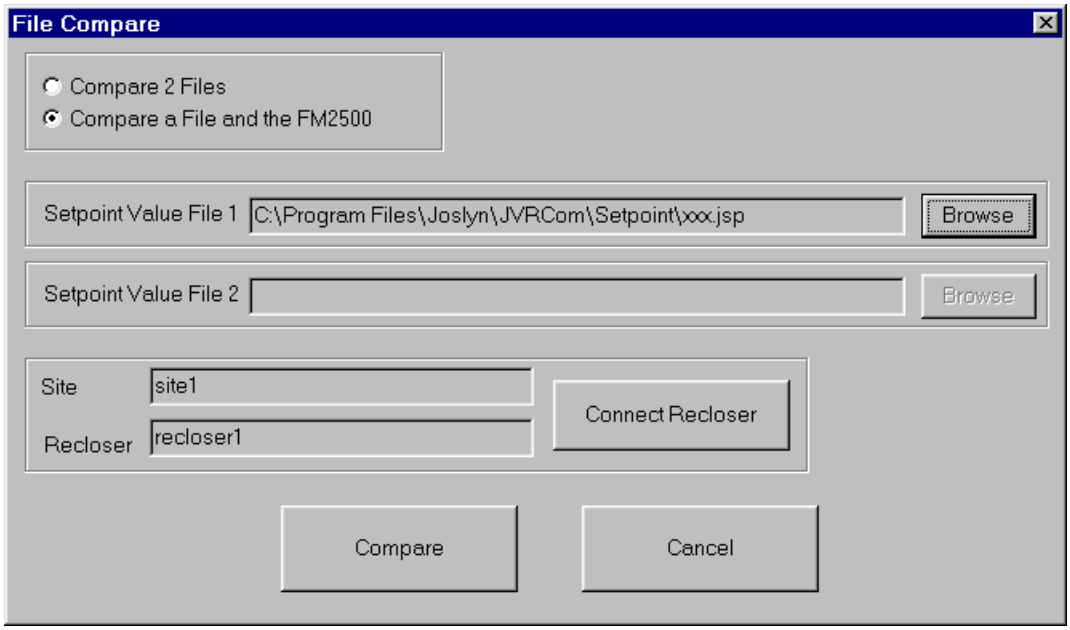

Figure 5. File Compare Dialog

The following table describes the action performed by each control on the File Compare dialog.

Control	Action
Compare Options	Select the source of the setpoint values that are to be compared, either 2 files, or a file and the Recloser.
Setpoint File 1	The file name of the first setpoint file that is to be used in the compare. This file name is set using the associated Browse button.
Setpoint File 2	The file name for the second setpoint file that is to be used for the compare. This is only enabled if the Compare Files option is selected. This file name is set using the associated Browse button.
File Browse buttons	Displays the file browse dialog to allow the user to select the setpoint files.
Site	The currently connected Site.
Recloser	The currently connected Recloser at the Site
Connect Recloser button	Initiate communications with a selected device
Compare button	Starts the compare between the given Site and Recloser and the selected file or between the 2 selected files.
Cancel button	Return to the File Transfer Menu.

The Site and Recloser edit boxes will be loaded with the currently connected recloser if JVRCom has been connected to a recloser via the Connect dialog. If no connection has been made prior to entering the Compare dialog, the boxes will be empty and the user can use the Connect Recloser button to establish communication with the desired recloser.

The file name displayed in the File edit box will be displayed without an extension. The appropriate extensions will be added to the file name when it is accessed for the compare.

The comparison type radio buttons will enable/disable the second file edit box and the site/recloser edit boxes according to the type of comparison that is to be done.

After the Compare button is pressed, the Compare results dialog will be displayed.

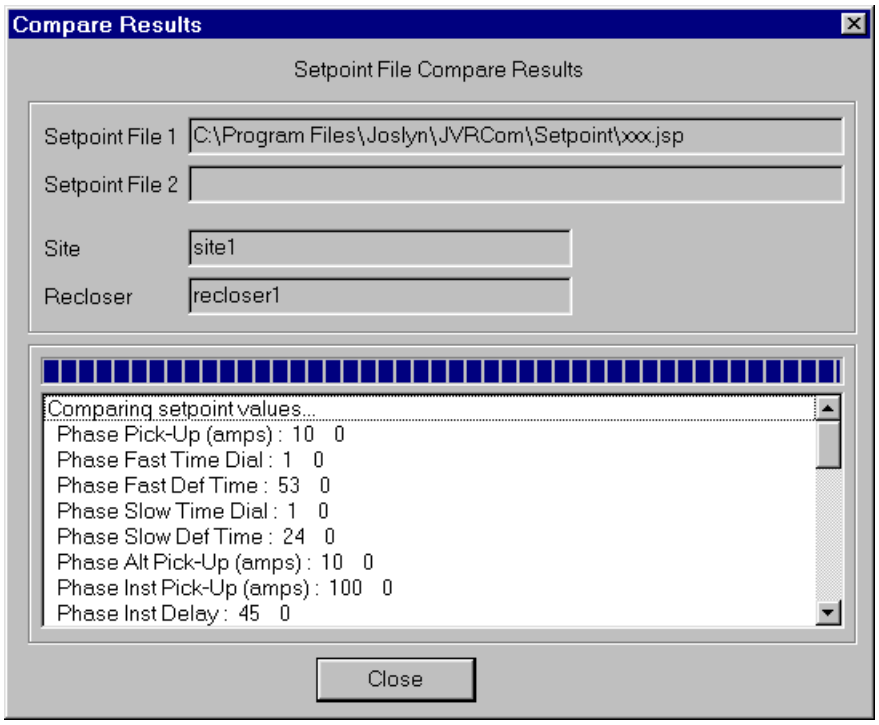

Figure 6. Compare Results Dialog

The following table describes the action performed by each control on the Compare Results dialog.

Control	Action
Setpoint File 1 and 2	The names of the setpoint files that are being compared. If the compare option is between a file and a Recloser, the second box will not be used.
Site	The name of the Site of the Recloser being compared. If the compare option is between 2 files, then this box will not be used.
Recloser	The name of the Recloser that is being compared. If the compare option is between 2 files, then this box will not be used.
Progress bar	The progress of the compare.
Results	Displays the current status of the compare operation. Any errors encountered during the compare will be displayed here.
Cancel/Close button	While the compare is running, the button reads Cancel and will stop the compare. When the compare has completed, the button reads Close and will return to the File Transfer dialog.

2.3 Setpoint Programming Dialog

The Setpoint Programming dialog provides the user with a menu choice of which portion of the setpoint values are to be edited. The dialog is invoked by the Main dialog when the Setpoint Programming button is pressed.

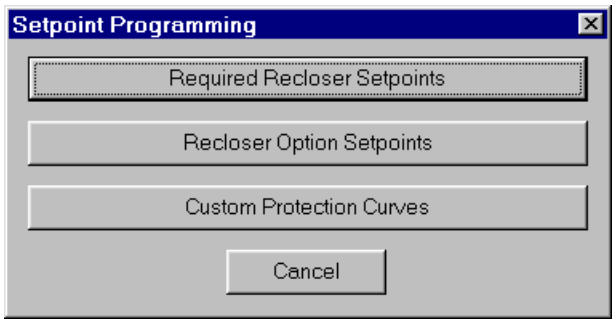

Figure 7. Setpoint Programming Dialog

The following table describes the action performed when each button is pressed on the Setpoint Programming dialog. Other dialogs that are referenced in the table are described in other sections.

Button	Action
Required Setpoints	Edit the Required Recloser Setpoints. The setpoint file to be edited will be selected by the user.
Option Setpoints	Edit the Optional Recloser Setpoints. The setpoint file to be edited will be selected by the user.
Protection Curves	Edit custom Protection Curves.
Cancel	Return to the Main Menu.

2.3.1 Required Recloser Setpoints Dialog

The Required Recloser Setpoints dialog provides the editor for the base recloser setpoints. The dialog is invoked by the Setpoint Programming dialog in OFFLINE mode. It is invoked by the Status & Control dialog in ONLINE mode.

The Required Setpoints dialog is a tabbed dialog. All tabs are displayed here to completely document the required editor functionality. It is assumed that the reader understands the definitions of each parameter, hence they are not discussed in this document.

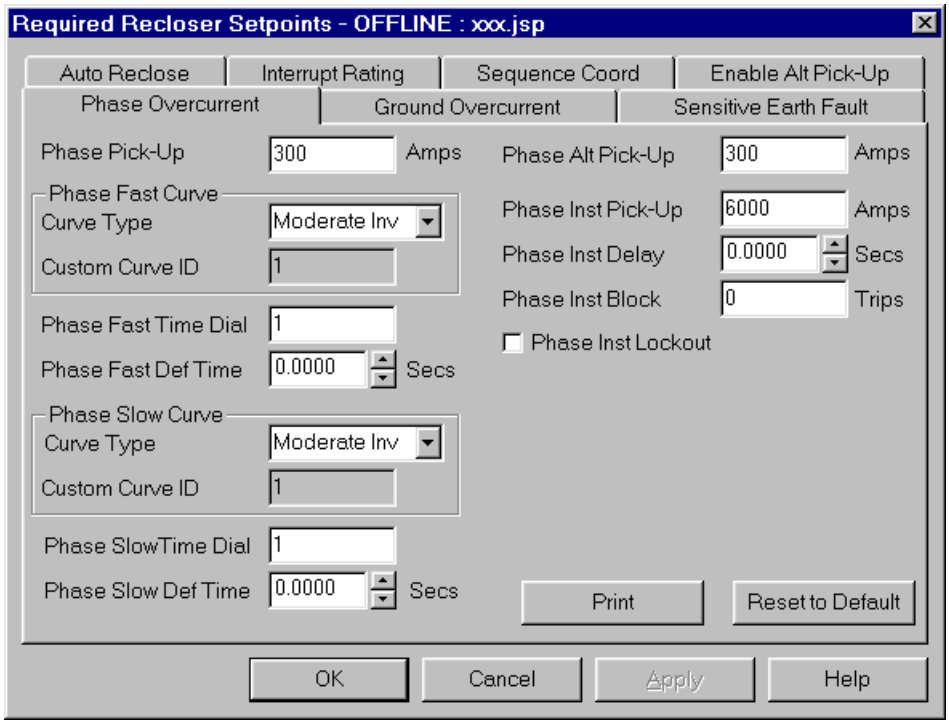

Figure 8. Required Setpoints - Tab 1

If the Curve Type combo-box is set to “Custom”, the custom curve ID edit box is enabled; the user can enter the desired custom curve ID number. If the combo-box is set to a standard curve type, the custom curve ID edit box is disabled.

