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LS450 ConfigTool 2.0

Installation and Operation Manual

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LS450 ConfigTool 2.0 Installation Manual

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Introduction

This manual provides instructions for the the LS450 ConfigTool 2.0 software that is used to program various Tek-CARE systems.

The LS450 ConfigTool 2.0 is designed to run on the technician's programming laptop. The programming laptop and the Tek-CARE system being programmed are networked together using a standard network patch cable between the Tek-CARE Network ports on various modules.

Master stations, TVs, mobile devices, etc. will display any changes made to the system that were created and/or modified in the LS450 ConfigTool 2.0 software. Make sure to have all of the appropriate manuals accessible when preparing modules, master stations, servers, and systems for installation.

Installing the Software on a New System

> **NOTE:** The LS450 ConfigTool 2.0 and Tek-CARE system must be running the same version of software, so that the LS450 ConfigTool 2.0 can commit a configuration to the Tek-CARE system. A newer LS450 ConfigTool 2.0 can load a configuration from an older system and can update the Tek-CARE system to the newer version.
>
> **Regularly obtain the latest LS450 ConfigTool 2.0, and use it to update the Tek-CARE system.**

A laptop running Windows is used to run the LS450 ConfigTool 2.0. The Tek-CARE system includes an LS450 ConfigTool 2.0 Programming Software USB flash drive. Insert the flash drive into a USB port of the computer to be used for programming the configuration. View the USB flash drive's contents using Windows Explorer, and double-click on LS450_setup_xxxx.exe (where xxxx is the software version). Follow the prompts to install the software. Remove the USB flash drive when the install is complete.

Network Setup

In order to communicate with the Tek-CARE Network, the programming computer running the LS450 ConfigTool 2.0 must have one Ethernet port configured to communicate with the Tek-CARE Network.

Access the network connections settings in Windows 10 by selecting **Start→Control Panel→Network and Internet→View Network Status and Tasks**.

Access the network connections settings in Windows 11 by selecting **Start→Control Panel→Network and Sharing Center→Change Adapter Settings**.

Select **Ethernet Connections**, then **Properties**. Select **Internet Protocol Version 4 (TCP/IPv4)**, then **Properties**. Check **Use the following IP address** and enter the following:

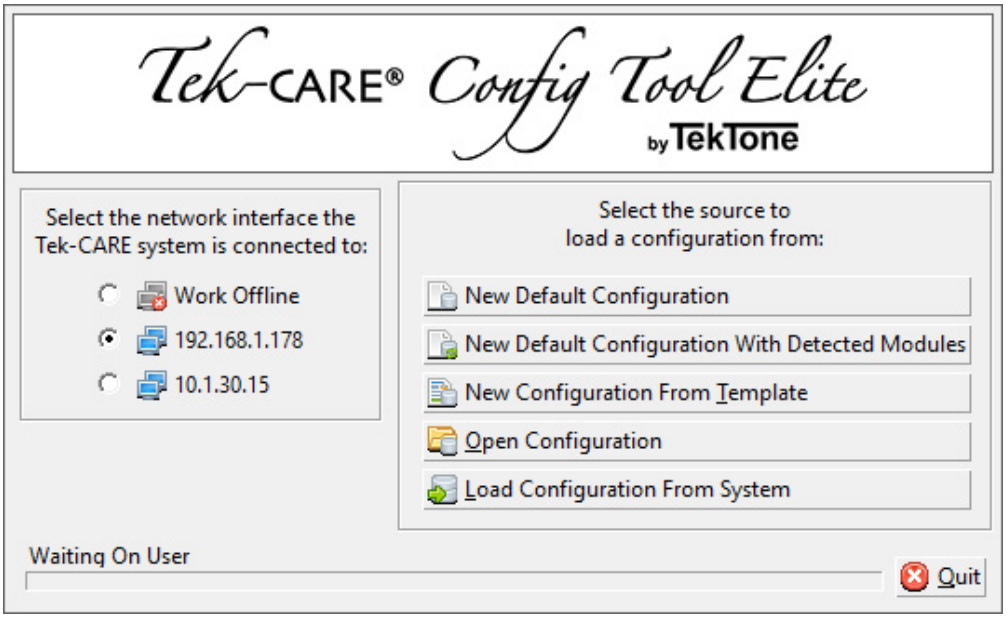
Tek-CARE IP address: 192.168.1.252 | Subnet Mask: 255.255.255.0

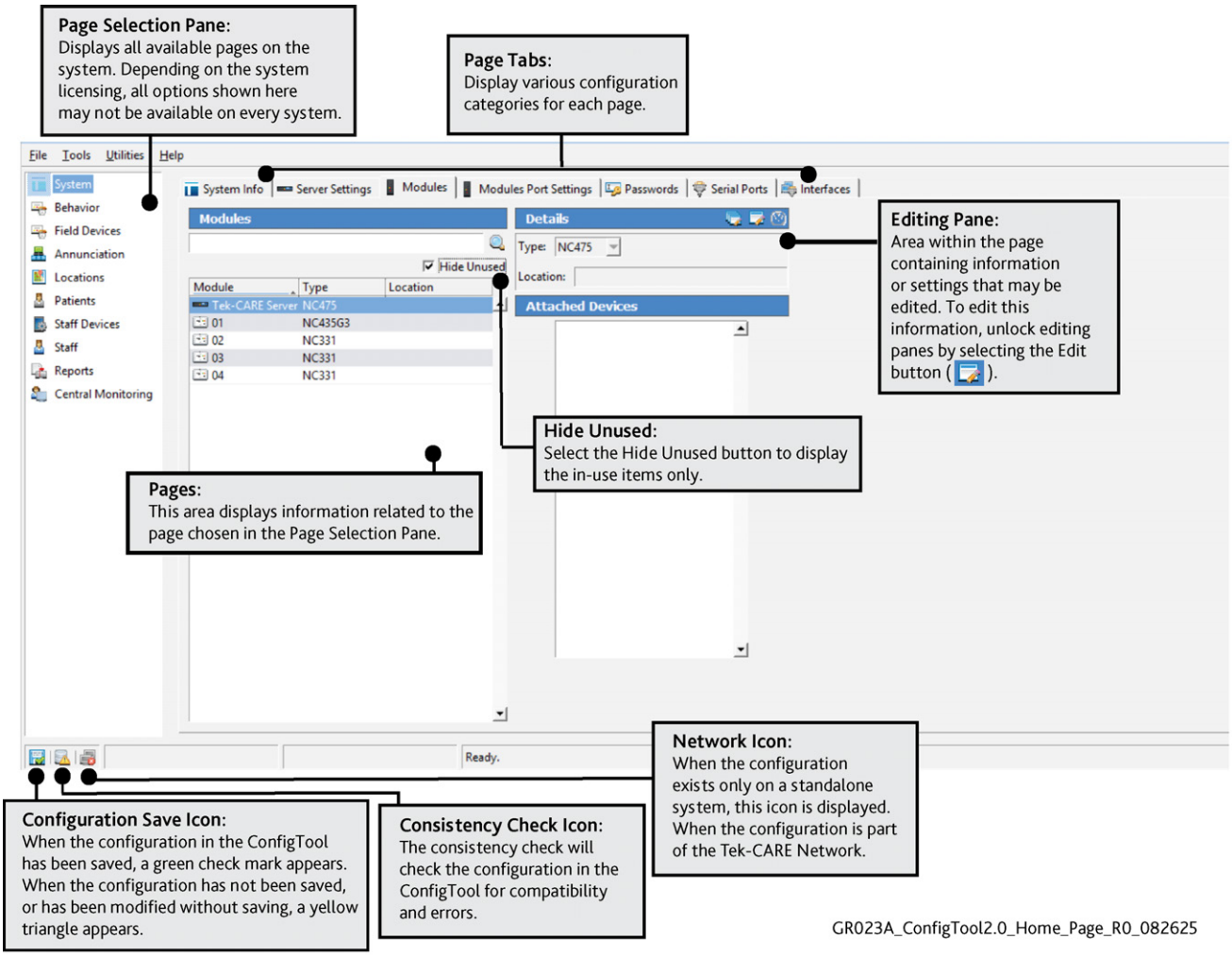
Select **OK** and close out of the Ethernet Properties.

Running the LS450 ConfigTool 2.0 Software

Running the LS450 ConfigTool 2.0 with an existing configuration already on the system:

1. Open the LS450 ConfigTool 2.0 on the programming laptop that is connected to the Tek-CARE Network to start the LS450 ConfigTool 2.0 Software.
2. In the Tek-CARE ConfigTool 2.0 splash screen, select the IP Address of the network interface that is connected to the Tek-CARE Network (normally 192.168.1.252).
3. Select **Load Configuration from System**. If patients have been added in the configuration, the software will prompt to either **Load with Private Data**, **Load without Private Data** (this option will change the names of the patients), or **Cancel Loading** (this option will return the user to the splash page).





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Work Flow

The LS450 ConfigTool 2.0 supports several methods of importing data, and may be used in different ways depending upon circumstances. **Be sure to save the configuration often**.

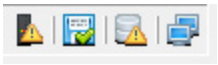
Below is a general example of the work flow for configuring a new system:

1. Install the hardware and check all wiring for shorts, grounds, and opens.
2. Open LS450 ConfigTool 2.0 and select **Load Configuration from System**.
3. Review the detected **Modules** on the **System** page within the software and add modules if necessary. If the modules are missing from the configuration, double check the DIP switch addressing or correct the connections (**Modules Tab on page 17**).
4. Select the **Masters** tab on the **Annunciation** page to ensure all of the masters have been detected and are included in the configuration (**Masters Tab on page 36**). Rename if necessary.
5. Select the **Stations** tab on the **Field Devices** page to ensure all of the stations have been detected and included in the configuration (**Stations Tab on page 28**). Rename as necessary.
6. Set up zone names with the **Zones** tab on the **Annunciation** page, then place the stations and masters within those zones (**Zones Tab on page 34**).
7. Set up annunciations for duty stations and zone dome lights with the **Field Annunciations** tab on the **Annunciation** page (**Field Annunciations Tab on page 35**).
8. If applicable, edit room controller points for TC120, TC400P5+, TC400GEN3, and TC3000 with the **Points** Tab on the **Field Devices** page. Be sure to **Disable Undetected Points** before editing room controller points. Refer to (**Points Tab on page 29**).
9. Locations may already be added into the configuration (**Locations Page on page 40**). Use the **Locations** tab on the **Locations** page to edit or add new locations if necessary.
10. If necessary, select the **Paging** tab on the **Staff Devices** page to enable the paging feature (**Pagers Tab on page 47**).
11. Add staff members and staff groups; create and define assignments for each staff member or group (**Staff Page on page 55**).
12. Select **File→Save Configuration** to save changes and **File→Consistency Check** to find and correct any issues. Select **File→Commit Configuration To System** to upload the configuration to the Tek-CARE Network. Once the upload is complete, the system will reboot.
13. Test the system before releasing it to the facility.

Using the ConfigTool 2.0 Programming Software

The System Configuration resides on the Tek-CARE system. Any changes made to the configuration using the ConfigTool must be committed to the system to take effect.

Pay close attention to the icons in the lower left corner of the ConfigTool screen. These icons will indicate when configurations are synced to the system, where the configuration is stored, if the configuration has had a consistency check, and if the NC475 Tek-CARE Central Equipment is maintaining a connection to the Tek-CARE Network.



System Data Icon - Indicates whether the configuration stored with the LS450 ConfigTool 2.0 is the same as the nurse call system's configuration data. The icon will indicate that the data is the same if no changes have been made since the initial load or since the last **Commit Configuration To System**.


Indicates the LS450 ConfigTool 2.0 data is the same as the configuration currently on the Tek-CARE system.


Indicates the configuration open in the ConfigTool is different than what is currently on the system.

File Status Icon - Indicates whether the current LS450 ConfigTool 2.0 data has been saved.


Indicates the config file has been saved to the hard drive of the laptop running the ConfigTool since the last edit.


Indicates the config file hasn't been saved to the local hard drive since the last edit.

Consistency Check Icon - Indicates whether the configuration has gone through a consistency check.


The configuration has successfully gone through a consistency check.


The configuration needs to go through a consistency check before being committed to the system.

Network Selection Icon - Indicates the network selection that was made when starting the LS450 ConfigTool 2.0.


One of the active network connections on this machine was selected.


The ConfigTool is being used offline to edit configuration files only.

During system programming, remember that the ConfigTool and the Tek-CARE system operate independently of each other. If a configuration is created or changed using the ConfigTool, it must be loaded onto the system by choosing **File→Commit Configuration to System**.

When programming the Tek-CARE system, the user must be familiar with the different buttons used to interact with the Tek-CARE software.

These buttons appear at the top of editing panes within the ConfigTool:

Edit: Before information in an editing pane may be changed, select this button to unlock the pane for editing.

Edit Multiple: Before information in an editing pane may be changed, select this button to unlock the pane for editing.

Apply: Select this button to confirm programming changes. After selecting this button, the field being edited will be locked.

NOTE: This does NOT save the configuration to disk.

Cancel: Select **Cancel** to undo any programming changes made in the editing pane and lock the pane.

Add: Used to add patients, transmitters, pagers, and other items to the configuration.

Delete: Used to delete records, transmitters, patients, and many other items from the configuration.

Add Multiple: Used to add multiple records to the Tek-CARE system at once. This is especially useful for adding RF pagers with consecutive CAP codes to the configuration.

Delete Multiple: Used to delete multiple records from the configuration at once.

Add Barcode: Used with hand scanner to enter a device # by scanning the back of the unit.

Mark Undetected TC570 Repeaters Not In Use: Marks undetected TC570 Repeaters (NC571) "not in use".

Input Controls - The Input Controls provide all the basic editing for each component. First, select **Add** or **Edit**. Next, use the various controls, each of which performs specific functions, to customize each component. Select **Apply** to accept the changes.

Drop-Down Lists allow various settings to be selected. The options are fixed; drop-down lists do not allow user input.

Check Boxes control On/Off options for components.

Text Boxes are used to enter text, such as a component name.

Spinner Boxes are used for numeric inputs. They have a predetermined range of values for each specific field.

Sliders are another type of numeric control with a fixed range. A slider visually displays the predetermined range of values as well as the current setting.

Audio Track Selectors are combination control/preview controls that allow the available tones to be selected and then played using the selected interval separation.

Check Tables provide a way to select multiple On/Off options at once. Each box represents one possible selection for the current component.

Dome Test Bars are used to preview the dome annunciation for a call type. Click **Play** to preview the current settings.

Station Inputs are used to configure station behaviors.

Status Bar Icons at the bottom left of the screen show the programs current configuration.

Tool Tips are available in many places in the LS450 ConfigTool. Each tool tip provides information relevant to that option or setting in the software or configuration when hovering over certain fields.

Progress Bar at the bottom of the screen displays the percent complete for various processes. It also includes a brief description of the current process or step in the process.

Status Text at the bottom of the screen displays either a brief description of the current process or step in the process, or "Ready" if the software is idle.

Acknowledgments

FXRuby: This software uses FXRuby (Libraries\FXRuby), a library copyright © Lyle Johnson and covered by the GNU Lesser General Public License, and includes code from the Mondrian Ruby IDE, copyright © Oliver Smith and covered by the MIT License.

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Menu Bar

In addition to the areas shown on the home screen, note the menu bar at the top of the window that contains the options **File**, **Tools**, **Utilities**, and **Help**. These menus are described on the following pages.

File

Under the **File** menu, note the configuration options.

