FIREHOUSE Software®

A C S®

FH CAD Monitor Installation and Introduction Guide

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Chapter 1

CAD Monitor Installation and Activation

The FIREHOUSE Software CAD Monitor provides an interface between Computer Aided Dispatch (CAD) systems and FIREHOUSE Software. FH CAD Monitor can be configured to run as a desktop application or as a service. This chapter provides the instructions for installing and activating FH CAD Monitor, including general hardware requirements for the workstation/server.

We distribute evaluation copies so you can freely evaluate this program under actual service conditions. Install FH CAD Monitor on an appropriate computer at your department. The installation program creates a fully operational system to evaluate CAD Monitor for 30 days after installation.

Hardware and Software Requirements

The following are minimum hardware and software requirements for installation:

- A Pentium class workstation running Windows 2000 or Windows XP, OR a server running Windows 2000 or 2003 Server.
- 128 MB or more RAM. 256MB or higher is recommended.
- A properly configured ODBC, XML, or text data source that allows (at minimum) read access to your CAD data. You may need to consult your CAD vendor to complete this requirement.
- FH Enterprise users: A local installation of the FH Enterprise client with a properly configured remote database connection or an ODBC data source that allows read/write access to your FH Enterprise database.
- FIREHOUSE Software Standard users: Access to the FIREHOUSE Software database (including lookup table information) and System database.

FH CAD Monitor is NOT currently support on any Windows 64 bit operating system.

Installing FH CAD Monitor

You must install FH CAD Monitor for each agency that interfaces to the CAD data. During the installation process, you have three options:

- Install FH CAD Monitor components without activating the monitor (to run the interface, the FH CAD Monitor desktop application must be opened manually).
- Automatically enable the FH CAD Monitor desktop application when a user launches Windows.

- Automatically enable the FH CAD Monitor service to run in the background whenever the workstation is on.

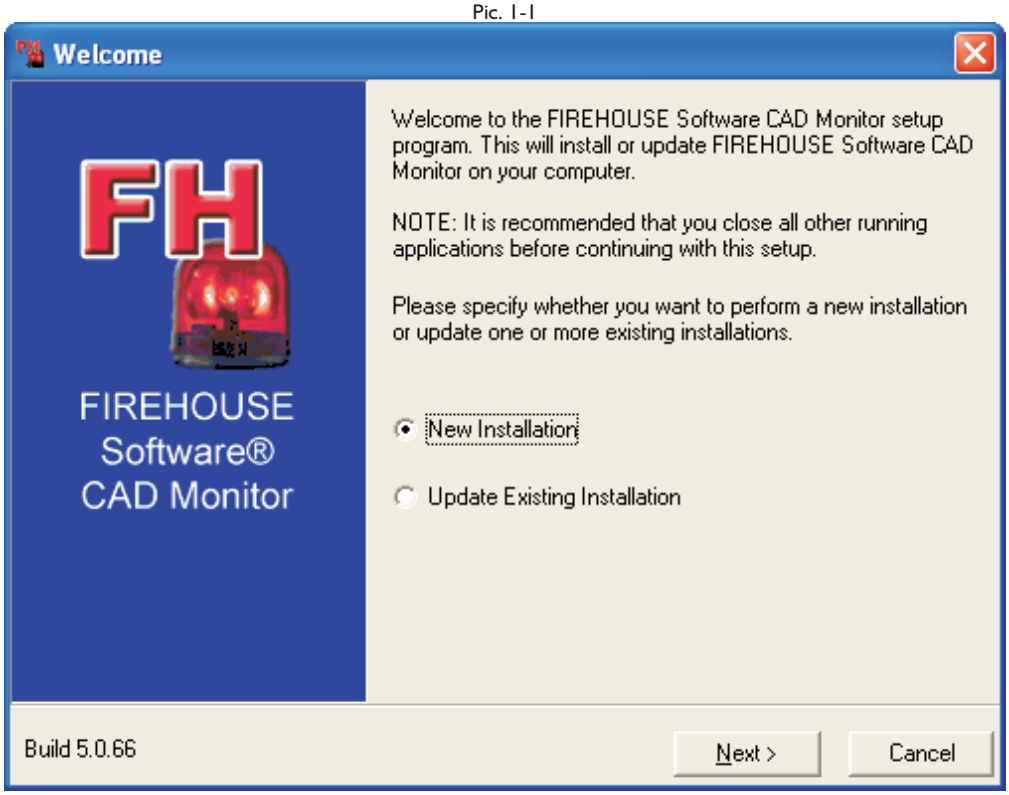
If FH CAD Monitor has previously been installed, you will need to perform the FH CAD Monitor update.

To Install FH CAD Monitor as a New Installation

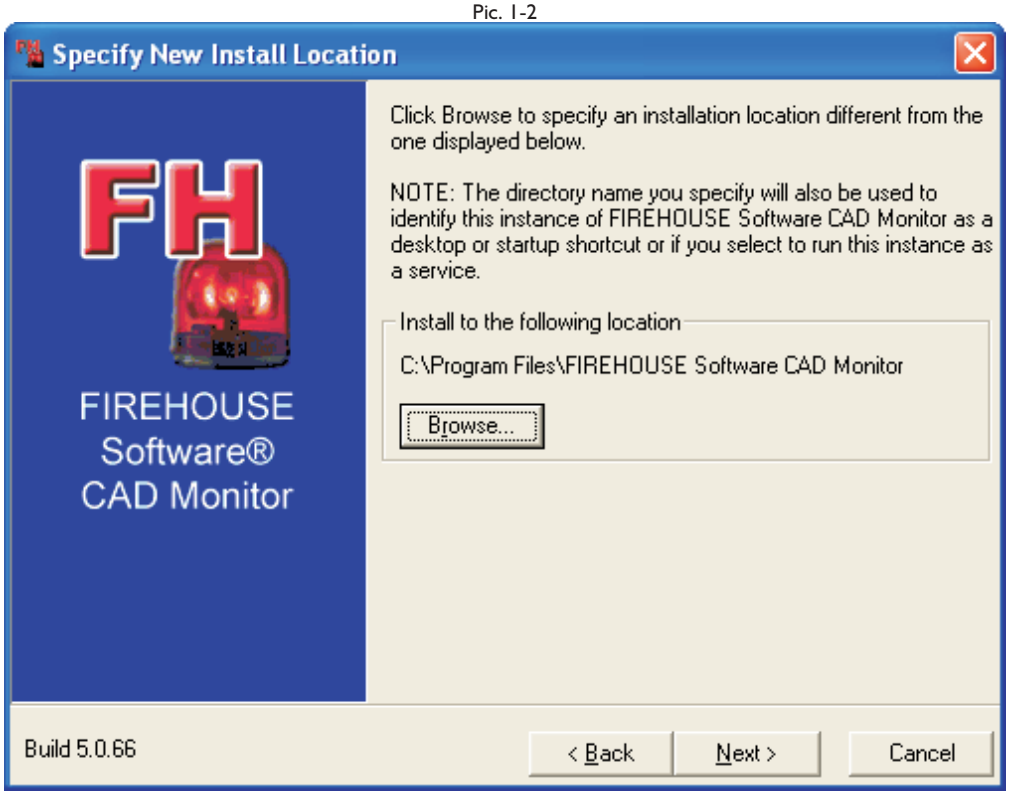
Log on to the computer as a Windows administrator, then complete the following steps:

- From the Windows **Start** menu, select **Control Panel**.
- Select **Add or Remove Programs**. The **Add or Remove Programs** form is displayed.
- Press **Add New Programs**, then press **CD or Floppy**. The **Install Program from Floppy Disk or CD-ROM** form is displayed.
- Insert the FH CAD Monitor CD then press **Next>**.
- If **FHCAD_Setup.exe** is not located, press **Browse...**, locate **FHCAD_Setup.exe**, then press **Open**.
- Press **Finish**. The **Welcome** form is displayed (Pic. 1-1).
- Select *New Installation* then press **Next>**.

Pic. 1-1



Pic. 1-2



- Note the installation location (Pic. 1-2).
  - Generally accept the default location for single agency installations.
  - If you are installing multiple instances of FH CAD Monitor because more than one agency is interfacing to the CAD data, press **Browse...** and select a unique location for each agency. We recommend using a descriptive folder name to distinguish between the agency's FH CAD Monitor installation. You will need to repeat the installation for each agency interfacing to CAD data.

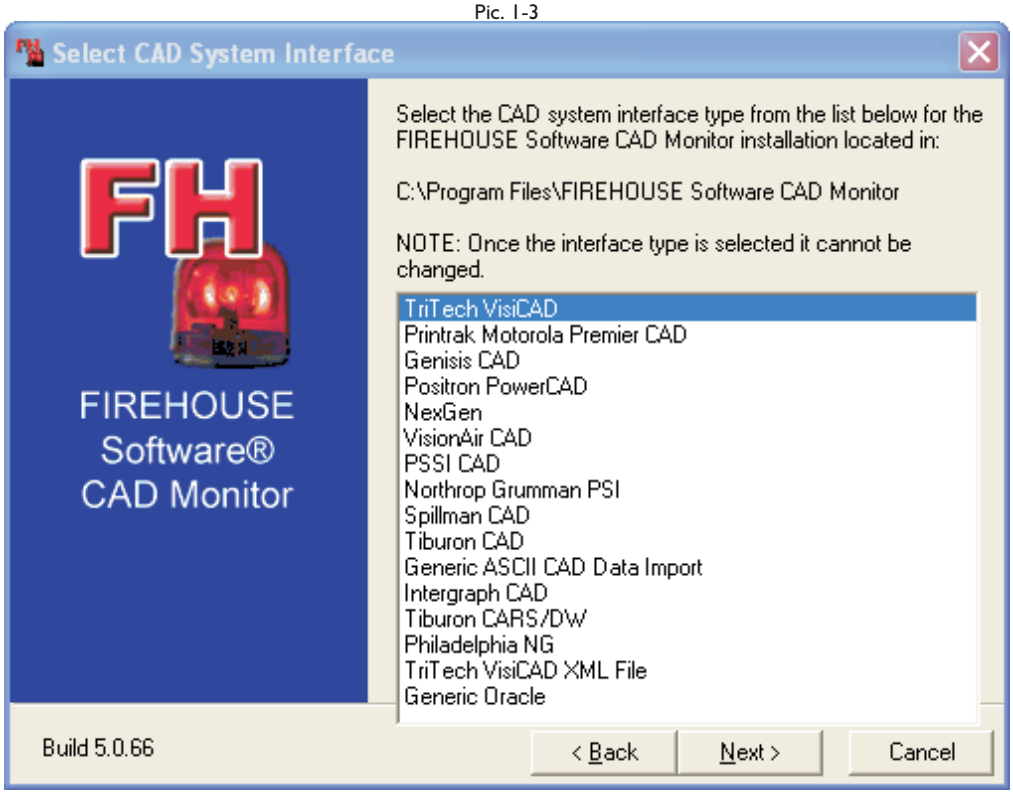
NOTICE
Licensing

You must be licensed for each instance of FH CAD Monitor.

- Press **Next>**. Information related to the installation is displayed.

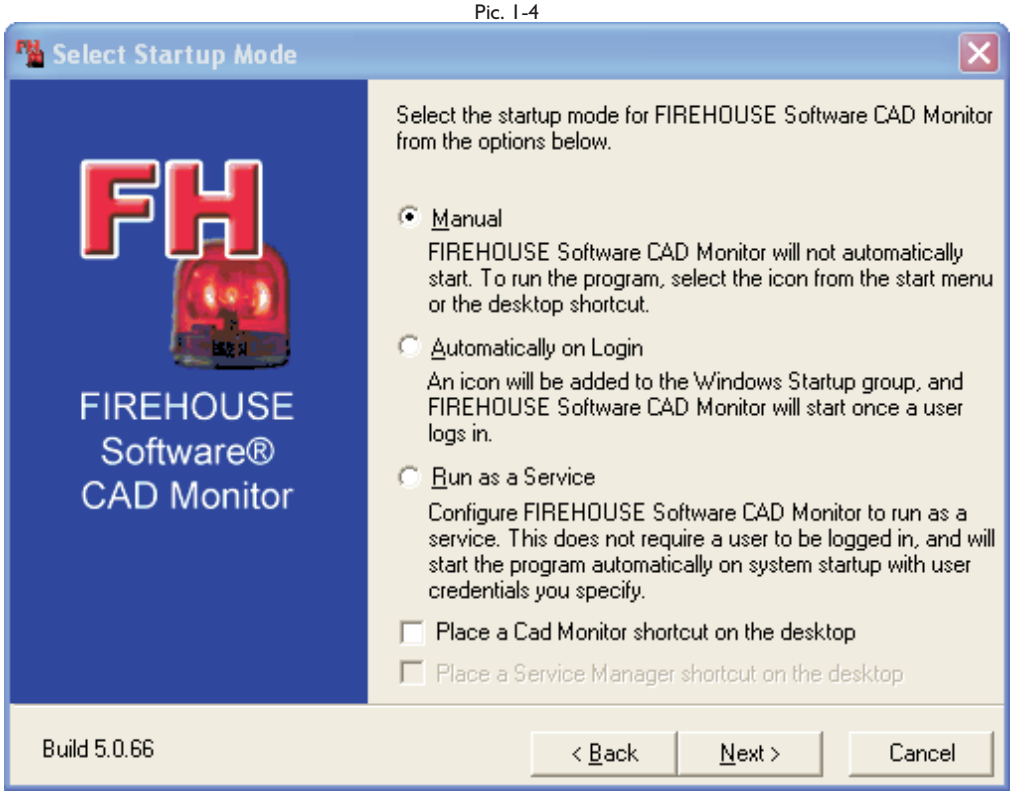
- Press **Next>**. Select the CAD system type to interface with (Pic. 1-3). If your CAD vendor developed a generic ASCII export or you plan to have your CAD system output a generic ASCII export file, select the 'Generic ASCII CAD Data Import' option. Press **Next>**.

Pic. 1-3



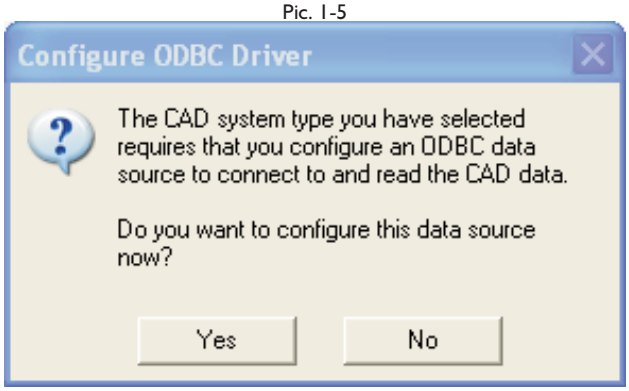
- Select the startup mode (Pic. 1-4):
  - Select *Manual* to install FH CAD Monitor as an inactive application. To start FH CAD Monitor and initiate the interface, you will need to access FH CAD Monitor via the Windows **Start** menu or via the FH CAD Monitor desktop icon.
  - Select *Automatically on Login* to automatically launch the FH CAD Monitor application when a user logs in to Windows.
  - Select *Run as a Service* to run FH CAD Monitor as a Windows service. The FH CAD Monitor service runs in the background whenever the workstation is on. The installation process will install the FH CAD Monitor Service Manager as well.
  - Check *Place a shortcut on the desktop* to add a shortcut to the FH CAD Monitor desktop application to the workstation's desktop.
  - Check *Place a Service Manager shortcut on the desktop* to add a shortcut to the FH Service Manager to the workstation's desktop.

Pic. 1-4



- Press **Next>**.
  - If *Run as a Service* was selected in the previous step, type the *Login Account* value (a domain name and user, or computer name) and *Password* for the service to use in accessing the CAD data.
  - You may be prompted to configure an ODBC data source (Pic. 1-5) depending on the selected CAD system. We recommend you press **Yes** and configure the ODBC data source now.

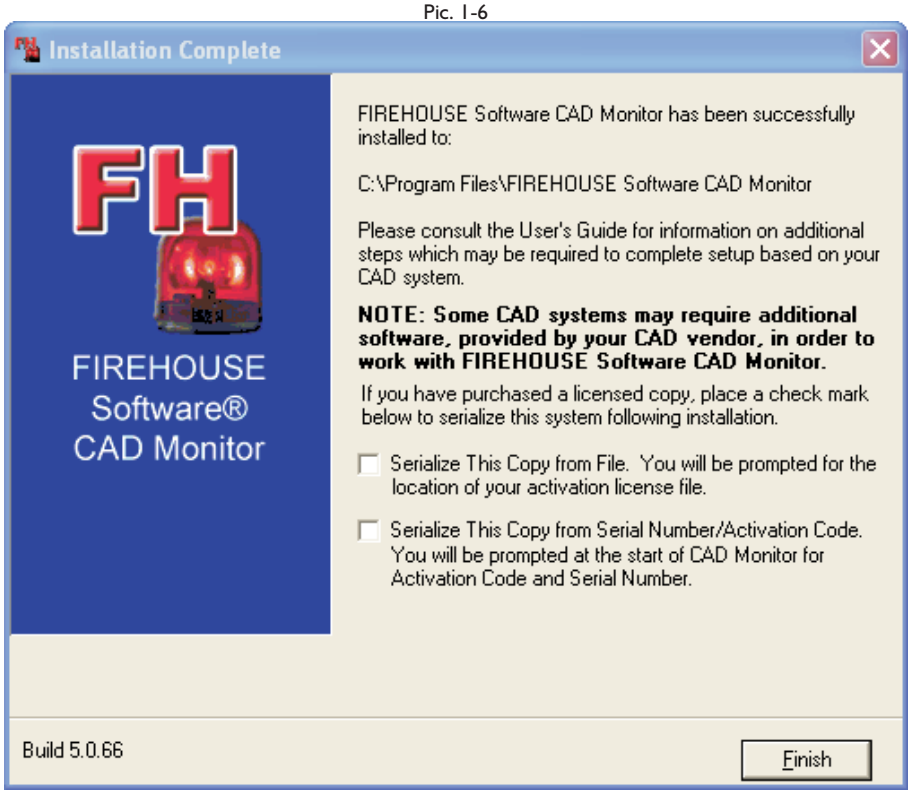
Pic. 1-5



- Press **Next>**. The **Installation Complete** form is displayed. You are ready to apply an activation.