The Def Time and Inst Delay spin controls will increment the values over the range of 0 to 1 with an increment size of 0.01667. The values cannot be edited directly; they can only be set using the spin dial.

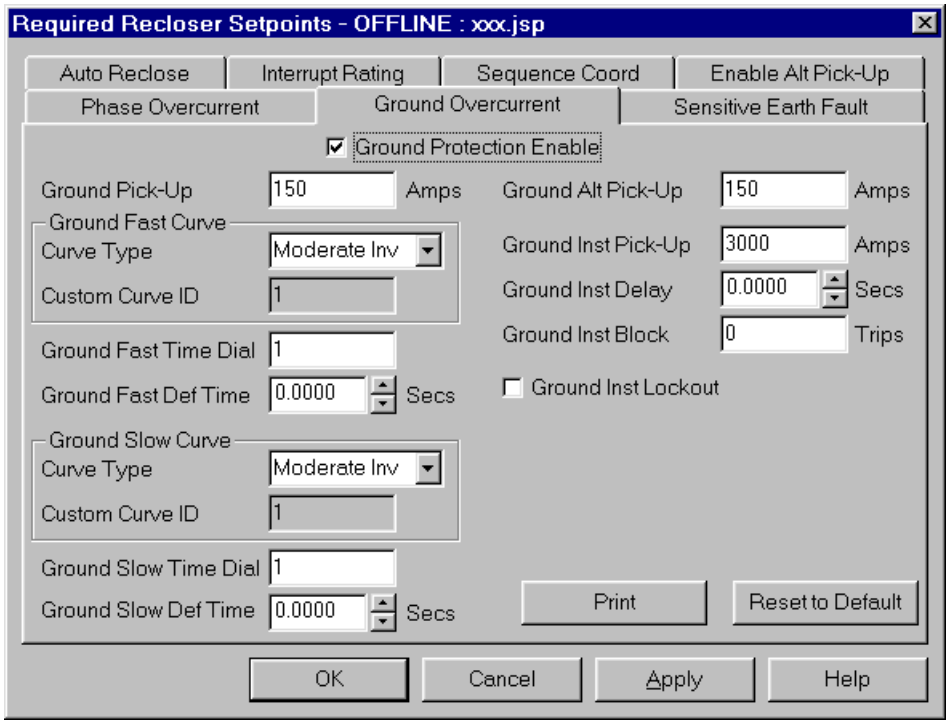

Figure 9. Required Setpoints - Tab 2

The custom curves are set in the same manner as described above for Tab 1. The Def Time and InstDelay spin controls work in the same manner as described above for Tab 1.

If Ground Protection Enable is not checked, all edit boxes on the tab are disabled.

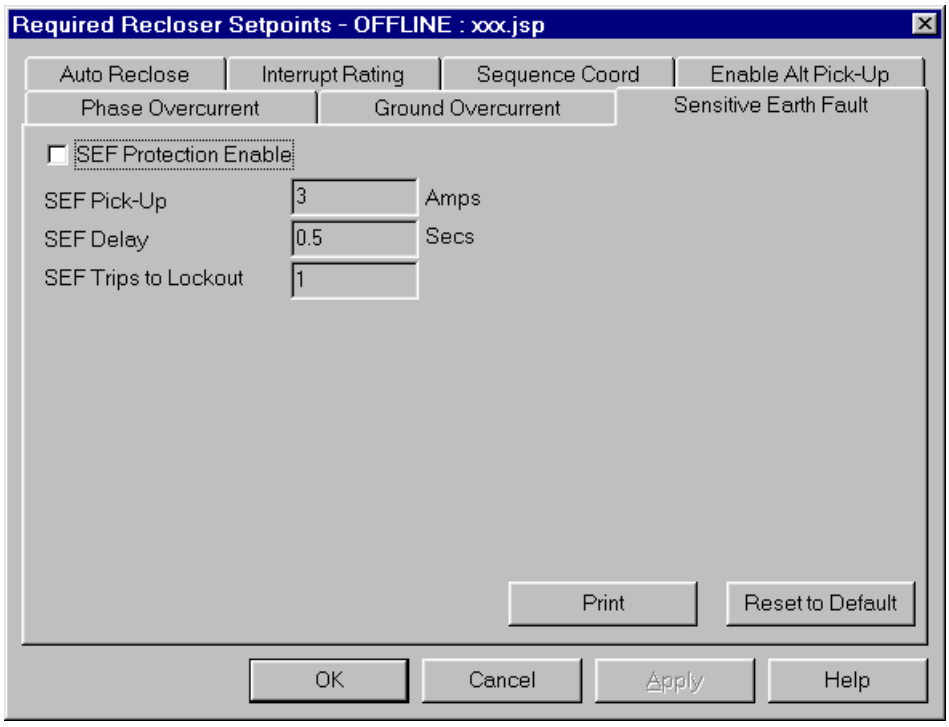

Figure 10. Required Setpoints - Tab 3

If SEF Protection Enable is not checked, all edit boxes on the tab are disabled.

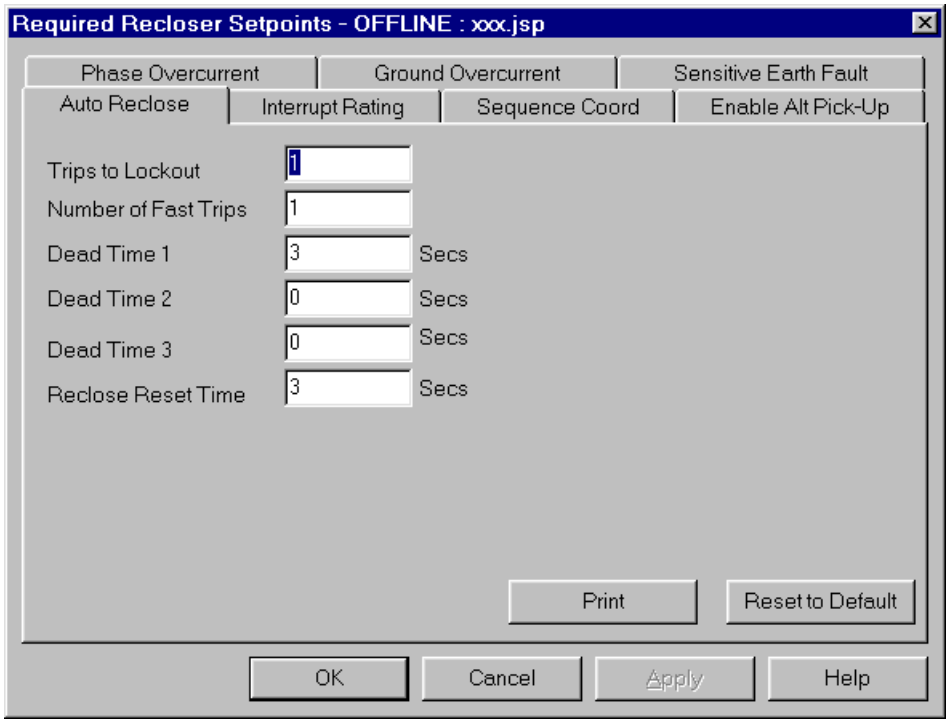

Figure 11. Required Setpoints - Tab 4

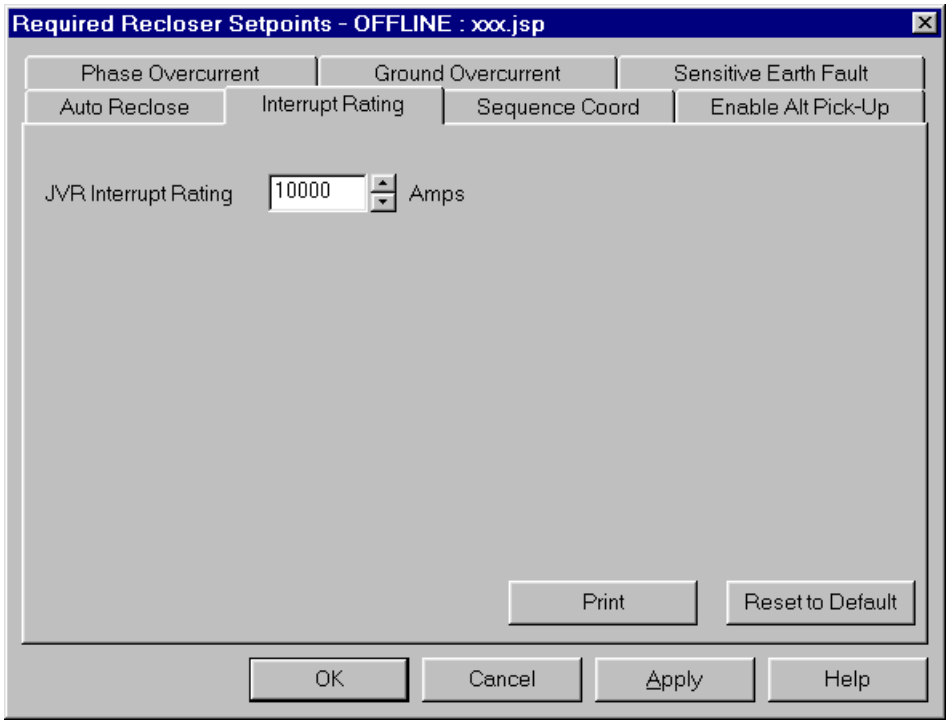

Figure 12. Required Setpoints - Tab 5

The Interrupt Rating spin control allows the value to be set to 6000, 10000, or 12000.