- **New Default Configuration -** Clears all data and reverts to the initial values for all components. This is a blank configuration without any existing hardware.
- **New Default Configuration with NC475 -** Cleans all data and reverts to the initial values for all components, then loads existing hardware types from the system and adds them to the default configuration.
- **Default Configuration with Detected Hardware -** Cleans all data and reverts to the initial values for all components, then loads existing hardware types from the system and adds them to the default configuration.
- **New Configuration From Template -** Clears all data and reverts to the initial values for all components, then loads a new configuration from selected templates.
- **Open Configuration -** Will load a configuration data file that has already been created and saved.
- **Reload Current Configuration File** - Reloads the configuration data from the most recent saved point of the configuration, discarding any unsaved changes.
- **Load Configuration from System -** Will load the current system configuration to the program for further editing.
- **Sync Configuration with Detected Modules** - Synchronizes the current configuration settings with actual hardware types present on the system. Most configuration options remain the same; just the existence and types of modules, masters, stations, and peripherals are updated.
- **Consistency Check** - Checks the configuration in the ConfigTool for compatibility and errors.
- **Export for Prior Version** - Allows the current configuration to be exported to a prior version of the software.
- **Save Configuration** and **Save Configuration As** - Allows to save the current configuration to the hard drive of the laptop being used for programming. Throughout the programming process, save the configuration regularly. Once programming is complete, save the configuration as a backup. This option will overwrite a file generated by an older version and will not be compatible with an older version of the software. Make sure to create a backup before installing updates.
- **Commit Configuration to System -** Sends the current configuration to the live Tek-CARE Network. If this command has not already been performed, the consistency check will run automatically before allowing the configuration to commit.
- **Quit -** Exits the LS450 ConfigTool.

Tools

The **Tools** menu includes a number of options used for different TekTone systems and integrations:

- **Central Monitoring Device List -** Create a printable list that links central monitoring device IDs to transmitter IDs, locations, and patient names. This list can be sent to the central monitoring facility to aid in identifying the source of a monitored alarm.
- **Callback List -** Choose the different options in the Callback List to Include Masters, Include Devices Not Currently In Use, and Include Zone.
- **Move Station Port** - If a port needs to be moved to a different port on a different module, select the source and destination from one module to another acceptable module that will work with those stations.
- **Merge NC400 Hardware into NC500 Configuration -** Import Tek-CARE400 hardware and station names from another configuration file into the currently loaded Tek-CARE500 configuration. This option can be used to integrate previously separate Tek-CARE400 and Tek-CARE500 systems.
- **NC300II Database Import to NC356CE -** When Tek-CARE400 NC356CE head-end modules will be used to replace the central equipment of a TC300II system, this procedure can be used to import the TC300II stations database into the Tek-CARE400 System.
- **NC300II Database Import as Foreign Devices -** TC300II Stations can be imported as Foreign Devices. This option is used when monitoring an TC300II with the NC475 Tek-CARE Central Equipment via Tek-ALERT. A valid TC300II database file is required for the import. Repeat for each stations.db file to be imported.
- **Import Foreign Devices from File -** Import a list of foreign devices from a CSV or tab-separated file.
- **Import Foreign Device Rules -** Import one or more foreign device rule sets from a saved file.
- **Update Foreign Device Rules -** Update one or more foreign device rule sets from a saved file.
- **Export Foreign Device Rules to New File** - Export one or more foreign device rule sets to a new config file.
- **Export Foreign Device List** - Export list of foreign devices to a new config file.
- **Import Location Survey Data** - Once a survey is taken for the Enhanced Location, select this option to import the data into the software.
- **Clear Location Survey Data** - This option will delete an imported survey that is used for Enhanced Location.
- **Replace ES Repeater** - This option will allow an old repeater to be replaced with a new repeater so a new survey doesn't have to be taken.
- **Remove Private Data** - This option allows all private patient data such as medications, conditions, etc., to be stripped from the configuration so that it can be sent to TekTone for troubleshooting help without revealing private patient information.
- **Restore Private Data** - This feature will restore private data if it has been stripped from the configuration. This option will redirect to the saved configuration file. This will prompt to load the file with private data onto the system.
- **Import Location Names from File -** This option will allow location names to be imported into the ConfigTool from a text file.
- **Generate Label Images** - This option is used to create custom call type inserts for SF123/SF523 stations if custom call types are used in the system configuration.

Utilities

The **Utilities** menu gives several options.

- **Reset Modules -** This option resets the system hardware immediately without changing the configuration.
- **Set Time on System -** By default, the LS450 ConfigTool uses the Windows system clock time from the machine it is running on. This option will change the time independently of the automatic time feature on the running system.
- **NC475/NC435G3/NC331 Update Server) -** This option will upgrade NC475 Tek-CARE Central Equipment and NC435G3/NC331 Hubs.
- **Upgrade GEN2 Modules (NC120/NC160/NC455CE/NC356CE) -** This option upgrades the applicable modules to the current software version.
- **NC475 License Update** - If you contact TekTone's Sales department and upgrade the license for additional features in the ConfigTool, this option will update the NC475's license file for additional features in the ConfigTool.
- **Change Subnet on Modules -** The facility LAN and Tek-CARE Network cannot be on the same subnet. This option will allow for a different subnet to be assigned to the Tek-CARE Network if 192.168.1.XXX is already used by the facility LAN.
- **Set NC455CE Audio Mode** - GEN3 or P5 (legacy) audio modes are assigned here. If an NC455CE will be supporting GEN3 equipment, the audio mode would then be assigned as such.
- **ES Location Survey Tool** - This tool creates a file of the recorded enhanced location and survey points.
- **TC570 Location Survey Tool** - This tool creates a file of the recorded enhanced location and survey points.
- **Setup EchoStream Messaging Mode** - This feature detects repeaters and programs the Network ID for Enhanced Location functionality.
- **Mobile App Echo Test Server** - The Mobile App Echo Test is used to determine if the facility's wireless network can support the audio functionality of the Staff App.

Help

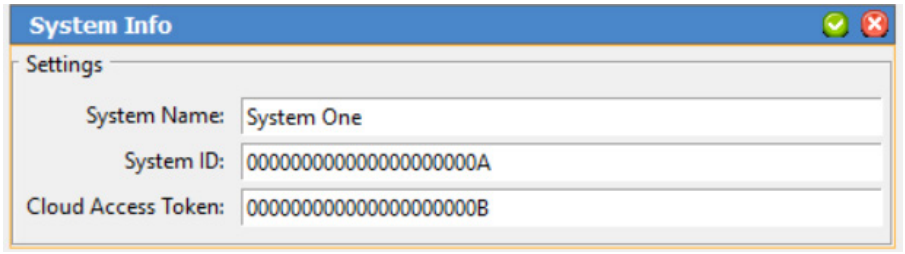
The **Help** menu displays options related to system information, troubleshooting, and software updates. The programming laptop must have a PDF viewer in order to view the **Fault Table** and **Change List**.

- The **Fault Table** shows a list of all available faults on the system along with a brief description of each fault.
- The **Change List** shows what changes have been made to the Tek-CARE software suite since the last code release.
- **About** will provide information about the currently installed software.

System Page

System Info Tab

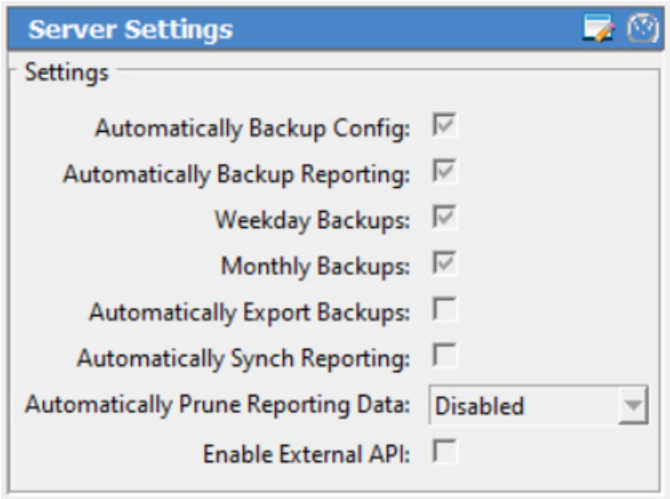
The System Info tab is used specifically for TekTone's cloud services.



Select **Edit** on the **System Info** tab to enter the system settings. Create a **System Name** to easily identify the configuration. When the cloud system has been set up for the facility, TekTone will supply the **System ID** and **Cloud Access Token**; enter these values into the appropriate fields, then select **Apply**.

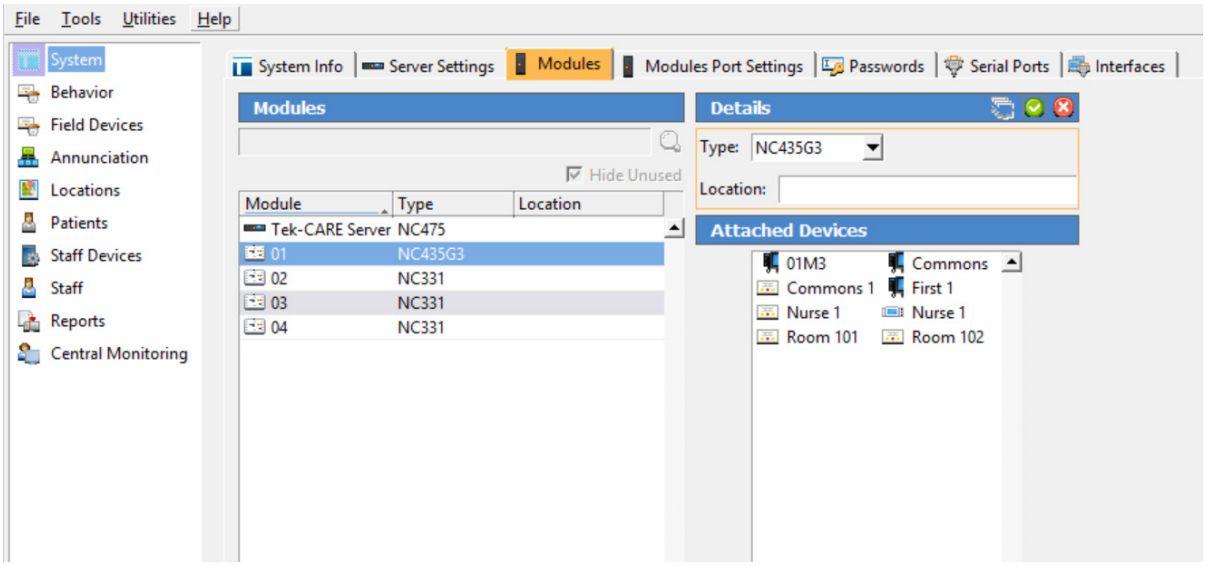
Server Settings Tab

The **Server Settings** tab allows for the option to automatically backup configurations and reporting, as well as automatically exporting backups and sync reporting. Check all applicable options for the facility's needs. Select **Apply** and save the configuration. Uncheck a setting if the facility no longer wishes to use that server setting.



Modules Tab

Modules and Hubs are the backbone of the Tek-CARE system. Once either **New Default Configuration with Detected Modules** or **Sync Configuration with Detected Modules** have been selected from the **File** menu, the ConfigTool will detect the modules on the Tek-CARE system. To find the detected modules in the ConfigTool, select the **Modules** tab within the **System** page.

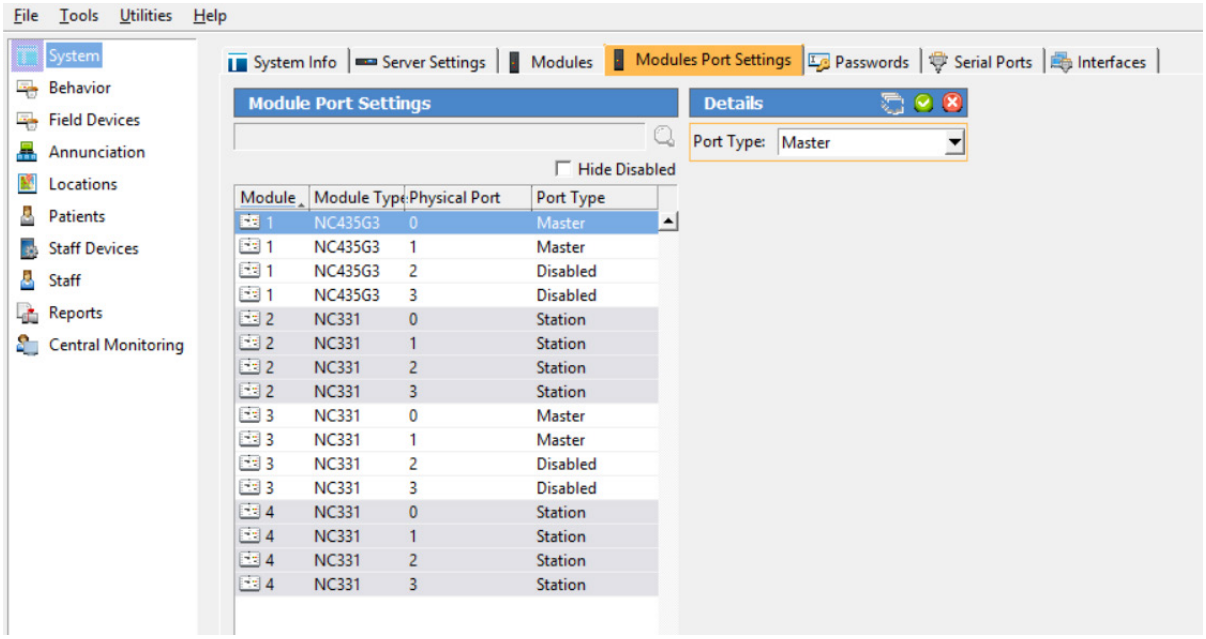


In the **Modules** pane, select the module address, then select **Edit** in the **Details** pane. Change the type of module and enter a location for the module. Detected masters and stations that are connected to that module are located in the **Attached Devices** pane.

Select **Apply** after editing the **Module** tab. Select **Hide Unused** to show only the modules that exist and hide the rest of the modules that are not used.

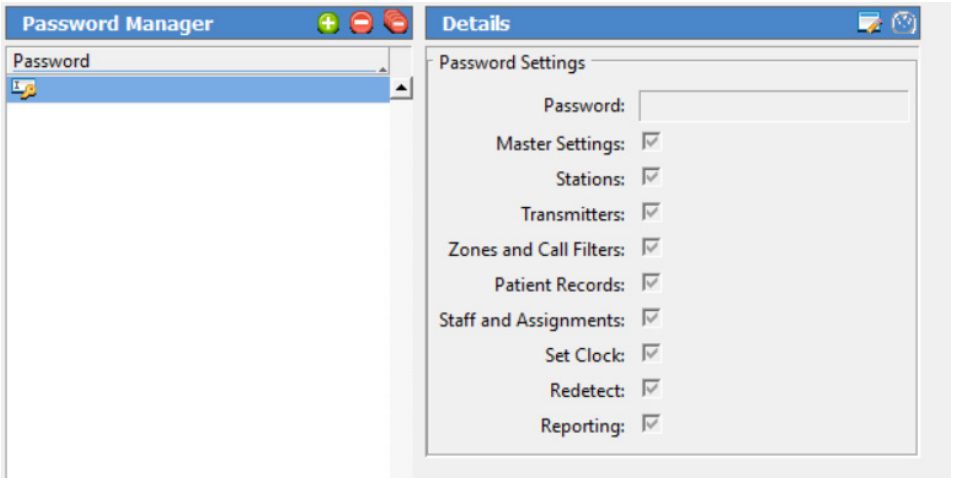
Modules Port Settings

Use the **Modules Port Settings Tab** to select the function of each of the four ports on the hub; the choices are Station, Master, or Disabled. The default is Station for all four ports. These fields only populate for NC435G3 and NC331 hubs.