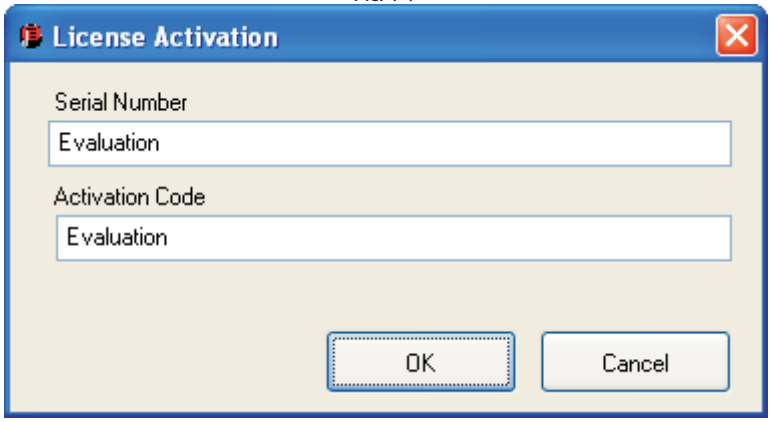
- If you have a license for FH CAD Monitor, choose from the following (Pic. 1-6):

Pic. 1-6



  - If you were provided a FHCADserial.lic file, check *Serialize this Copy from File*, then press **Finish.** (Initial shipments of CAD Monitor include the FHCADserial.lic file on the CD. Subsequent 'update' CDs do not include the file.) Press **Browse...** to locate where the file was stored . Press **OK**. FH CAD Monitor is now activated.
  - If you were provided an activation code number, check *Serialize this Copy from Serial Number/Activation Code*, then press **Finish.** Type the Serial Number and Activation Code in the fields provided (Pic. 1-7). Press **OK**. FH CAD Monitor is now activated.
  - Press **Finish**.
- If you are evaluating FH CAD Monitor, Press **Finish**, then press **OK** to the **License Activation** prompt (Pic. 1-7).

Pic. 1-7



- Note any additional information and press **OK** if prompted.

Updating Existing Installations

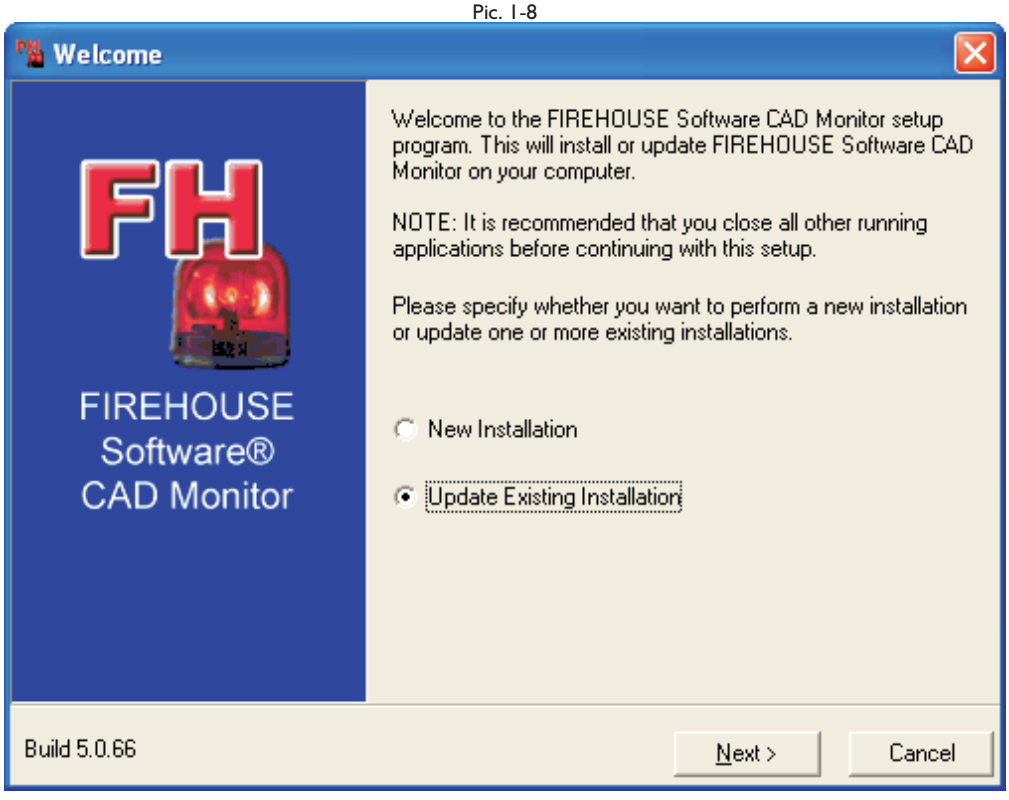
If you have a previous installation of FH CAD Monitor, the FH CAD Monitor CD Installation will update the existing version.

To Update Existing FH CAD Monitor Installation

Access the workstation as a Windows administrator, then complete the following steps:

- From the Windows **Start** menu, select **Control Panel**.
- Select **Add or Remove Programs**. The **Add or Remove Programs** form is displayed.
- Press **Add New Programs**, then press **CD or Floppy**. The **Install Program from Floppy Disk or CD-ROM** form is displayed.
- Insert the FH CAD Monitor CD then press **Next>**.
- If **FHCAD_Setup.exe** is not located, press **Browse...**, locate **FHCAD_Setup.exe**, then press **Open**.
- Press **Finish**. The **Welcome** form is displayed (Pic. 1-8).
- Select *Update Existing Installation* then press **Next>**.

Pic. 1-8



- Make the appropriate selection (Pic. 1-9):

- If you know the location of the current FH CAD Monitor installation, check *Skip automatic search for existing installations* then press **Next>**.

Pic. 1-9

  - Press **Browse...**, select the existing FH CAD Monitor installation, then press **OK**.
- If you do not know the location, press **Next>**. FH CAD Monitor installation locations will be identified (it may take several minutes to complete the search).
  - Highlight the FH CAD Monitor installation to update, then press **Next>**.

If the existing installation of FH CAD Monitor was serialized, you do not need to check an option (Pic. 1-6), and may continue to the next step. If the existing installation was not serialized (an evaluation version), follow the prompts for serializing the installation.

- If you were provided a FHCADserial.lic file, check *Serialize this Copy from File*, then press **Finish.** (Initial shipments of CAD Monitor include the FHCADserial.lic file on the CD. Subsequent 'update' CDs do not include the file.) Press **Browse...** to locate where the file was stored . Press **OK**. FH CAD Monitor is now activated.
- If you were provided an activation code number, check *Serialize this Copy from Serial Number/Activation Code*, then press **Finish.** Type the Serial Number and Activation Code in the fields provided (Pic. 1-7). Press **OK**. FH CAD Monitor is now activated.
- If you are continuing the evaluation of FH CAD Monitor, Press **Finish**, then press **OK** on the **License Activation** form (Pic. 1-7).

Press **Finish**. Your FH CAD Monitor installation is updated.

Chapter 2

Configuring FH CAD Monitor

FH CAD Monitor creates records in FH based on information entered in the CAD system. FH database changes are logged to a file that can be reviewed later. The CAD Monitor can also be configured to send an email notification to specified email addresses if a problem is encountered while processing. This chapter provides the details for database connection, general configuration setup, and administering FH CAD Monitor software.

Setting Up Data Connections

CAD Monitor accesses CAD systems via ODBC, XML, or via straight text files exported from your CAD system. The connection method varies depending on the CAD system you select during install.

FH CAD Monitor needs to point to the ODBC, XML, or text data created by your CAD software to create and update relevant FH records. Your CAD vendor can provide you with specific information about the created CAD records.

More About ODBC

ODBC is an acronym for "Open Database Connectivity". ODBC is a software standard that allows different applications to share data. The application connects to a database using a software driver configured to provide access to that particular data format. For example, there are ODBC drivers for Microsoft® SQL Server™, Microsoft Access, Oracle® and many others. A "Data Source", or "DSN" as it is often referred to, is simply an ODBC driver configuration. For example, you can configure an SQL Server data source to log in to a particular database using a particular login account and automatically open a particular database.

The process of setting up an ODBC data source varies depending on the ODBC driver, but in general involves selecting the driver, specifying basic login and connection information (for databases that have built-in security, like SQL Server), and selecting the database to access. You are prompted to set up your ODBC data source during the installation. FH CAD Monitor uses the created ODBC data source indicated in the FH CAD Monitor database configuration options. See 'To Set Database Configuration Options' on page 14 for more information about this area.

More About XML

XML is an acronym for "Extensible Markup Language". FH CAD Monitor interfaces to some CAD vendor systems by interfacing to XML data containing the CAD data.

To connect to CAD systems that use XML connections, you define the CAD systems XML source via database configuration options. See 'To Set Database Configuration Options' on page 14 for more information about this area.

More About Text

FH CAD Monitor interfaces to some CAD vendor systems by interfacing to a text data source containing the CAD data.

To connect to CAD systems that use text data sources, you define the CAD systems text source via database configuration options. See 'To Set Database Configuration Options' on page 14 for more information about this area.

FH CAD Monitor Service Management

When the FH CAD Monitor service option is selected during FH CAD Monitor installation, you define the service that runs silently in the background. If you do not select to run a service during installation or if you updated to FH CAD Monitor version 5, you can set up a service at any time.

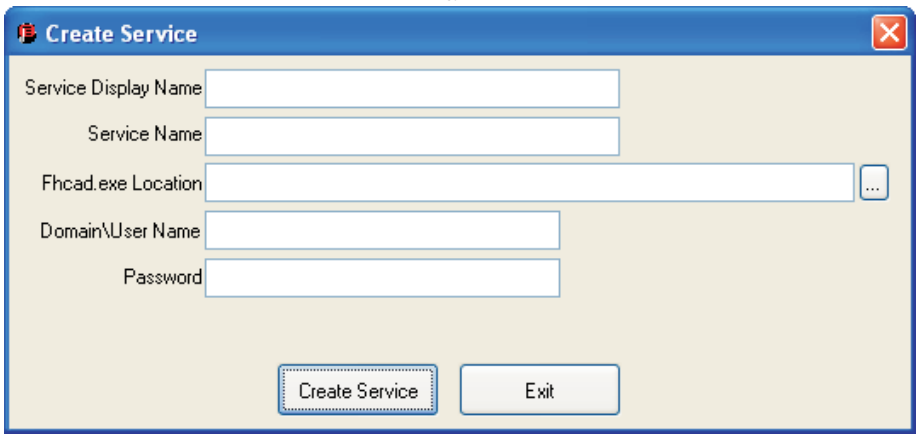
Adding or Modifying Services

The FH CAD Monitor service configuration is modified or additional FH CAD Monitor services are added using the FH CAD Monitor Service Manager. If FH CAD Monitor handles input from multiple CAD systems, a service must be added for each CAD system to import from. An FH CAD Monitor license is required for each service.

To Create a New Service

- From the Windows **Start** menu, select **Programs** → **FIREHOUSE Software CAD Monitor** → **CAD Monitor Service Manager**.
- From the **Manage Services** menu, select *Create Service*. The **Create Service** form is displayed (Pic. 2-1).

Pic. 2-1

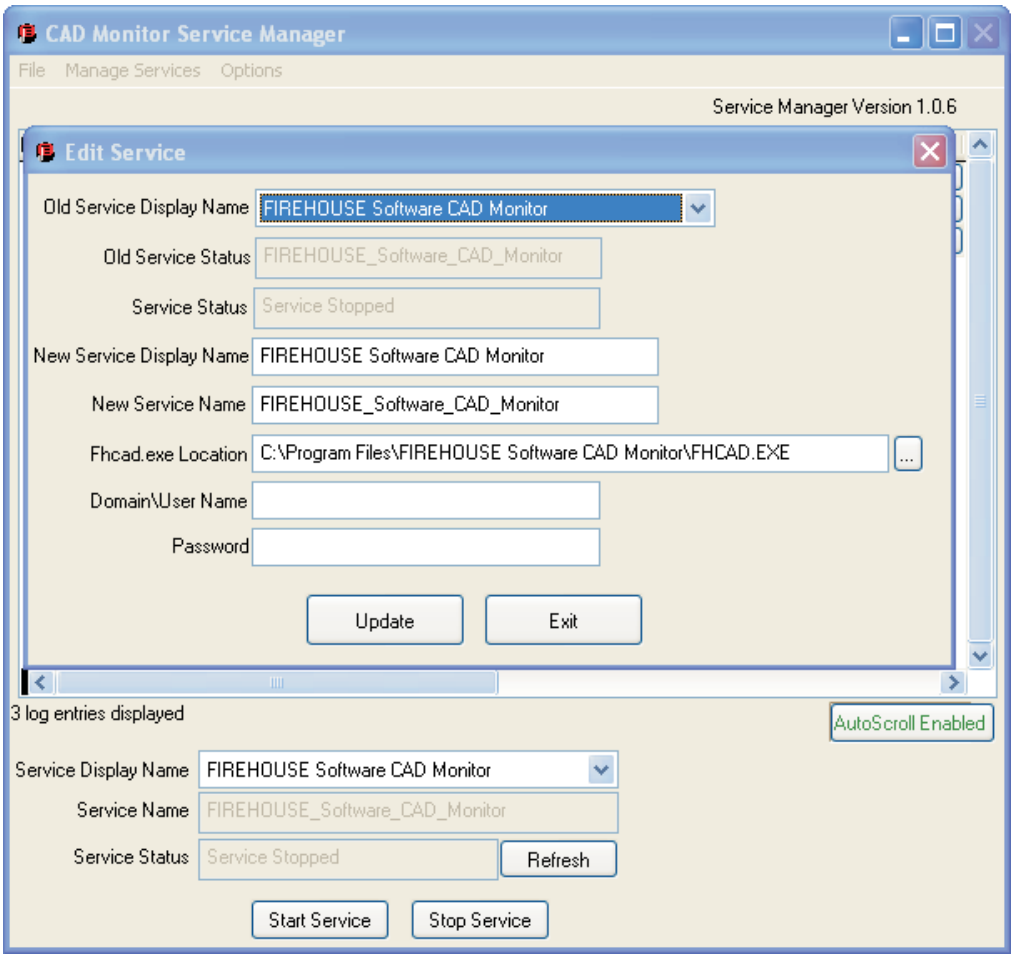


- Type a name to display in the *Service Display Name* field.
- Type a name to use in the *Service Name* field.
- Type or lookup the location of the FH CAD Monitor executable file in the *Fhcad.exe Location* field (C:\Program Files\FIREHOUSE Software CAD Monitor\ by default, yours may be different. If FH CAD Monitor is installed on a mapped network drive, the unc path to the location of FHCad.exe should be used instead of the mapped drive letter.)
- Type a value in the *Domain\User Name* field.
- Type a password value in the *Password* field.
- Press **Create Service**.

To Edit a Service

- From the Windows **Start** menu, select **Programs** → **FIREHOUSE Software CAD Monitor** → **CAD Monitor Service Manager**.
- Press the drop-down arrow in the *Service Display Name* field to select the service to modify .
- From the **Manage Services** menu, select *Edit Service*. The **Edit Service** form is displayed (Pic. 2-2).

Pic. 2-2



- Press the drop-down arrow in the *Old Service Display Name* field to select the service.
- Type a new name to display in the *New Service Display Name*.
- Type a new name to use for the service in the *New Service Name*.
- Type or lookup a new path in the *Fhcad.exe Location*.
- Type a new value in the *Domain\User Name* field.
- Type a new value in the *Password* field.
- Press **Update**.

To Delete a Service

- From the Windows **Start** menu, select **Programs → FIREHOUSE Software CAD Monitor → CAD Monitor Service Manager**.
- From the **Manage Services** menu, select *Delete Service*. The **Delete Service** form is displayed.
- Press the drop-down arrow to select a *Service Display Name*.
- Press **Delete**.

To Stop a Service

- From the Windows **Start** menu, select **Programs → FIREHOUSE Software CAD Monitor → CAD Monitor Service Manager**.
- in the *Service Display Name* field to select the service to stop .
- Press **Stop Service**.

To Start a Service

- From the Windows **Start** menu, select **Programs → FIREHOUSE Software CAD Monitor → CAD Monitor Service Manager**.
- Press the drop-down arrow in the *Service Display Name* field to select the service to start.
- Press **Start Service**.

To Review Log From FH CAD Service Manager

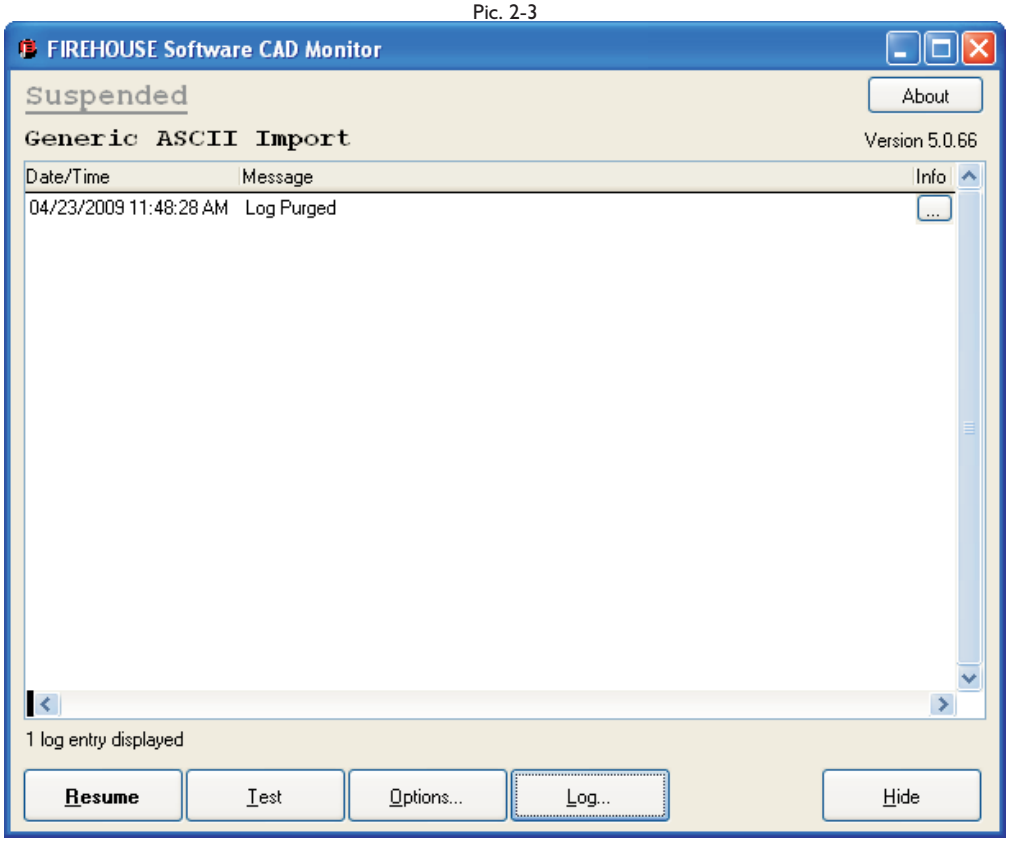
- From the Windows **Start** menu, select **Programs → FIREHOUSE Software CAD Monitor → CAD Monitor Service Manager**.
- Select the service to review activity for in the *Service Display Name* field.
- If you will be scrolling through a lengthy log, press **AutoScroll Enabled** and the button changes to **AutoScroll Disabled**. If the button already lists 'AutoScroll Disabled' you do not need to press the button.
- Review FH CAD Monitor activity log as needed.