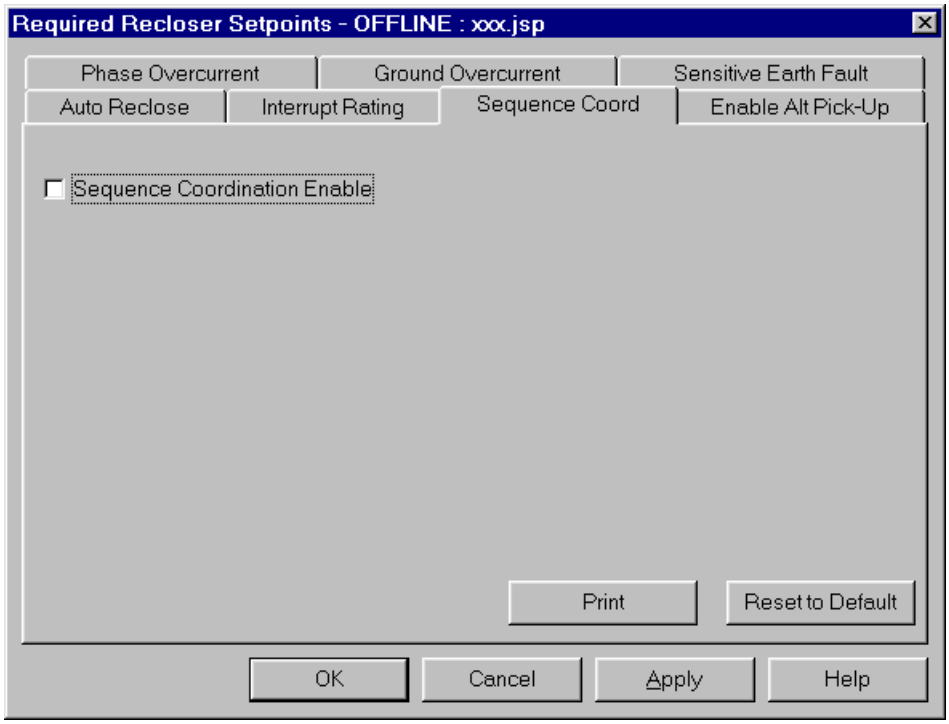

Figure 13. Required Setpoints - Tab 6

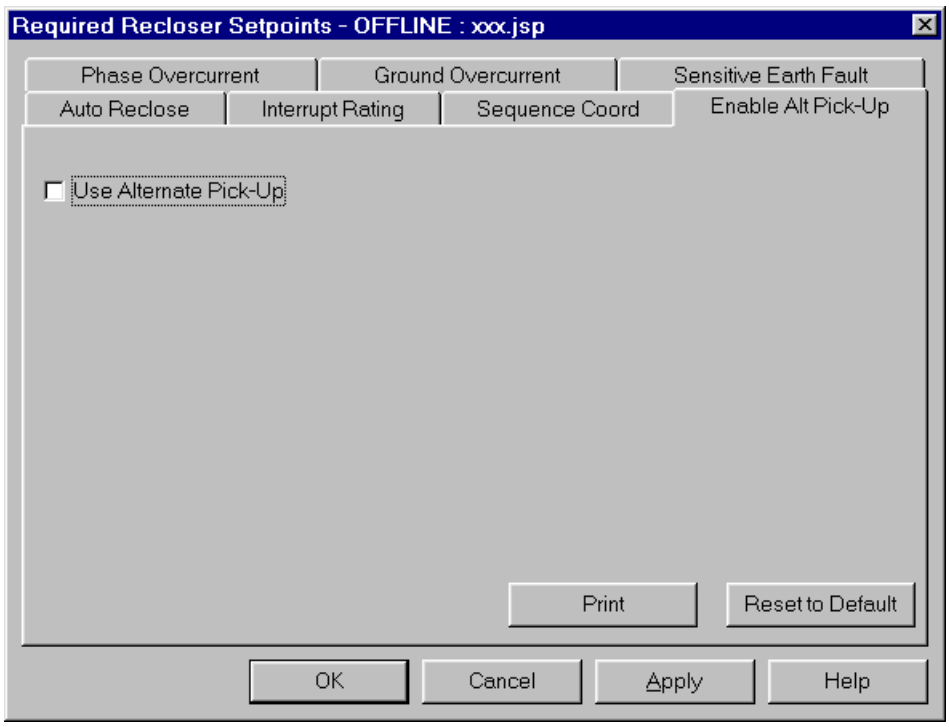

Figure 14. Required Setpoints - Tab 7

The following table describes the action performed when each button is pressed on the Required Setpoints dialog.

Button	Action
Reset to Default	Sets the values of the parameters displayed on the current tab to their associated default values.
Print	Prints all Required Setpoint values.
Help	Online Help.
Apply	In OFFLINE mode, saves the current Setpoint values to a selected file. In ONLINE mode, transfer the current Setpoint values to the currently connected Recloser.
OK	In OFFLINE mode, saves the current Setpoint values to a selected file. Returns to the Setpoint Programming Menu. In ONLINE mode, transfer the current Setpoint values to the currently connected Recloser. Returns to the Status & Control dialog.
Cancel	Returns to the invoking dialog. Any changes made to Setpoint values are discarded. (except for those changed and Applied).

There are two modes in which the Required Setpoints dialog is used, ONLINE and OFFLINE. The current mode is indicated in the dialog title bar. The differences are described below:

ONLINE mode: The Required Setpoints dialog is invoked from the Status & Control dialog using the Required Setpoints button. The parameter values displayed in the dialog are uploaded from the recloser. Any changes that are made and saved, or applied, are transferred directly to the recloser.

OFFLINE mode: The Required Setpoints dialog is invoked from the Setpoint Programming dialog. The parameter values displayed in the dialog are read from the setpoint file selected upon entry to the dialog. Any changes that are made and saved, or applied, are saved in the selected setpoint file.

In OFFLINE mode a file selection dialog is presented before and after the Required Setpoints dialog. Upon entering the dialog, the user is able to select a current file to edit or, if he wishes, enter a new file name. If a new file name is entered, all parameter values will be set to default values initially. Upon applying, or leaving the dialog, the user is able to select the file to save the values in, this provides a "save as" feature. If a different file name is selected, and that file exists, the user will be asked if the file should be overwritten.

2.3.2 Recloser Option Setpoints Dialog

The Recloser Option Setpoints dialog provides the editor for any optional recloser setpoints. The dialog is invoked by the Setpoint Programming dialog in OFFLINE mode. It is invoked by the Status & Control dialog in ONLINE mode.

The Option Setpoints dialog is a tabbed dialog. All tabs are displayed here to completely document the option editor functionality. It is assumed that the reader understands the definitions of each parameter, hence they are not discussed in this document.

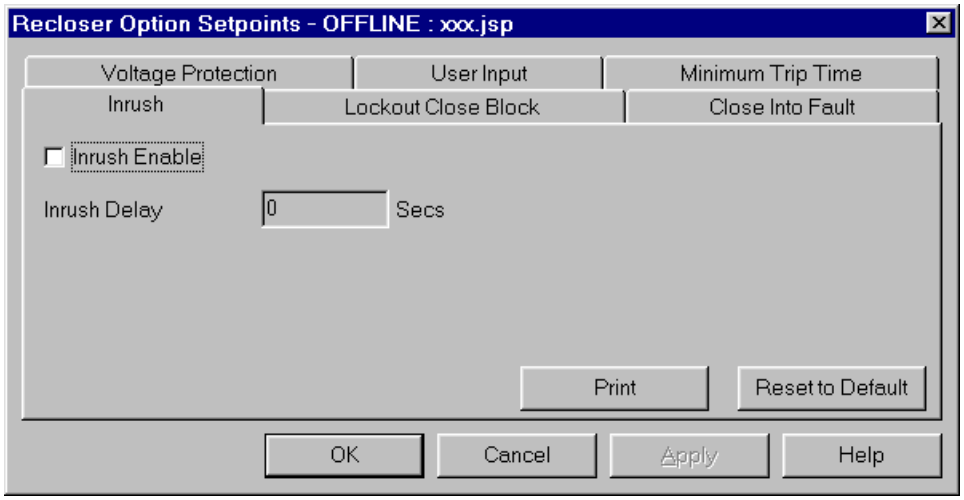

Figure 15. Option Setpoints - Tab 1

When Inrush Enable is not checked , the Inrush Delay edit box is disabled.