Passwords Tab

Password protection is useful to prevent unauthorized facility staff from making changes to the configuration of the Tek-CARE system, for example: adding or removing transmitters, changing staff assignments, or altering reporting settings. Several different passwords may be used, each protecting different system settings.



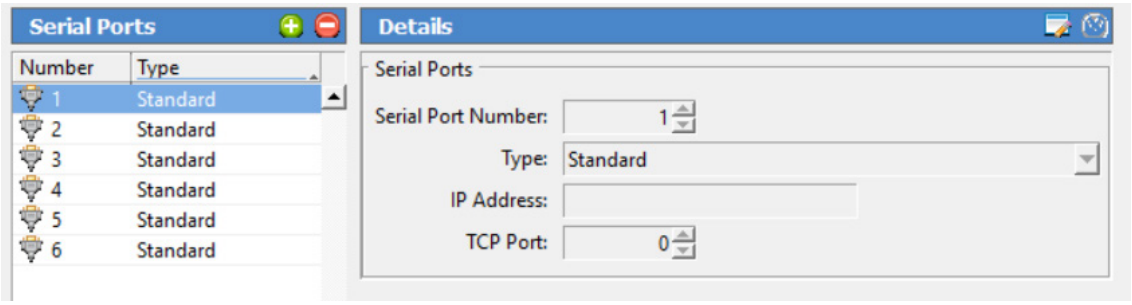
To add a new password, select the **Passwords** tab, then select **Add**. In the **Details** pane, create a password. The password can be up to 16 characters.

The blank entry that exists by default does not require a password to access the various features. If a password is created, the selected features must be removed from the blank entry. Check the boxes of each feature that the facility would like password protected. Select **Apply** and save the configuration.

To delete a password, select the password, then select **Delete**.

Serial Ports Tab

A serial port is used for paging, various interfaces, and to communicate between a foreign device and the Tek-CARE Network. The **Serial Ports** tab on the **System** page is used to modify an existing port or to create a virtual serial port through use of an IP/Serial converter (CT601, CT701A).



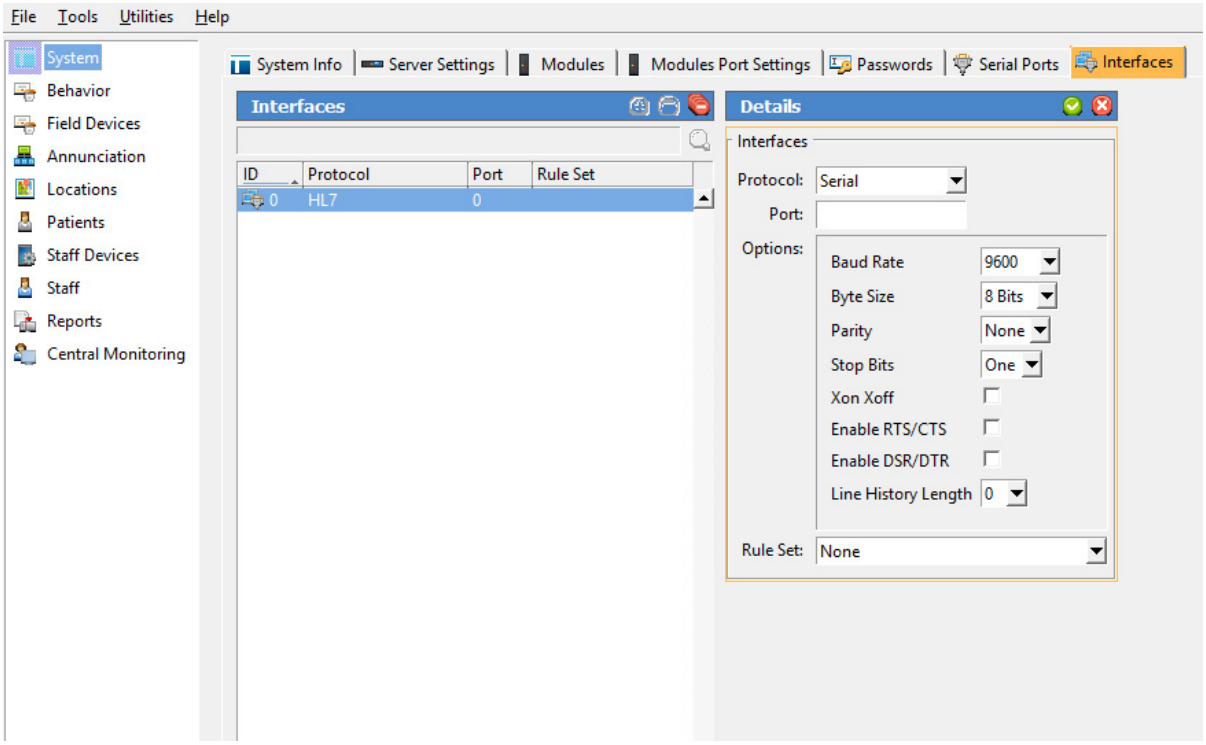
By default, there are six standard serial ports included in the **Serial Ports** pane (1: NC510ES or NC510UL, 2: NC570 Receiver, 3: NC365B Paging Transmitter, 4: NC510FA Receiver, 5: Unused, 6: Central Monitoring). To add an additional Serial Port, select the **Serial Ports** tab, then select **Add**.

Enter the **Serial Port Number**, choose the **Type** of serial port, enter the **IP Address** for the IP/Serial Converter, and choose the **TCP Port** for the IP/Serial converter. Select **Apply**.

To delete a serial port, select the serial port, then select **Delete**.

Interfaces Tab

The main function of an interface is to provide a way to import events, messages, and data from foreign devices and display them on the Tek-CARE system. The interface will specify the port, protocol, and options used to read messages from a foreign system.



To create a new interface, select the **Interfaces** tab on the **System** page, then select **Add**. In the **Details** pane, select the appropriate data stream in the **Protocol** drop-down, then enter the **Port** number associated with the data stream.

Enter the correct **Options** for each protocol including: **Baud Rate**, **Byte Size**, **Parity**, and **Stop Bits**. If applicable, check the boxes for **Xon Xoff**, **Enable RTS/CTS**, **Enable DSR/DTR**, and set the desired value for **Line History Length**.

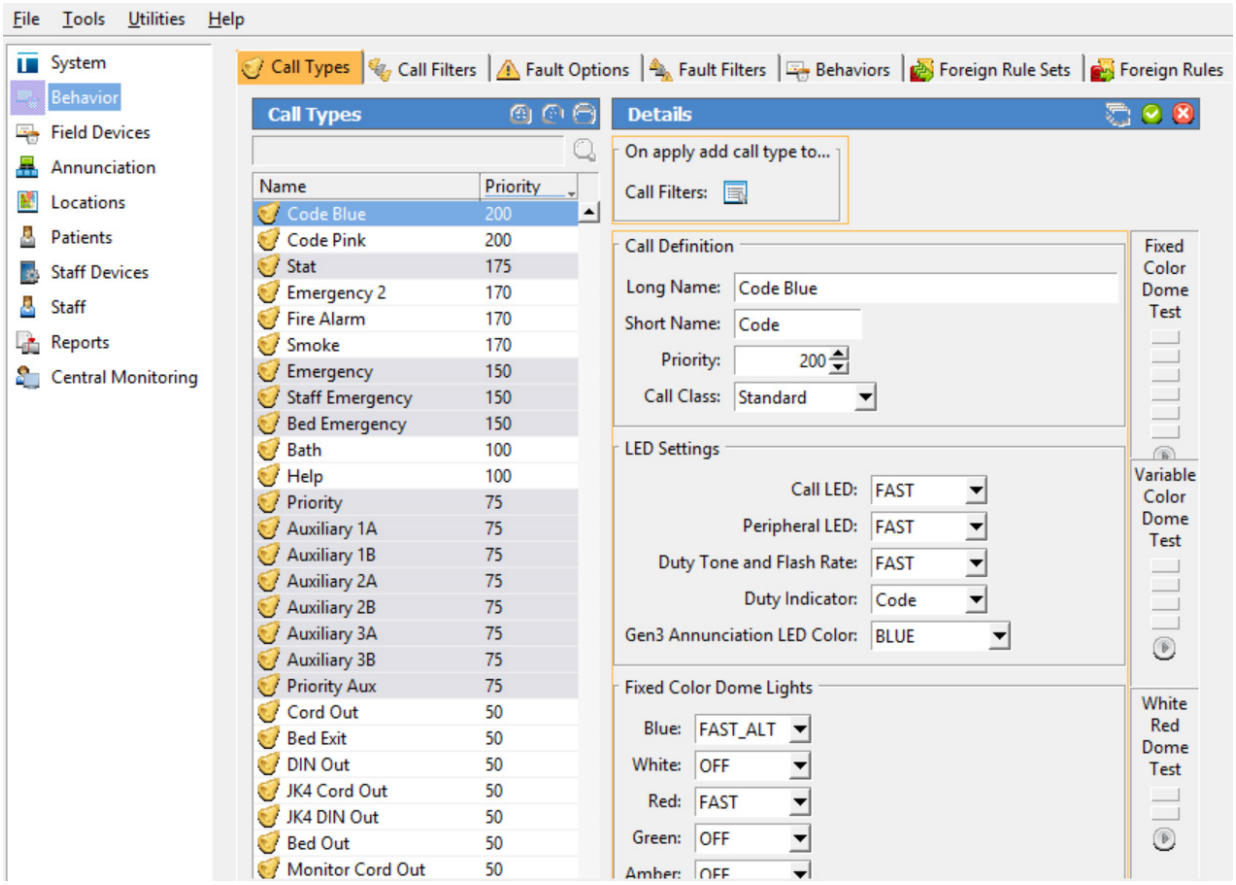
Choose the **Rule Set** used for the interface. The rule set will determine which rules run for each message received on the interface, as well as which hardware behaviors are available to assign to foreign devices on the interface. Select **Apply**.

Behavior Page

The Behavior page is used to modify or add station-specific behaviors, call/fault types and filters, and foreign rule sets. For example, an SF520UL can have the behavior of a **Security Device** or a **Check In Device**.

Call Types Tab

The **Call Types** tab is used to create custom call types, and change the various defaults (such as LED settings, call definition, dome light settings, etc.).



To create a new call type, select **Add** in the **Call Types** pane.

In the **Details** pane, select the **Call Filters** button in the **On apply add all call type to...** pane, then check the appropriate boxes to apply the call type to master station call filters, annunciation station call filters, or other specific call filters.

In the **Call Definition** pane, create a **Long** and **Short** name for the call definition. The long name will show if applicable, but if there is limited space, the monitor will only show the short name. Enter a **Priority** (ranges from 0 to 255). The higher the number, the higher priority the call type will show on a master station, event monitor, or Tek-CARE TV. For example, a code blue would be a higher priority than a routine

call due to the importance of the call. The **Call Class** will determine how the call type will be annunciated. A normal standard call verses a staff call will show different indicators on a master station.

The **LED Settings** pane allows for customization of the rate and style of the **Call LED**, **Peripheral LED**, **Duty Tone and Flash Rate**, and a **Duty Indicator**. **GEN3 Annunciation LED Color** is used to select the LED color used to display the call when annunciated on G3 multi-purpose stations.

The **Fixed Color Dome Lights** pane is used for TC300III LI38x- and TC400 LI48x- series lights.

The **Variable Color Dome Lights** pane is for TC400 P5/P5+, TC400 GEN3, and TC3000 LI484P5 lights.

The **Two-Color Dome Lights** pane is for TC120 LI122 or LI122BL room controllers with dome lights.

In the **Audio File** pane, choose the sound the masters and monitors will play to annunciate the call by choosing a **Track** and **Interval** speed.

In the **Options** pane, check **Silenceable** to be able to silence the call. If silenceable, a call can be muted at the master station using **Tone Silence**, and at the duty station by pressing the **Reset** button.

Selecting **Attended** will force staff to reset the call from the point of origin within the patient's room. If **Attended** is not selected, some input types allow calls to be reset by making an audio connection to the room from a master.

Force Domes will cause the lower priority calls to be annunciated as well as high priority calls on an unused section of a dome light (if available).

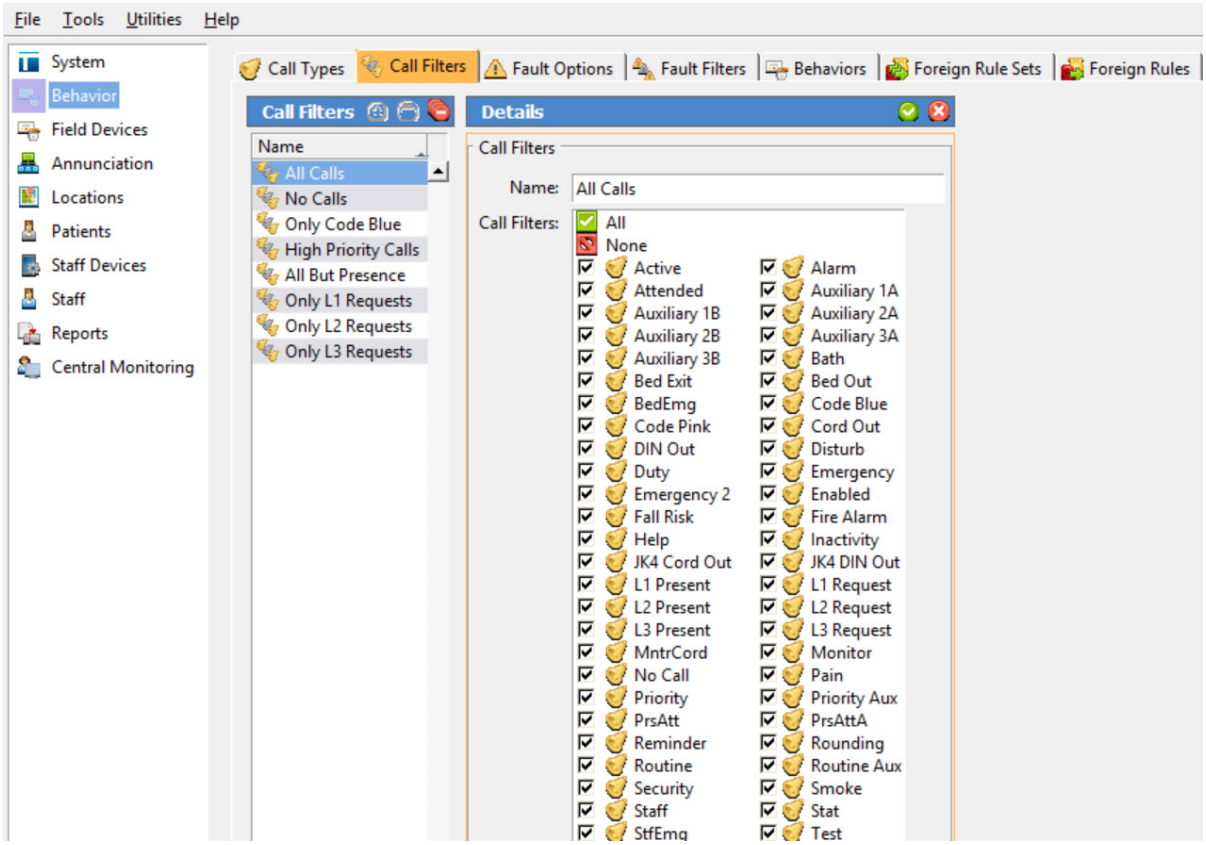
Screen Color gives the option to choose the background color used to display the call on a master station, monitor, or mobile app. **RF Page Level** will assign the escalation code (priority) for the specified call type to be annunciated on a pager.

