



siteVIEW Enterprise 2.0

Distributed Monitoring Software

User Manual: FleetSync™ Option

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PREFACE

Hardware and software described in this document is subject to on going development and improvement. Consequently there may be minor discrepancies between the information in this document and the performance and design of the hardware and software.

The siteVIEW Enterprise System is designed for flexibility of use and installation and is therefore highly configurable and should only be installed by an appropriately trained technician.

The user should ascertain that this product is suitable for the intended application. This document assumes that the reader is familiar with the Kenwood product, its operation and programming. TASC Systems Inc. accepts no responsibility, liability, for misuse of, or damage resulting from the misuse of the product described herein.

This document describes the installation and operation of TASC Systems' *siteVIEW Enterprise 2.0* distributed monitoring software that is specific to the Kenwood FleetSync™ protocol. The FleetSync™ protocol is copyright the Kenwood Communications Corporation and is used under license agreement. All rights reserved.

Refer to the siteVIEW Enterprise 2.0 User Manual (document number 050-015-0050) for detailed instructions and examples of use of the siteVIEW Enterprise 2.0 system.

The TASC siteCOMMANDER hardware device is the only device that is capable of using the FleetSync protocol to communicate with the siteVIEW Enterprise system.

Refer to the siteCOMMANDER User Manual (document number 050-015-0002) for detailed instructions and examples of use of the siteCOMMANDER.



Before connecting any equipment to siteVIEW Enterprise 2.0, it is advised to read the siteVIEW Enterprise 2.0 User Manual and also this manual in their entirety.

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REVISION HISTORY

Revision	Date	Changes
050-015-0051R00	April 2009	<ul style="list-style-type: none"><li data-bbox="829 474 1019 499">• First Release

1. INTRODUCTION

1.1.1. TASC Security Key

This manual details the setup and use of the siteVIEW Enterprise 2.0 system for use with the FleetSync™ protocol.

The TASC siteVIEW Enterprise 2.0 security key must be pre-programmed to enable the FleetSync™ protocol in order for FleetSync™ to be enabled as an option in the siteVIEW Enterprise 2.0 system.

To see which options are enabled in a siteVIEW system, launch the siteVIEW client software application and select “Help->About” from the main menu and see which options the *Data Handler Server* is configured with. If

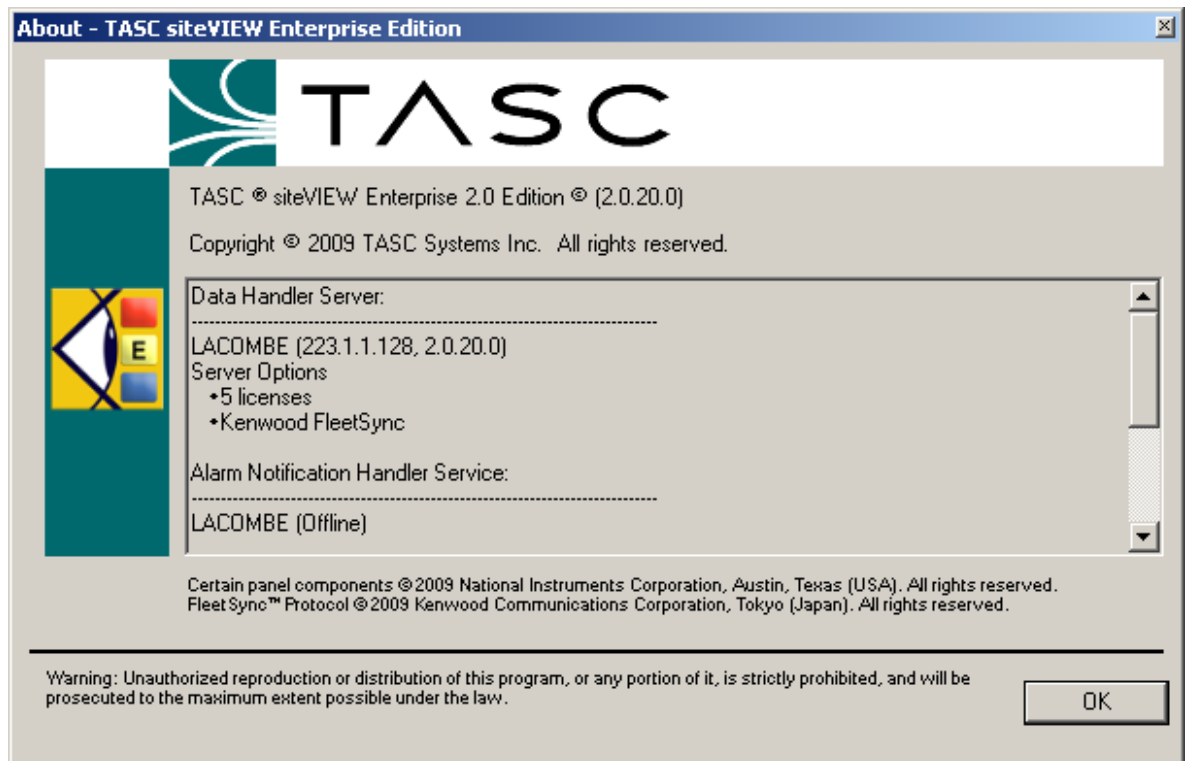


Figure 1 – About TASC siteVIEW Enterprise Edition

“Kenwood FleetSync™” does not appear in the list, then the system will not display any FleetSync™ related settings.