Setting Configuration Options

CAD monitoring is not active until configuration is complete.

Configuration options control how FH CAD Monitor and the CAD system interface with one another. By default, the **CAD Monitor** form (Pic. 2-3) is displayed following installation, and is also accessible from the Windows **Start** menu, **Programs → FIREHOUSE Software CAD Monitor → FIREHOUSE Software CAD Monitor** option. FH CAD Monitor services running in the background need to be suspended prior to accessing configuration options.

Pic. 2-3



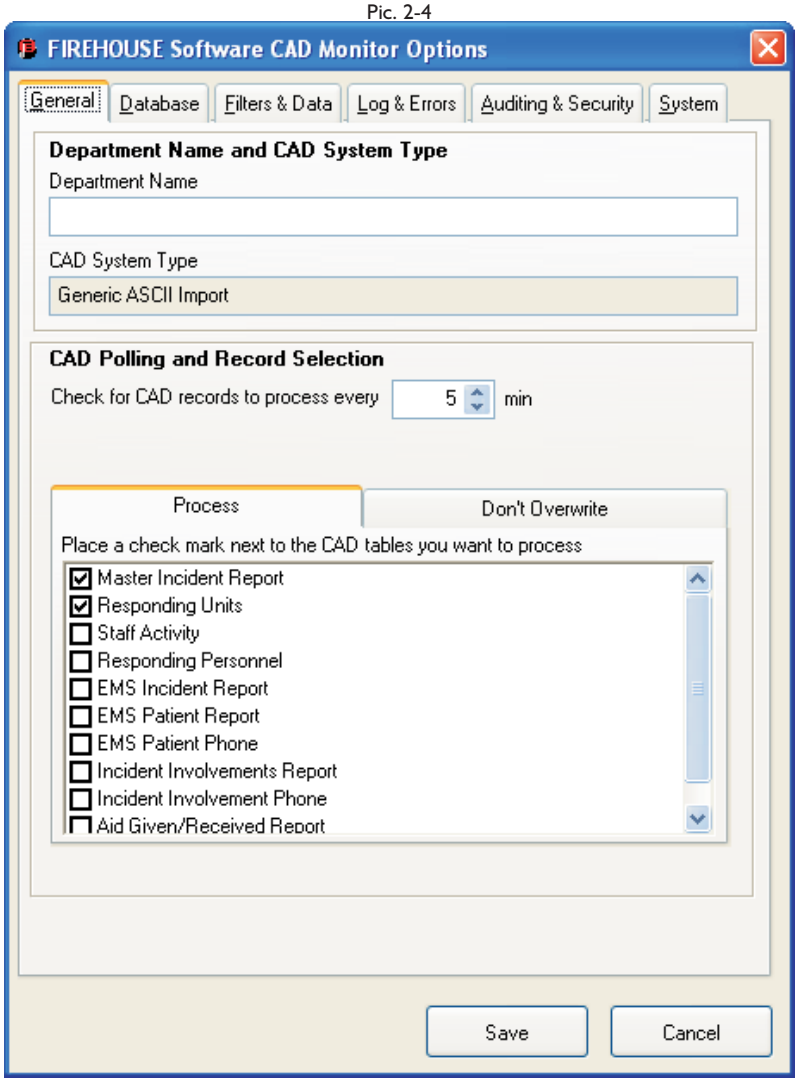
To Set General Configuration Options

FH CAD Monitor services need to be stopped. See 'To Stop a Service' on page 13 for details.

- From the Windows **Start** menu, select **Programs → FIREHOUSE Software CAD Monitor → FIREHOUSE Software CAD Monitor.**
- Press **Options...** The **FIREHOUSE Software CAD Monitor Options** form is displayed (Pic. 2-4). Available options vary depending on the CAD system you are interfacing with.
- Select the frequency at which polling of the CAD database should occur (in minutes).

- If **Reset Last Poll...** is displayed, you can limit the CAD records to be closed on or after a specified date and time. To limit CAD records, press **Reset Last Poll...** , specify the *Date* and *Time* then press **OK**.

Pic. 2-4



Your form may vary slightly from above depending on your CAD system.

NOTICE
Optional Set Points

Some CAD systems have an option to reset the date and time at which the last poll occurred. Check *Set/Reset polling timer at end of processing (standard)* to start the timer at the end of processing. The elapsed time between the start of the initial processing and the start of next processing will be as specified plus the amount of time required to process. Check *Set/Reset polling time at beginning of processing* to start the time at the start of processing. The elapsed time between the initial processing and the start of the next processing will always be exactly as specified. To reset the timer (e.g., to synchronize with a CAD process), you will need to resume processing from the FH CAD Monitor desktop application. As

soon as you press **Resume** from the **FIREHOUSE Software CAD Monitor** form, the timer starts at zero and will poll at the specified interval.

- On the **Process** tab, place a check mark next to the tables or record types that will be processed from CAD. The list of tables or record types displayed vary based on CAD system type. Select only the tables or record types you wish to use to create FH records. FH records for the selected options are created for every CAD record (whether it contains relevant data or not), so filters may need to be added to only create FH records for CAD records that contain certain values.

If you are processing 'Generic ASCII Text' files, tables containing user fields are not included unless the user field definition file is also included in the folder containing the CAD export files.

- On the **Don't Overwrite** tab, place a check mark next to the tables or record types that should not overwrite existing records when processed from CAD. The list of tables or record types displayed vary based on CAD system type. Select only the tables or record types you wish to protect from being overwritten by CAD data.
- If *Delete records from the CAD database after import* is displayed, check the box if the CAD records are not needed after they have been added to FH.
- Press **Save**. You are prompted if any required elements are incomplete.

To Set Database Configuration Options

FH CAD Monitor services need to be stopped. See 'To Stop a Service' on page 13 for the steps to stop a running service.

For test purposes, we recommend that you configure the FH CAD Monitor to use a backup copy or sample FH database for a period of time, rather than your live data. Once you have verified operation and are satisfied that it is configured correctly, point to your "live" FH data.

- From the Windows **Start** menu, select **Programs → FIREHOUSE Software CAD Monitor → FIREHOUSE Software CAD Monitor.**
- Press **Options...** The **FIREHOUSE Software CAD Monitor Options** form is displayed (Pic. 2-5).
- Click the *Database* tab. Available options vary depending on the CAD system you are interfacing with.
- Select *FIREHOUSE Software Database* type:
  - 'Update local database' for standard FH databases, where data resides in DBF files in a directory on a hard drive. When you select this option, you must specify the physical location of the data directory. If an FH client is installed on this computer, the data location defaults based on the client configuration. When FH CAD Monitor is run as a service, enter the unc path to the FH database if it is located on a mapped network drive.

- 'Update remote FH database using existing settings on this computer' for FH Enterprise databases where the FH Enterprise desktop client is also installed on this computer. The FH Enterprise desktop client database connection settings are used and no further configuration is required.

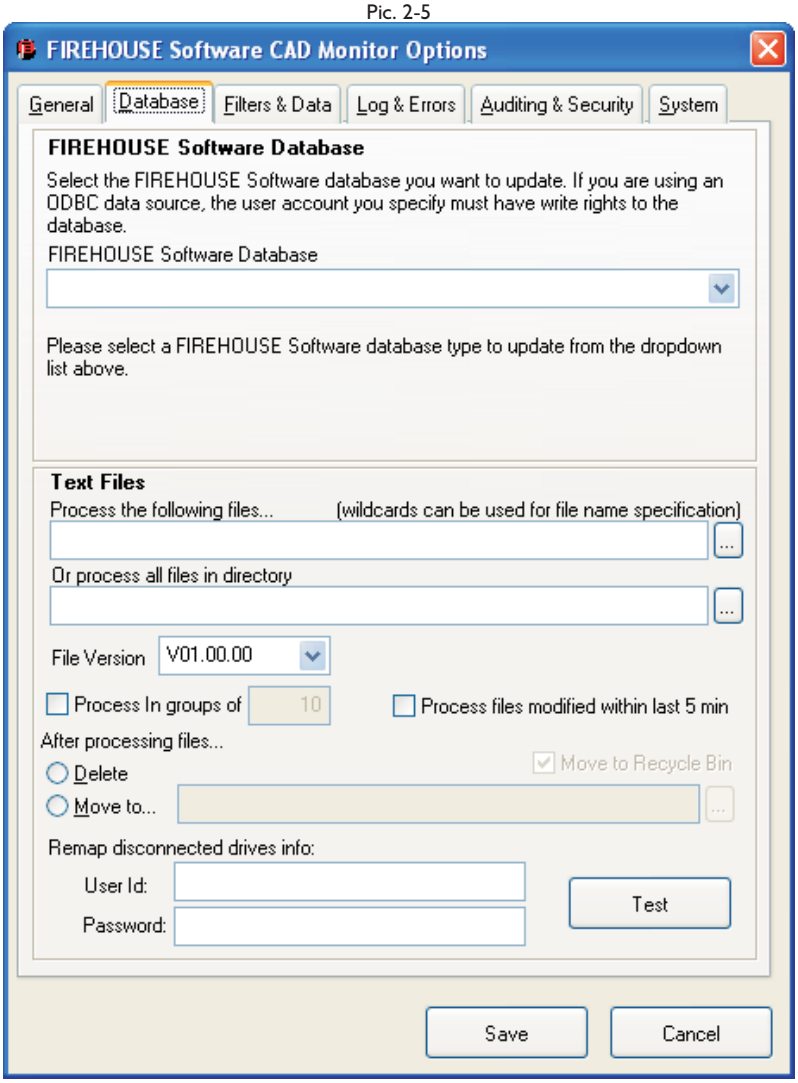
NOTICE
Certain Installations

If your FH installation uses an INI file to set the path to the database, you will need to specify the path to the standard FH database or set up an ODBC data source to the FH Enterprise database. If FH Enterprise database is installed at the workstation where FH CAD Monitor runs, consider setting up an ODBC data source and selecting 'Update remote database through ODBC data source'. When 'Update remote FH database using existing settings on this computer' is selected and the FH Enterprise database is changed at the workstation, FH CAD Monitor also writes to the newly specified database.

- 'Update remote database through ODBC data source' for FH Enterprise databases where no FH Enterprise client is installed on this computer. Connection to the database is made using an ODBC data source that is configured through the Windows Control Panel. When selected, you must select the DSN (ODBC data source name) from the dropdown list and specify the login name and password that will be used to connect to the remote database.
  - Check *Use Trusted Connection* to pass your remote data source login credentials based on your Windows login information.

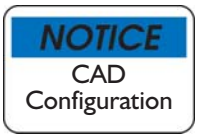
- Depending on the CAD system, you will have options to specify data options for **CAD Databases**, **XML Files**, or **Text Files**.

Pic. 2-5



Your form may vary slightly from above depending on your CAD system.

- If FH CAD Monitor connects to the CAD database via an ODBC data source, specify **CAD Database** details. You must first configure the data source using the Windows **Control Panel**. You must also specify the login name and password that will be used to connect to the CAD database. At minimum, the account you use must have read access to the database.
  - Check *Use Trusted Connection* to pass your remote data source login credentials based on your Windows login information.
- If FH CAD Monitor connects to the CAD data source via XML, there are two possible variants; importing an XML file or via direct connection.
  - When importing an XML file, select the files to process or the directory where the files are stored, and select the post-processing action. Select *Delete* to delete the XML files from the CAD system after they are processed. *Check Move to Recycle Bin* to keep a copy of the deleted files in the Windows **Recycle Bin**. Select *Move to* and select a directory where XML files from the CAD system are moved after they are processed.
  - When connecting to the XML source directly via TCP/IP connection, specify *IP Address/Server Name* and *Port*.



Some CAD systems have a configuration setting that specifies the number of records to return when queried. The CAD system needs to be configured to return as many records as would result during a normal polling interval. We recommend increasing query results value to at least 500 to ensure that all records are included from CAD to FH.

- If FH CAD Monitor connects to the CAD database via a text file, select the file to process or the directory containing the files, and select the post-processing action. Wildcards can be used for file name specifications.
  - *File Version* is only included for Generic ASCII text imports. Specify the *File Version* to verify in the CAD text file. When the version value in the text file from the CAD system varies from the specified *File Version*, the file is rejected.
  - *Process in groups* is an option for some CAD systems. Processing a large CAD import as a whole can potentially use a large amount of available resources. Check *Process in groups* and specify the number of records to process at a time to process records in groups.
  - *Process files modified within last 5 min* is an option for some CAD systems. Check *Process files modified within the last 5 min* to process a CAD file even if the CAD file has been modified in the last 5 minutes.
  - Select *Delete* to delete the text files from the CAD system after they are processed. *Check Move to Recycle Bin* to keep a copy of the deleted files in the Windows **Recycle Bin**.
  - Select *Move to* and select a directory where text files from the CAD system are moved after they are processed.
  - Set *User Id* and *Password* information to remap disconnected drives.

- Press **Save**. You are prompted if any required elements are incomplete.

Setting CAD Data Filters

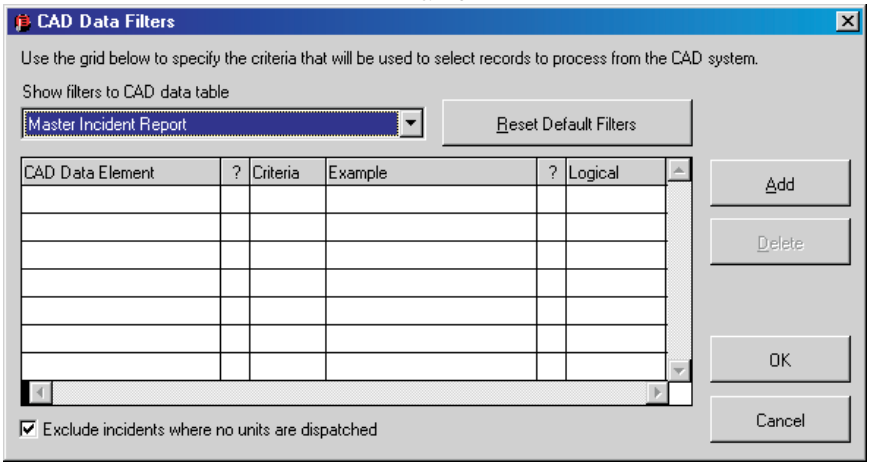
Set CAD data filters to limit records processed from the CAD system (for example, to only include records for specific agencies).

To Set CAD Data Filters

FH CAD Monitor services need to be stopped. See 'To Stop a Service' on page 13 for the steps to stop a running service.

- From the Windows **Start** menu, select **Programs** → **FIREHOUSE Software CAD Monitor** → **FIREHOUSE Software CAD Monitor.**
- Press **Options...** The **FIREHOUSE Software CAD Monitor Options** form is displayed.
- Click the *Filters & Data* tab. Available options vary depending on the CAD system you are interfacing with.
- Press **Filters**. The **CAD Data Filters** form is displayed (Pic. 2-6).
  - Select a CAD table in *Show filters to CAD data table*. Available tables vary based on your CAD system.
  - Press **Add**.
  - Type or lookup the CAD data elements (fields), qualifier, and qualifying values for each of those data elements.
  - Combine multiple expressions using "AND" or "OR" in the Logical column.

Pic. 2-6



  - Check *Exclude incidents where no units are dispatched* and an incident report is not created in FH unless units are dispatched.
  - Press **Reset Default Filters** if you want to reset all CAD data filters for the current CAD table back to their default settings.
  - Repeat steps above for additional tables, then press **OK** when finished.
- Press **Save**. You are prompted if any required elements are incomplete.

About Field Mapping

Your CAD system may not include all the same data elements that FH does. You may need to specify where a specific data element is stored in the CAD system and define where it should go in the FH database. The information about where specific data elements are in

the CAD system and where they should go in FH is referred to as 'Field Mapping'. You can customize how CAD data elements are mapped to FH.

To Set Field Mapping

FH CAD Monitor services need to be stopped. See 'To Stop a Service' on page 13 for the steps to stop a running service.

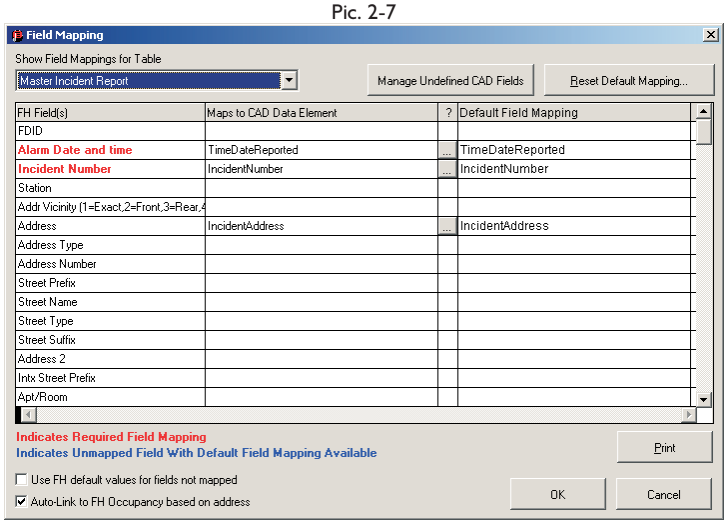
- From the Windows **Start** menu, select **Programs → FIREHOUSE Software CAD Monitor → FIREHOUSE Software CAD Monitor.**
- Press **Options...** The **FIREHOUSE Software CAD Monitor Options** form is displayed.
- Click the *Filters & Data* tab. Available options vary depending on the CAD system you are interfacing with.
- Press **Field Mapping**. The **Field Mapping** form is displayed (Pic. 2-7).

NOTICE
Color-Coding

FH Field(s) are color-coded. When the *FH Field(s)* value is red a mapping must be specified. Blue indicates that there is a default mapping available but not specified. You should review all blue fields following an FH CAD Monitor update since additional fields and default mappings may have been added by the update.

- Select *Show Field Mappings for Table*. Available tables vary depending on your CAD system. Default field mappings are already entered.
- If the **Manage Undefined CAD Fields** button is displayed, you can add undefined fields from the CAD data and map them to FH fields:
  - Press **Manage Undefined CAD Fields**.
  - Select the defined CAD table where the undefined CAD field is located in *Show added field mappings for table*.
  - Press **Add**, then specify the CAD source *Field Name* and *Field Size*.
  - Press **OK**.

Pic. 2-7



- FH fields are listed. For a listed FH field, specify the *Maps to CAD Data Element* or Expression value to use:
  - 'No Mapping' if the FH field should not be populated with CAD data.

- 'Reset to Default Mapping' to reset the FH field to default (whether the default is 'no mapping' or a specified CAD value).
- 'Select a CAD field from the list' to display available CAD fields. Select the CAD field then press **OK**.
- 'Specify a literal value or expression' to display a form for entering an expression. Expressions can include literal values, CAD data element names, and functions.

- Press **Print** to print the field mapping for the selected table. We recommend saving a copy of field mapping for your reference.
- Check *Use FH default values for fields not mapped* to populate FH fields with FH defaults when nothing or 'No Mapping' is selected for the FH field.