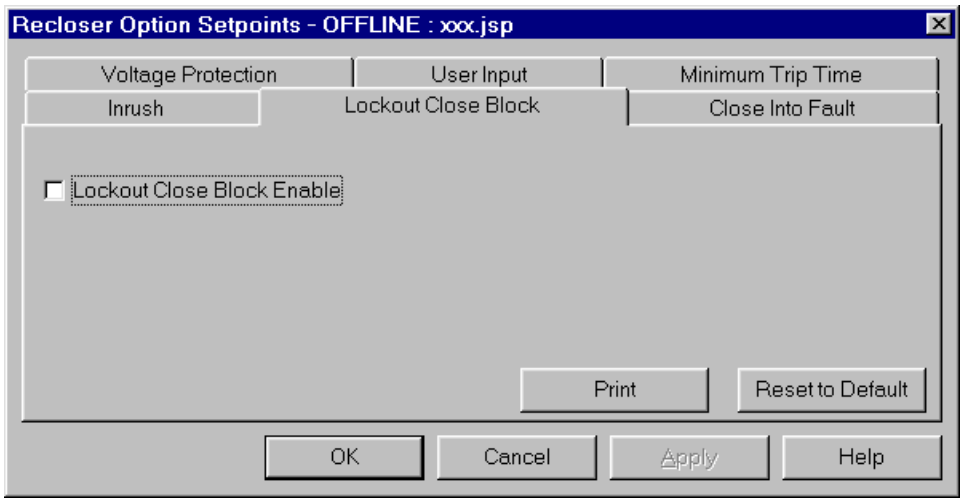

Figure 16. Option Setpoints - Tab 2

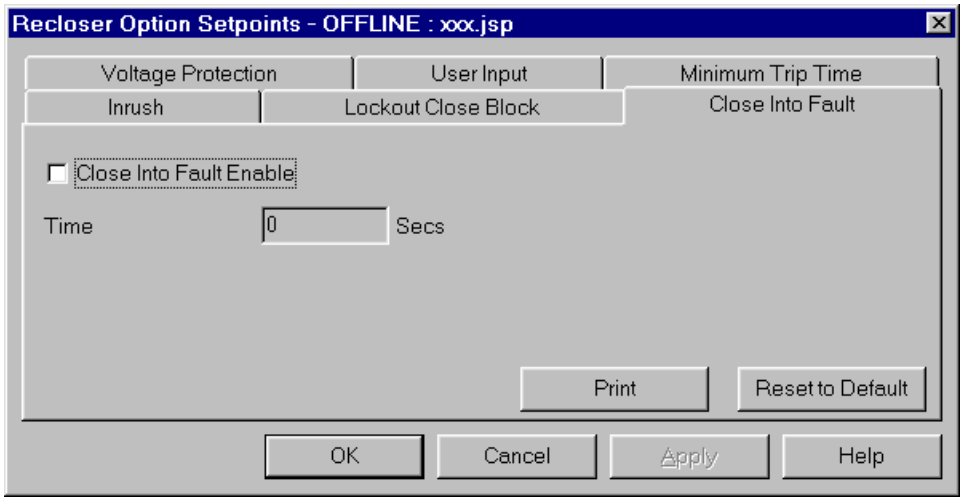

Figure 17. Option Setpoints - Tab 3

When Close Into Fault Enable is not checked, the Time edit box is disabled.

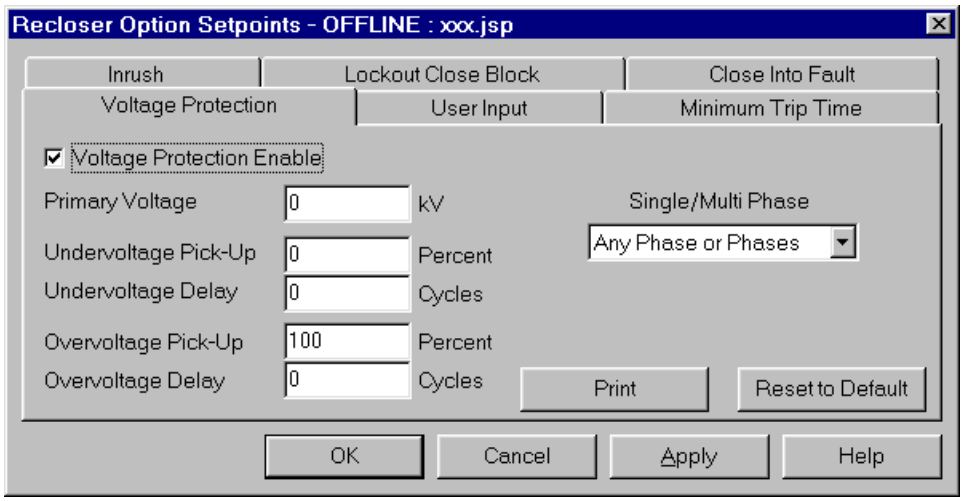

Figure 18. Option Setpoints - Tab 4

When Voltage Protection Enable is not checked, the edit boxes on the tab are disabled.

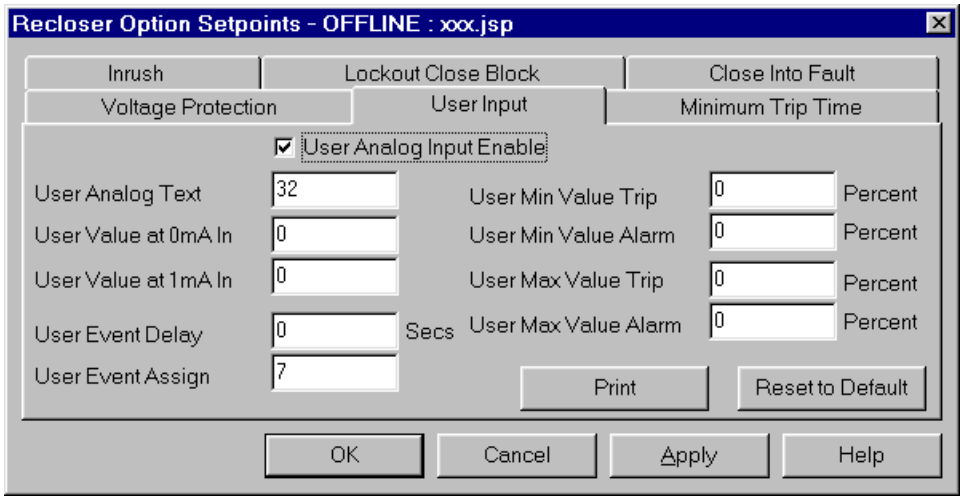

Figure 19. Option Setpoints - Tab 5

When User Analog Input Enable is not checked, the edit boxes on the tab are disabled.

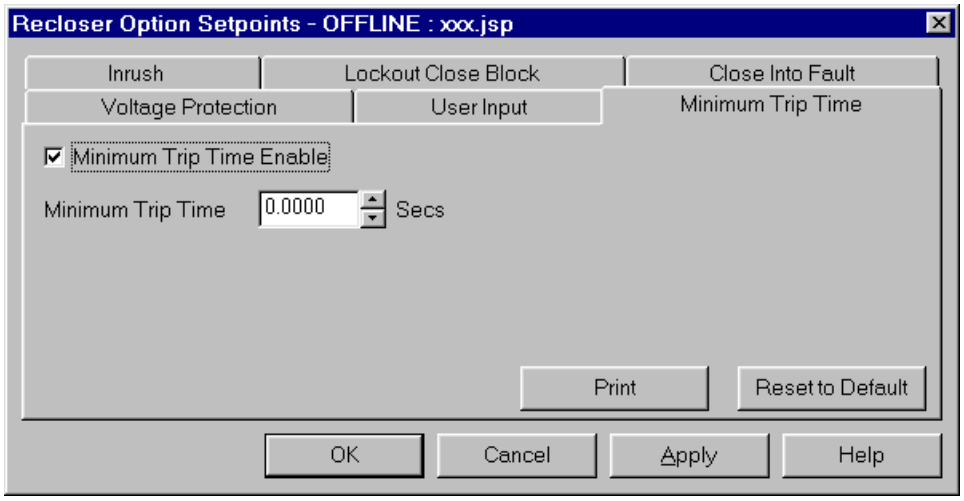

Figure 20. Option Setpoints - Tab 6

When Minimum Trip Time Enable is not checked, the value edit box is disabled.

The Minimum Trip Time spin control will increment the value over the range of 0 to 1 with an increment size of 0.01667. The value cannot be edited directly; it can only be set using the spin dial.

The following table describes the action performed when each button is pressed on the Option Setpoints dialog.

Button	**Action**
Reset to Default	Sets the values of the parameters displayed on the current tab to their associated default values.
Print	Prints all Option Setpoint values.
Help	Online Help.
Apply	In OFFLINE mode, saves the current Setpoint values to a selected file. In ONLINE mode, transfer the current Setpoint values to the currently connected Recloser.
OK	In OFFLINE mode, saves the current Setpoint values to a selected file. Returns to the Setpoint Programming Menu. In ONLINE mode, transfer the current Setpoint values to the currently connected Recloser. Returns to the Status & Control dialog.
Cancel	Returns to the invoking dialog. Any changes made to Setpoint values are discarded. (except for those changed and Applied).

There are two modes in which the Option Setpoints dialog is used, ONLINE and OFFLINE. The differences are described below:

ONLINE mode: The Option Setpoints dialog is invoked from the Status & Control dialog using the Option Setpoints button. The parameter values displayed in the dialog are uploaded from the recloser. Any changes that are made and saved, or applied, are transferred directly to the recloser.

OFFLINE mode: The Option Setpoints dialog is invoked from the Setpoint Programming dialog. The parameter values displayed in the dialog are read from the setpoint file selected upon entry to the dialog. Any changes that are made and saved, or applied are transferred to the selected setpoint file.

In OFFLINE mode a file selection dialog is presented before and after the Option Setpoints dialog. Upon entering the dialog, the user is able to select a current file to edit or, if he wishes, enter a new file name. If a new file name is entered, all parameter values will be set to default values initially. Upon applying, of leaving the dialog, the user is able to select the file to save the values in, this provides a “save as” feature. If a different file name is selected, and that file exists, the user will be asked if the file should be overwritten.

2.3.3 Protection Curve Editor

The protection curve editor provides a means to enter, or edit, a time/current table, and to chart the table for visual inspection. The dialog is invoked by the Setpoint Programming dialog.