1.1.2. siteCOMMANDER Hardware

The TASC siteCOMMANDER is a hardware device that can be used in conjunction with siteVIEW Enterprise. The device has its own firmware configuration that can be changed either using the siteCOMMANDER Configuration Utility (SCCU) or by using siteVIEW Enterprise.

Some highlights of the siteCOMMANDER features include:

- Monitoring of 8 built in contact (digital) inputs
- Monitoring of 8 built in analog inputs
- Monitoring and control of 8 built in digital outputs
- Support for adding and monitoring TASC Temperature Sensors
- Device logging
- Low power mode
- Connectivity via RS232 and FFSK
- Kenwood FleetSync™ Protocol

2. SYSTEM CONFIGURATION

2.1. Communication Ports

2.1.1. Adding A New FleetSync™ Communication Port

To add and configure an available COM port for siteVIEW monitoring, select “Edit->Add New Communications Port” from the main menu. This launches the *Connection Wizard*.

In the first stage of the *Connection Wizard* form, select the COM Port type. Set the port type to be *Serial* and then a list of available serial communication ports will be displayed in the port drop down list. Select the port and choose the FleetSync™ protocol.

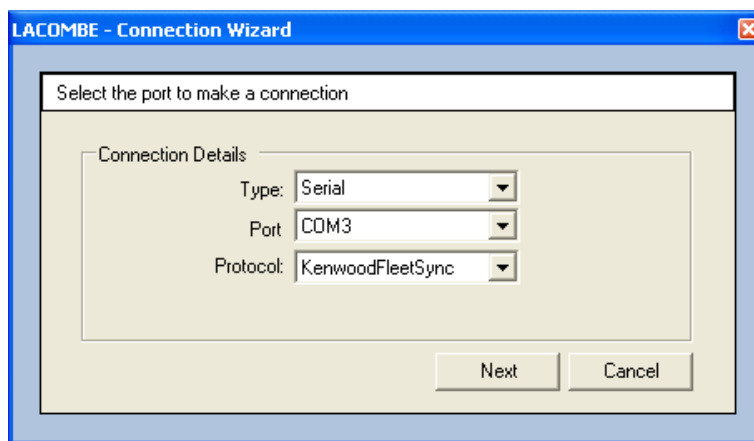


Figure 2 – Connection Wizard – Serial Details

After entering the required information, select next.

Enter the port timing parameters. The *Packet Timeout* is entered in milliseconds and is the maximum amount of time a COM Port should wait for a response after sending out a request. The *Inter-Byte Timeout* is also entered in milliseconds and is the maximum time a COM Port should wait between incoming data bytes before the incoming data is considered complete.

If COM Port communication is timing out too often, it may be that the packet timeout is too short. If communication is taking too long to complete, try reducing the packet timeout.

If COM Port communication results in abnormally high communication errors, it may be that the inter-byte timeout is too low. Setting the inter-byte timeout too high also results in the packet timeout taking too long.

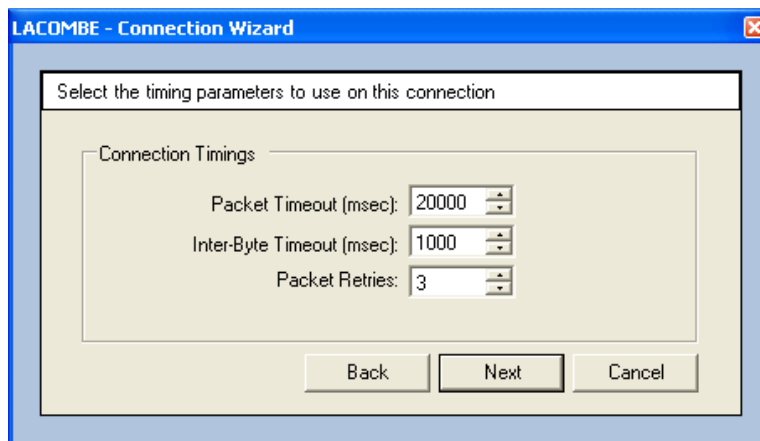


Figure 3 – Connection Wizard – Timings

Change the Packet Retries to specify the number of times a port should retry packets that have no response.

Experiment with the timings until you achieve the fastest and most reliable communication.

Defaults: Packet Timeout 20000 msec; Inter-byte Timeout 1000 msec; Packet Retries 3.

COM Port Configuration	Packet Timeout (msecs)	Inter-Byte Timeout (msecs)
Ethernet	500-1,500	50-100
Serial	1,000-3,000	50-200
Serial with PSTN Modem	2,000-5,000	100-300
Serial with FleetSync™ Radios	20,000-30,000	500-2,000
Serial with Other Radios	Depends on the technology used and the number of radio hops.	Depends on the technology used and the number of radio hops.

Table 1 – Recommended Communication Timing Parameters

After select the timing parameters, select next. Choose a name for the connection and a description to remind users of useful information about the connection and then select finish to add the COM Port.

Figure 4 – Connection Wizard – Identification

2.1.2. Configuring an Existing Communication Port

To view and change information pertaining to a particular COM port on a *Communication Service*, select the desired COM port node on the Tree View and then select “Edit->Properties” from the main menu. This launches the Connection Details form.

Figure 5 - Connection Details

Select a name for the COM port. The name will be how siteVIEW refers to this communication port throughout the application.



Note: Existing archived log files will still contain the old port name.

The description properties of both the COM port and device detail forms are displayed when a user hovers the mouse above a Site Panel control that represents the COM port or device.