Central Monitoring Code is the contact ID code that identifies the event type of the call. This code will be used by the central monitoring station. Select **Apply**.

> **NOTE**: Be sure to contact the central monitoring company for the default code list for reference if changes need to be made.

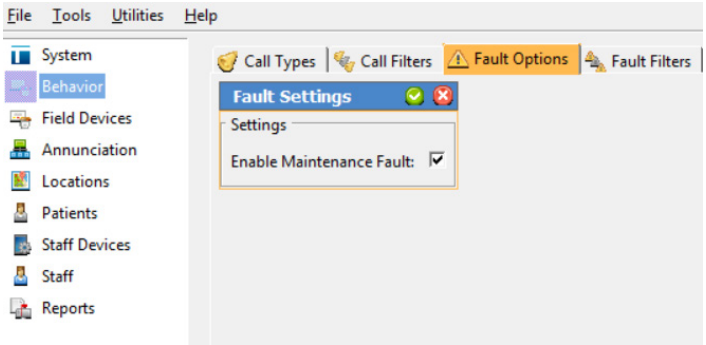
Call Filters Tab

Select the appropriate **Call Filters** to be annunciated by various masters and other annunciation devices. To add a new call filter, select **Add** in the **Call Filters** pane, then create a name for the filter in the **Details** pane. Select the different call types to include within the call filter. Select **Apply**.



Fault Options Tab

To enable maintenance fault, select **Edit** in the **Fault Settings** pane and check the box to **Enable Maintenance Fault**.

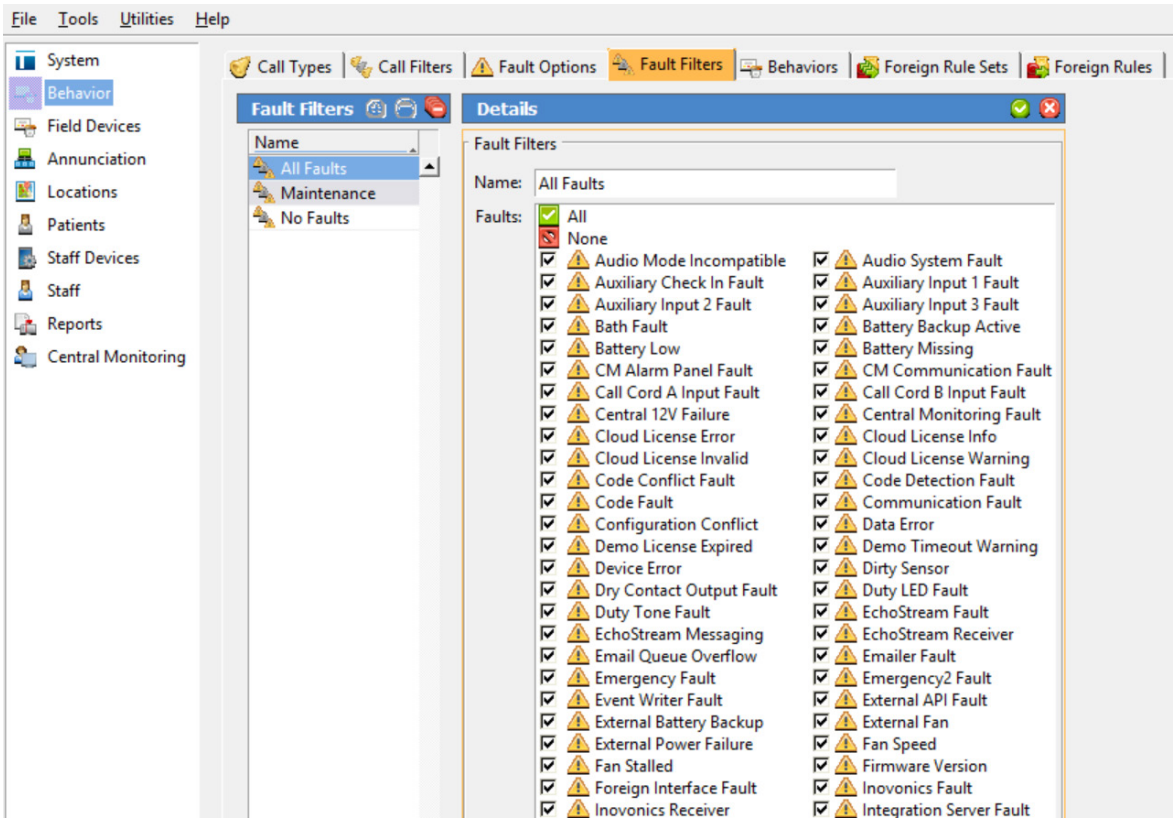


NOTE: A maintenance fault is a software-latched fault that indicates some other fault has occurred on the system. It can be used as a steady fault to send to maintenance staff pagers or email addresses. It must be cleared manually with a redetect after other faults have been resolved.

Fault Filters Tab

A fault filter includes a list of faults that will be annunciated on various annunciation devices, and staff assignments once a fault appears on the system.

The current **Fault Filters** included in the ConfigTool are **All Faults**, **Maintenance**, **Missing**, and **No Faults**. To edit any of these, select the specific filter, then select **Edit** in the **Details** pane.



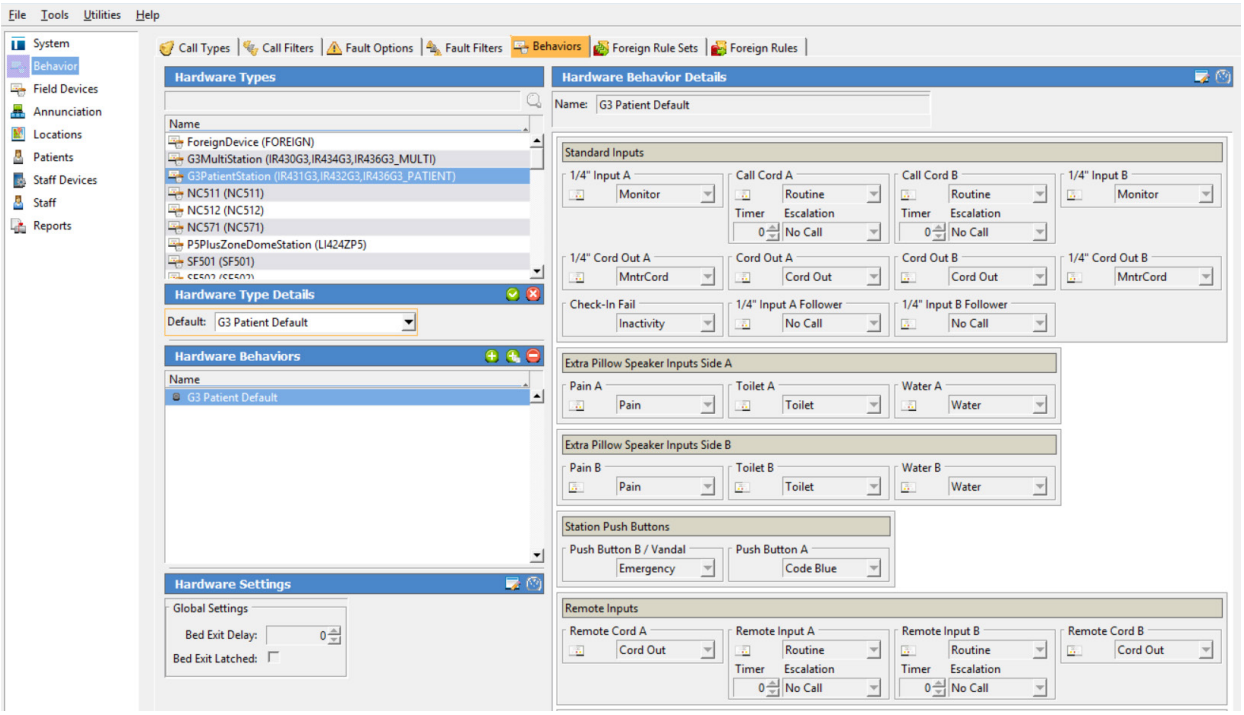
Select **Add** to create a new fault filter. Create a name for the fault filter. Select **All** to include all faults within the filter or select all of the applicable faults to be included within the fault filter.

Deselect a fault to remove it from the filter. Select **Apply**. To delete a fault filter, select the fault, then **Delete**. For a description of each fault, select **Help → Fault Table**.

Behaviors Tab

The **Behaviors** tab is used to change or add hardware-specific behaviors. For example, an SF520UL can be a **Security Device** or a **Check In Device**.

The **Behaviors** tab shows the default behaviors for all hardware. To change the hardware, choose a **Hardware Type** and select **Edit** under **Hardware Type Details** then select different defaults and behavior details. Select **Apply**.



To add a new behavior to a specific hardware, select **Add** under **Hardware Behaviors**. Create a name for the behavior under **Hardware Behavior Details** and select the appropriate behaviors for the hardware.

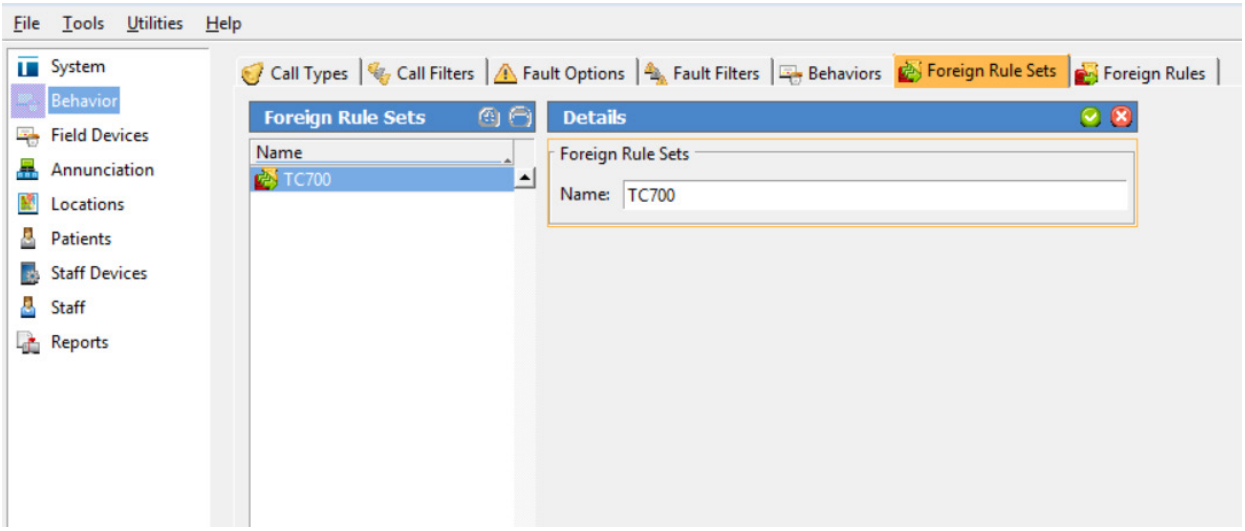
To change the bed exit settings, select **Edit** under **Hardware Settings**. The **Bed Exit Delay** timer can be adjusted up to 10 seconds. If the timer is set to 0, a call will be placed immediately once the input has been activated. Check **Bed Exit Latched** to reset the call at the station then select **Apply**.

To delete a hardware behavior, select a hardware behavior then select **Delete**.

> **NOTE:** Any changes made to a hardware type's behavior will be applied to all hardware utilizing that specific behavior.

Foreign Rule Sets Tab

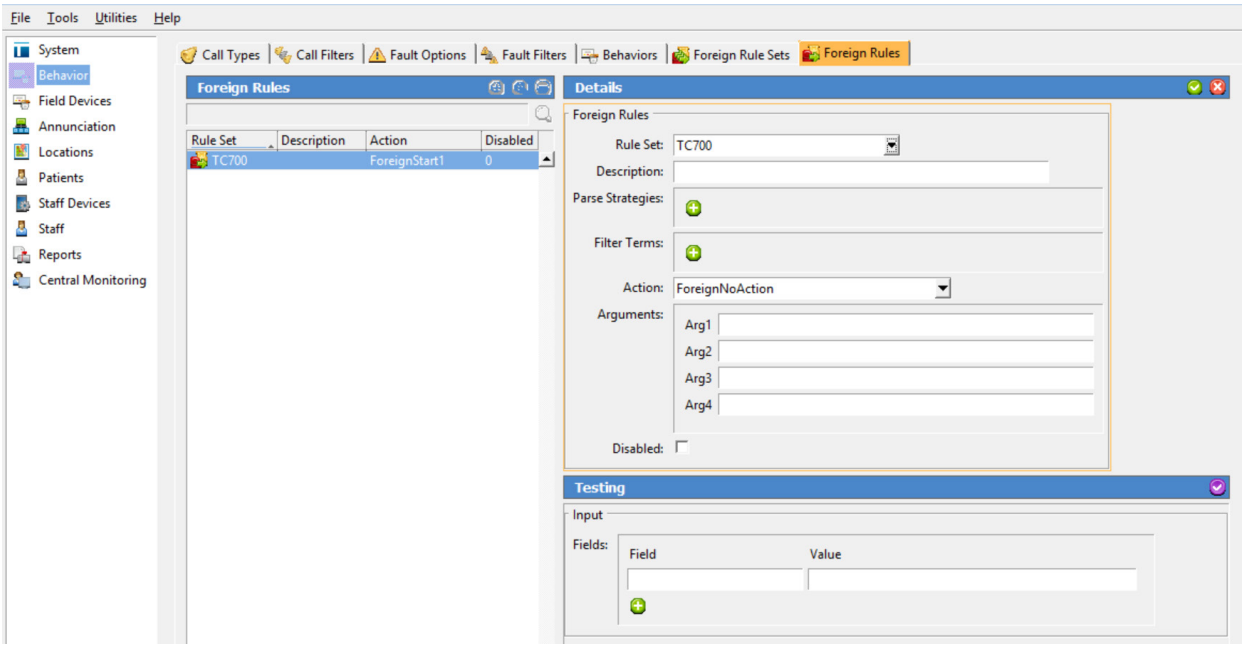
A foreign rule set acts as a container for the rules and hardware behaviors that it takes to characterize a foreign system type. Select the **Foreign Rule Sets** tab to create a foreign rule set. Select **Add** to create a name for the foreign rule set. Select **Apply**. To delete a foreign rule set, select it, then select **Delete**.



Foreign Rules Tab

The foreign rules map messages that come from interfaces to either activate or deactivate call inputs of various foreign devices.