Certain CAD systems do not send the department FDID number. Without the FDID code, an import of units cannot establish the link between the incident record and responding unit record(s). Set the field mapping for FDID to 'No Mapping', and check the option for *Use FH default values for fields not mapped*. This will default the FDID code from the FH workstation location setting of FH Workstation Options.

Only static FH default values are applied to records. Dynamic default values based on FH client workstation or system settings will be ignored. Advanced FH functions (like SQLMax, SQLMin, XLate), or default values that refer to application objects that are not "known" to FH CAD Monitor (for example, goApp, goApp.Workstation) will not add values to empty or unmapped fields. Native FoxPro functions like TRIM() and LEFT() are applied to records.

- Check *Auto-Link to FH Occupancy based on Address* to use FH Occupancy record field values in incident records created from CAD records. See 'More Information' below for additional information.

When an FH record is created from a CAD record, FH Occupancy information defaults into the incident record if *Auto-Link to FH Occupancy based on Address* is selected and when there is an exact match between the CAD values and FH values in the *Number* (NUMBER), *Prefix* (ST_PREFIX), *Street/Highway* (STREET), *Type* (ST_TYPE), *Suffix* (ST_SUFFIX), *Address Line 2* (ADDR_2) fields, *City* (CITY), *State* (STATE), *ZIP Code* (ZIP), and *Apt Room*(Apt/Room/Suite). If no match is found, the values in all fields except the *Apt Room* (Apt/Room/Suite) are compared again. If no match is found, the values are compared again without the *Address Line 2* (ADDR_2). The final matching attempt will exclude *City* (City). When a match is found, the *State* (STATE), *ZIP Code* (ZIP), *District* (DISTRICT), *Census Tract* (CENSUS), *County* (COUNTY), *Township* (TOWNSHIP), *Zone* (ZONE), *Latitude* (LATITUDE), *Longitude* (LONGITUDE), *Specific Use* (PROP_USE), EMS Incidents only: *Property Ownership* (PROP_OWN), and *Mixed Use* (MIXED_USE) from the FH occupancy record is defaulted into the incident report unless the field is mapped. When a match is found to multiple occupancy records where the

Apt_Room is the only item that did not compare, the first occupancy record will be used.

- Press **OK** to save changes.

- Press **Save**. You are prompted if any required elements are incomplete.

About Code Conversions

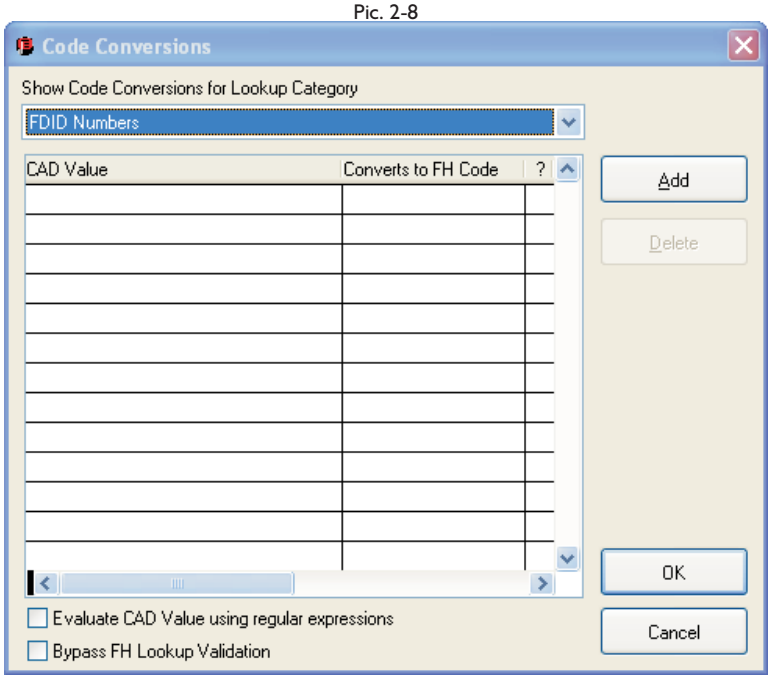
Many fields in FH are driven by lookup tables for consistent data entry. Equivalent fields in CAD may or may not be lookup-driven, or the values may not correspond to values that you use in FH. You can specify CAD values and relate them to valid FH values from the applicable lookup table/category.

To Specify Code Conversions

FH CAD Monitor services need to be stopped. See 'To Stop a Service' on page 13 for the steps to stop a running service.

- From the Windows **Start** menu, select **Programs** → **FIREHOUSE Software CAD Monitor** → **FIREHOUSE Software CAD Monitor.**
- Press **Options...** The **FIREHOUSE Software CAD Monitor Options** form is displayed.
- Click the *Filters & Data* tab. Available options vary depending on the CAD system you are interfacing with.
- Press **Code Conversions**. The **Code Conversions** form is displayed (Pic. 2-8).
- Select a lookup category in *Show Code Conversions for Lookup Category*.
  - Press **Add**.
  - Type a value in *CAD Value*.
  - Type or lookup the corresponding FH Code.
  - Check *Evaluate CAD Value using regular expressions* to enable expression validation of custom expressions entered for code conversions.

Pic. 2-8



- Check *Bypass FH Lookup Validation* to import values even when they are not valid lookups. You should carefully review records created from CAD records for invalid entries (codes without description) if you bypass FH lookup validation.
- Press **OK** to save changes.

- Press **Save**. You are prompted if any required elements are incomplete.

About Unit Status

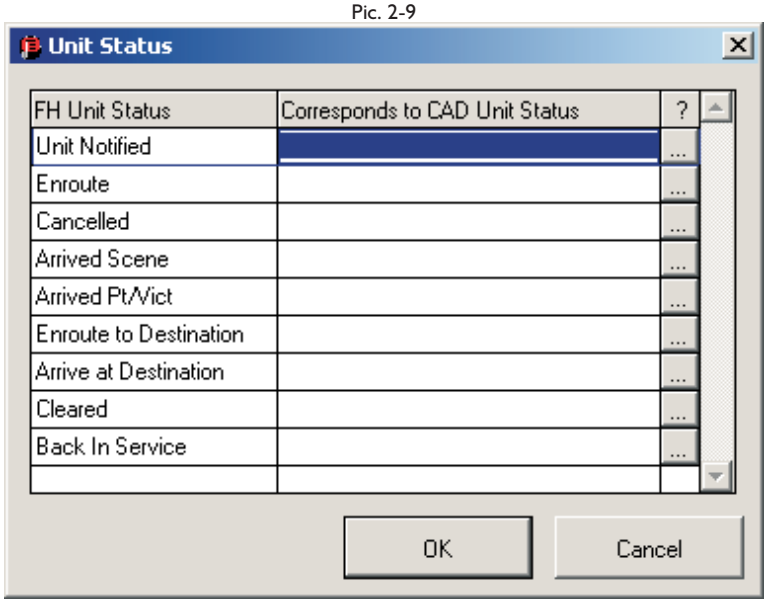
Some CAD systems track unit response activities in multiple records in a CAD unit or resource activity table. Each unit status change results in a new record. FH tracks unit responses in a single record, with date/time values for each recognized status, namely unit notified, en route, cancelled, arrived scene, cleared, and back in service.

To Specify Unit Status

FH CAD Monitor services need to be stopped. See 'To Stop a Service' on page 13 for the steps to stop a running service.

- From the Windows **Start** menu, select **Programs** → **FIREHOUSE Software CAD Monitor** → **FIREHOUSE Software CAD Monitor.**
- Press **Options...** The **FIREHOUSE Software CAD Monitor Options** form is displayed.
- Click the *Filters & Data* tab. Available options vary depending on the CAD system you are interfacing with.
- Press **Unit Status**. The **Unit Status** form is displayed (Pic. 2-9).
  - Type or lookup the *Corresponds to CAD Unit Status* value used by your CAD system.
  - Press **OK**.
- Press **Save**. You are prompted if any required elements are incomplete.

Pic. 2-9



Error Notifications and Logs

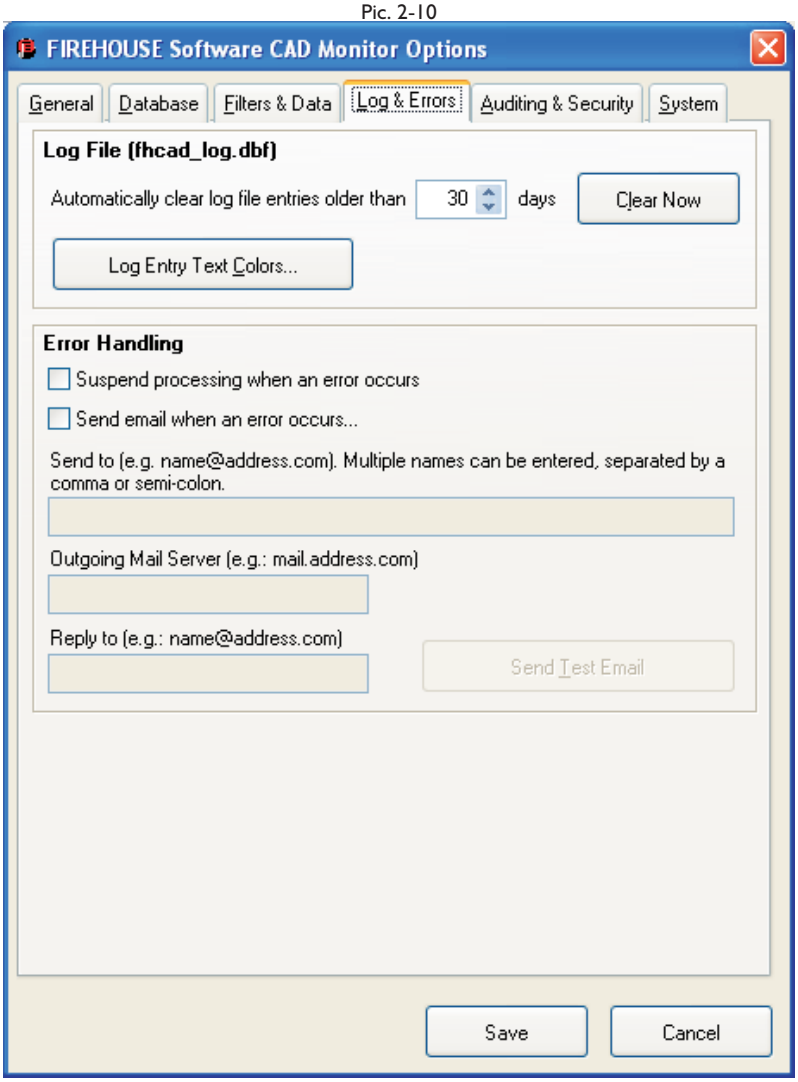
When FH CAD Monitor processing is interrupted or an error is triggered during processing, it is important to notify a CAD Monitor administrator and have access to the error from a log.

To Set Log & Errors Configuration Options

FH CAD Monitor services need to be stopped. See 'To Stop a Service' on page 13 for the steps to stop a running service.

- From the Windows **Start** menu, select **Programs → FIREHOUSE Software CAD Monitor → FIREHOUSE Software CAD Monitor.**
- Press **Options...** The **FIREHOUSE Software CAD Monitor Options** form is displayed.
- Click the *Log & Errors* tab (Pic. 2-10). Available options vary depending on the CAD system you are interfacing with.
- Set the number of days for the log file to retain log processing and error entries (System default is 30 days).
- Press **Log Entry Text Colors...** to establish specific colors for the viewing of different log text.
- Check *Suspend processing when an error occurs* to stop processing when an error is encountered. No CAD records are imported when processing is suspended.
- Check *Send email when an error occurs* to send an email to the specified email address(es) when an error is encountered. Set the appropriate values in *Send to, Outgoing Mail Server,* and *Reply to*. Press **Send Test Email** to verify settings are correct.
- Press **Save**. You are prompted if any required elements are incomplete.

Pic. 2-10



CAD Monitor Security and FH Audit Records

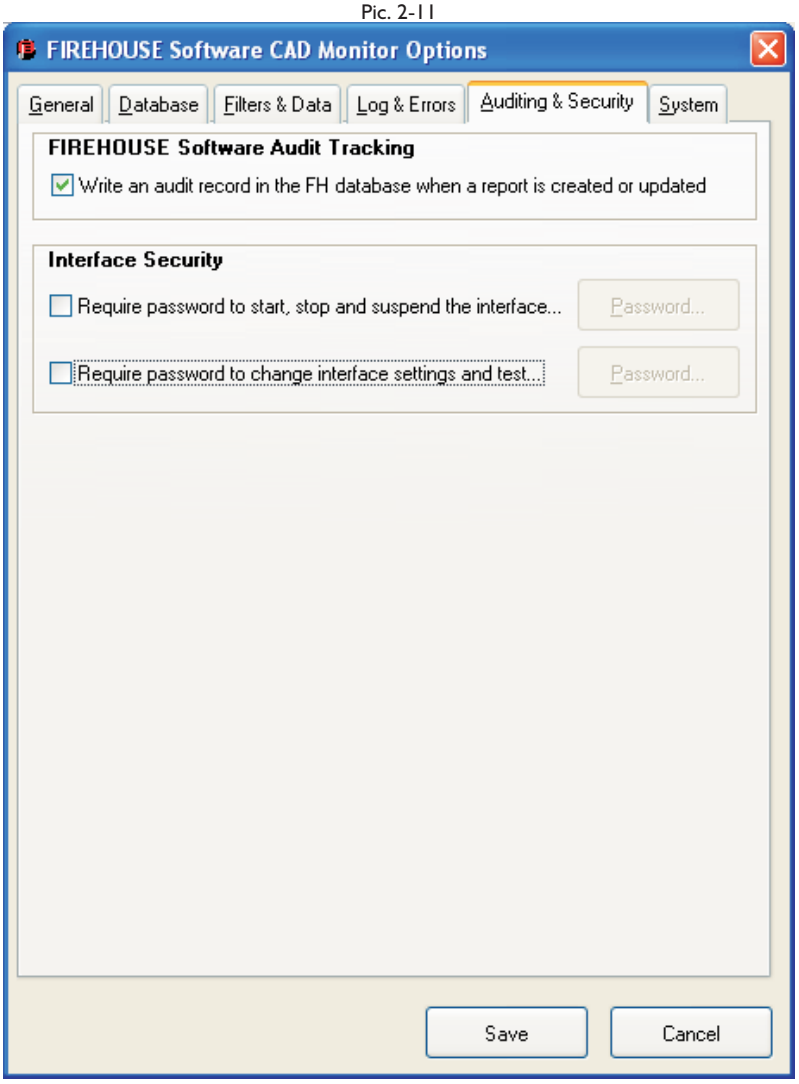
Passwords can be set to control access to certain functions, such as starting or stopping the CAD Monitor and accessing configuration options. Audit records can be generated into the FH database when incident reports are created or updated.

To Set Auditing & Security Configuration Options

FH CAD Monitor services need to be stopped. See 'To Stop a Service' on page 13 for details.

- From the Windows **Start** menu, select **Programs** → **FIREHOUSE Software CAD Monitor** → **FIREHOUSE Software CAD Monitor.**
- Press **Options...** The **FIREHOUSE Software CAD Monitor Options** form is displayed.
- Click the *Auditing & Security* tab (Pic. 2-11). Available options vary depending on the CAD system you are interfacing with.
- Check *Write an audit record in the FH database when a report is created or updated* to update the FH audit history table when a record is created or updated (enabled by default). If this option is enabled, a special FH user account is created for use by the CAD Monitor.
- To establish a password for changing interface settings or running CAD Monitor, check the appropriate option to require a password, then specify a password and press **OK**.
- Press **Save** when finished setting configuration options. You are prompted if any required elements are incomplete.

Pic. 2-11



About System Settings

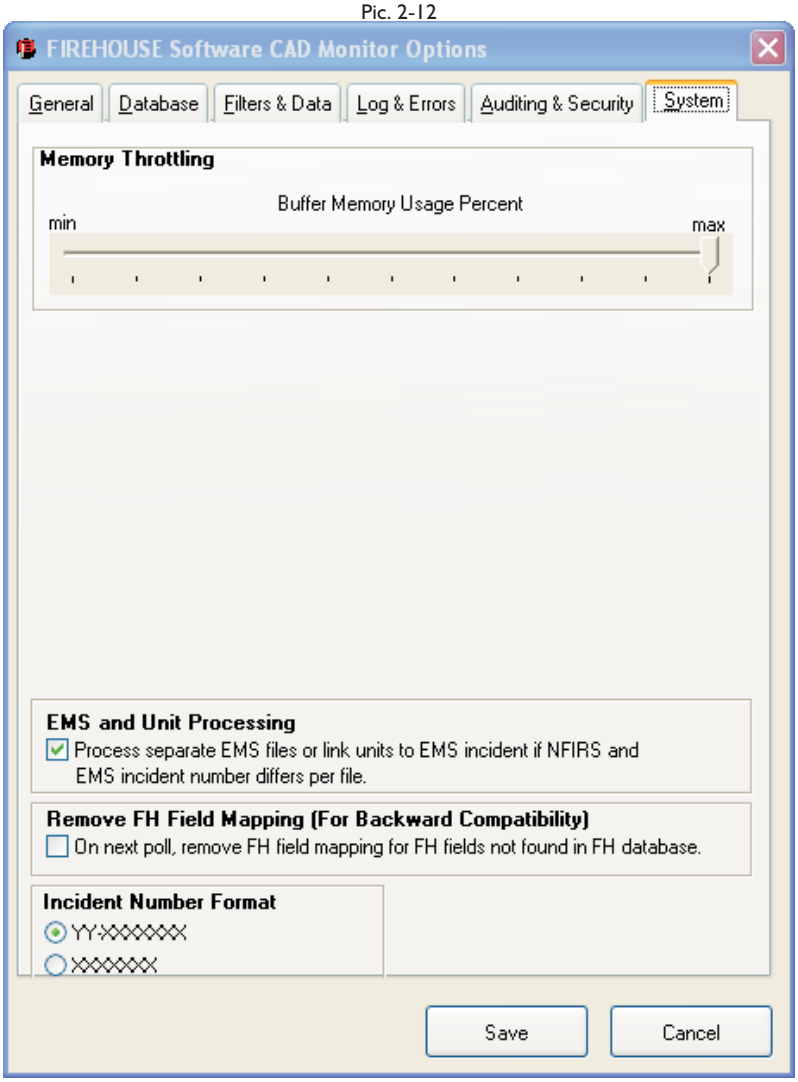
The System tab of CAD Monitor Options provides the user added settings for memory usage, EMS and Unit Processing, and backward compatibility to older versions of FIREHOUSE Software.

To Set System Options

FH CAD Monitor services need to be stopped. See 'To Stop a Service' on page 13 for the steps to stop a running service.