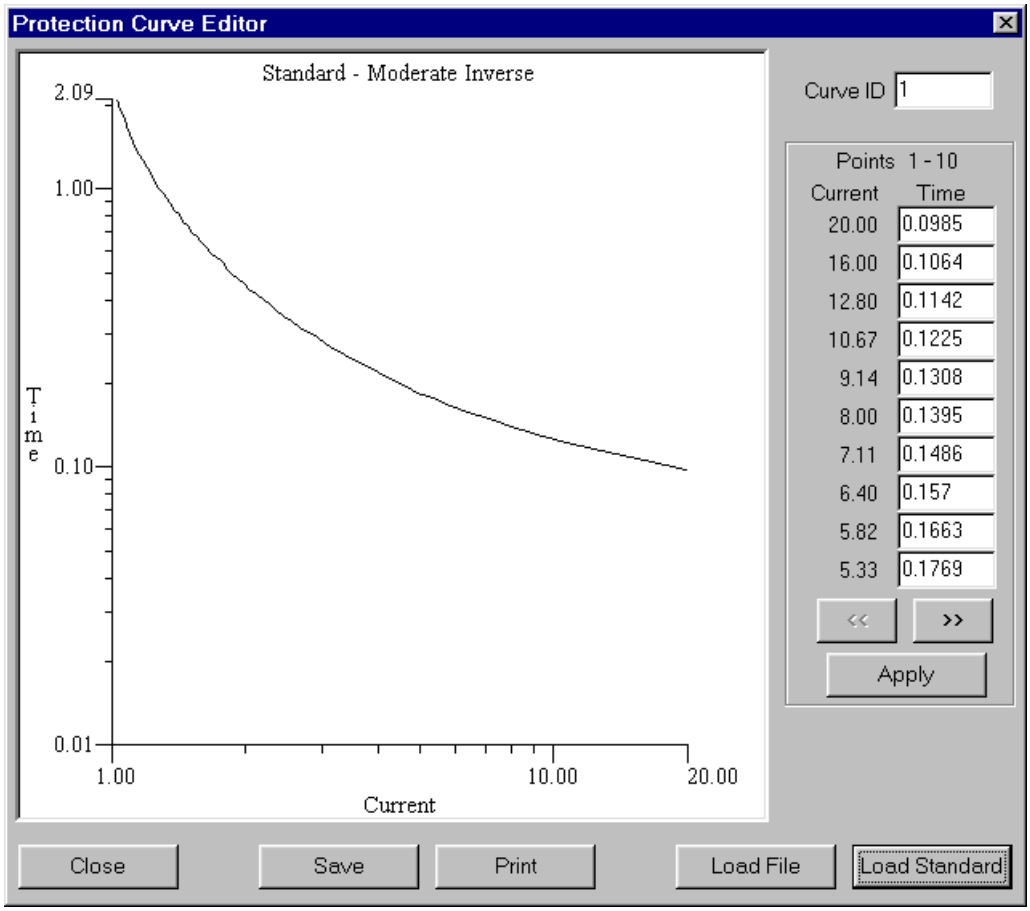

Figure 21. Curve Editor

The following table describes the action performed by each control on the Curve Editor.

Button	Action
Curve ID	ID number for the Protection Curve. The ID number must be in the range 1-254. The Curve is saved in a file whose name is associated with the given ID number. The ID number is used to specify the custom Curve in the Setpoint Programming editors in the Phase Overcurrent and Ground Overcurrent tabs.
Curve Points	Enter the desired trip time, in seconds, for each current in the Protection Curve table. 10 curve points are displayed and edited at a time, the group of 10 is determined by the << and >> buttons.
>>	Moves to the next group of 10 curve points.
<<	Moves to the previous group of 10 curve points.
Apply	Updates the graph with the current curve points.
Load Standard	Select a standard curve to be loaded. This enables curves to be derived from the standard curves.
Load File	Select a previously saved curve file and load it into the editor.
Print	Prints the graph and the curve points.
Save	Saves the current curve points to file.
Close	Return to the Setpoint Programming Menu.

The chart in the plot area is updated whenever the Apply button is pressed; hence, it provides immediate feedback to the effects of a change to the table.

The time/current table is cleared to 0 upon entering the Curve Editor.

The curve file names are derived from the curve ID number using the following format:

Curve_xxx

Where *xxx* is 001 to 254 depending on the curve ID number that is used for the curve table. When a curve is saved, the file name is generated from its ID number. When a file is loaded, the user selects the curve file by file name.

If a file for the curve ID number exists when Save is pressed, and the ID is different than the ID from which the table was loaded, the user is asked if the file should be overwritten.

The user can select from the following standard curves to load into the editor when using the <Load Standard> button.

- Moderately Inverse
- Normally Inverse
- Very Inverse
- Extremely Inverse

2.4 Status & Control Dialog

The Status & Control dialog provides monitoring, control, and configuration of the FM2500. The dialog is invoked by the Main dialog when the Status & Control button is pressed.

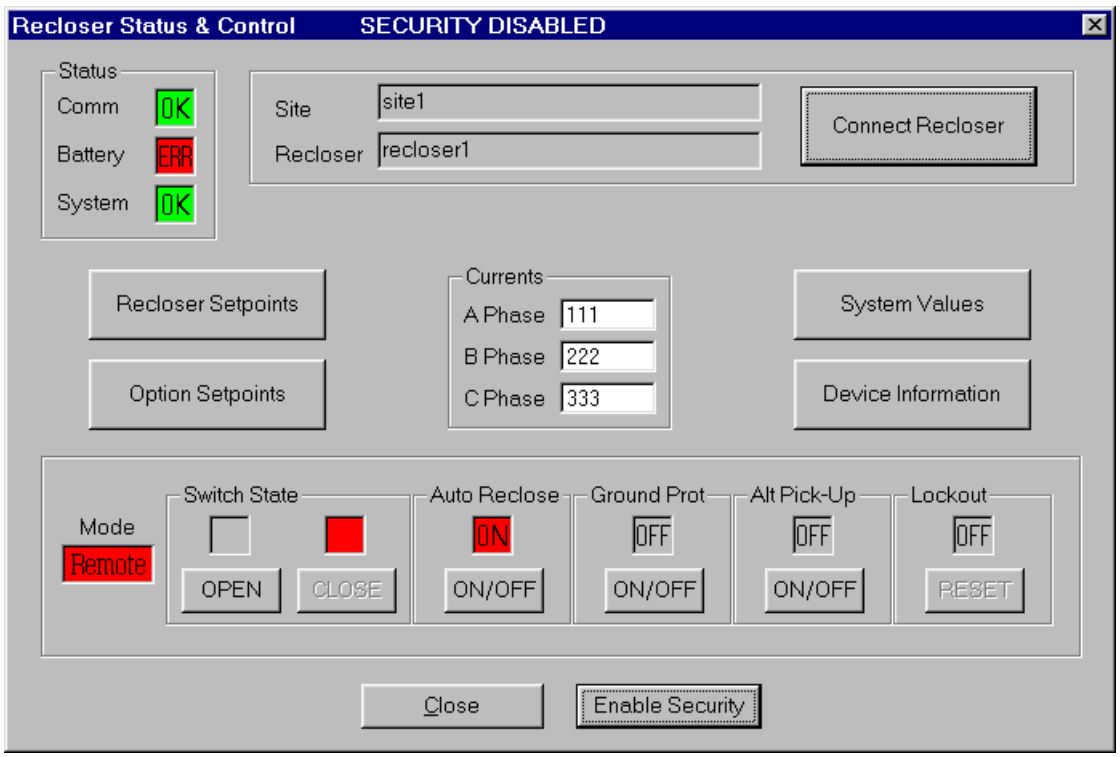

Figure 22. Status & Control Dialog

The following table describes the action performed by each control on the Status & Control dialog.

Control	Action
Comm Status Indicator	Green when communication is OK, Red if there are communication errors.
Battery Status Indicator	Green when the battery status of the connected Recloser is OK, Red if the Recloser is indicating a battery test error.
System Status Indicator	Green when the system status of the connected Recloser is OK, Red if the Recloser is indicating that there is a system alarm.
Site	The currently connected Site.
Recloser	The currently connected Recloser at the Site
Connect Recloser button	Initiate communications with a selected device
Recloser Setpoints button	Online editing of the Required Setpoints in the currently connected Recloser. This feature is disabled if there is no connected Recloser, or if there are communications errors.
Option Setpoints button	Online editing of the Optional Setpoints in the currently connected Recloser. This feature is disabled if there is no connected Recloser, or if there are communications errors.
System Values button	Monitor System Values either online, or offline from a previously uploaded file. If there is a connected Recloser, the display defaults to online. If there is no connected Recloser, a file will be selected by the user for display.
Device Information button	Device information such as serial number and software revision for the currently connected Recloser. This feature is disabled if there is no connected Recloser, or if there are communications errors.
Currents	Current values for each phase of the currently connected Recloser.
Mode Indicator	Local/Remote status of the connected Recloser.
Open control button	Opens the Recloser switch. Displays Green if open, Gray otherwise. This button is disabled if the switch is open, the Recloser is in local mode, or if there are communications errors.
Close control button	Closes the Recloser switch. Displays Red if closed, Gray otherwise. This button is disabled if the switch is closed, the Recloser is in local mode, or if there are communications errors.
Auto Reclose control button	Toggles the Auto Reclose feature in the connected Recloser. Displays Red if enabled, Gray otherwise. This button is disabled if the Recloser is in local mode, or if there are communications errors.
Ground Protection control button	Toggles the Ground Protection feature in the connected Recloser. Displays Red if enabled, Gray otherwise. This button is disabled if the Recloser is in local mode, or if there are communications errors.
Lockout Indicator/Reset control button	Resets a Lockout condition in the connected Recloser. Displays Red if lockout is active, Gray otherwise. This button is disabled if the Recloser is in local mode, lockout is inactive, or if there are communications errors.
Alternate Pick-Up control button	Toggles the Alternate Pick-up feature in the connected Recloser. Displays Red if enabled, Gray otherwise. This button is disabled if the Recloser is in local mode, or if there are communications errors.
Close button	Return to the Main Menu.
Enable/Disable Security	Toggles the security on and off. Disabling security requires a password. When security is disabled, the dialog title bar indicates “SECURITY DISABLED”.

The Site and Recloser edit boxes will be loaded with the currently connected recloser if JVRCom has been connected via the Connect dialog. If no connection has been made prior to entering the Status & Control dialog, the boxes will be empty and the user can use the Connect button to establish communication with the desired recloser. The continuous monitoring routine keeps track of the currently connected recloser and updates the display accordingly.

Indicators are set to the colors mentioned above based on each indicators actual state in the device. After a control button is pressed, the corresponding indicator will turn Yellow, indicating the intermediate state when the software is waiting for a status update from the connected recloser.