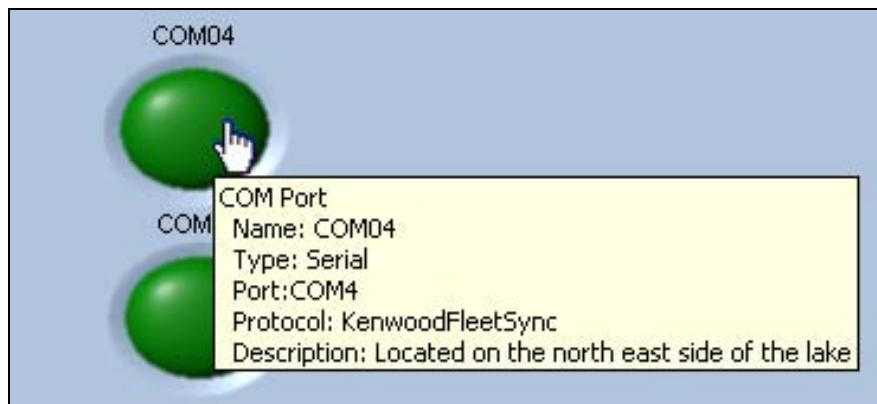


Figure 6 – COM Port Panel Component

Changes can only be made to port settings if the port is offline or by closing the port by disabling monitoring.

The COM port field contains a list of communication ports available on the *Communication Service*.

The Protocol drop down field sets the protocol, which is used to communicate on the communication port. By default this protocol is set to BinMP. Kenwood FleetSync™ is available as an Add-On feature from TASC.

Two generic COM port-timing parameters exist. The packet timeout is the time the *Communication Service* will wait for a reply after transmitting a communication packet to a device. When the *Communication Service* is receiving a response packet, the packet bytes are received one at a time. The inter-byte timeout is the time in which the *Communication Service* should wait between packet bytes, before deciding the packet has failed.

By increasing the packet timeout and the inter-byte timeout, siteVIEW is more likely to receive a packet. If siteVIEW needs to frequently retry packet transmissions, it is possible that one or both of these timeout values needs to be increased. If siteVIEW frequently encounters communication errors, it is possible that the inter-byte timeout needs to be increased. If these timeout values are too high, siteVIEW communication may seem to take an unusually long time. Achieving the correct balance of timing values ensures that packets are handled efficiently.

The Packet Retry count is the number of times that siteVIEW will reattempt a failed communication attempt.

The Channel Busy Retry count is the number of times that siteVIEW will reattempt a communication attempt that failed because the FleetSync™ radio returned an error stating that the channel was busy.

Two FleetSync™ specific timing parameters also exist. The Radio ACK-Wait Time is the time that siteVIEW will wait for a radio acknowledgement after sending a packet before sending the next packet. If the acknowledgement is returned before the Ack-Wait Time, then siteVIEW will continue to send messages. The Packet Turn-Around Delay is the amount of time since the last transaction that siteVIEW will wait before sending another packet. This parameter is intended to give the radio some recovery time. The FleetSync™ 80 Series radios require more turn-around time than the newer FleetSync™ radios. Without this delay, the radios may begin to behave poorly. The FleetSync™ 180 Series radios, and later, have a better turn-around time and can get away with almost no turn-around time.

2.2. Devices

2.2.1. Adding a New Device

Each *Communication Service* COM port is capable of communicating to a network of hardware devices. To add and configure a device for siteVIEW monitoring, first highlight the COM Port that connects the network of hardware devices to the *Communication Service* and select “Edit->New Device” from the main menu. This launches the *Device Monitoring Wizard*.

First, the device details form will display the device description page. Enter the device type and any addressing information and then select next. The correct addressing information must be selected in order for proper communication to occur.

The screenshot shows a window titled "Device Monitoring Wizard - COM04". Inside the window, there is a section titled "Device Details" containing four dropdown menus: "Device Type" (selected: sC), "Device COM Port" (selected: SerialPort2), "Module Type" (selected: SlaveNoMapping), and "Address" (selected: 3). At the bottom right of the window are two buttons: "Next" and "Cancel".

Figure 7 – Device Monitoring Wizard - Details

Next choose the device name and description (optional). The device name will be used by siteVIEW to make reference to the device. The description appears when a user hovers over the Site Panel control that represents the device.

Figure 8 – Device Monitoring Wizard - Identification

Next configure the radio address of the radio that is connected to the device. Select a valid Fleet ID and Radio ID. The Fleet ID must be between 100 and 349. Where the Radio ID must be between 1000 and 4999.

Figure 9 – Device Monitoring Wizard – FleetSync™ Connection Details

After entering the radio information, select the Finish button to add the device. siteVIEW will then attempt to communicate with the device by polling the device for its status and configuration. If any of the communication is incomplete, an indication of this will be displayed in the site navigation tree, beside the device's name.

siteVIEW will not allow configuration changes to be made on the device until the entire device configuration has been successfully downloaded. From that point on, siteVIEW assumes that it is the only application that has access to the device. If changes are later made to the device using a configuration tool such as the siteCOMMANDER Configuration Utility (SCCU), siteVIEW's configuration for the device will be out of date and this may result in

erroneous data displayed in siteVIEW. To bring siteVIEW back up to date, perform a complete refresh from siteVIEW for the modified device.

2.2.2. Device Details

After communication with a device has been successfully established, additional device configuration is made available. Selecting “Edit->Properties” from the main menu opens the device details form. The device details form provides the ability to configure a device.

The device details form has multiple tabs. The available tabs differ from device to device depending on the device’s firmware version, the available siteVIEW add-ons, and the type of device. siteVIEW supports three different TASC devices, but only the TASC siteCOMMANDER is capable of using the FleetSync™ protocol.