- From the Windows **Start** menu, select **Programs → FIREHOUSE Software CAD Monitor → FIREHOUSE Software CAD Monitor.**
- Press **Options...** The **FIREHOUSE Software CAD Monitor Options** form is displayed.
- Click the *System* tab (Pic. 2-12). Available options vary depending on the CAD system you are interfacing with.
- Specify *Buffer Memory Usage Percent*. When set to *Max* (default) FH CAD Monitor will use as much workstation memory as possible when needed, resulting in the fastest processing. When set to *Min*, less memory is available to FH CAD Monitor and processing will take longer, but other workstation processes will be impacted less.

Pic. 2-12



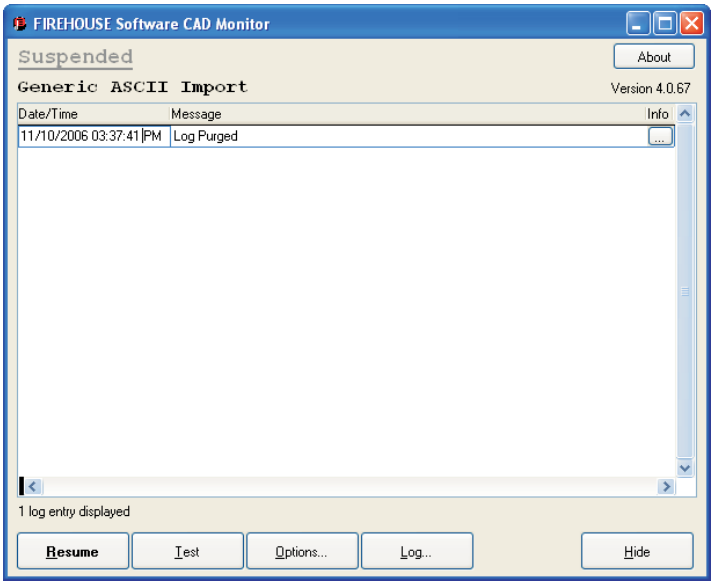
- Check *Process separate EMS files or Link units to EMS incident if NFIRS and EMS incident number differs per file* if an EMS incident and unit should be processed when they are issued a different incident number.
- Check *On next poll, remove FH field mapping for FH fields not found in FH database* if any field mappings were established by CAD Monitor, but the fields are not present in the version of FH. CAD Monitor assumes by default it is interfacing with the newest version of FH when it processes CAD data.
- Press **Save** when finished setting configuration options. You are prompted if any required elements are incomplete.

Using FH CAD Monitor Desktop Application

The FH CAD Monitor desktop application is a stand-alone application that runs independently of the FIREHOUSE Software desktop client application. FH does not need to be installed on the workstation running FH CAD Monitor, although FH CAD Monitor needs to be able to access both your CAD and FH databases. The FH CAD Monitor desktop application runs silently and unattended in the background and maintains a log of activity as it runs. The log can also be exported to a text or RTF file if desired. Please note that if FH CAD Monitor is configured to run as a service, the FH CAD Monitor desktop application does not need to be running. See 'To Create a Service' on page 11 for the steps to run FH CAD Monitor as a service.

FH CAD Monitor places a red icon in your Windows task tray (typically in the lower right corner of your screen) when the FH CAD Monitor desktop application is active and processing. When processing is suspended, the icon is grayed out.

Note that the icon is also added to the task tray when the FH CAD Monitor Service Manager is open. To run the FH CAD Monitor desktop application, select the Windows **Start** menu → **Programs** → **FIREHOUSE Software CAD Monitor** → **FIREHOUSE Software CAD Monitor** option. The **FIREHOUSE Software CAD Monitor** form is displayed.



About FH CAD Monitor Desktop Application Operations

The FH CAD Monitor desktop application runs independently. There will be instances where you will need to suspend processing. For example, if the CAD system will be taken off-line for maintenance. Other operations include running a test import to verify configuration, and reviewing a log of CAD Monitor activities.

To Suspend the FH CAD Monitor Desktop Application

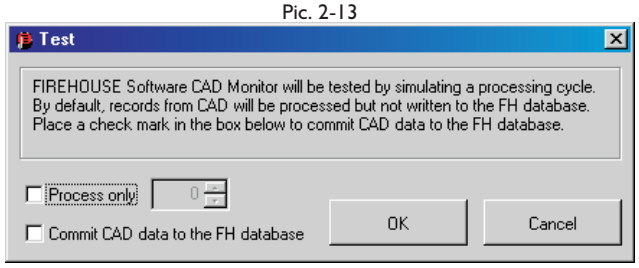
With the **FIREHOUSE Software CAD Monitor** form displayed:

- Press **Suspend** to suspend monitoring. When processing is suspended, the **Suspend** button changes to the **Resume** button. Press **Resume** to resume monitoring. You can require a password to start, stop, suspend, or resume the interface by pressing **Options...**, clicking the *Auditing & Security* tab, then checking the **Interface Security** area options to password protect.

To Test FH CAD Monitor

- From the Windows **Start** menu, select **Programs** → **FIREHOUSE Software CAD Monitor** → **FIREHOUSE Software CAD Monitor**. The **FIREHOUSE Software CAD Monitor** form is displayed.
- Press **Test** to run a simulated processing of CAD data.
  - If *Days to search back looking for incidents* is included, FH CAD Monitor reviews records with date values withing the number of days specified.
  - Check *Process Only* and specify the number of records to process to limit the number of records included in testing.
  - Check *Commit CAD data to FH database* to write test records to the FH database.
- Press **OK** to run the test.

Pic. 2-13



An additional option, *Days to search back looking for incidents*, is included for certain CAD types. Only incident records dated within the specified number of days are included in the test results.

NOTICE
SQL Setting

SQL Server has a has a stored procedure (sp_dbcmptlevel) an administrator can set certain database behaviors to be compatible with specified earlier versions. If an error occurs attempting to test a small process number, the SQL administrator should confirm sp_dbcmptlevel returns a number greater than 70.

To Access CAD Monitor Configuration Options

FH CAD Monitor services need to be stopped. See 'To Stop a Service' on page 13 for details.

- From the Windows **Start** menu, select **Programs** → **FIREHOUSE Software CAD Monitor** → **FIREHOUSE Software CAD Monitor.**
- Press **Options** to access the configuration options. For more information on configuration options, refer to "Setting Configuration Options" on page 14. A password may be required to access configuration options.

To Access CAD Monitor Log from Desktop Application

FH CAD Monitor services need to be stopped. See 'To Stop a Service' on page 13 for details.

- From the Windows **Start** menu, select **Programs** → **FIREHOUSE Software CAD Monitor** → **FIREHOUSE Software CAD Monitor.**
- Press **Log** to display a shortcut menu from which you can:
  - Search the log for a specific word or phrase.

- Export the current log contents to a rich text (RTF) or plain text (TXT) file.

RTF preserves the formatting and colors of the log text. You must have an installed word processor that supports RTF format to view the resulting export file.

- Clear All Entries. If a password has been required on your system to access configuration options, you will be required to enter it here in order to clear the contents of the log file. This option removes all current entries from the log.

Administration

CAD System Down

If the CAD system is not available for a period of time, you need to decide whether to enter all incidents into the CAD system when it is available and populate FH from the CAD system data, or to enter incidents into FH directly until the CAD system is available again (incidents entered directly into FH would not be entered into the CAD system). If you enter the incidents into FH and into the CAD system when it becomes available, the CAD incidents will overwrite the FH incidents with the same incident number, date, and FDID.

Empty FH Records

When you select the record types to import from CAD in the general configuration options (detailed page 14), FH records in the selected area are created for every CAD record. For example, if EMS Incident Reports is an option for your CAD system and is selected in the general configuration to be imported, an FH EMS incident record is created for every CAD record imported regardless of whether it is an EMS incident or not. To prevent this from happening, you either need to exclude the record selection altogether or add filters to only create a record when EMS incident data exists.

Excluding Record Selection Altogether

To exclude record selection in a specific area of FH, access the general configuration options and uncheck the area that you do not wish to import.

Adding Filter

Add a filter that only creates FH records when certain information is available. The data elements from CAD vary depending on the type of CAD system, but typically a record type field is available to prevent FH records from being created when data elements for the FH record are not available. Adding filters is detailed on page 19.

Missing/Incomplete Records in FH

If records available in your CAD system are not imported into FH, there are several possibilities:

- If the CAD records do not include any dispatched units, the CAD Monitor options may specify to *Exclude incidents where no units are dispatched*. See 'Field **Mapping**' on page for details on disabling this option if you want to include incident records without dispatched units in FH.
- For some CAD systems you can manually scan CAD data to include records created after a date you specify.

- From the **FIREHOUSE Software CAD Monitor** form, press **Options**. The **FIREHOUSE Software CAD Monitor Options** form is displayed.
- Press **Reset Last Poll** and enter the *Date* and *Time*. All CAD records created after the specified date and time will be imported into FH.

If FH records include a code value in a lookup driven field (for example, **`Shift`**) but there is no description for the field, *Bypass FH Lookup Validation* is enabled. See 'Code Conversions' on page for details on disabling this option, or add a description for this code in FH.

CAD Monitor Configuration Backup

Each time “Save” is selected in the Cad Monitor configuration options, it creates a backup of the configuration file into the BACKUPCONFIG folder. If configuration settings are lost or you wish to restore them to a previous setup, you can use the date modified of the file(s) to determine the previous configuration to restore. Rename the chosen file in the BACKUPCONFIG folder to “fhcad.cfg”, then copy and paste the file into the cad monitor installation folder (by default c:\Program Files\FIREHOUSE Software CAD Monitor), overwriting the existing one.

USER Field Record Descriptions

The USEI, USEE, USEP, and USEU records are for populating Incident User defined fields, EMS User defined fields, EMS Patient user defined fields, and Unit User defined fields. Since user defined fields are user defined and not predefined, it is impossible to define a record description as the others are defined in this document. Instead, the creator of the USEI, USEE, USEP, and USEU record(s) must create the record descriptions.

Each imported data field is described by four tab delimited text fields.

Field 1 – Field Name

Field 2 – Field Type

Field 3 – Field Size

Field 4 – Number of decimal places

All fields must be populated and saved in their respective file. Files named:

- ‘USEIFieldsDefinitions.txt’ contain record descriptions for the USEI record.
- ‘USEEFieldsDefinitions.txt’ contains record descriptions for the USEE record.
- ‘USEPFieldsDefinitions.txt’ contains record descriptions for the USEP record.
- ‘USEUFieldsDefinitions.txt’ contains record descriptions for the USEU record.

All user definition files must be saved in the directory where other CAD export files are placed.

Here is an example of what a ‘USEIFieldsDefinitions.txt’ might look like (tabs are represented as '^'):

```
USER_FLD_02^C^15^0
USER_FLD_03^C^20^0
USER_FLD_04^C^4^0
USER_FLD_05^L^1^0
USER_FLD_06^L^1^0
USER_FLD_07^L^1^0
USER_FLD_08^N^4^0
USER_FLD_09^N^4^0
USER_FLD_10^N^2^1
```

Notice that the first field is named 'USER_FLD_02' in the record definition. That is because the actual first field in the resulting import record (as with every record in the import file) is the record identifier in this case that value would be the USEI. The resulting 'USEI' record that would be placed into an import file could look like this:

```
USEI^My Test Field1^My Test Field2^Test Field3^T^T^T^2^3^0.5
```

A USEP record will link to a Patient Record through the key fields *Last*, *First*, and *Middle* names. Here is an example of what a 'USEPFieldsDefinitions.txt' might look like:

```
USERP_FIRST^C^25^0
USERP_SECOND^C^15^0
USERP_MIDDLE^C^15^0
USERP_FLD_5^C^15^0
USERP_FLD_6^C^20^0
USERP_FLD_7^C^4^0
USERP_FLD_8^L^1^0
USERP_FLD_9^L^1^0
USERP_FLD_10^L^1^0
USERP_FLD_11^N^4^0
USERP_FLD_12^N^4^0
USERP_FLD_13^N^2^1
```

The resulting 'USEP' record that would be placed into an import file could look like this:

```
USEP^Cartwright^Hoss^My USEP Field1^My USEP Field2^USEP
Field3^T^T^T^2^3^0.7
```

A USEU record will link to a Unit Record through the key fields *Unit*, *Notif_Date*, *Notif_Time*. Here is an example of what a 'USEUFieldsDefinitions.txt' file might look like:

```
USERU_UNIT^C^6^0
USERU_NOTIFY_DT^D^10^0
USERU_NOTIFY_TM^D^8^0
USERU_FLD_5^C^15^0
USERU_FLD_6^C^20^0
USERU_FLD_7^C^4^0
```

```
USERU_FLD_8^L^1^0
USERU_FLD_9^L^1^0
USERU_FLD_10^L^1^0
USERU_FLD_11^N^4^0
USERU_FLD_12^N^4^0
USERU_FLD_13^N^2^1
```

The resulting 'USEU' record that would be placed into an import file could look like this:

```
USEU^T6-1^2/21/2004^16:50:00^T6-1^My USEU Field1^My USEU
Field1^T^T^T^2^3^0.8
```

USEE and USEP records are not loaded unless the parent EMS record is also included in the file.

Chapter 3

Specific CAD Vendor Details

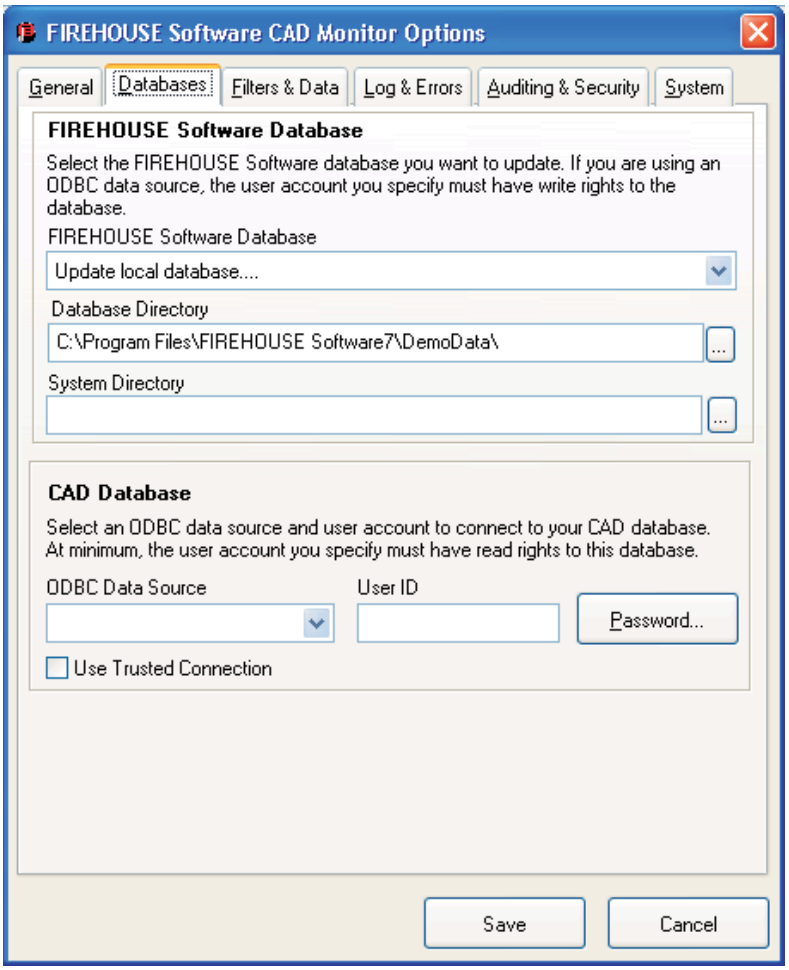
FH CAD Monitor interfaces with a variety of CAD systems, including TriTech VisiCAD, Genisis 911 CAD, NexGen CAD, Northrop Grumman, Positron powerCAD, Motorola Premier CAD, Spillman Technologies Inc., VisionAIR CAD, and more. Coordinated efforts from these vendors permitted unique FH CAD Monitor installation choices for each vendor. Each installation will automatically set the default field mappings for the source data to the proper FH database fields. Individual departments may choose to adjust the default mappings according to their needs. Additional specific options related to some vendors are included in this chapter.

Connecting Vendors via ODBC Data Source

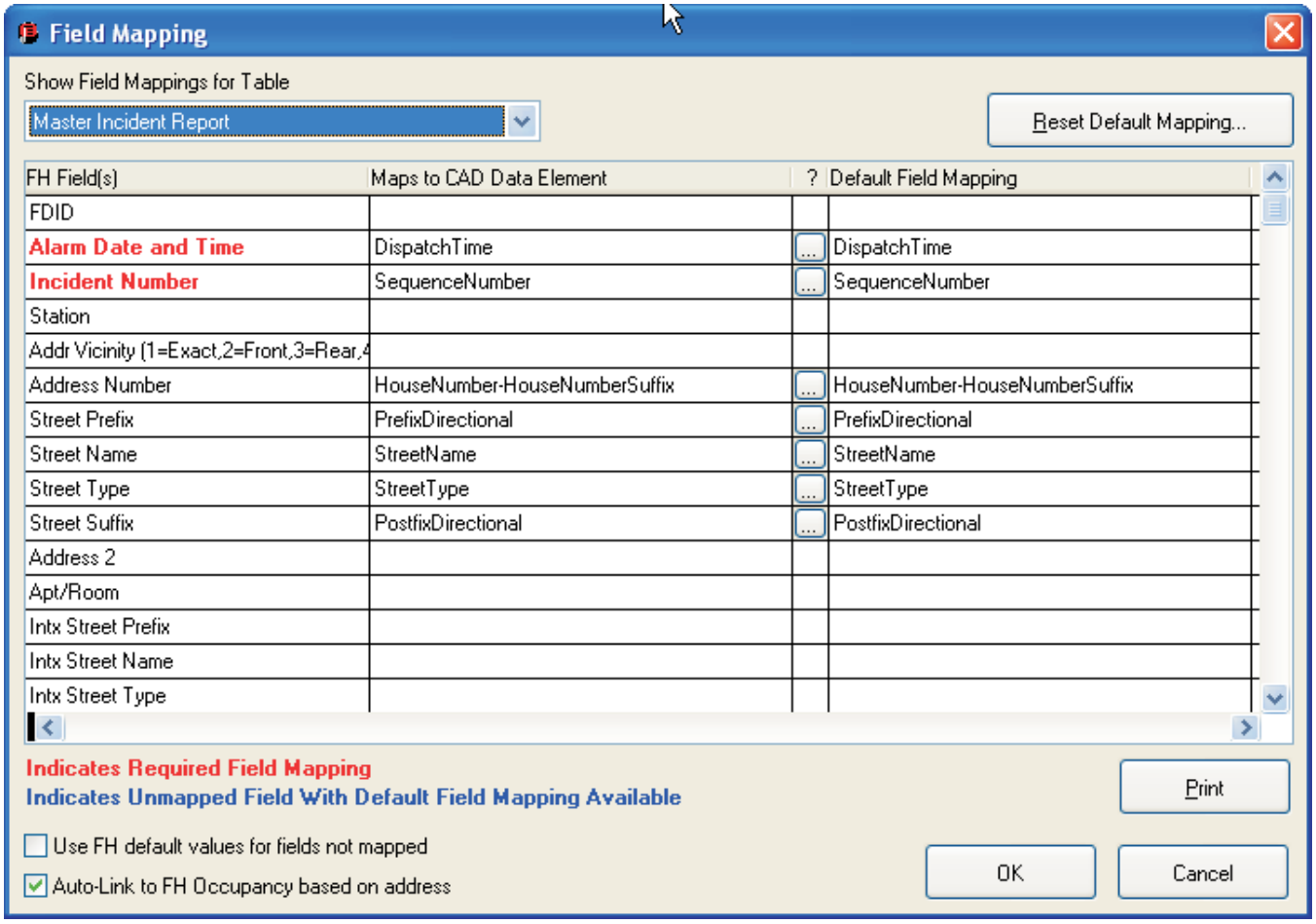
FH CAD Monitor will require an ODBC data source connection for the following CAD vendors. You can choose to configure an ODBC source during the installation of FH CAD Monitor if you do not have one already established.