Toggle buttons, such as Auto Reclose, are push-on, push-off buttons. I.e. pressing the button will toggle the current state of the control parameter.

All control buttons require confirmation prior to carrying out their actions. When the button is pressed, a message box is displayed giving the user the ability to cancel the command at that time.

Control buttons will be disabled when the connected recloser is in Local mode.

The Lockout Reset button will be disabled when lockout is not active.

All controls in the dialog, with the exception of the System Values button, will be disabled when there is not an active connection, or when there are communications errors.

All status and values will be updated once every 2 seconds while this dialog is displayed.

2.4.1 System Values Dialog

The System Values dialog displays the system values that are either currently in the device, or saved in a file by an upload procedure. The dialog is invoked by the Status & Control dialog.

The dialog is a tabbed dialog. All tabs are displayed here to completely document the dialogs functionality. It is assumed that the reader understands the definitions of each parameter, hence they are not discussed in this document.

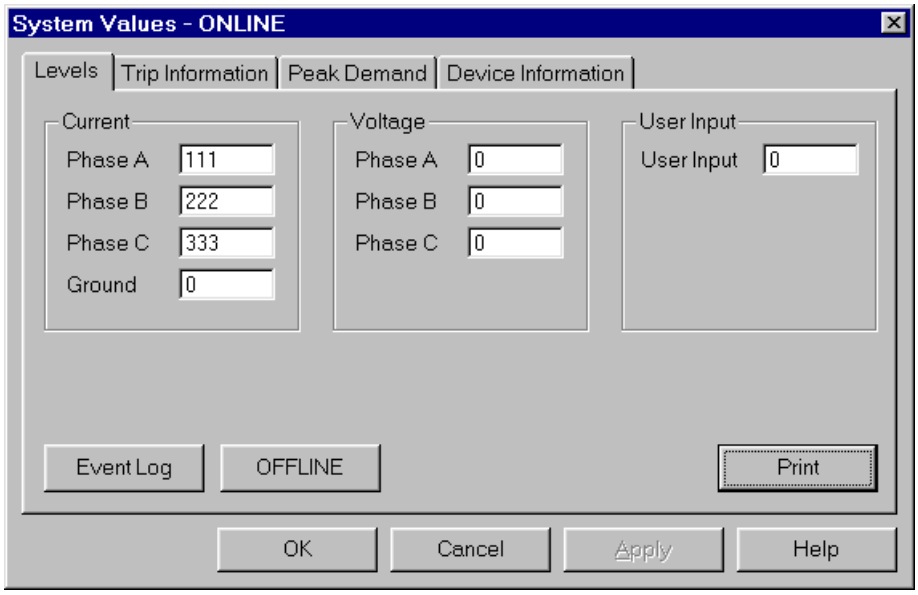

Figure 23. System Values - Tab 1

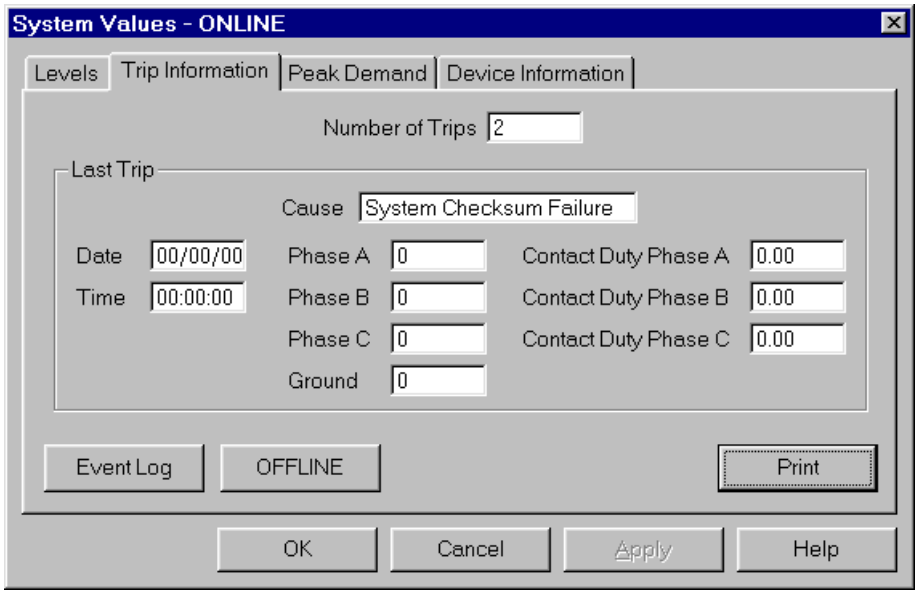

Figure 24. System Values - Tab 2

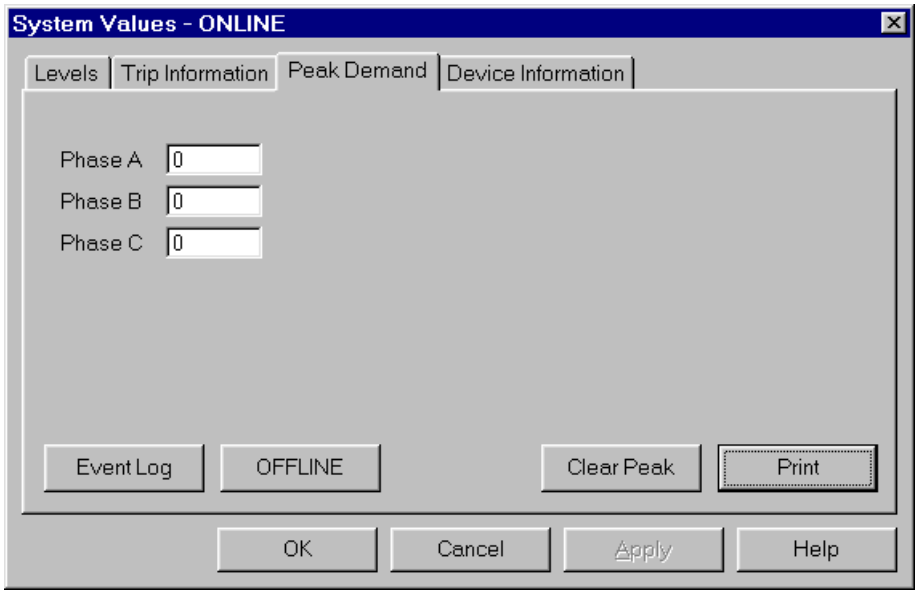

Figure 25. System Values - Tab 3

The Clear Peak button will clear the peak demand data in the connected recloser. It will send a command directly to the recloser. The user will be asked to confirm the operation after pressing the button.

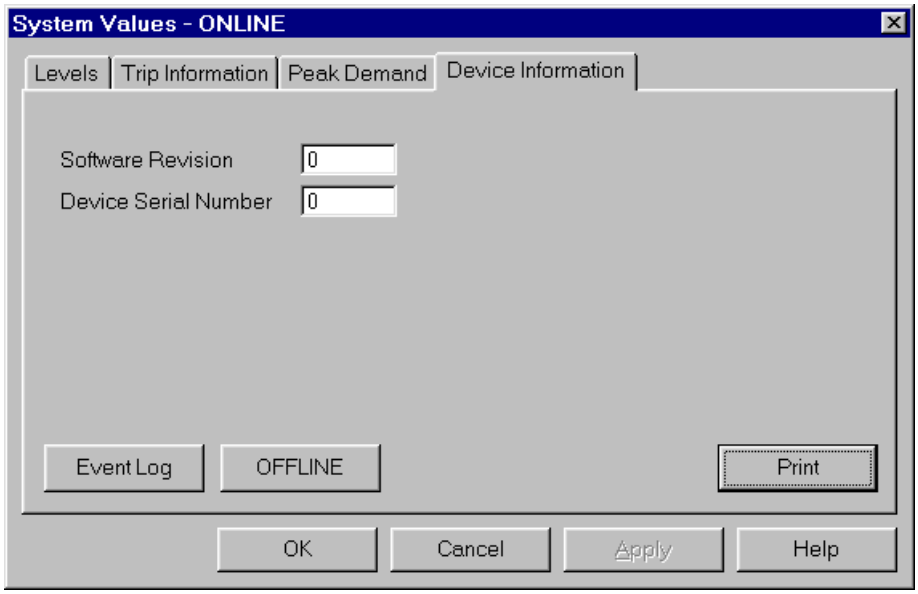

Figure 26. System Values - Tab 4

The following table describes the action performed when each button is pressed on the System Values dialog.

Control	Action
Event Log button	Display the Event Log for the connected Recloser.
OFFLINE/ONLINE button	Toggles the current display mode between online and offline. If the display is currently online, the user will select a file to be displayed. If the display is currently offline, values will be retrieved from the connected recloser.
Print button	Print all current System Values.
OK button	Return to the Status & Control dialog.
Cancel button	Return to the Status & Control dialog.

The System Values dialog, like the Setpoints dialogs, operate in two modes, ONLINE and OFFLINE. The current mode is indicated in the dialog's title bar. The differences are described below:

ONLINE mode: This is the default mode upon entry into the System Values dialog. All system values are read from the device and updated regularly. The ONLINE/OFFLINE button reads OFFLINE.

OFFLINE mode: When OFFLINE mode is entered, the user is prompted to select a system values file. The values displayed by the dialog are read from the file. The Clear buttons are disabled in OFFLINE mode. The ONLINE/OFFLINE button reads ONLINE.

If there is not an active connection, or there are communications errors, when entering the System Values dialog, the dialog is defaulted to OFFLINE mode, and the user is prompted to select a file for display.

2.4.2 Event Log Dialog

The Event Log Dialog displays the events that are currently in the connected recloser's event log. The dialog is invoked from the System Values dialog.