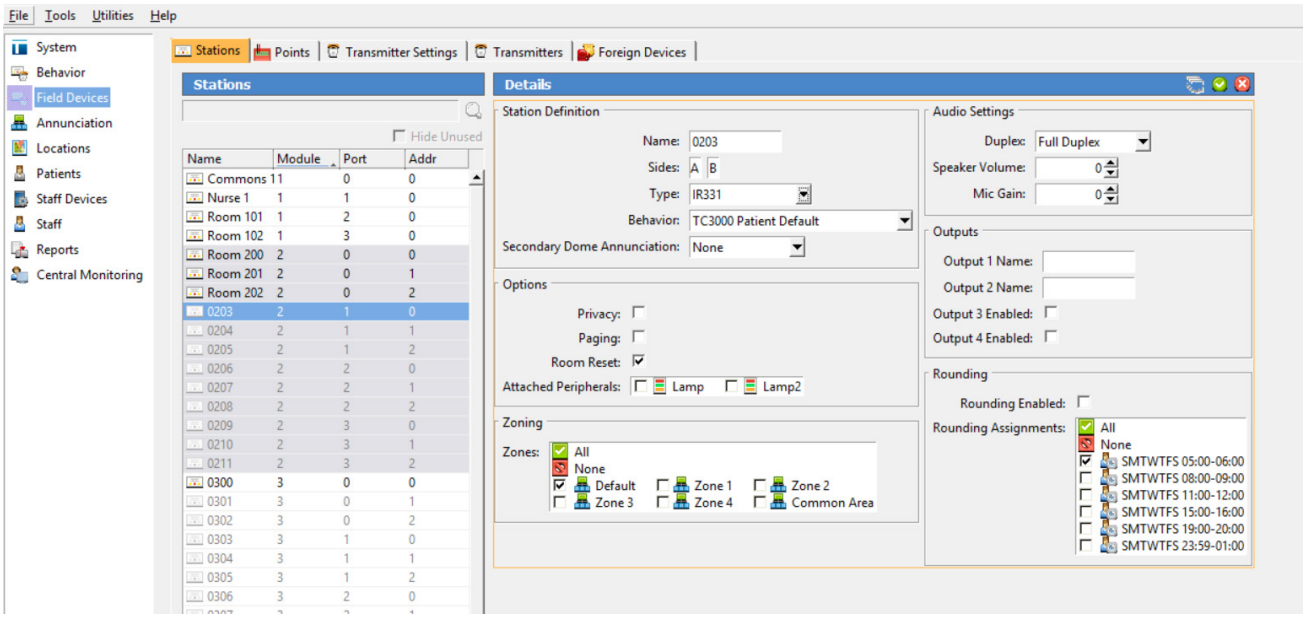
Select the **Foreign Rules** tab then select **Add** to create a foreign rule. In the **Details** pane, select the appropriate rule set. Select **Apply**. To delete it, select the foreign rule, then select **Delete**. Test the foreign rules by entering the various input and output fields under **Testing**. Allow the testing to take place before committing the configuration.



Field Devices Page

Stations Tab

To detect and configure a new station, select the **Stations** tab on the **Field Devices** page.



Select a station from the list, then select **Edit** in the **Details** pane. Create a **Name** for the station (usually the room number).

If there is more than one side to a station (ex. IR432G3) allowing for sided calls like Side A and Side B, select the correct **Side** for the station.

The **Type** of station determines the different options available to set for that specific station.

The **Behavior** of the station will determine the call types the station will place.

If desired, calls from one station may be forced to annunciate on the dome light of another station. The station selected in the **Secondary Dome Annunciation** drop-down list will annunciate calls on its dome light from the station being edited.

NOTE: Stations used in this way must be connected to the same module.

If the station will receive audio paging, check the **Paging** box in the **Options** pane. Check the **Privacy** box to ensure that if a station is selected from the master and audio is connected, the audio is one-way only from master to station.

Check the **Room Reset** box to allow the station reset button to reset any calls placed in the room directly from the station.

If the station will receive zone paging, select the appropriate **Zones** the station will be in with the **Zoning** pane.

In the **Audio Settings** pane, choose either **Half Duplex** or **Full Duplex**. Half duplex only allows audio in one direction at a time (like a radio - push to talk, release to listen). Full duplex enables simultaneous audio to and from the station (like a telephone - talk and listen simultaneously). If necessary, make appropriate

adjustments to the **Speaker Volume** and the **Mic Gain** to adjust the input volume to the station being edited.

In the **Outputs** pane, enter the **Output 1 Name** and **Output 2 Name**to show output controls on the master stations. Check the **Output 3 Enabled** and/or **Output 4 Enabled** to utilize additional outputs.

For use with Dry Contact DC1 - DC4 options on Multi-Purpose Stations:

DC1 through DC4 are mapped to the outputs respectively. To enable, enter the **Output 1 Name** and **Output 2 Name**, then check the boxes for **Output 3** and **Output 4**.

Output 1 provides a 5-Second On, **Output 2** provides a Toggle On and Off (controls are on the master station), **Output 3** provides a local output for the duration of the call, and **Output 4** provides a zones watched output for the duration of the call(s).

For legacy stations:

For use with the IR41xP5 Legacy stations where PM420 modules are employed. To enable, enter the **Output 1 Name** and **Output 2 Name**, then check the boxes for **Output 3** and **Output 4**.

Output 1 is momentary for 20 seconds. **Output 2** is latching. Then **Output 3** cycles with the call and **Output 4** will activate while a call is on the station.

If rounding will be used on the station, check the **Rounding Enabled** box and select the appropriate **Rounding Assignments** schedule for that station. Input **Rounding Settings Tab on page 44** and **Rounding Schedules Tab on page 45** on the **Patients** page before enabling rounding on the station. Once the rounding is enabled on the station(s), select the **Behaviors Tab** on the **Behavior** Page to verify the rounding behavior. If the station is placed in an unoccupied room, uncheck **Rounding Enabled**. Select **Apply**.

Points Tab

Points are the six physical connections on the rear of each room controller or station that are used in TekCARE120, Tek-CARE400 P5+/GEN3, and Tek-CARE3000 Nurse Call Systems. These are shown as points 1-6 in the configuration. In addition to the physical points, there are also two additional points present in the configuration for the LI122 and PM120. Refer to IL992 TC120 Installation Manual, IL1059 TC400 P5+ Installation Manual, IL1119 TC400 GEN3 Installation Manual, and IL1140 TC3000 Installation Manual for more information.

> **NOTE**: If using rounding on the TekCARE120 system, the station must have an SF123 or an SF124 configured as a room reset.

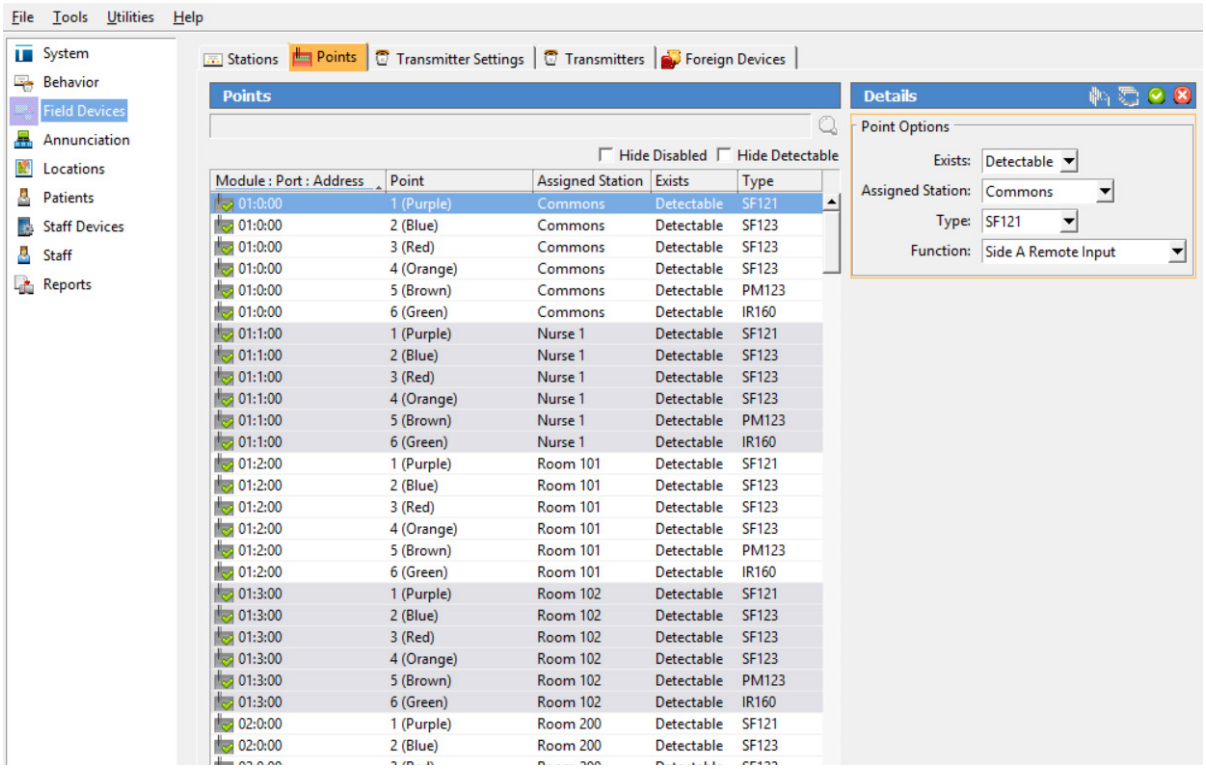
By default, all of the room controller points are assigned to a station in the ConfigTool. The physical address of the room controller determines which station points are assigned to.

A point can be in three states within the ConfigTool:

Detectable: When points are in the Detectable state, the central is constantly polling those points, searching for attached stations.

Exists: If a point is marked as Existing, the point is supervised and the system assumes that a station is connected to that point. If a station goes missing or is not detected, a fault will annunciate for that point.

Disabled: If a point is marked as Disabled, the system does not look for station attachment at the point.



To edit points, select the **Points** tab on the **Field Devices** page selection pane. Check the **Hide Disabled** and **Hide Detectable** boxes to view only existing points.

Locate the correct point group that refers to the address of the specific station or room controller that the points are physically connected to. Either edit one point or edit multiple points at once.

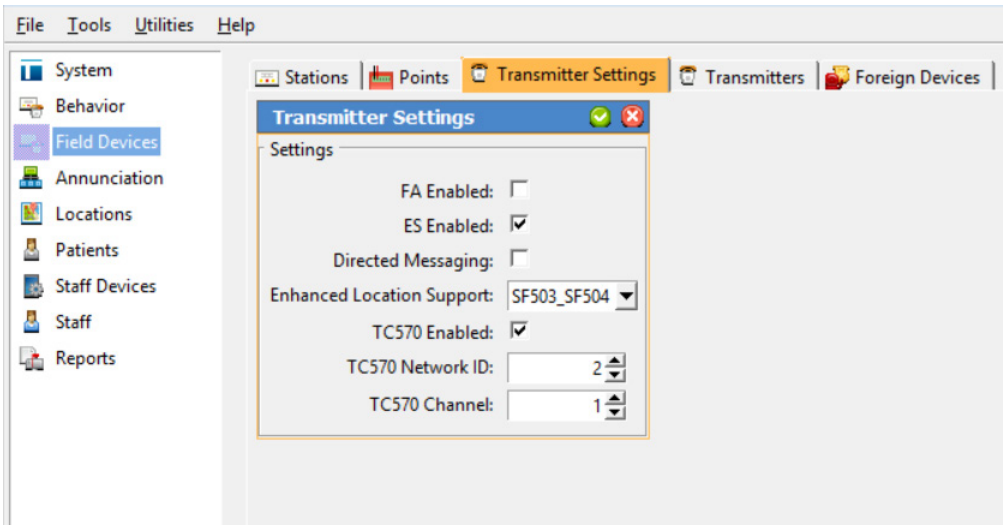
To edit only one point at a time, select the point, then select **Edit**. In the Details pane, select **Disabled**, **Detectable**, or **Exists** from the **Exists** drop-down in the **Details** pane. Select the **Assigned Station** the point is assigned to, select the hardware **Type**, then select the correct **Function**. Select **Apply**.

To edit a group of points, select a point, then select **Edit Multiple** in the **Details** pane. Change the applicable points to show as **Existing**, select their **Type**, and select a **Function** for each point. Select **Apply**.

> **NOTE**: Be sure to periodically run the consistency check to look for errors created by editing points.

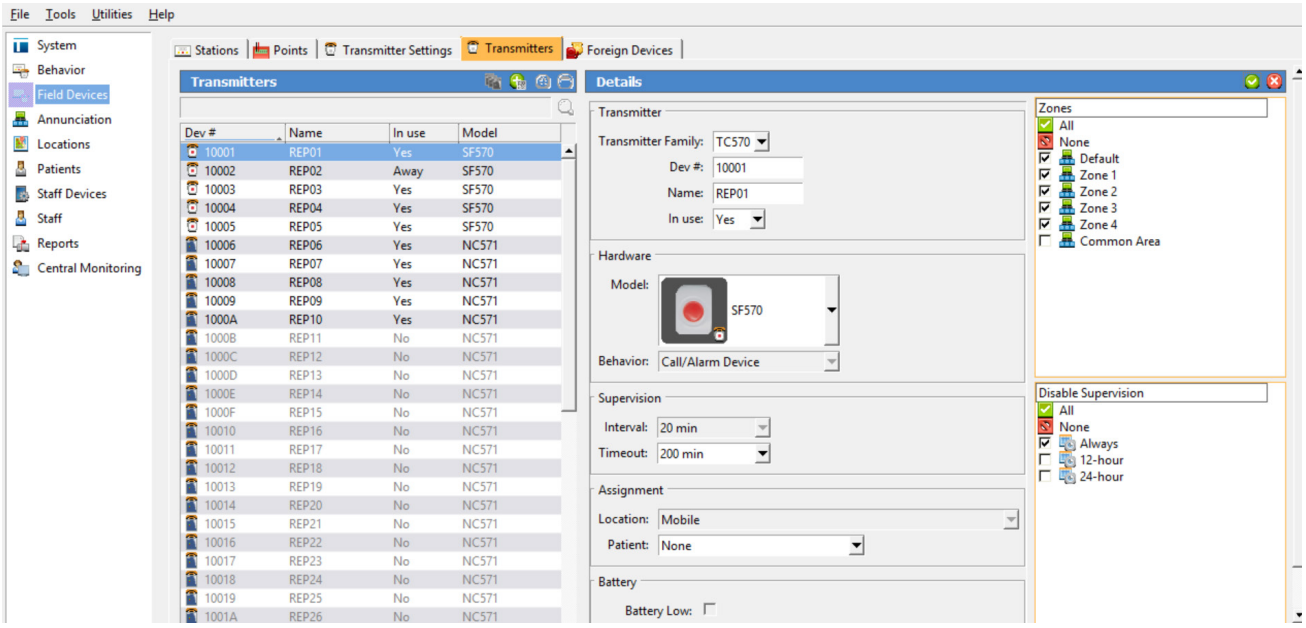
Transmitter Settings Tab

Use the **Transmitter Settings** tab options to enable wireless emergency call systems. See IL881 Tek-CARE500 Installation Manual, or IL1089 Tek-CARE570 Installation Manual for additional details.



Transmitters Tab

Transmitters and wireless system receivers and repeaters are added within the **Transmitters** tab. Transmitters are assigned to either a person or to a location, depending on the type of transmitter used. To create a new transmitter, select the **Transmitters** tab on the **Field Devices** page.



To add transmitters via a barcode and scanner, select **Add Barcode** in the **Transmitters** pane. When the **Add Transmitter by Barcode** window opens, select **Echostream** or **TC570** in the **Hardware Family** pane, then scan the barcode. The **Device #** will auto-populate.

To add transmitters manually, select **Add** in the **Transmitters pane**. In the **Details** pane, select the appropriate **Transmitter Family** (**FA**for Frequency Agile, **ES** for Echostream, or **TC570**) from the drop-down.

> **NOTE:** Be sure to chose the correct **Transmitter Family** setting, as this is a global action for all transmitters.

Enter the **Device #** located on the back of the device. (The device number will be exactly four or eight hexadecimal digits.) Create a **Name** for the transmitter and select **No**, **Yes**, or **Away** from the **In Use** drop-down menu.

In the **Hardware** pane, select a hardware **Model** and **Behavior** for the transmitter and its use.

In the **Supervision** pane, select the **Interval** the transmitter will send supervision signals, and select when the timeout will show if the transmitter has gone missing. Select the desired **Interval** and **Timeout** values.