Once the ODBC connection is created, specify the ODBC data source, user id, and password that will be used to connect to the CAD database. At minimum, the account you use must have read access to the database.

Check *Use Trusted Connection* to pass your remote data source login credentials based on your Windows login information.



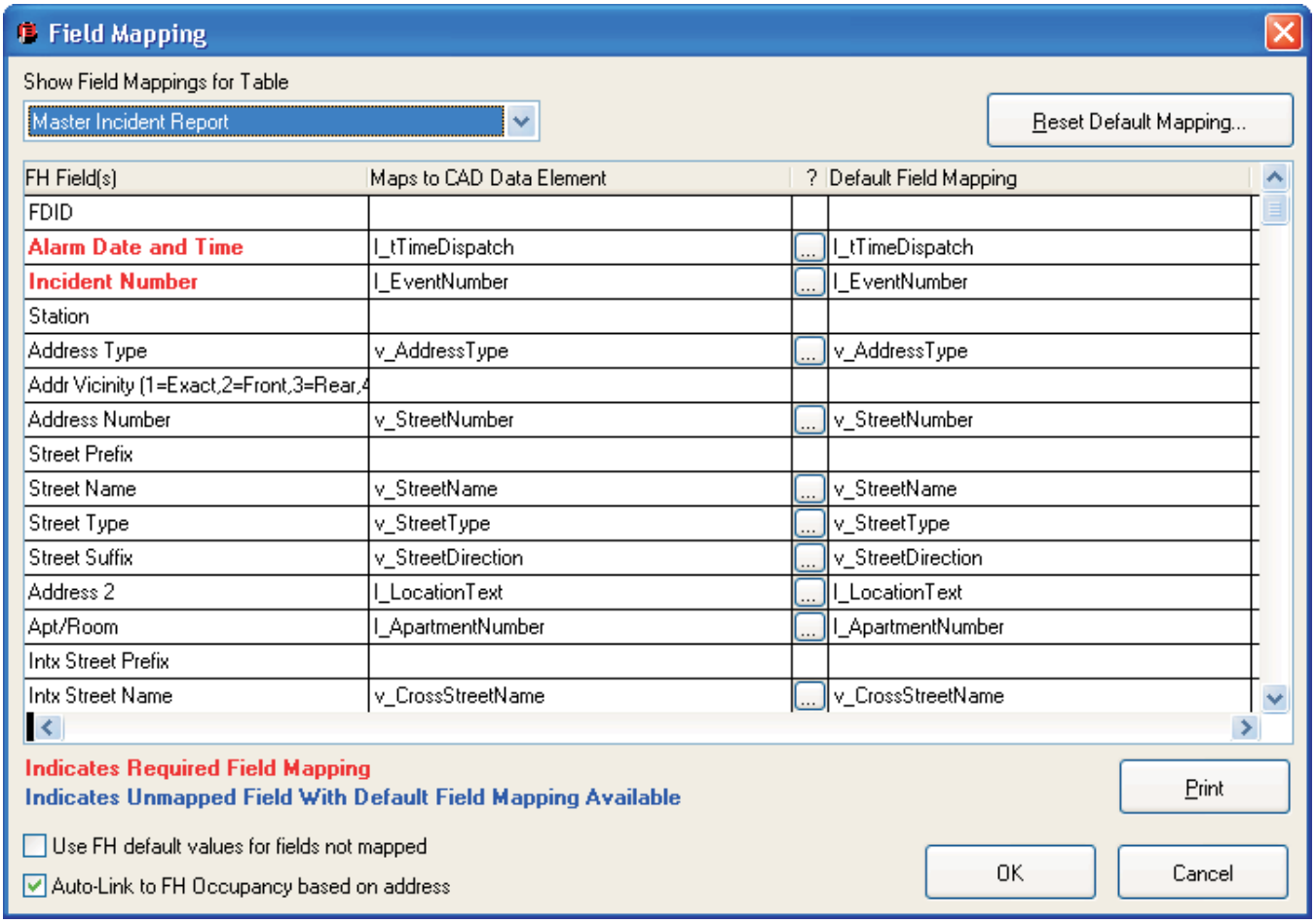
Positron Power CAD



The field mappings for Positron Power CAD will load during the installation by default as shown above. If any field import situations arise, modified user expressions in the *Maps to CAD Data Element* column can be compared for accuracy to the *Default Field Mapping* column. If any record import situations arise, review the CAD Data Filters for possible conflicting filter settings.

There is an additional option included in the FH CAD Monitor Options form, General tab, to 'Delete records from CAD from import'. If left unchecked, no records are deleted. If checked, you can opt to 'Delete Processed Records' (all records imported into FH) or 'Delete All Records' (all processed records, plus incident records with no units. Unit records without an incident record associated with it are not deleted).

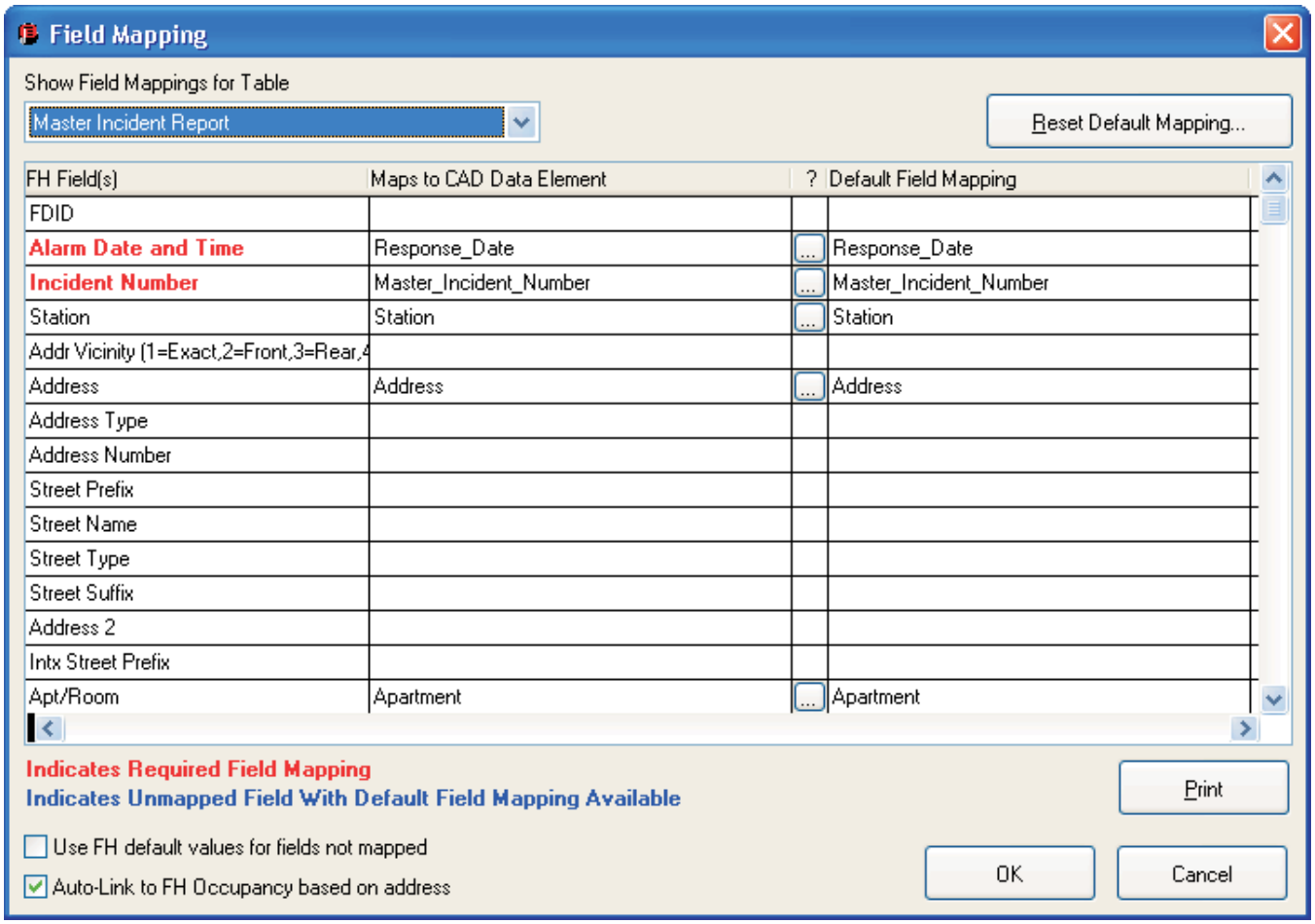
Motorola Premier (Printrak) CAD



The field mappings for Motorola Premier (Printrak) CAD will load during the installation by default as shown above. If any field import situations arise, modified user expressions in the *Maps to CAD Data Element* column can be compared for accuracy to the *Default Field Mapping* column. If any record import situations arise, review the CAD Data Filters for possible conflicting filter settings.

There is an additional option included in the FH CAD Monitor Options form, General tab, to 'Delete records from CAD from import'. If left unchecked, no records are deleted. If checked, you can opt to 'Delete Processed Records' (all records imported into FH) or 'Delete All Records' (all processed records, plus incident records with no units. Unit records without an incident record associated with it are not deleted).

American TriTech VisiCAD



The field mappings for American TriTech VisiCAD will load during the installation by default as shown above. If any field import situations arise, modified user expressions in the *Maps to CAD Data Element* column can be compared for accuracy to the *Default Field Mapping* column. If any record import situations arise, review the CAD Data Filters for possible conflicting filter settings.

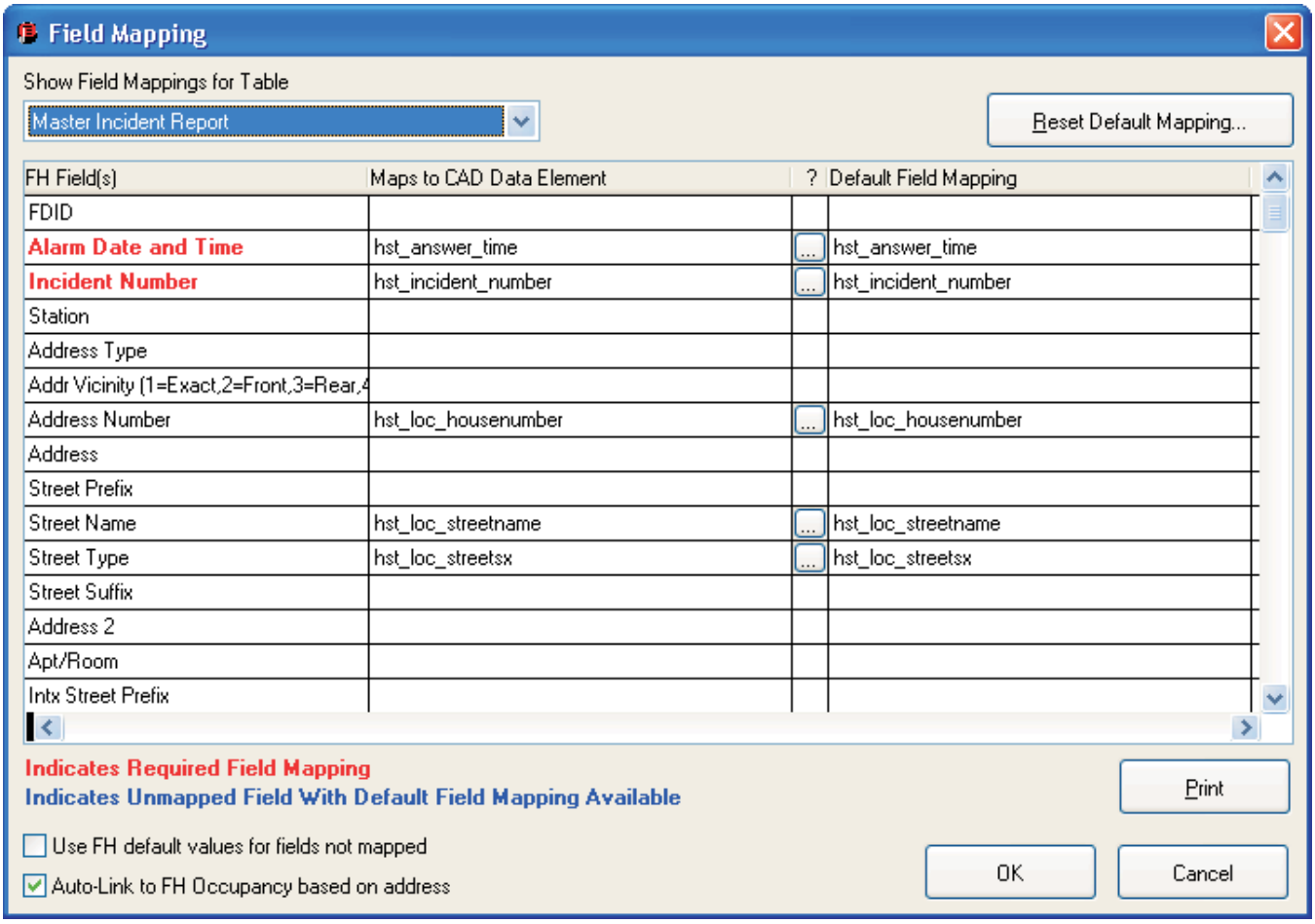
CAD Monitor can handle jurisdictions from TriTech VisiCAD by changing the default field mapping for the incident field. Example expressions are noted below. CAD monitor may generate an error message that the expression is not valid. Select Ignore. The expression will work without problems.

This returns the incident number from the CaseNumber table

```
QueryCADValue("SELECT SUBSTRING(CaseNumber,11,10) AS CaseNo FROM
CaseNumber WHERE MasterIncidentID = " + STR(CAD_Incidents.ID))
```

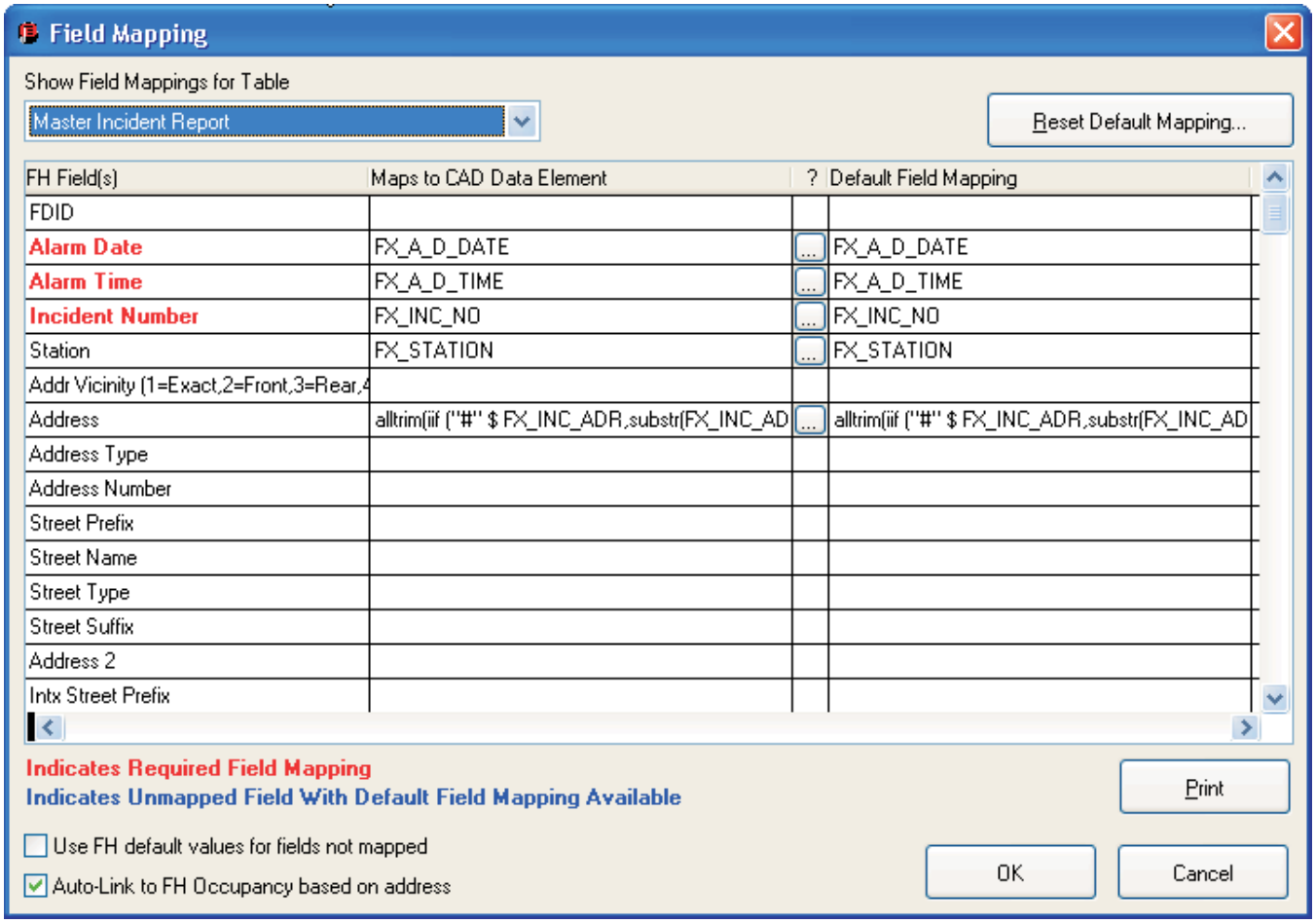
```
IIF(!isnull(QueryCADValue("SELECT SUBSTRING(CaseNumber,5,5) AS CaseNo
FROM CaseNumber WHERE JurisdictionName='Your Department Name' AND
MasterIncidentID = " + STR(CAD_Incidents.ID))),QueryCADValue("SELECT
SUBSTRING(CaseNumber,5,5) AS CaseNo FROM CaseNumber WHERE
JurisdictionName='Your Department Name' AND MasterIncidentID = " +
STR(CAD_Incidents.ID)),"ABORT_INCI")
```