The Communication tab contains the Fleet ID and Radio ID of the radio that is attached to the device. This address must be correct in order for siteVIEW to properly send and data to the siteCOMMANDER.

The siteCOMMANDER should use the COM Port named “Serial Port 2” as its primary transmission port when it is communicating with siteVIEW.

The screenshot displays the 'Device Details - TASC siteVIEW Enterprise Edition' window with the 'Communication' tab selected. The 'Device Addressing' section contains the following settings: Device COM Port (SerialPort2), Module Type (SlaveNoMapping), Address (1), Fleet ID (100), and Radio ID (1000). The 'Port Configuration' section is active, showing Baud Rate (9600), Protocol (KenwoodFleetS), Inter-Byte Timeout (msec) (500), Packet Retry Count (3), and Packet Retry Timeout (msec) (1000). The 'Serial Port 2' tab is selected. At the bottom, there is a checkbox for 'Only upload changed settings' and buttons for 'OK', 'Apply', and 'Cancel'.

Figure 10 – Device Details – Communication Tab

The Port Configuration group box contains timing and protocol parameters for the remote device. Make sure the protocol is set to Kenwood FleetSync™ for Serial Port 2 and BNMap for Serial Port 1, which is used to configure the device locally.

The Kenwood FleetSync™ tab contains radio information for where the device should send new status messages. In order for the device to properly send new status messages to siteVIEW, enable Radio 1, enable siteVIEW Monitoring on Radio 1 and enter the Fleet ID and Radio ID of the radio that is connected to siteVIEW. The Fleet ID and Radio ID must be correct in order for the device to properly send messages to the radio.

Radios 2 and 3 can also be used to send messages to other Kenwood FleetSync™ radios, such as hand held portable radios. To configure the content of the messages that the siteCOMMANDER sends, use the siteCOMMANDER Configuration Utility (SCCU). Radio 1 can also be used to send messages to the hand held portable radios, but siteVIEW monitoring must first be disabled because the message that is sent to siteVIEW is in a different format than what is sent to the radio.

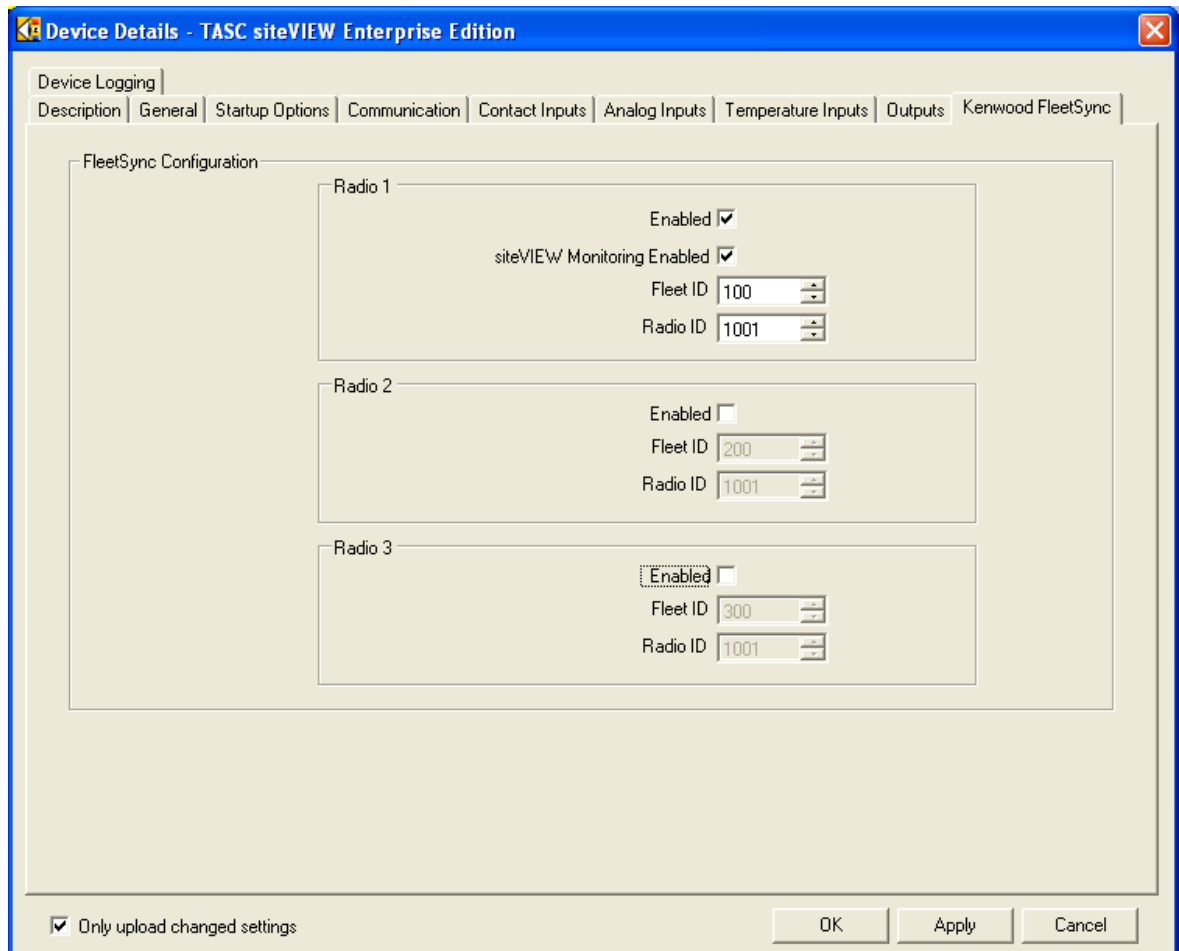


Figure 11 – Device Details – Kenwood FleetSync™ Tab

siteVIEW can also be configured to send messages to the hand held portable radios. For more information see the next section in this manual entitled Alarm Conditions.