In the **Assignment** pane, choose the appropriate **Location** and **Patient** for the device.

In the **Battery** pane, the **Battery Low** box will be checked if there is a battery low notification from the device. The **Battery Changed** box auto populates with the date after a battery change.

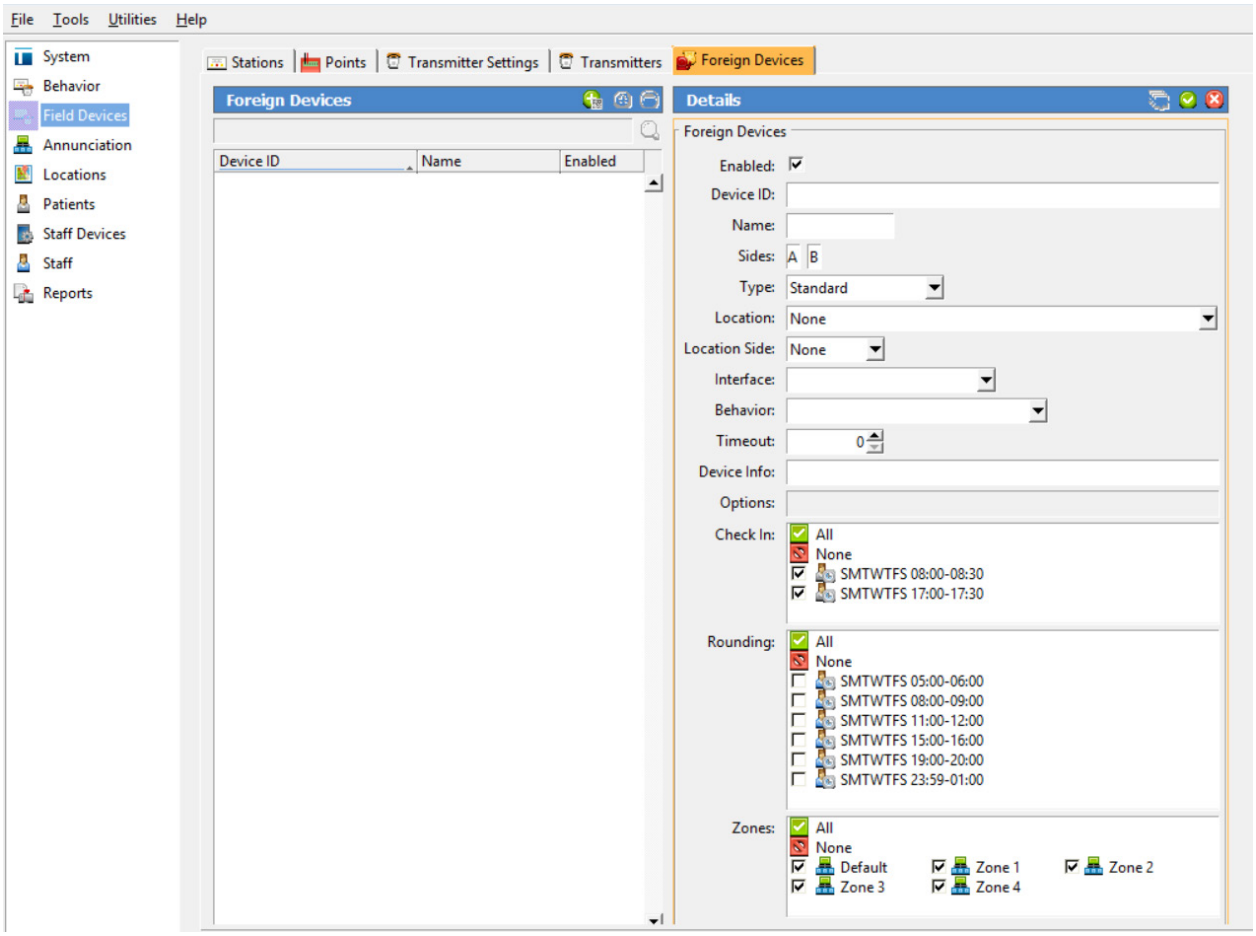
Select the correct **Zones** that will be watching the transmitter. Supervision options are configurable in the **Supervision** pane and are dependent on system model. Supervision may also be disabled by checking the applicable box in the **Disable Supervision** pane.

When all transmitter information is populated, select **Apply**.

Foreign Devices Tab

Foreign devices include security systems, fire alarms, and other non-TekTone devices that will be integrated with the Tek-CARE Network. See IL970 Tek-CARE700 Installation Manual for additional details.

To add a new foreign device, select the **Foreign Devices** tab on the **Field Devices** page, then select **Add**.



The **Details** pane allows users to enable and manage the foreign device. Select the **Enabled** box, enter the **Device ID**, and enter a **Name** for the device. Select the device **Type** from the drop-down.

If a location is created on the **Locations** page, choose the appropriate entry from the **Location** drop-down list, along with the **Location Side**.

Once an interface has been created in the **Interfaces** tab, it will show as an interface option. If there is not an interface to choose from, create a new one on the **Interfaces** tab within the **System** page. Select a **Behavior** for the foreign device (previously created on the **Behaviors** page).

Select a **Timeout** interval, if desired. Populate the **Device Info** field, and the **Options** field with additional information about or options for the foreign device.

If assignments have already been created, select a **Check In**. If the rounding feature will be used with the foreign device, select the appropriate **Rounding** schedule. Choose the correct **Zone** that will annunciate the device, then select **Apply**. Save the configuration.

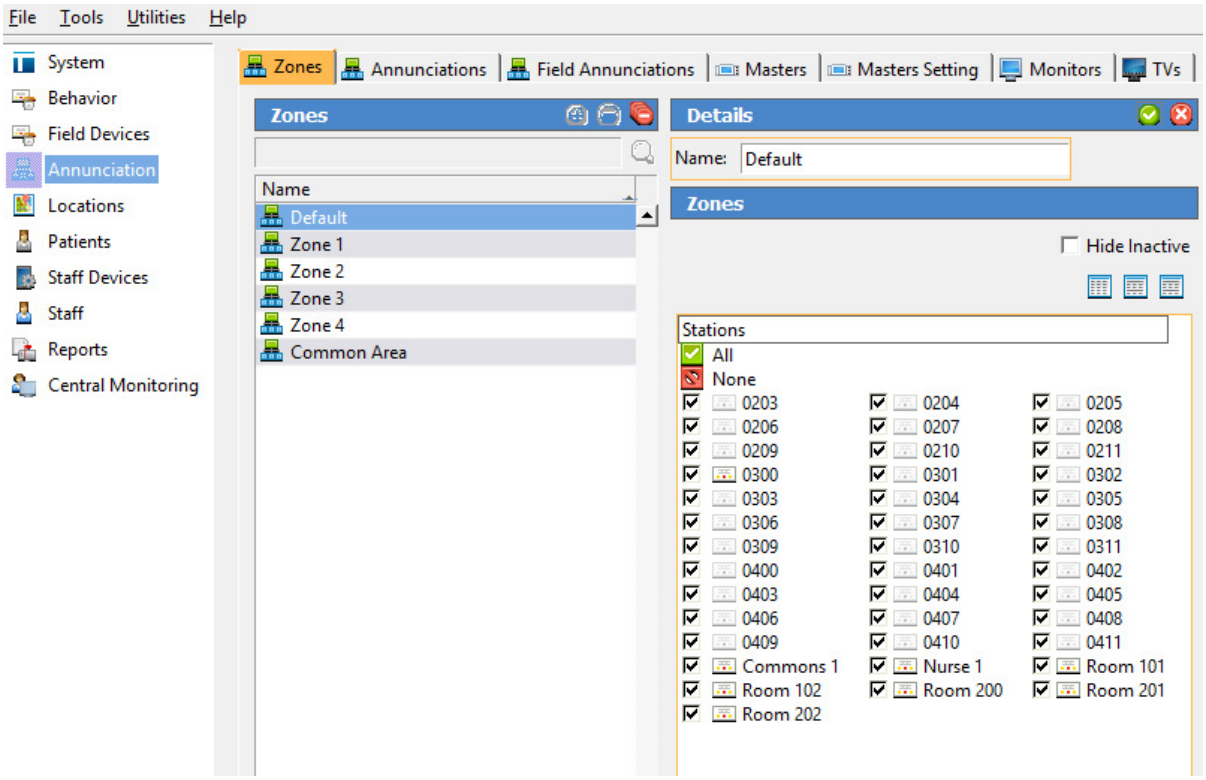
To delete a foreign device, select the device, then select **Delete**.

Annunciation Page

Zones Tab

Zones are a number of stations grouped together for various reasons. Each zone is preconfigured to include devices associated with the corresponding module number. Preset zones may be renamed or deleted, and new zones can be created.

To create a new zone, select the **Zones** tab on the **Annunciation** page, then select **Add**. To edit a zone, select it from the list in the **Zones** pane, then select **Edit** in the **Details** pane. If desired, enter a new name for the zone. Select **Apply** once the zone has been created.

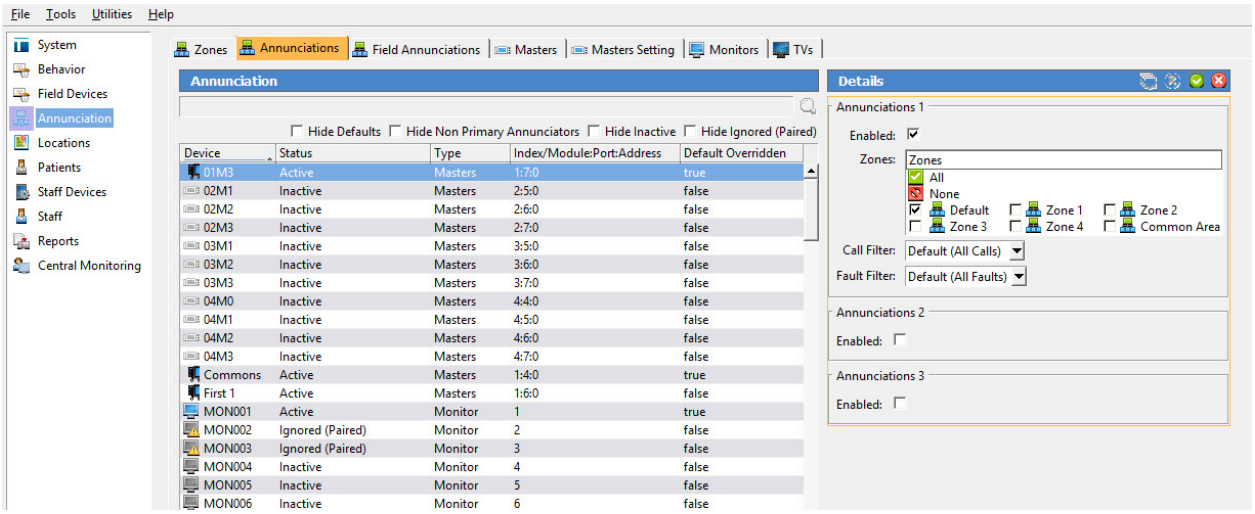


To assign stations to a zone, select the zone, select the Edit button, then select the hardware to be included within that zone. Use the **Annunciations** and **Field Annunciations** tabs to select the stations that will annunciate calls from devices in that specific zone. See the **Annunciations Tab on page 35** and **Field Annunciations Tab on page 35** for further details.

To delete a zone, select the zone from, the **Zones** tab, then select **Delete**.

Annunciations Tab

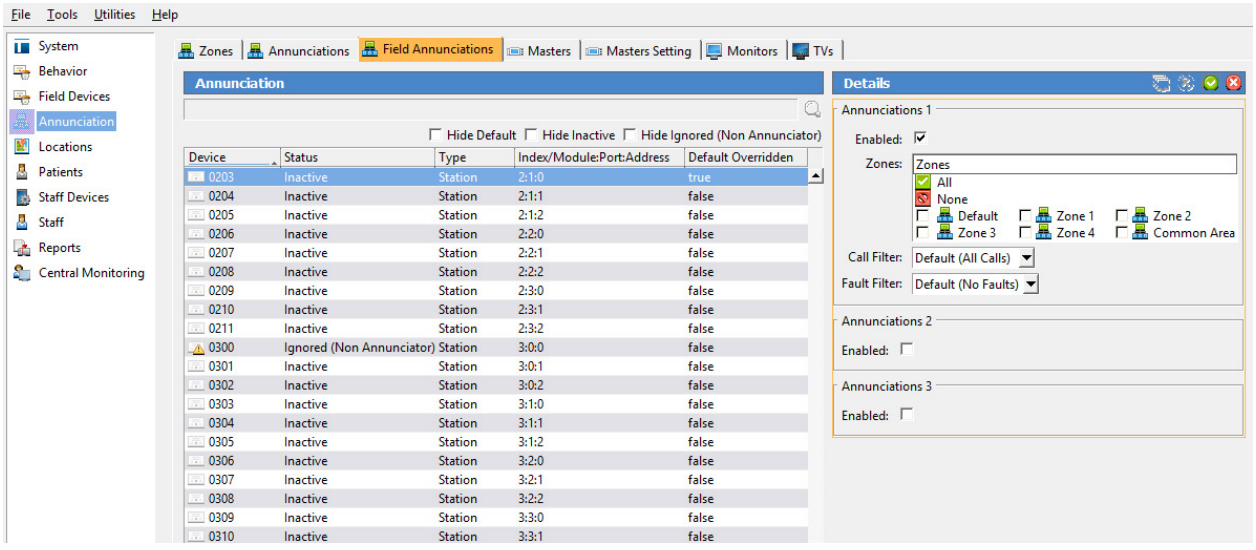
Once all zones are defined in the **Zones** tab, use the **Annunciations** tab to program specific annunciations for masters, monitors, and duty stations. Select the zones, call filters, and fault filters in the **Details** pane to build the annunciation schemes. Annunciations can be enabled and disabled for the selected devices as needed in the ConfigTool, and once created, are also selectable on master stations.



Field Annunciations Tab

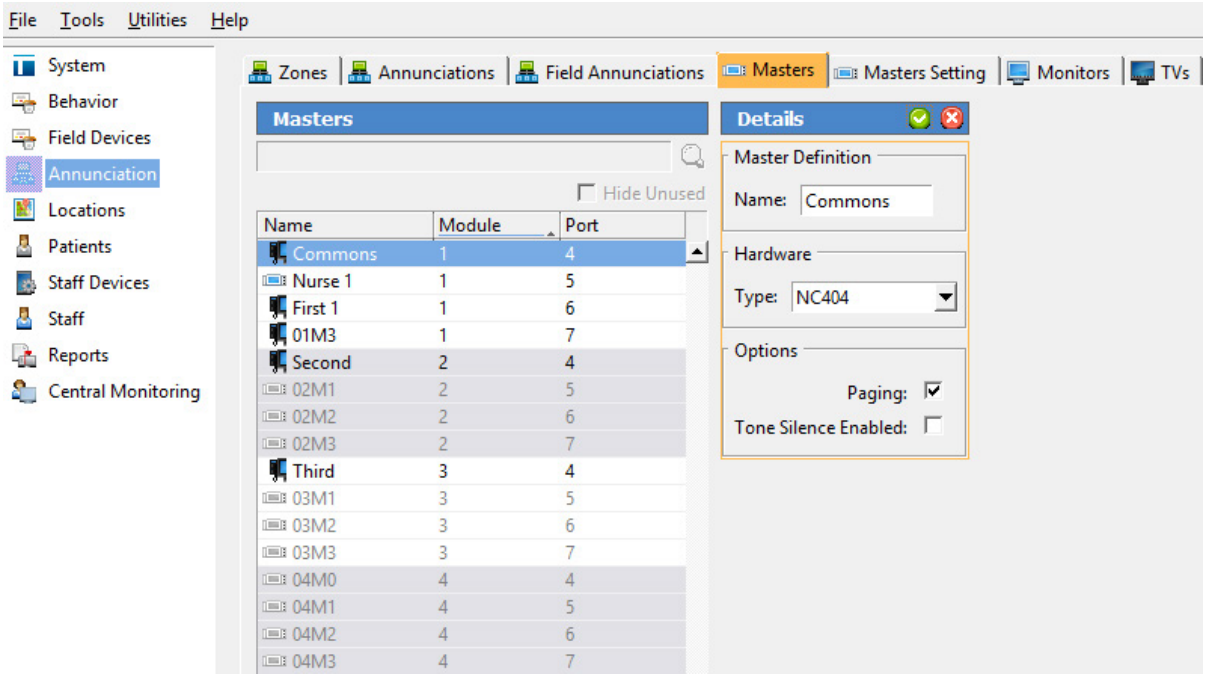
Once all zones are defined in the **Zones** tab, use the **Field Annunciations** tab to program specific annunciations for field devices. Select the zones, call filters, and fault filters in the **Details** pane to build the annunciation schemes. Annunciations can be enabled and disabled for the selected devices as needed in the ConfigTool, and once created, are also selectable on master stations.