Genisis 9-1-1 CAD



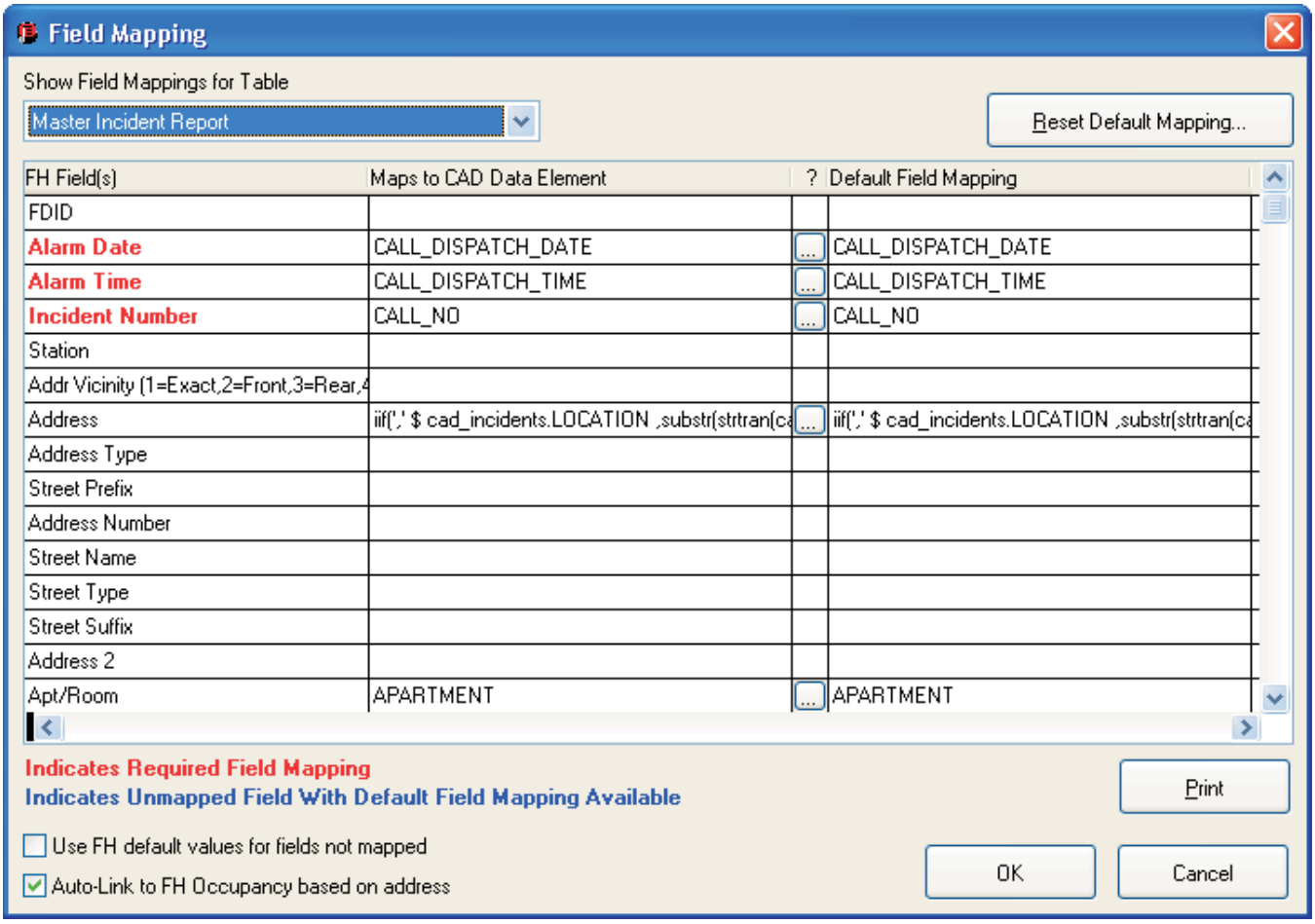
The field mappings for Genisis 9-1-1 CAD will load during the installation by default as shown above. If any field import situations arise, modified user expressions in the *Maps to CAD Data Element* column can be compared for accuracy to the *Default Field Mapping* column. If any record import situations arise, review the CAD Data Filters for possible conflicting filter settings.

Tiburon CAD



The field mappings for Tiburon CAD will load during the installation by default as shown above. If any field import situations arise, modified user expressions in the *Maps to CAD Data Element* column can be compared for accuracy to the *Default Field Mapping* column. If any record import situations arise, review the CAD Data Filters for possible conflicting filter settings.

Tiburon CARS/DW

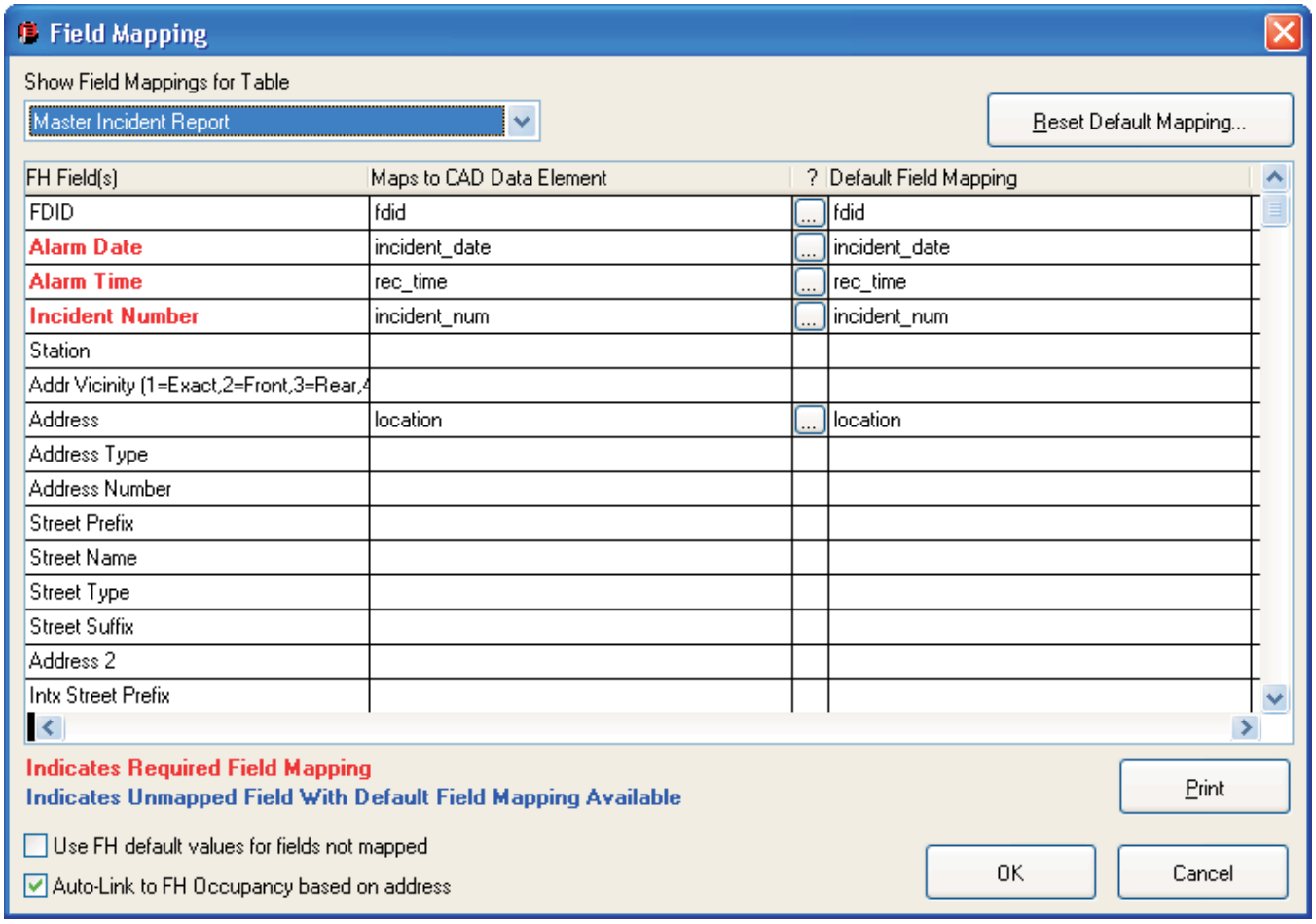


The field mappings for Tiburon CARS/DW CAD will load during the installation by default as shown above. If any field import situations arise, modified user expressions in the *Maps to CAD Data Element* column can be compared for accuracy to the *Default Field Mapping* column. If any record import situations arise, review the CAD Data Filters for possible conflicting filter settings.

Two scripts need to be run to create new views for CAD Monitor. The views are used to read the incident data. The scripts are available in the Firehouse Software CAD Monitor\DB_Scripts folder after CAD Monitor is installed. The SQL System Administrator will need to run these scripts on the SQL server.

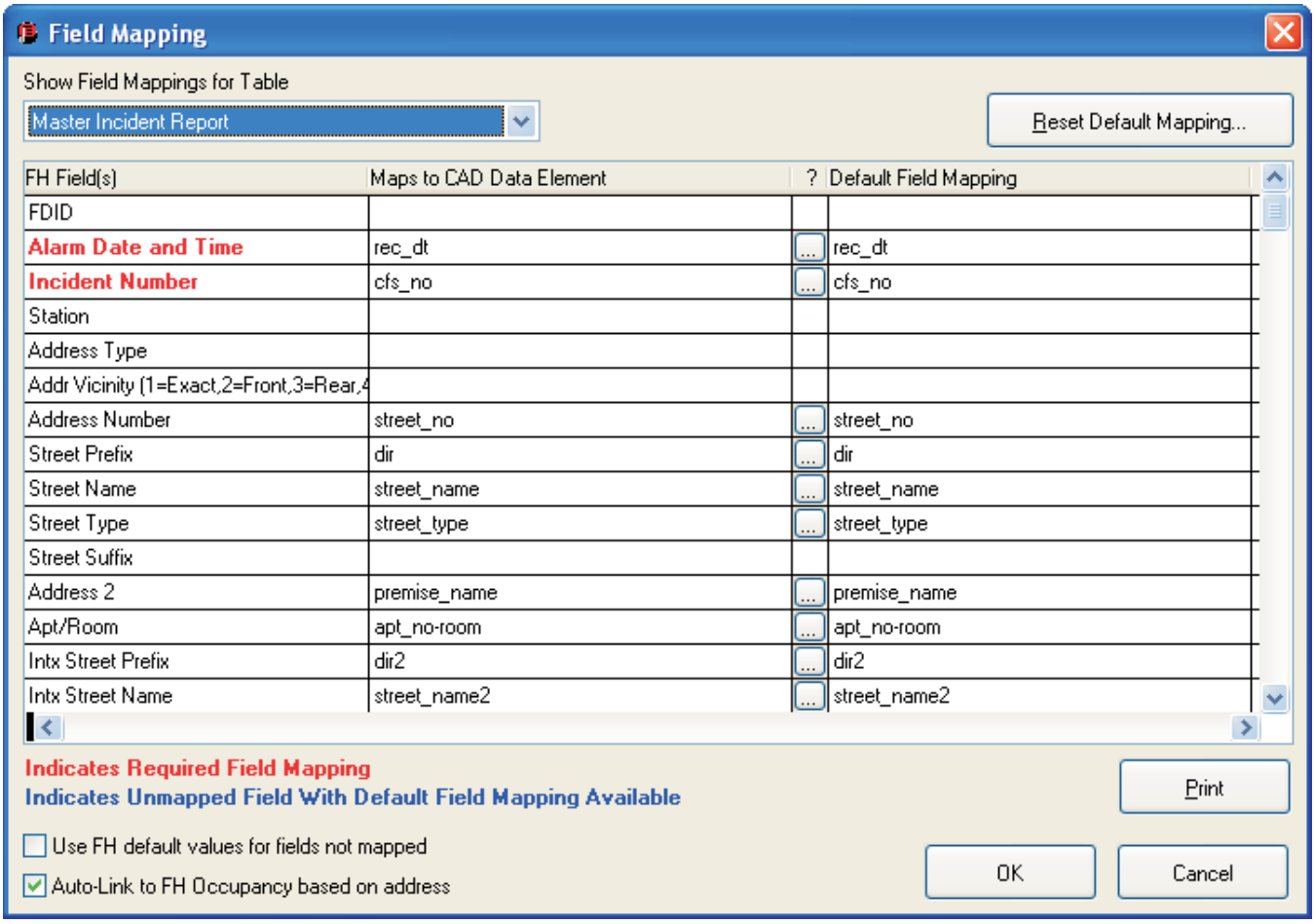
FH CAD Monitor needs Read-Only Access to the CARS_DW database and Read-Only access to the following Tables and Views: FCARSCALL1, FCARSCALL2, FCARSCALL3, FCarsCallUnit, FCarsUnitAssign, CarsNarrative, ECARSCALL1, ECARSCALL2, ECARSCALL3, ECarsCallUnit, ECarsUnitAsgn, FCarsCallView, and ECarsCallView.

PSSI CAD



The field mappings for PSSI CAD will load during the installation by default as shown above. If any field import situations arise, modified user expressions in the *Maps to CAD Data Element* column can be compared for accuracy to the *Default Field Mapping* column. If any record import situations arise, review the CAD Data Filters for possible conflicting filter settings.

NexGen CAD



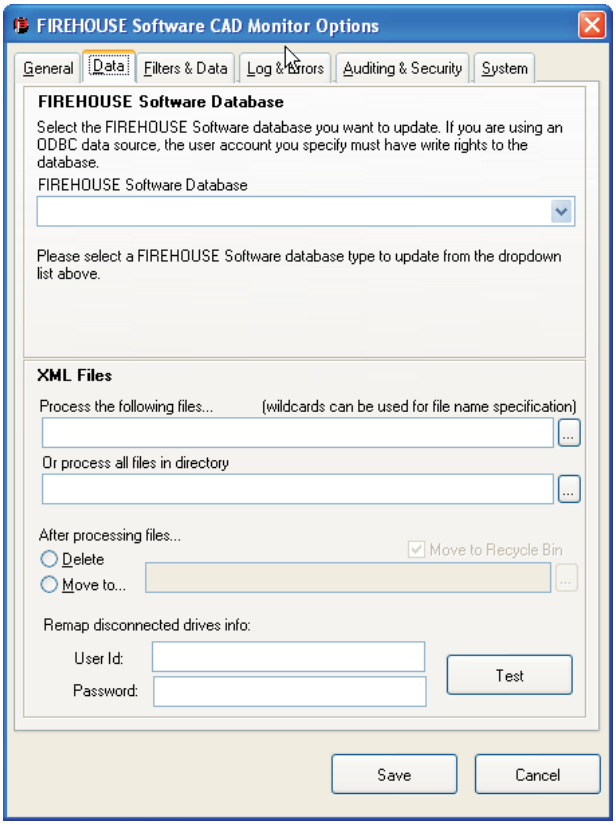
The field mappings for NexGen CAD will load during the installation by default as shown above. If any field import situations arise, modified user expressions in the *Maps to CAD Data Element* column can be compared for accuracy to the *Default Field Mapping* column. If any record import situations arise, review the CAD Data Filters for possible conflicting filter settings.

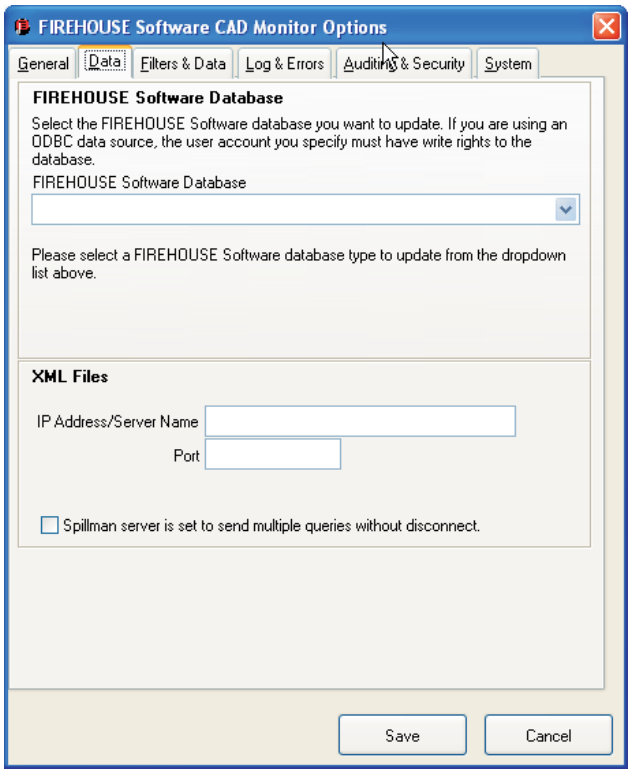
It is important to not alter the unit_id in the cad system, and then re-import the incident record. This could cause FH CAD Monitor to error, and stop all processing of other incidents. If this occurs, you must reset the polling date to after the incident date of the altered record.