WARNING: Making configuration changes to a device will cause the device to restart its firmware. As a result the device outputs will turn off. This could unintentionally activate/deactivate equipment located at the remote site without warning. It is the customer's responsibility to ensure personnel or property is not damaged.

2.3. Alarm Conditions

Alarm conditions can be configured for individual inputs, outputs, or devices.

Alarm conditions set boundaries for inputs or outputs, allowing the user to be notified when the value goes outside this boundary. When the value is outside the alarm conditions boundary, the alarm has then been triggered and the user is notified. Possible alarm status values are Ceased, CeasedAndAcknowledged, CeasedAndCleared, Active, ActiveAndAcknowledged and ActiveAndCleared.

Alarm conditions can also be configured to alarm when a device is unresponsive.

A user can then manage alarms by taking necessary actions as defined by his procedures or the instructions associated with the alarm.

There are two different ways to setup FleetSync™ alarm notification within siteVIEW: by attaching alarm recipients to specific alarm conditions, or it can be done globally, by selecting certain radios to receive all messages of a certain severity.

2.3.1. Alarm Specific Reporting Options

See the siteVIEW Enterprise 2.0 User Manual (050-015-0050) for information about adding a user as a recipient to a specific alarm condition.

See User Administration Section 3. on page 21 of this manual to see how to configure the radio that is associated to the specific user that.

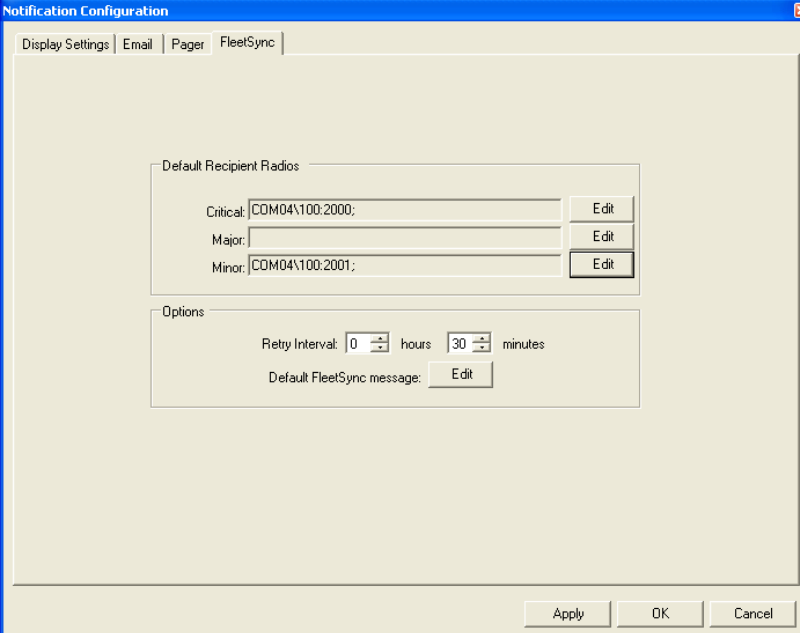
If the user is attached as a recipient to the alarm condition and if the user's radio addressing is correctly configured, they will receive messages from siteVIEW when alarms statuses change.

2.3.2. Global Alarm Notification Settings

Selecting "Tools-> Notification Settings" from the main menu opens the Notification Configuration Form. From this form, global alarm notification options may be set that apply to all alarm conditions.

FleetSync™

Selecting the “FleetSync™” tab allows a user to configure the port to send outgoing messages, the retry interval, the default FleetSync™ message template and the default recipient radio addresses.



The screenshot shows a window titled "Notification Configuration" with a blue title bar and a close button. The window has four tabs: "Display Settings", "Email", "Pager", and "FleetSync", with "FleetSync" being the active tab. The main content area is divided into two sections: "Default Recipient Radios" and "Options".

Default Recipient Radios: This section contains three rows of text boxes, each with an "Edit" button to its right. The first row is labeled "Critical:" and contains the text "COM04\100:2000;". The second row is labeled "Major:" and is empty. The third row is labeled "Minor:" and contains the text "COM04\100:2001;".

Options: This section contains a "Retry Interval:" label followed by two spinners: one for "hours" (set to 0) and one for "minutes" (set to 30). Below this is a "Default FleetSync message:" label followed by an "Edit" button.

At the bottom of the window, there are three buttons: "Apply", "OK", and "Cancel".

Figure 12 – Notification Configuration – FleetSync™

The default recipient FleetSync™ radio addresses allows for system wide FleetSync™ messages to be sent based on the criticality of the alarm that initiated the alarm message. Each criticality can have one or more FleetSync™ radios. Pressing the corresponding “Edit” buttons opens the FleetSync™ Radio Selection form.

The screenshot shows a dialog box titled "FleetSync Radio Selection". It has a blue title bar with a close button. The main area is divided into two sections. The top section, labeled "Radio Details", contains three input fields: "Fleet ID" with the value "000", "Radio ID" with the value "0000", and "Port" with a dropdown menu showing "--select a FleetSync port--". Below these fields is an "Add" button. The bottom section is a list box containing the text "COM04 \ 100:2000". At the bottom of the dialog are "OK" and "Cancel" buttons.