> **NOTE**: If a master station has any fault filter setting other than "Default (All Faults)" it will not have the capability to preform a Re-Detect function.



Masters Tab

A master station displays calls on the Tek-CARE Network. To set up a master station within the ConfigTool, select the **Masters** tab in the **Annunciation** page.



Select **Hide Unused** to hide the unused masters. Choose a master and select **Edit** under the **Details** pane.

Create a **Name** and choose the correct **Type** of detected hardware for the master.

If the master will be working with paging, check the **Paging** box in the **Options** pane. This option allows the master to receive audio pages. Select **Apply**.

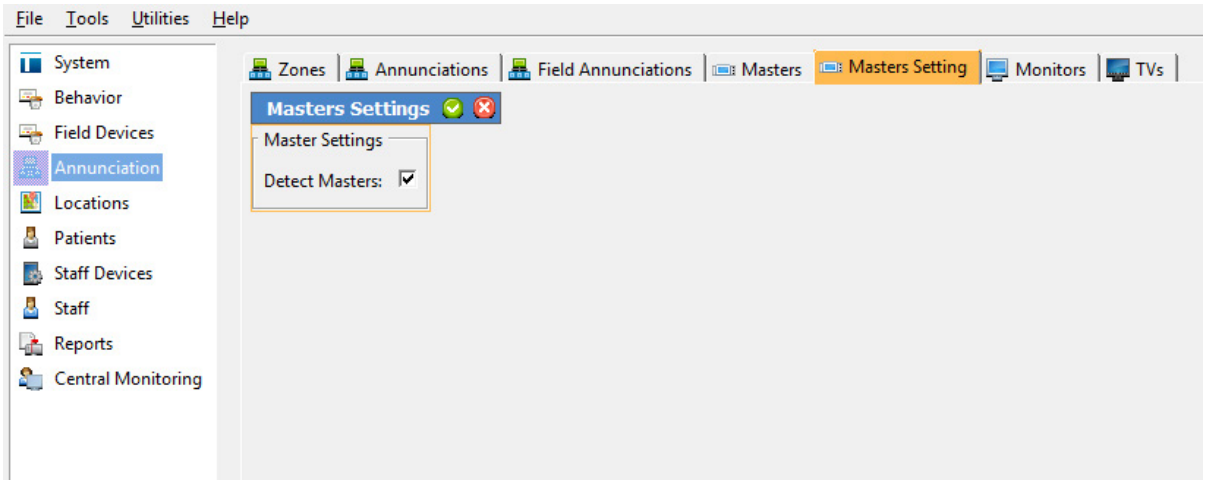
Tone Silence Enabled either allows or disallows low-priority call tone silencing from an NC415G3 or NC404TS master station. By default, this option is unchecked. Only check this box if the ability is desired. For more information on setting up the NC404TS master station, see IL1052 NC404TS Installation Manual.

Select the appropriate **Call Filters** (**Behaviors** page) and **Zones Watched** (**Annunciation** page) that will be annunciated by the selected master. Select **Apply** once all of the master stations have been created. Refer to **Call Filters Tab on page 23** and **Zones Tab on page 34** for detailed information on the call filters and zones features.

Masters Settings Tab

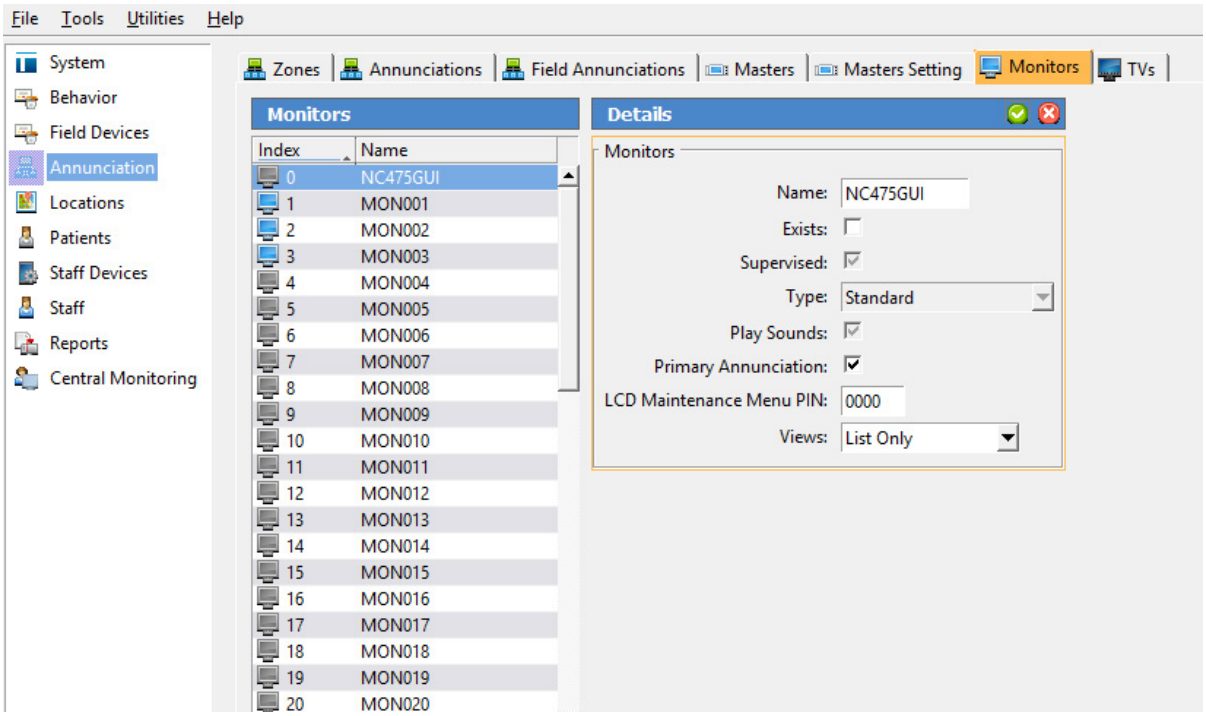
The **Detect Masters** setting is enabled by default. Technicians should consider disabling this setting when adding GEN2 modules, because each GEN2 module has 10 potential masters, and those count toward the Tek-CARE system limit of 100 masters. Disabling the **Detect Masters** setting will ensure that the potential master slots do *not* count toward the limit of 100 masters.

To disable this setting, select the **Masters Settings** tab in the **Annunciations** page. Select the **Edit** button, then select the **Detect Masters** checkbox to disable/enable.



Monitors Tab

The **Monitors** tab in the **Annunciations** page provides the option to add a remote monitor, or pair a monitor with an NC404 master console and choose the View (screen layout). Choose the call filters that will annunciate on the monitor with the **Annunciations** tab. See **Annunciations Tab on page 35** for further detail.



To add a new monitor, choose a monitor from the list, then select **Edit**. Change the name of the monitor to something that is easily recognizable. If this monitor is to be recognized on the Tek-CARE Network, select the **Exists** box.

Select the **Supervised** box to display a fault if the monitor disconnects from the network.

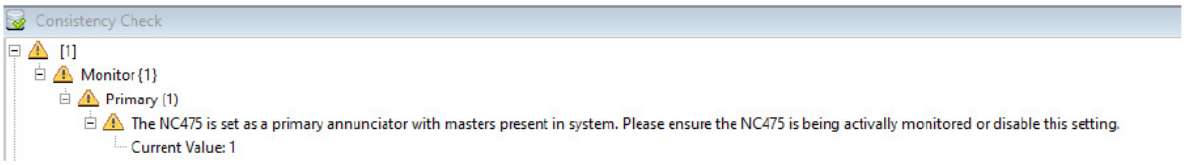
In the **Type** drop-down, select either **Standard**, **Non-Interactive**, or **Paired with NC404**.

Standard type is interactive (ex. NC403TS). Non-Interactive type (ex. an Apple TV with the Tek-CARE TV app) is for viewing and display purposes only.

Paired with the NC404 will allow the monitor to be paired with the master station and allow the NC404TS different viewing options. Refer to IL1052 NC404TS Installation manual for more information. If paired with an NC404TS, select the master from the **Paired Master** drop list.

Select the **Play Sounds** box for the monitor to play sounds when a call is active on the Tek-CARE system.

The NC475 may serve as a primary annunciator on the system (Monitor ID 0000). However, if it will be unattended in an equipment room, it is required to deselect the **Primary Annunciation** box. If the **Primary Annunciator** is selected for the NC475, the following warning will be displayed when the configuration commits to the system:



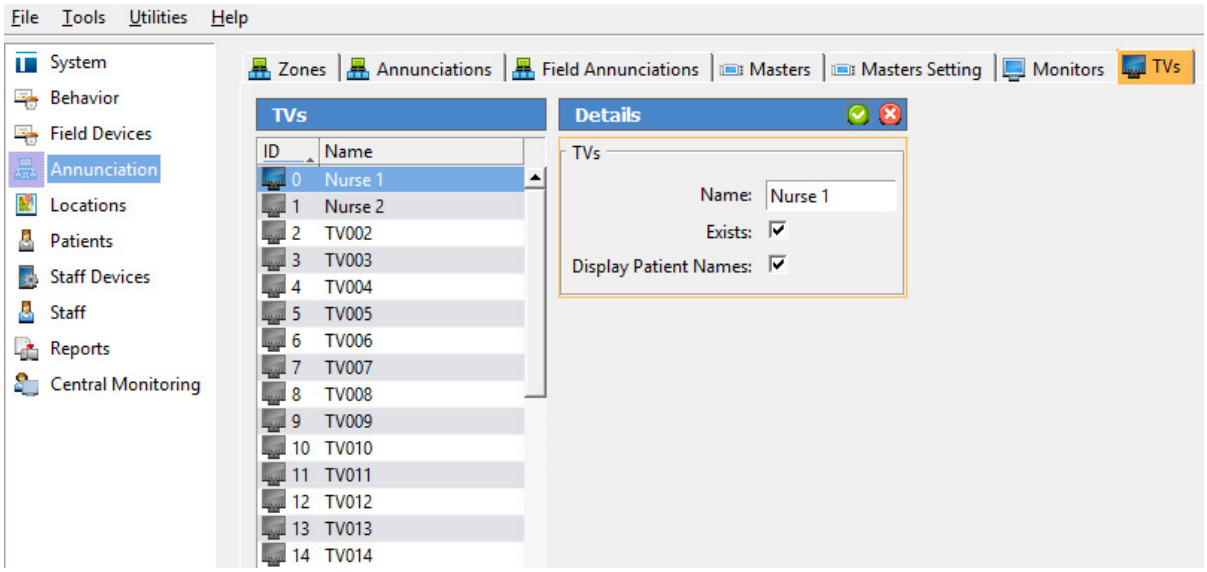
To create an access code called the LCD Maintenance Menu PIN for the LCD Menu on the NC475, enter the **LCD Maintenance Menu PIN**.

If paired with an NC404, choose either **List Only** (same functionality as an event monitor), **List and Icon**, or **List and Map** in the **Views** drop-down. The **List and Icon** view will produce a visual layout that will be created within the LS450 ConfigTool.

With the **Zones Tab on page 34** (**Annunciation** page) and **Call Filters Tab on page 23** (**Behavior** page), select the applicable zones and calls that are to be annunciated on the monitor. Select **Apply**.

TVs Tab

A Tek-CARE TV is a non-interactive app on an Apple TV that displays calls from the Tek-CARE system. To add a Tek-CARE TV in the ConfigTool, select the **TVs** tab on the **Annunciations** page.



The license quantity will start with ID 0.

The TVs pane shows the ID (0-254) and Name (TV0-TV254) for each of the Apple TVs.

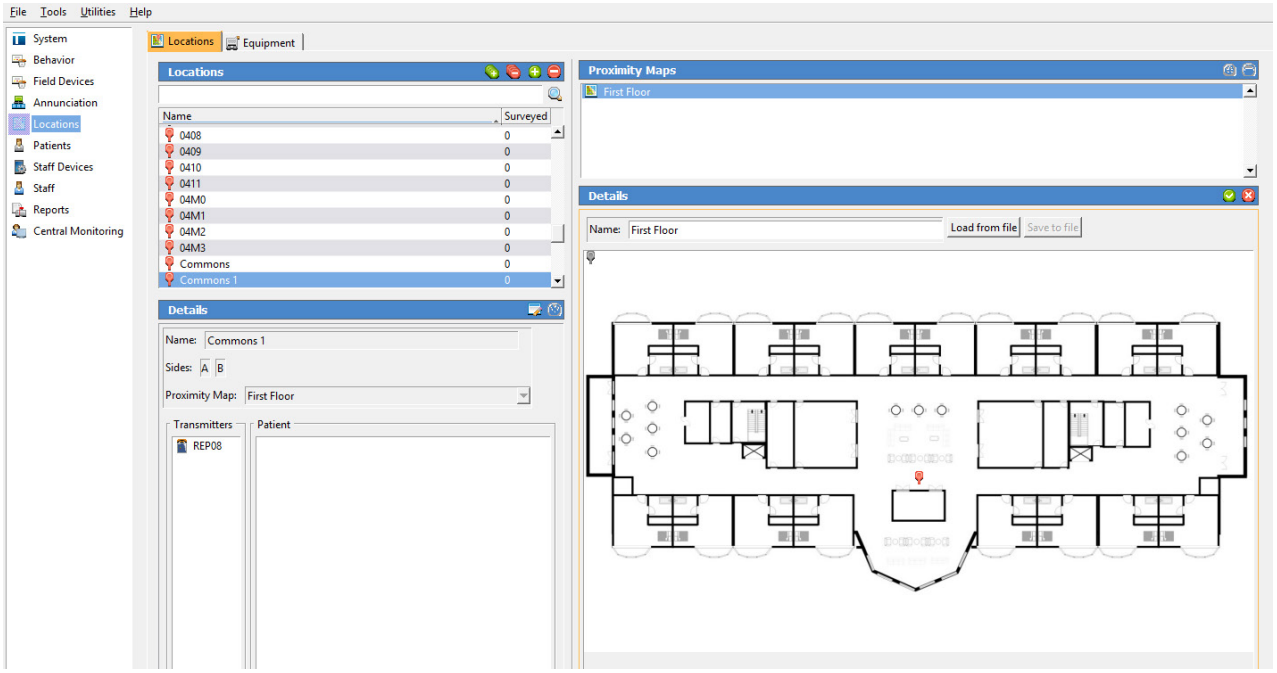
To edit attributes of a TV, select it from the list, then select **Edit** in the **Details** pane. Enter a new **Name** for the TV if desired and check the **Exists** box. Uncheck the **Display Patient Names** box if the facility does not want patient names displayed on the TV due to privacy reasons. Select **Apply** to accept the changes. Repeat this process for all TVs installed in the facility, then save the configuration.