Accessing Vendor XML Data

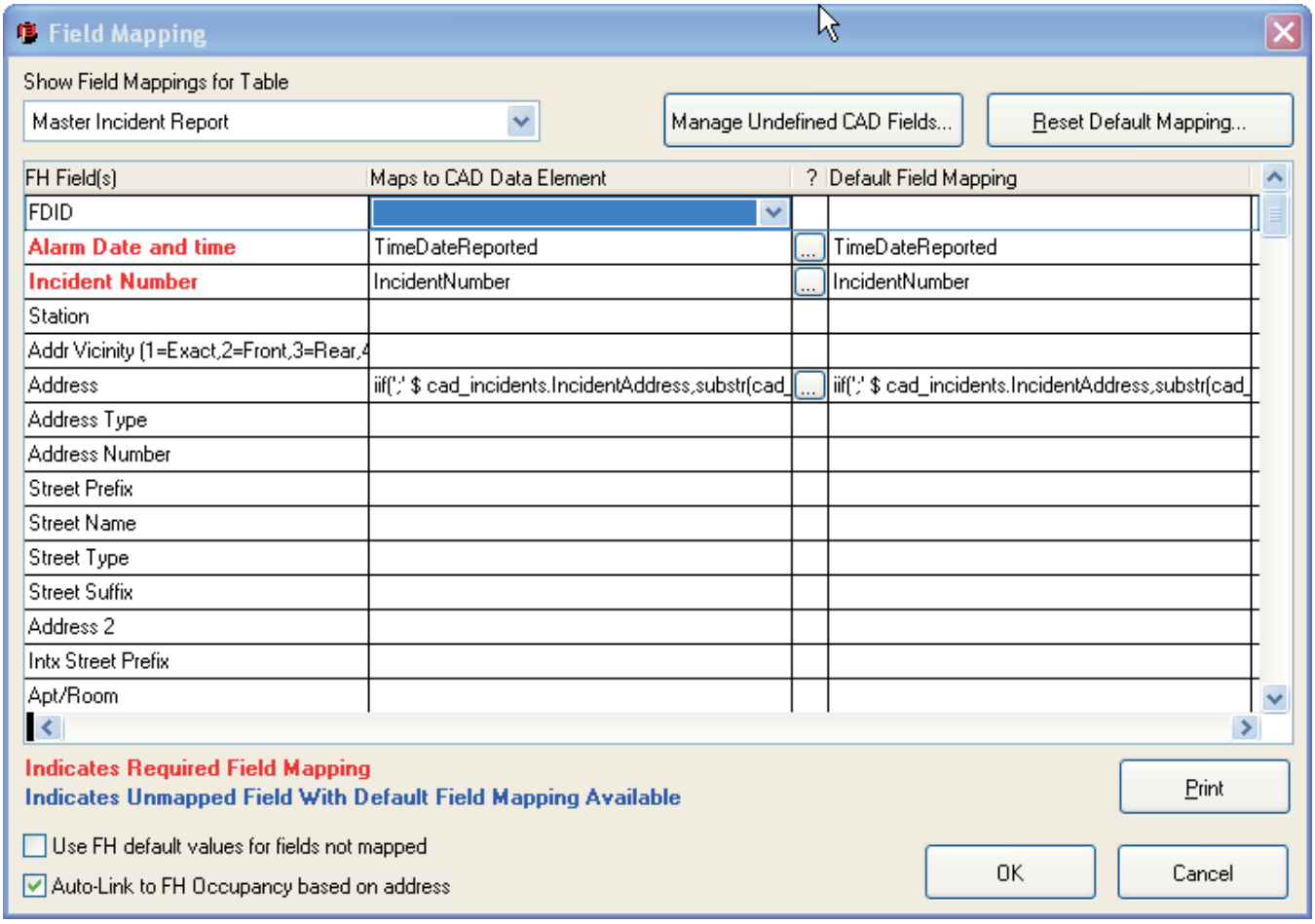
FH CAD Monitor will require a direct connection or import of an XML file for the following CAD vendors. When importing an XML file, select the files to process or the directory where the files are stored, and select the post-processing action. Select *Delete* to delete the XML files from the CAD system after they are processed. *Check Move to Recycle Bin* to keep a copy of the deleted files in the Windows **Recycle Bin**. Select *Move to* and select a directory where XML files from the CAD system are moved after they are processed.

When connecting to the XML source directly via TCP/IP connection, specify *IP Address/Server Name* and *Port*.





Spillman Technologies, Inc. CAD



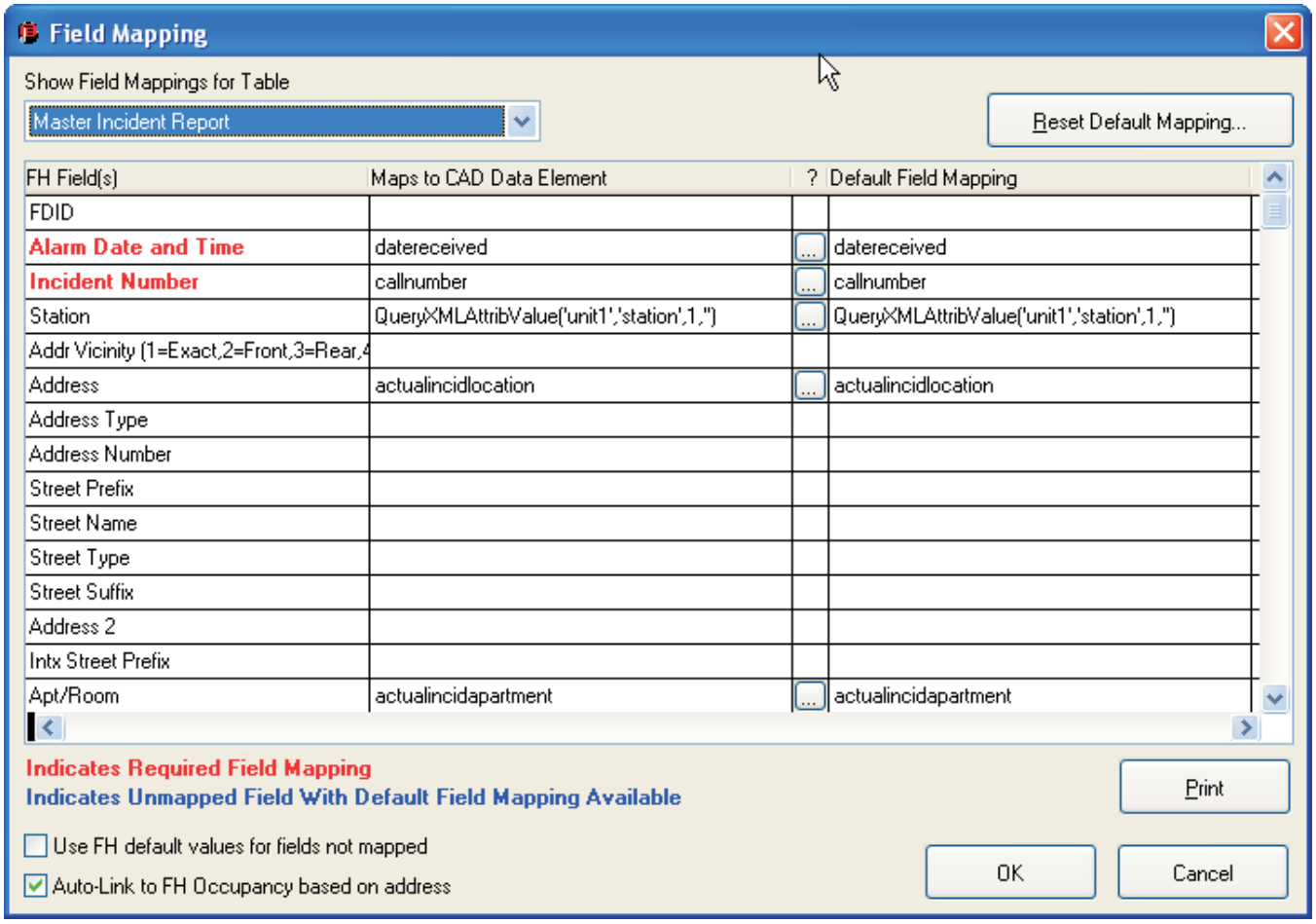
The field mappings for Spillman Technologies CAD will load during the installation by default as shown above. If any field import situations arise, modified user expressions in the *Maps to CAD Data Element* column can be compared for accuracy to the *Default Field Mapping* column. If any record import situations arise, review the CAD Data Filters for possible conflicting filter settings.

If you have a Spillman CAD system configured to return multiple queries without disconnect, check *Spillman server is set to send multiple queries without disconnect* in the Options form, Data tab. FH CAD Monitor will keep track of the last poll time. When CAD monitor re-polls, it will go back to the last poll time to pull data.

If you reset the poll time manually, all calls will be pulled from the specified time. If data already exists in FH, it will overwrite the record(s) by design.

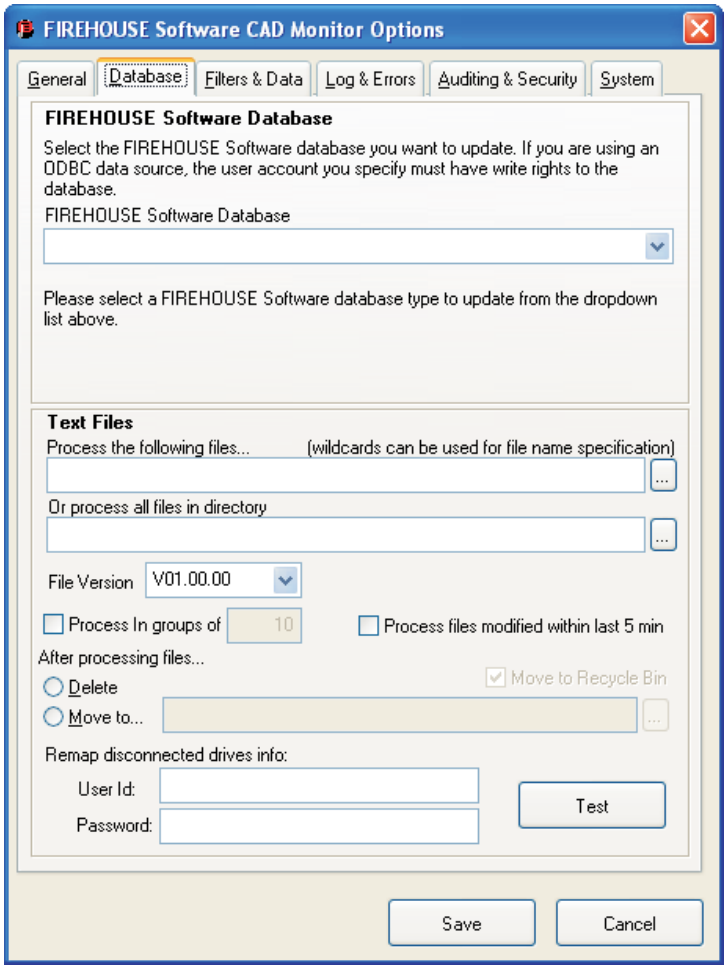
The most updated information for FH CAD Monitor's interface with Spillman Technologies, Inc. can be located at http://www.firehousesoftware.com/eval/Spillman.php

VisionAIR VisionCAD



The field mappings for VisionAIR VisionCAD will load during the installation by default as shown above. If any field import situations arise, modified user expressions in the *Maps to CAD Data Element* column can be compared for accuracy to the *Default Field Mapping* column. If any record import situations arise, review the CAD Data Filters for possible conflicting filter settings.

Text file import for FH CAD Monitor



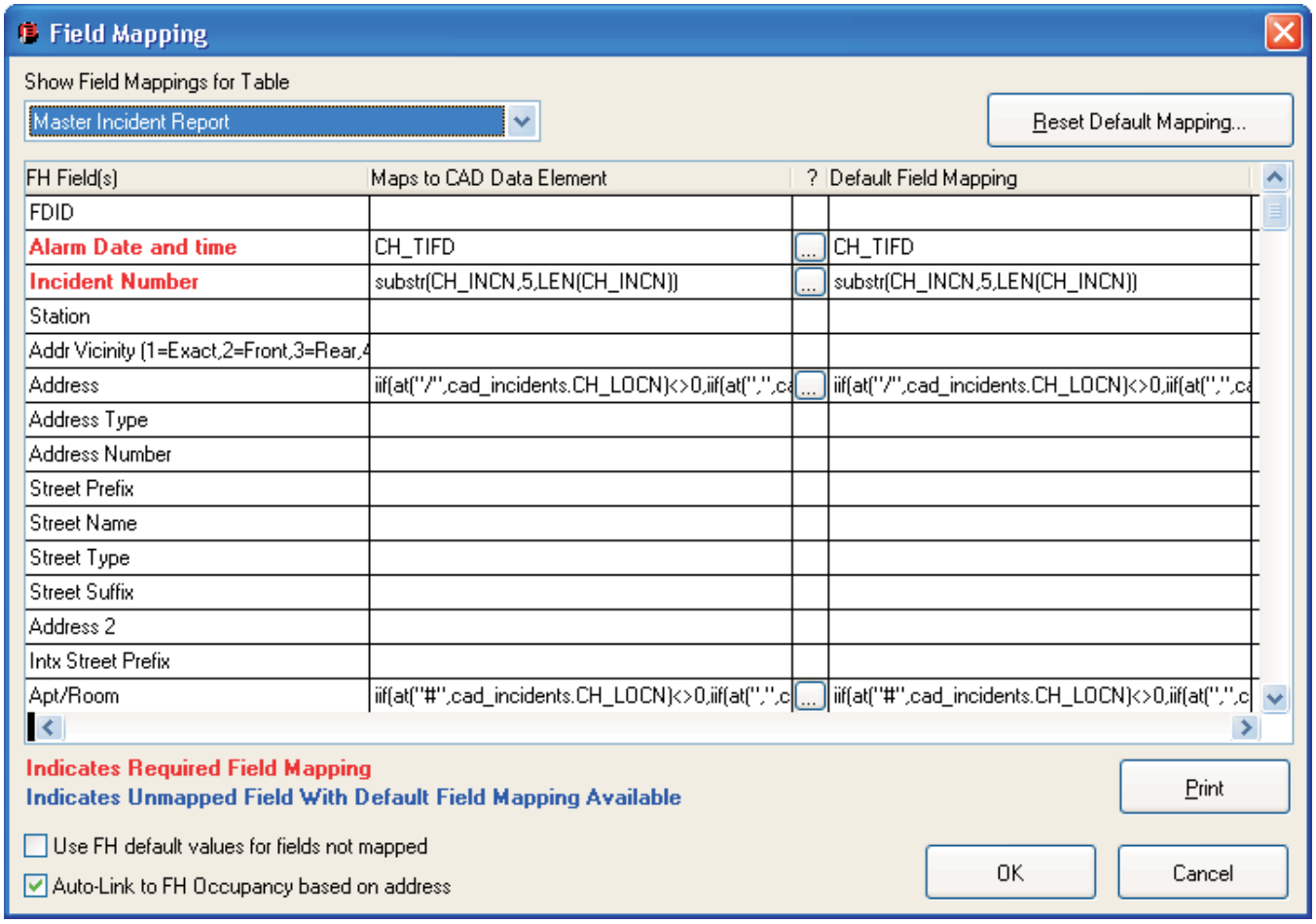
FH CAD Monitor will require a ASCII file for the following CAD vendors. When importing a file, select the files to process or the directory where the files are stored, and choose the post-processing action. Select *Delete* to delete the files from the CAD system after they are processed. *Check Move to Recycle Bin* to keep a copy of the deleted files in the Windows **Recycle Bin**. Select *Move to* and select a directory where files from the CAD system are moved after they are processed.

Generic ASCII text imports will specify the *File Version* to verify in the CAD text file in conjunction with your file format

Generic ASCII Text Imports

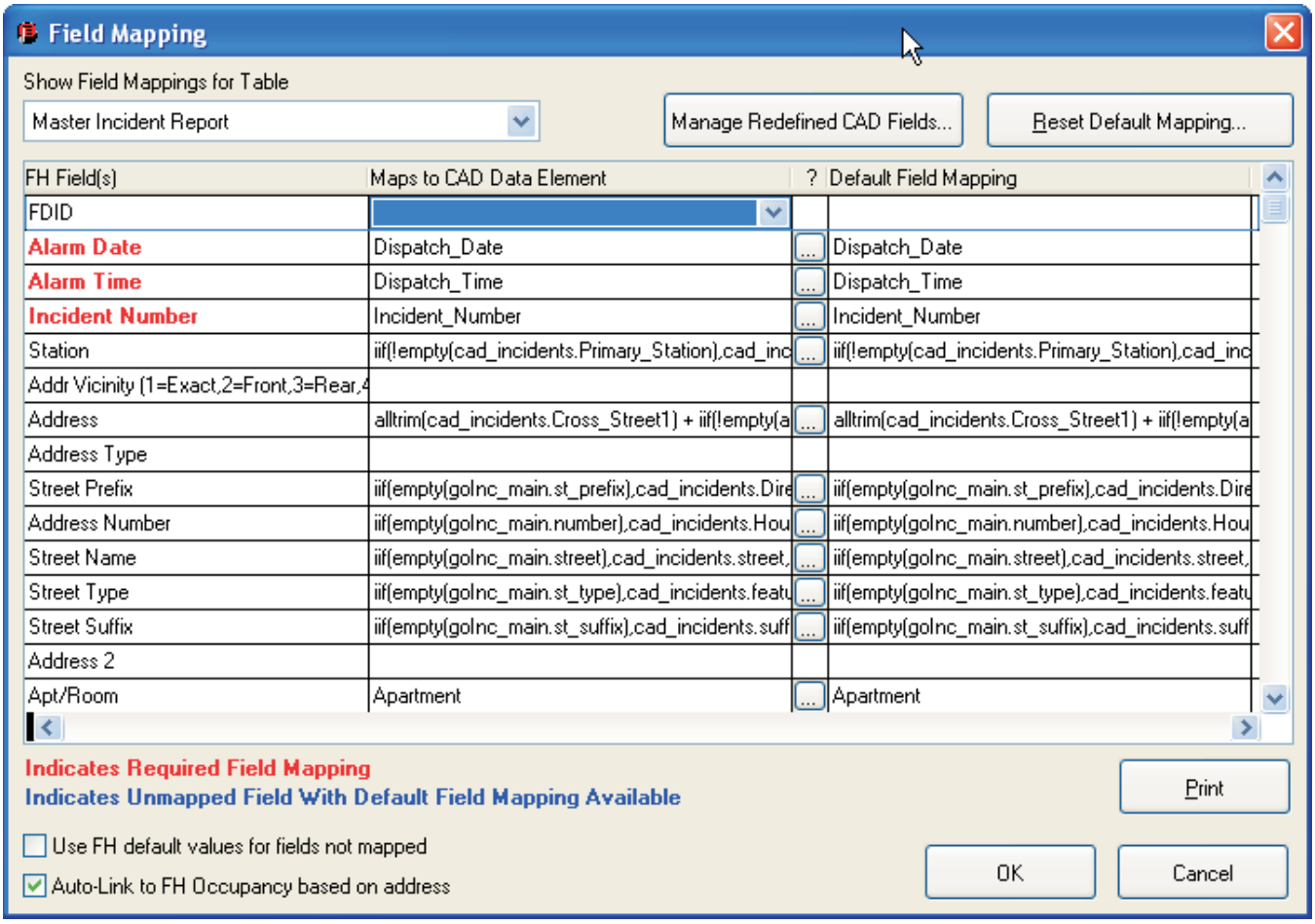
FH CAD Monitor interfaces with many CAD systems via generic ASCII files based on cooperative efforts between the CAD vendor and FIREHOUSE Software. FH CAD Monitor can import any generic ASCII text source that conforms to the structure. This enables any CAD system with export capability to be interfaced with FH. We recommend contacting your sales representative to determine which option is best for your specific configuration.

Northrup Grumman PSI CAD



The field mappings for Northrup Grumman PSI CAD will load during the installation by default as shown above. If any field import situations arise, modified user expressions in the *Maps to CAD Data Element* column can be compared for accuracy to the *Default Field Mapping* column. If any record import situations arise, review the CAD Data Filters for possible conflicting filter settings.

Integraph CAD



The field mappings for Integraph CAD will load during the installation by default as shown above. If any field import situations arise, modified user expressions in the *Maps to CAD Data Element* column can be compared for accuracy to the *Default Field Mapping* column. If any record import situations arise, review the CAD Data Filters for possible conflicting filter settings.