Figure 13 – Notification Configuration – FleetSync™ Radio Selection

Configure the Fleet ID and Radio ID of the radio that is to receive alarm text messages from siteVIEW. The port is the outgoing FleetSync™ COM Port that will be used to send FleetSync™ messages to the FleetSync™ radio. Make sure the radio that is attached to the selected port is within range of the radio that messages are to be sent to. Press the “Add” button to add the radio to the list. Press the “OK” button to accept the radio addresses and return to the notification configuration form.

The retry interval indicates how often the FleetSync™ message will be resent. The FleetSync™ messages will continue to be sent to the recipient until the alarm has ceased or been acknowledged or cleared.

Pressing the default FleetSync™ message “Edit” button opens the Notification Message editor. From the Notification Message editor, the siteVIEW alarm notification FleetSync™ message can be modified. The upper portion of the form can be edited and the bottom portion of the form displays an example of what the alarm FleetSync™ message will look like. Rows of buttons are located across the center of the form. When any of the buttons are pressed, a predefined field tag is inserted into the message. For example, pressing the button labeled “Alarm ID” inserts the alarm id tag into the message in the form of “<ALARM_ID>.” This tag is a placeholder that gets replaced with the actual alarm id before the FleetSync™ message is sent.

Figure 14 – Default FleetSync™ Message Editor

The FleetSync™ text messages are limited to a maximum of 39 characters.

Press the “OK” button to accept the default FleetSync™ message and to return to the notification configuration form.

Press the “Apply” or “OK” button to accept the changes to the global FleetSync™ notification configuration.

3. USER ADMINISTRATION

3.1. Managing User Accounts

To modify siteVIEW Enterprise user accounts open the user administration form, which can be viewed by selecting “Connect->Accounts->User Administration” from the main menu.

The screenshot shows the 'User Administration' window. On the left is a table with columns: Username, Rights, First Name, and Last Name. The table contains two rows: 'svadmin' with rights 'Administra...' and 'user' with rights 'User'. On the right is a form for editing a user. The form has fields for First Name (Test), Last Name (User), Username (testuser), Rights (User), Enabled (checked), Password (masked), and Confirm Password (masked). Below these is a section for 'FleetSync' with tabs for 'Email' and 'FleetSync'. The 'FleetSync' tab is active, showing 'Enabled' checked, 'Fleet ID' (101), 'Radio ID' (1000), and 'Port' (COM04). At the bottom are buttons for 'Apply', 'New', 'Delete', 'History', and 'Close'.

Username	Rights	First Name	Last Name
svadmin	Administra...		
user	User		

Figure 15 - User Administration – Linking A Radio To A User

To associate a specific radio to a user, select an existing user. Select the FleetSync™ tab, check the Enabled box and configure the radio information. Enter the Fleet ID and Radio ID that the user will have access to. Also, select the FleetSync™ port that siteVIEW should use to send messages to the specified radio. The port should be one that is within range of the user's radio so that it can properly send a message to the user. Finally press the Apply button to save the changes.

If the user is then added as a recipient of an alarm condition, the user will receive text messages to their FleetSync™ portable radio whenever the alarm status changes.

4. SENDING TEXT MESSAGES FROM siteVIEW

siteVIEW can send text messages to FleetSync™ enabled radios. To send a FleetSync™ text message, select a FleetSync™ enabled COM Port from the siteVIEW network tree list and then select Edit->Text Message from the Main Menu. This will open the text message form.

Specify the Fleet ID, Radio ID and the message to send and then press the “Send” button. If the specified radio is within range of the selected port the message should appear on the LCD screen of the radio.

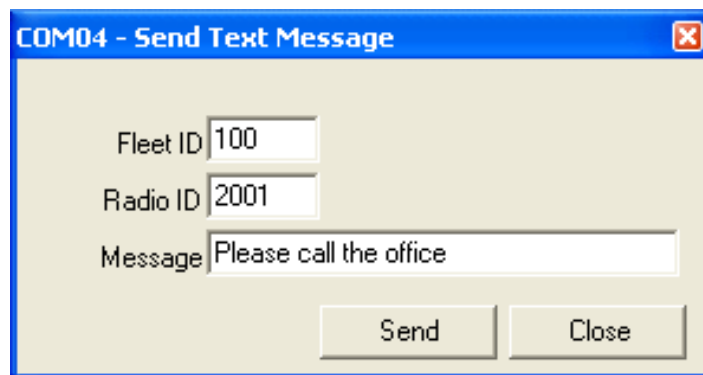


Figure 16 – Manually Sending FleetSync™ Text Messages

5. SETTING UP KENWOOD FLEETSYNC™ RADIOS

To configure the Kenwood FleetSync™ radios, use the Kenwood KPG software.

Following are the recommended settings for radios in a siteVIEW system. Note, the software you use may differ based on the version of KPG that is used and the version of radio. These settings were taken from the TK8180-Mobile device and using the KPG-89D version of software. Each radio needs its own unique Fleet ID and Radio ID.