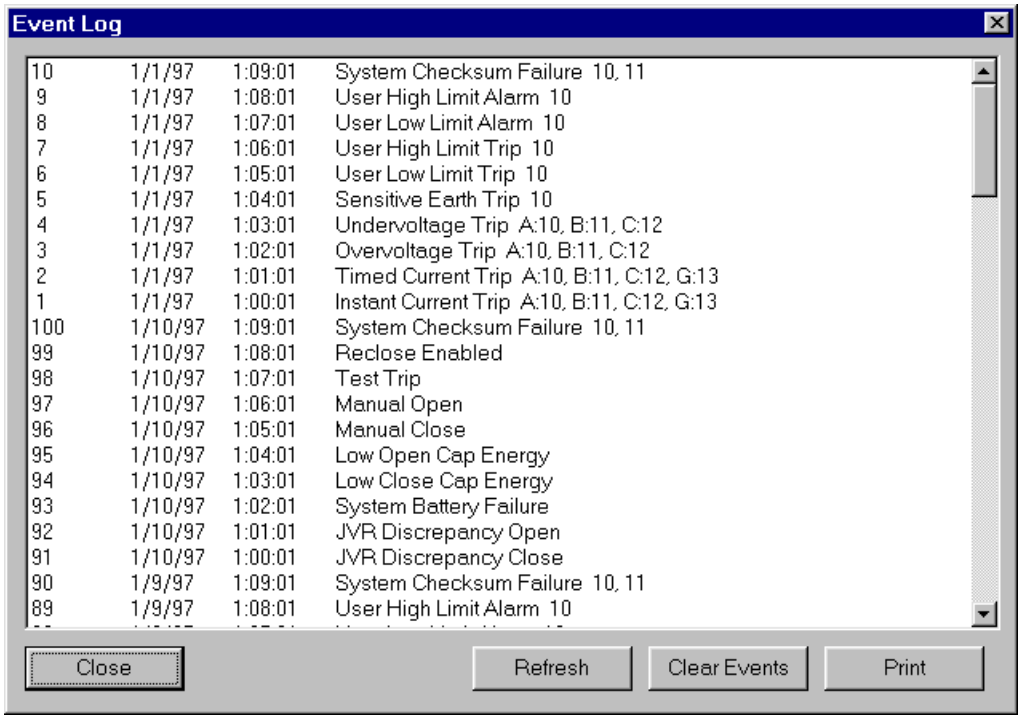

Figure 27. Event Log Dialog

The following table describes the action performed by the Event Log dialog controls.

Control	Action
Refresh button	Retrieve the current Event Log information from the connected Recloser, and update the display.
Clear Events button	Clear the Event Log in the connected Recloser.
Print	Print Event Log.
Close	Return to System Values dialog

The Clear Events button will issue a clear events command directly to the connected recloser after the action has been confirmed by the user. The display will automatically be refreshed after the action.

2.4.3 Device Information Message Box

The Device Information message box displays general information from the currently connected device. The message box is invoked by the Status & Control dialog.

The following information will be displayed:

- Serial number
- Firmware revision

2.5 Diagnostics Dialog

The Diagnostics dialog displays all system events that are currently in the connected recloser's event log. The display appears the same as the Event Log dialog shown above, except that the events are filtered to only show the system events.

2.6 Connect Dialog

The Connect dialog allows the user to select a recloser and establish communications. The dialog is invoked by various dialogs including the Main Menu dialog.

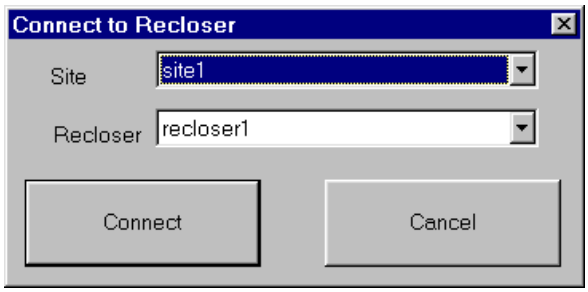

Figure 28. Connect Dialog

The following table describes the action performed by each control on the Connect dialog.

Control	Action
Site	Select a Site from the list of available Sites. The Site list is configured in the Address Book.
Recloser	Select a Recloser from the list of available Reclosers at the selected Site. The Recloser list is configured for each Site in the Address Book.
Connect button	Establishes the connection to the selected Site and Recloser.
Cancel button	Returns to the previous dialog.

The Site and Recloser edit boxes will be loaded with the currently connected recloser if the Communication Software has been connected to a recloser. If no connection has been made prior to entering to the Connect dialog, the boxes with be set to the first site and recloser on the Address Book's list.

2.7 Setup Dialog

The Setup dialog allows the user to set the configuration of JVRCom itself. The dialog is invoked by the Main Menu dialog.

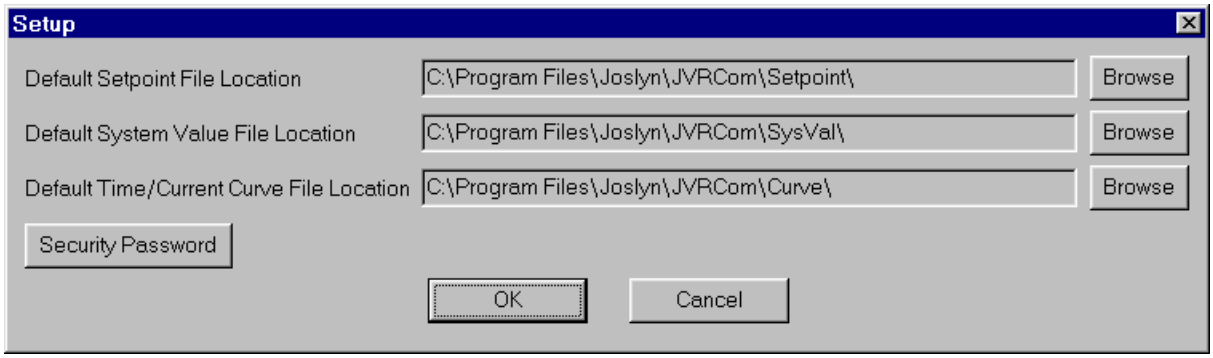

Figure 29. Setup Dialog

The following table describes the action performed by each control on the Setup dialog.

Control	Action
Security Password button	Change the security password
Setpoint File Location	The directory path to the default location where Setpoint files are to be stored. The path is selected using the associated browse button.
System Values File Location	The directory path to the default location where System Value files are to be stored. The path is selected using the associated browse button.
Curve File Location edit box	The directory path to the default location where Protection Curve files are to be stored. The path is selected using the associated browse button.
File Browse buttons	Display a file selection dialogs to allow the user to select the directory paths.
OK button	Saves any changes to the setup and returns to the Main Menu dialog.
Cancel button	Cancels all setup changes, except password changes, and returns to the Main Menu dialog.

For more information on the software configuration parameters, see the section *Software Configuration*.

2.7.1 Security Password Dialog

The Security Password dialog allows the user to change the current security password.

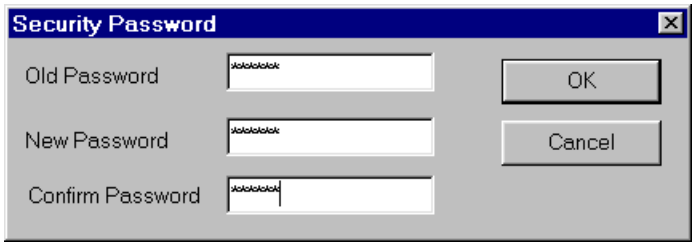

Figure 30. Security Password Dialog

The following table describes the action performed by each control on the Setup dialog.

Control	Action
Old Password	Enter the current security password here.
New Password	Enter the desired new password here.
Confirm Password	Enter the desired new password again for confirmation.
OK button	Checks the passwords, stores the new password, and returns to the Setup dialog.
Cancel button	Returns to the Setup dialog.

When the OK button is pressed, the following checks are made:

- Old Password matches the current password
- New Password and Confirm Password match

The new password will be accepted only if all of these checks pass.

2.8 Address Book Dialog

The Address Book dialog handles the configuration of the Address Book. The Address Book is a list of sites and reclosers and the information necessary to connect to each. It also provides the ability to name each site and recloser a meaningful name, so that the user does not have to remember details such as recloser addresses and port numbers. The dialog is invoked by the Main Menu dialog.

The Address Book is a two dimensional system. There is a list of sites. Each site has information about the serial port connection to that site, and a list of reclosers. Hence, the site provides the information required to make the connection, then the recloser provides the information for a specific recloser at that site.

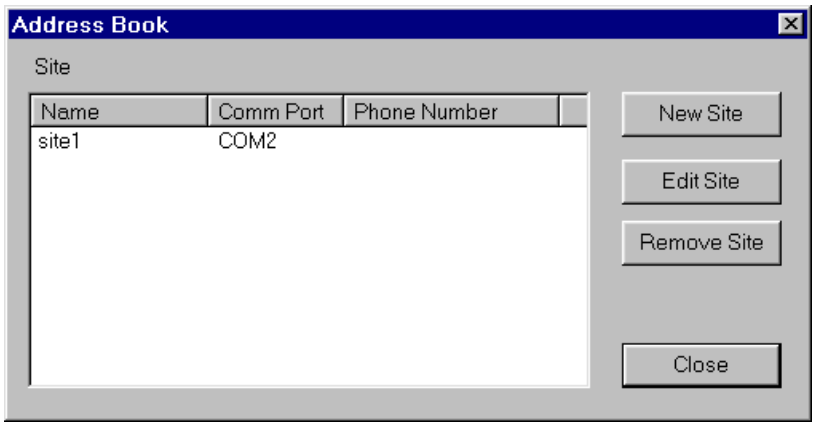

Figure 31. Address Book Dialog

The following table describes the action performed by each control on the Address Book dialog.

Control	Action
Site list	List of currently configured Sites.
New Site button	Configure a new Site.
Edit Site button	Edit the configuration of the currently selected Site.
Remove Site button	Deletes the currently selected Site from the list.
Close button	Return to the Main Menu.

The Site Address dialog allows the user to configure the parameters for a site.