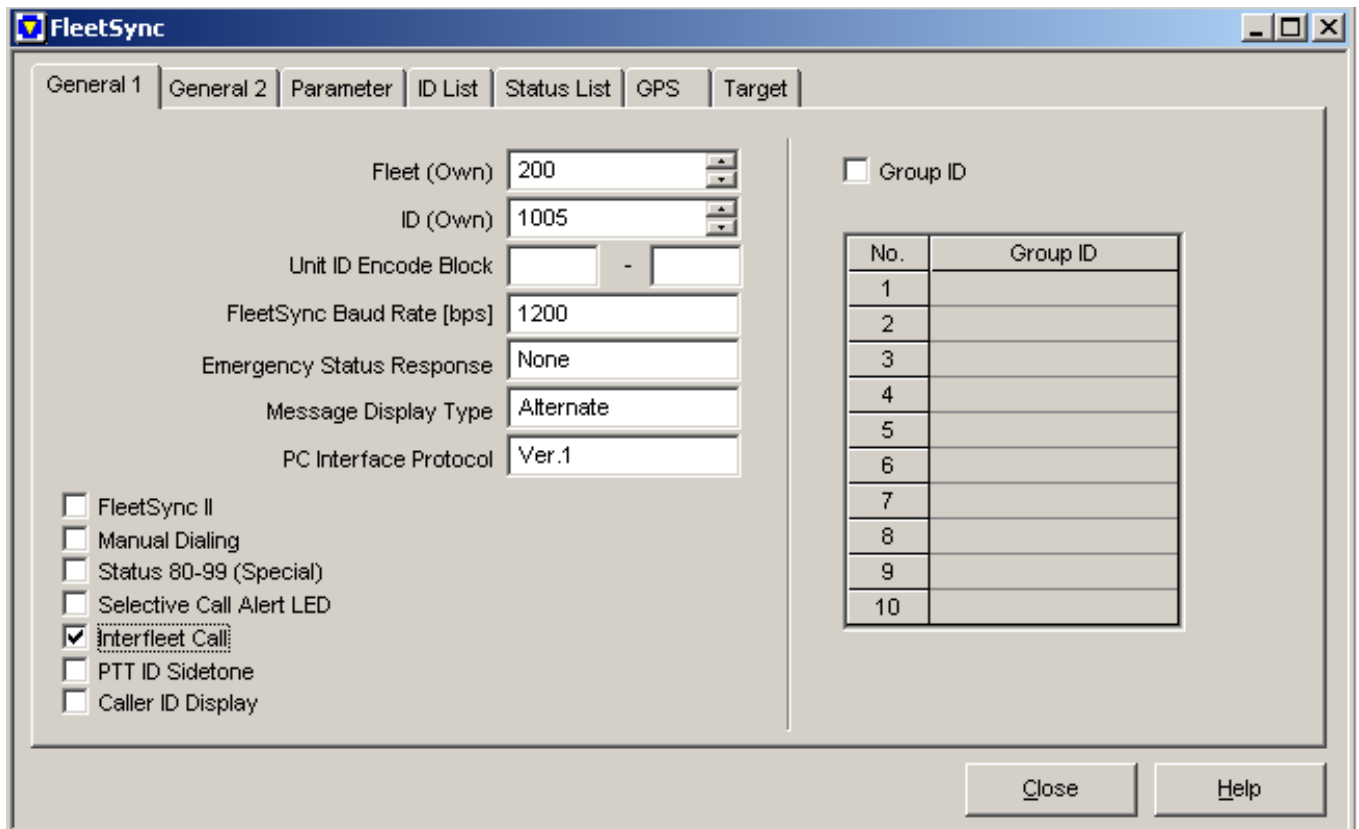


Figure 17 – Kenwood FleetSync™ KPG – General 1 Tab

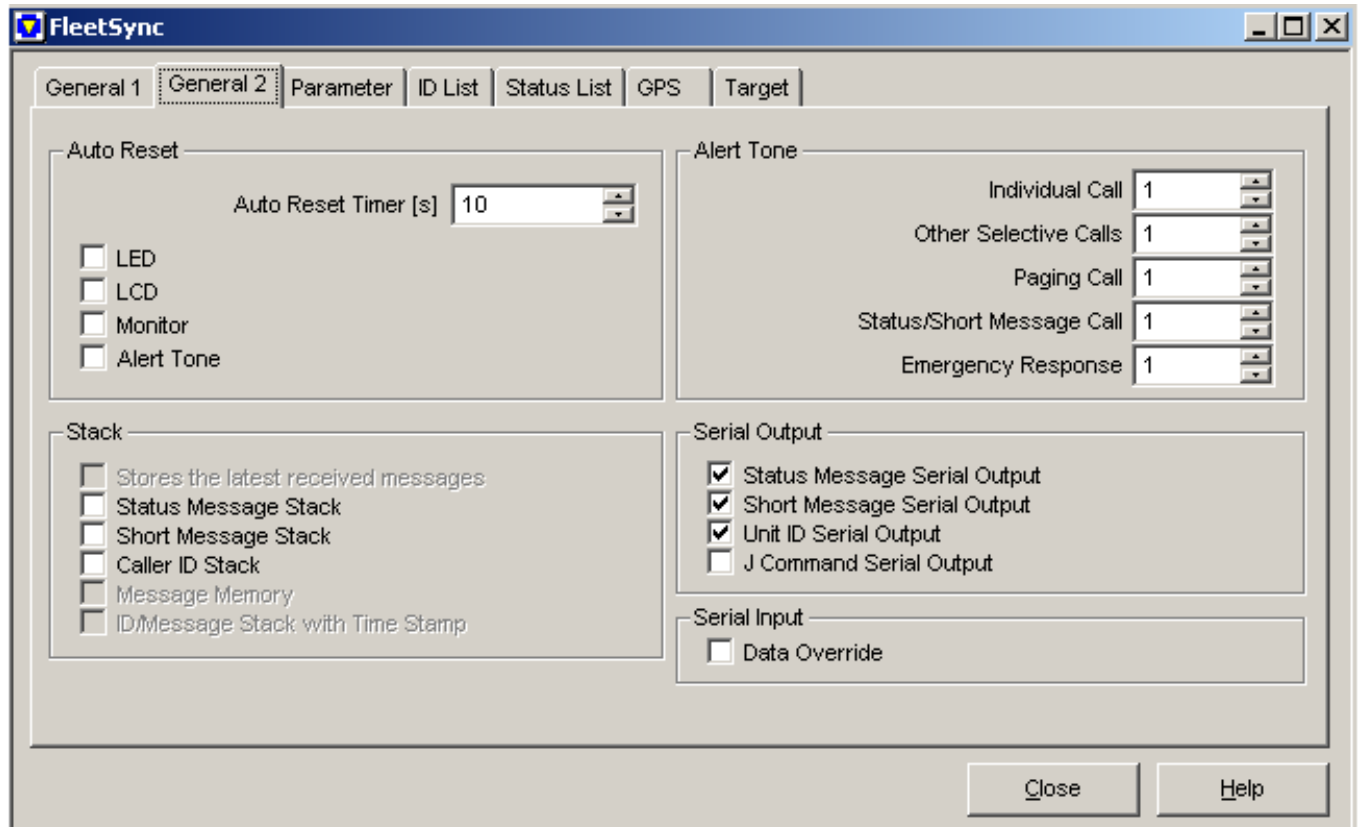


Figure 18 – Kenwood FleetSync™ KPG – General 2 Tab

Make sure to disable the “J Command Serial Output.” This will disable the J-Code and R-Code messages that are sent from the radios, because these messages conflict with the siteVIEW system.

Enable the “Short Message Stack” for hand held portable radios so that technicians can receive messages from siteVIEW. However, disable this option for the device and siteVIEW radios.

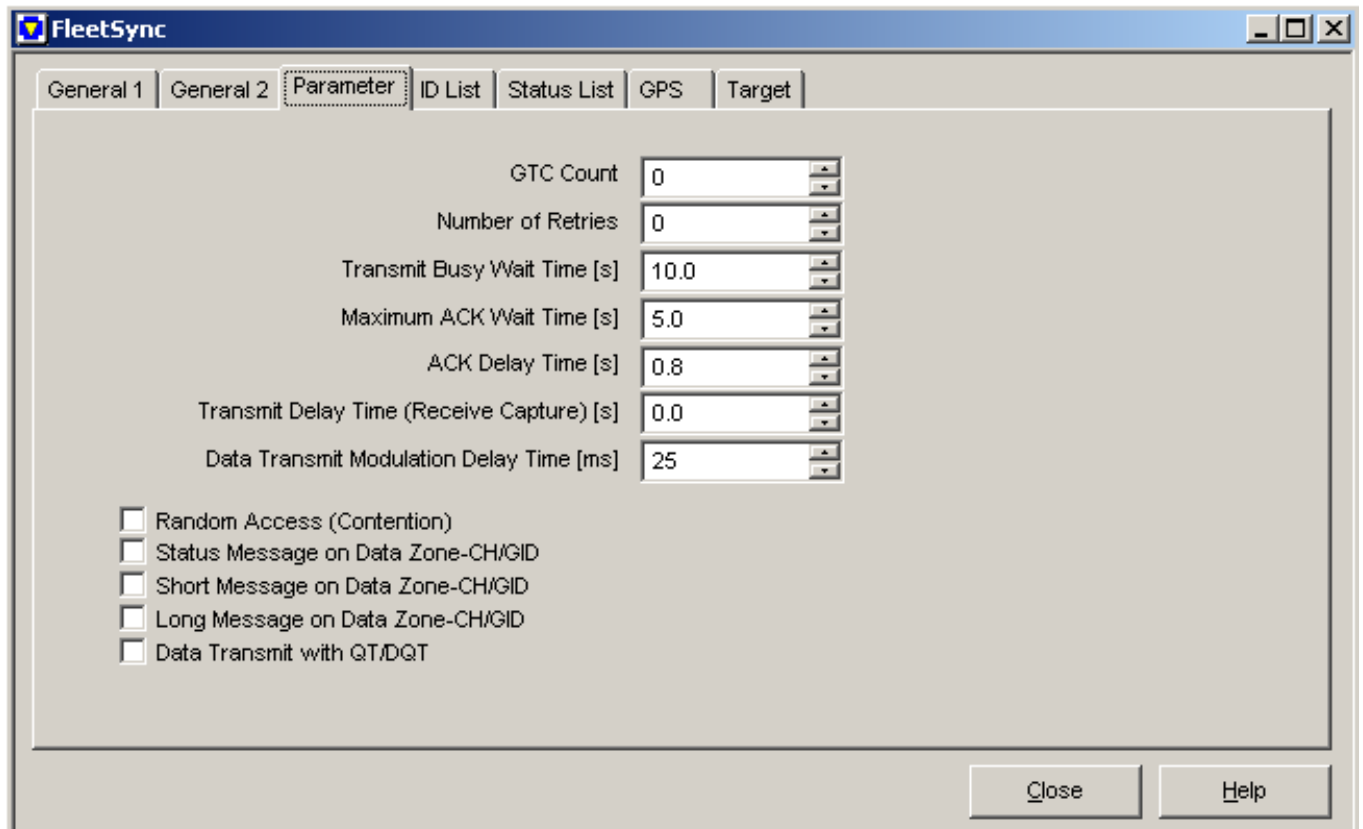


Figure 19 – Kenwood FleetSync™ KPG – Parameter Tab