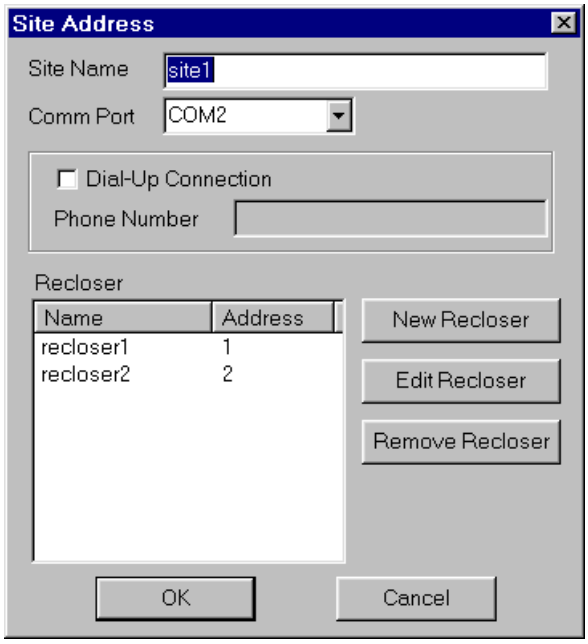

Figure 32. Site Address Dialog

The following table describes the action performed by each control on the Site Address dialog.

Control	Action
Site Name	The desired Site name.
Comm Port	Select the communications port to be used from a list of available ports.
Dial-Up Connection option	Determines whether the connection to the Site is through a modem.
Phone Number	The phone number to dial for a dial-up connection. This box is disabled if the dial-up option is not checked.
Recloser list	The list of currently configured Reclosers.
New Recloser button	Configure a new Recloser for the Site.
Edit Recloser button	Edit the configuration of the currently selected Recloser.
Remove Recloser button	Deletes the currently selected Recloser from the list.
OK	Saves any changes to the Site configuration and returns to the Address Book dialog.
Cancel	Cancels all site changes and returns to the Address Book dialog.

The Recloser Address dialog allows the user to configure the individual recloser at the selected site.

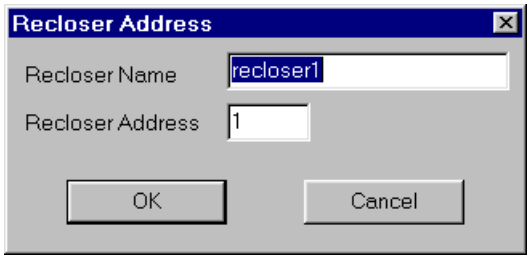

Figure 33. Node Address Dialog

The following table describes the action performed by each control on the Node Address dialog.

Control	Action
Recloser Name	The desired Recloser name
Recloser Address	The Modbus multi-drop address of the Recloser in the communications network at the selected Site.
OK	Saves any changes to the Recloser configuration and returns to the Site Address dialog.
Cancel	Cancel all recloser changes and returns to the Site Address dialog.

2.9 Online Help

The online help for JVRCom provides context sensitive Windows help. There are two ways to display the online help for the current context: Help buttons and the <F1> key.

Help Buttons: If there is a Help button on the current dialog, pressing the button will display Windows help pertaining to the dialog.

<F1> Key: Pressing <F1> at any time during execution of JVRCom will display Windows help pertaining to the currently displayed dialog.

2.10 Security

JVRCom provides a single level of security to guard against unauthorized operations. The following operations are included under the security level:

- Setpoint download
- Remote control, including
  - Lockout reset
  - Open switch
  - Close switch
  - Auto reclose toggle
  - Ground protection toggle
  - Alternate pick-up toggle
- Required setpoints in ONLINE mode
- Option setpoints in ONLINE mode
- System value reset control, including
  - Clear event log
  - Clear duty monitor
  - Clear amp demand data
  - Clear operations counter
- Security password dialog

The first time that a secure operation is attempted, the user will be presented with the Security Password dialog.

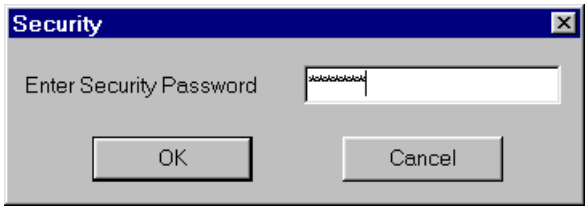

Figure 34. Security Password Dialog

If the user enters the correct security password, the operation continues. If an incorrect password is entered, a message box is displayed indicating an invalid password, and the Security dialog is re-displayed.

Once the security password has been entered correctly, the user has full access to all operations until one of the following events occur:

- JVRCom is exited.
- The Default Security button on the Main Menu dialog is pressed, returning security to the default level.

Changing the security password is a special case in that it always requires that the current password be entered, regardless of the current security level.

3.

Data Files

Data that is uploaded and downloaded is stored in files based on its type. The following types of data files will be associated with JVRCom.

3.1.1 Setpoint File

A setpoint file holds all the values that are displayed and edited in the Required Setpoints and Option Setpoints dialogs. These files are used when setpoints are uploaded or downloaded. The files are also used by the Setpoints dialogs in the OFFLINE mode.

Setpoint files have the extension ".jsp".

3.1.2 System Value File

A system value file holds all the values that are displayed in the System Value dialog, including the information in the event log. The system value files are uploaded from the FM2500 and provide a snapshot of the status of the device at the time of uploading.

The system value files can be displayed by the System Value dialog in the OFFLINE mode.

System value files have the extension ".jsv".

3.1.3 Curve File

A curve file holds the time/current table for a single, user-defined time/current protection curve.

When the setpoint file being downloaded to the FM2500 references a curve file, the curve file corresponding to the curve ID number is downloaded to the FM2500. When setpoints are uploaded from the FM2500, if custom curves are being used, the curve tables in the FM2500 are uploaded and saved in files whose names are derived from their ID numbers.

Curve files have the extension ".jtc".

3.1.4 Default Setpoint File

The default setpoint file holds the default values for the required and option setpoints. This file is installed with the software and is accessed whenever the Reset to Default button is pressed in the Setpoints dialogs.

The default setpoint file is named "DefSetpt.jsd".

4. Communications

This section describes the communications interface between the FM2500 and JVRCom.

4.1 Communications Protocol

All communications with the FM2500 uses the Modbus RTU protocol.

4.2 Communications Media

All communications from the PC uses RS-232. The FM2500 has the option to communicate using either RS-232 or RS-485, which can be multi-dropped.

If JVRCom is to communicate to a network of multi-dropped devices, it must be connected to the network through a modem or a RS-232 to RS-485 converter. Hence, the port configuration and protocol command set is identical from the standpoint of JVRCom regardless of the media used.

4.3 Connection establishment

There are two forms of connections that must be considered, direct and dial-up. The type of connection is determined by the Dial-Up check box in the Site Address dialog for the particular site. If the box is checked, the connection type is dial-up, otherwise it is assumed to be direct.

4.3.1 Direct Connection

A direct connection is one that requires no modem dialing; the PC's communications port is connected directly to the device or the device network. Communications to the FM2500 is through either RS-232 or a converter to the RS-485 network.

4.3.2 Dial-up Connection

A dial-up connection requires that the PC's communications port be connected to a modem. The actual device or device network is also connected to a modem. (Note that it is assumed that the modem is 100% Hayes compatible.)

Connection establishment is started by JVRCom dialing the local modem using the phone number that is configured in the Site Address dialog for the selected site.

5. Software Configuration

The following parameters are used to control the behavior of JVRCom. These parameters can be changed in the Setup dialog.

5.1 Security Password

The security password is required to perform secure operations.

Note that the password dialogs are case sensitive.

The password will be set to **"Joslyn"** when the software is initially installed.

5.2 Default Setpoint File Location

This is the directory where the software will place the setpoint files (.jsp) that are uploaded or saved. The user is able to change the actual location by using the file selection dialogs which are presented whenever a setpoint file is to be accessed. The file selection dialog will always default to this directory.

The setpoint file location will be set to "C:\Program Files\JoslynHi-Voltage\JVRCom\Setpoint" when the software is initially installed.

5.3 Default System Value File Location

This is the directory where the software will place the system value files (.jsv) that are uploaded. The user is able to change the actual location by using the file selection dialogs which are presented whenever a system value file is to be accessed. The file selection dialog will always default to this directory.

The setpoint file location will be set to "C:\Program Files\JoslynHi-Voltage\JVRCom\SysVal" when the software is initially installed.

5.4 Default Curve File Location

This is the directory where the software will place the time/current curve files (.jtc) that are uploaded or saved. The user is able to change the actual location by using the file selection dialogs which are presented whenever a curve file is to be accessed. The file selection dialog will always default to this directory.

The setpoint file location will be set to "C:\Program Files\JoslynHi-Voltage\JVRCom\Curve" when the software is initially installed.

6. Address Book

The Address Book stores the communications configuration of each site and device that is to communicate with the software. The sites and devices can be named intuitive names to make device selection easier for the user.

The following information is stored for each site:

- Site Name - a user defined name
- Comm Port - the port that is to be used for communications (chosen from a combo box)
- Dial-Up Flag - designates that this site requires a modem dial-up connection
- Phone Number - the phone number to dial for a dial-up connection
- Device Table - a list of devices that are to be accessed through this site

The following information is stored for each device in a site's device table:

- Device Name - a user defined name
- Node Address - the communications address of the device

7. Software Installation

JVRCom is installed from floppy disk using an installation program. The installation program is started by running *A:\setup*. The installation will perform the following operations.

1. The home directory will be set to "C:\Program Files\JoslynHi-Voltage\JVRCom".
2. Unpack and copy all necessary files to the home directory, including
    - Program files
    - Help files
    - Default setpoint file "DefSetpt.jsd"
    - Empty address book file "Address.jab"
3. Set the System Registry information for the initial software configuration.
4. Create a program icon in the program manager / start menu.

8. Software UnInstallation

JVRCom can be removed from the system using the Add/Remove Programs utility in the Control Panel.