Locations Page

Locations Tab

Locations are created to represent the actual locations within the facility. In a default configuration, locations are already created to match the potential station names.

Select the **Locations** tab in the **Locations** page, then select **Add** to create a new location. To edit a location, select it from the list in the **Locations** pane, then select **Edit**.



In the **Details** pane, enter a **Name** for the location. If there is a proximity map already uploaded to the ConfigTool, select the applicable map from the **Proximity Maps** drop-down.

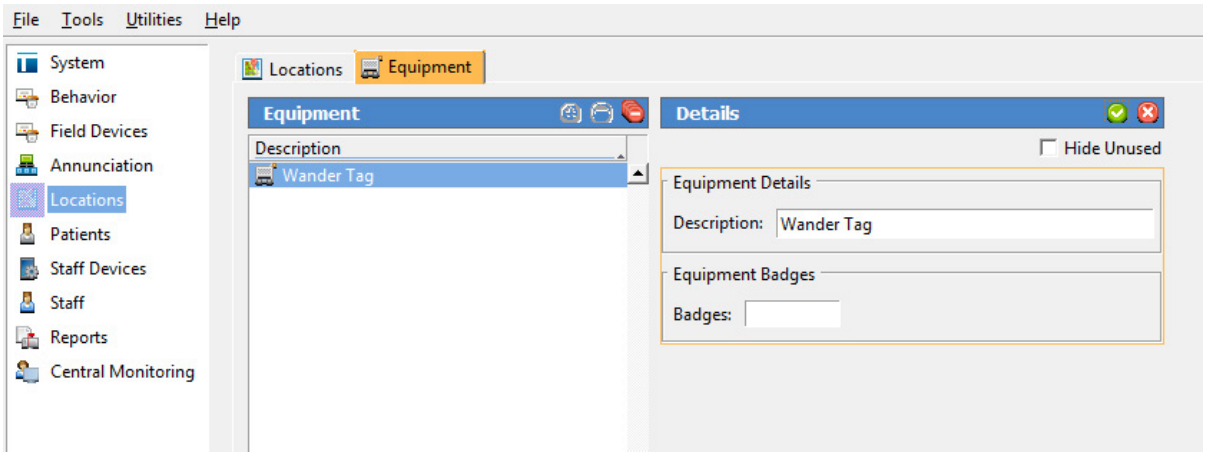
To load a map, select **Add** in the **Proximity Maps** pane, enter a name in the **Details** pane, then choose the **Load From File** button. Acceptable file formats for proximity maps are .bmp, .gif, .jpeg, and .png.

Select the desired proximity map, plot the various points on the map, then select **Apply**. Once the configuration is saved and committed, the proximity map will place location icons into the map and display those locations on any monitor, if **List and Map** is selected on the **Monitors** page. Refer to the **Monitors Tab on page 38** for further detail.

To delete a location, select a location from the list, then select **Delete**.

Equipment Tab

Add asset trackers for foreign devices with the **Equipment** tab in the **Locations** page.

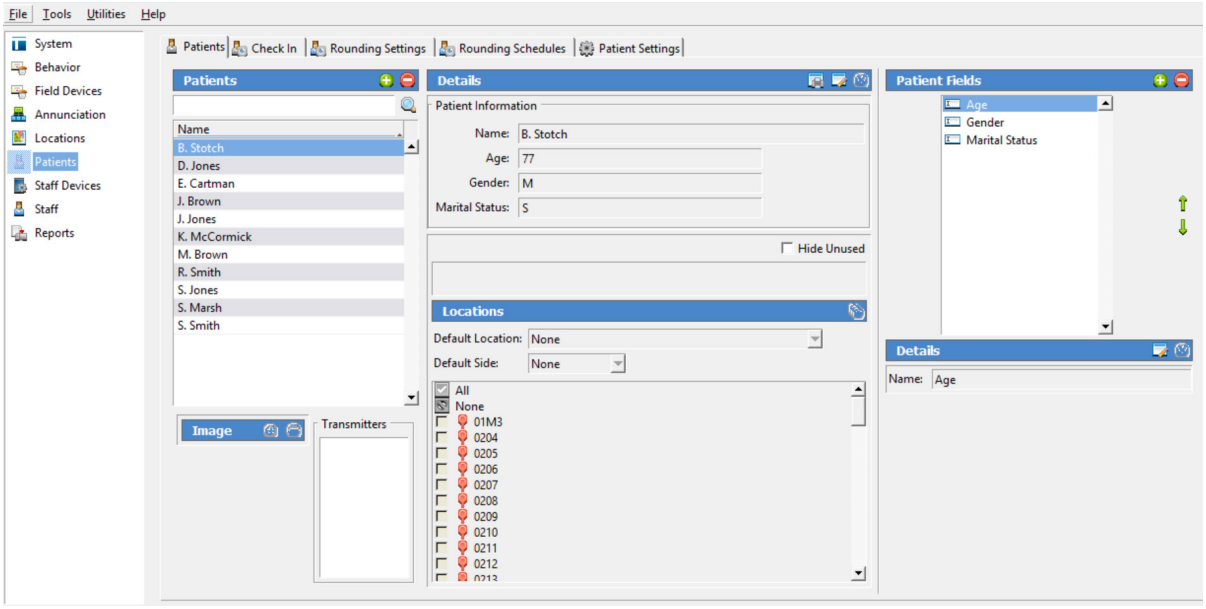


To add equipment, select **Add** in the **Equipment** pane, populate the **Description** field in the **Details** pane and select **Apply**. The Equipment Badges pane is used for older legacy systems and is no longer applicable.

To delete equipment, select the equipment from the list, then select **Delete**.

Patients Page

Patients Tab



To add a patient, select **Add** in the **Patients** pane under the **Patients** tab. Enter the patient's name. Upload a picture of the patient by selecting **Add** in the **Images** pane. Image files such as .bmp, .gif, .jpg, and .png may be uploaded to the ConfigTool. Select **Apply** to save the entry.

In the **Locations** pane, select a **Default Location** and **Default Side** in the respective drop-downs if applicable.

By default, Patient Information only provides for the name for the patient. To add more fields, select **Add** in the **Patient Fields** pane to create additional information about the patient. Examples of additional patient fields include key notes about the patient such as allergies or emergency contact information. If more than one **Patient Field** is created, green arrows to the right of the pane will appear. To change the patient field sequence, select a patient field from the list, then use the up and down arrows to move the patient field up or down in the list.

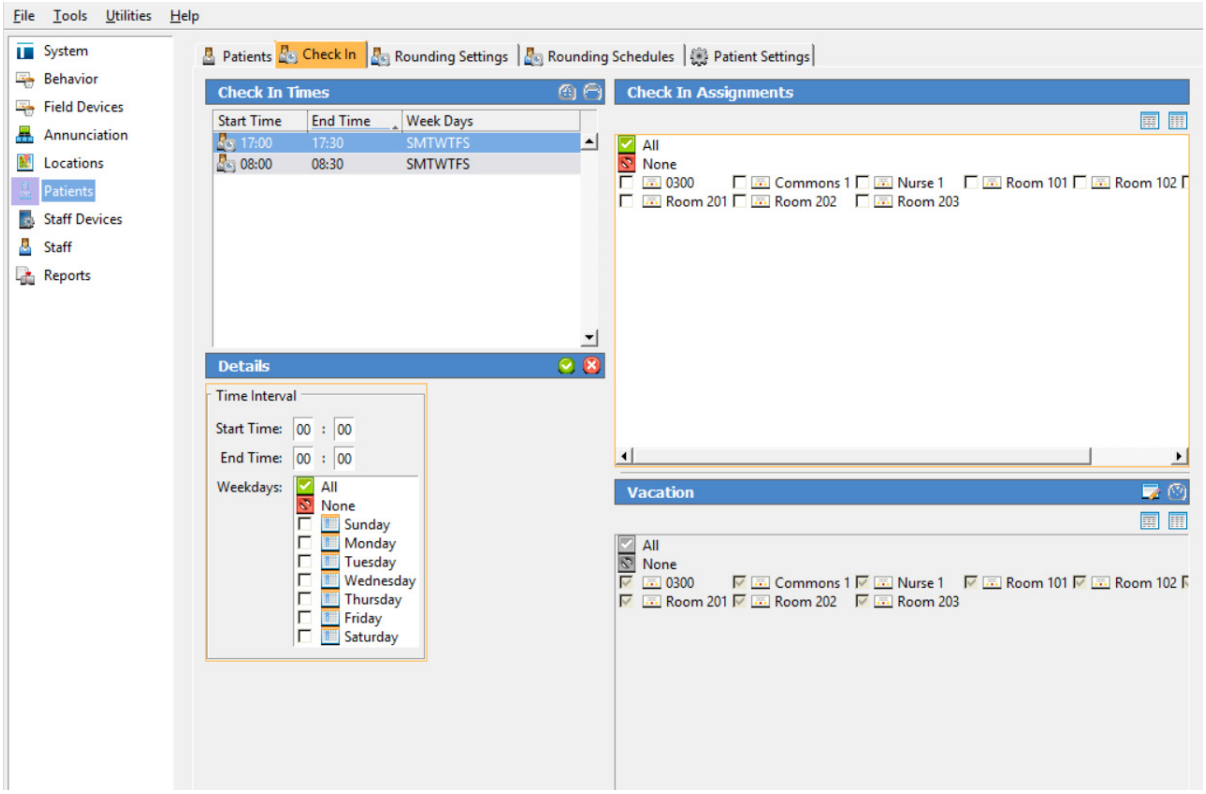
Check In Tab

A check in requires the patient or resident within the facility to check in at certain times. Check in windows are created, then stations, transmitters, or switches are assigned in that window.

If the patient or resident does not check in as expected, an inactivity call will be produced on the Tek-CARE Network event monitors, masters, pagers, and mobile apps to alert facility staff that the check in was not completed.

Stations are assigned check in times in the **Check In** tab. Transmitters will be assigned to the appropriate check in window through the **Transmitters** tab on the **Field Devices** page. See **Transmitters Tab on page 31** for further detail.

To create a check in time, select the **Check In** tab in the **Patients** page selection pane, then select **Add**. Enter the Time Interval in the **Details** pane for the required time frame and days of the check in.



Select the stations to be used for assignments in the **Check In Assignments** pane, if applicable.

If the patient or resident will be away on vacation, select **Edit** in the **Vacation** pane and enter the time away for the patient or resident to temporarily remove that device from the requirement until the patient returns to the facility. Select **Apply**.

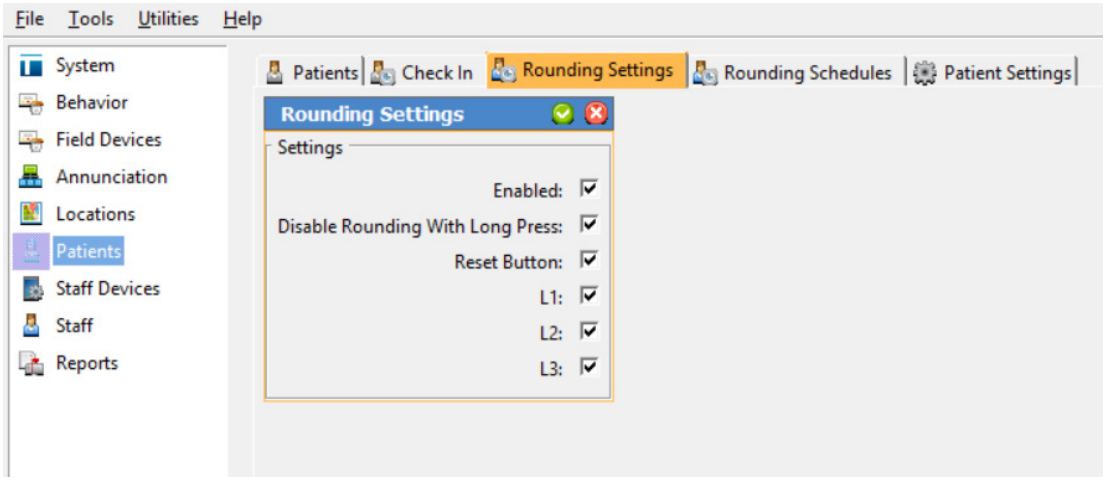
To delete a check in, select the entry from the **Check In Time** pane, then select **Delete**.

> **NOTE:** For daily editing or administrative work, the ConfigToolLive is generally the most efficient tool, as it allows many edits to be done in real time.

Rounding Settings Tab

The rounding feature ensures staff members will attend to their associated patients in a timely manner. Reports run by the facility will show the rounding times of each assigned staff member. **Rounding Settings** are global.

> **NOTE**: Assigning a point as a room reset for the SF123 station is required for the rounding feature to be used on Tek-CARE120 systems.



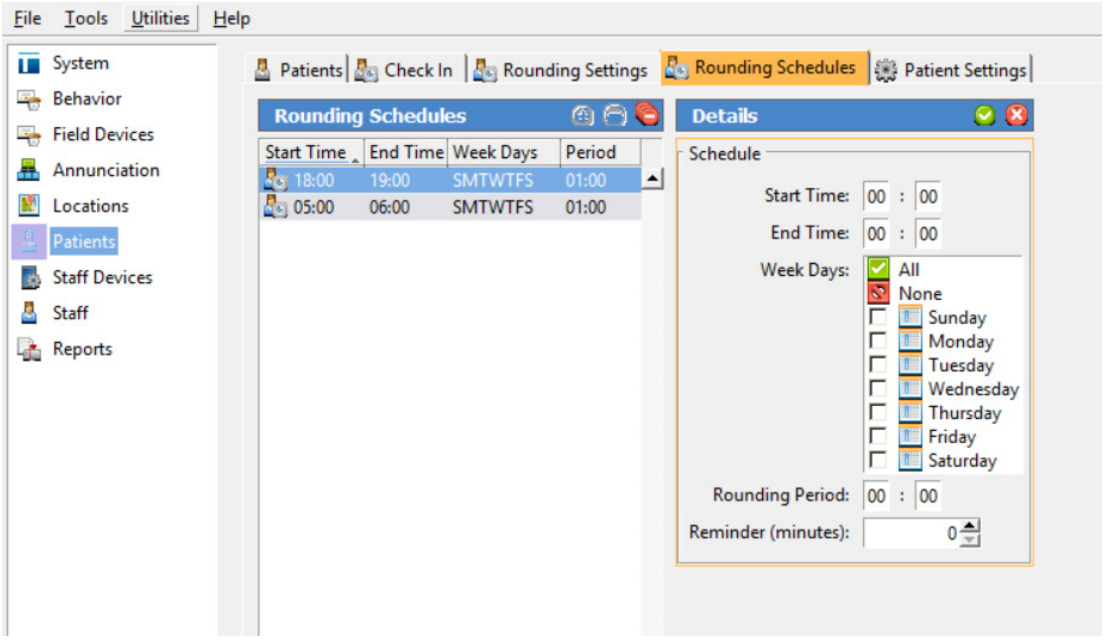
Select **Enabled** to enable the rounding feature. To disable rounding with a long press, select the **Disable Rounding With Long Press** box; this feature allows for disabling rounding with a long press when the room is empty, however, legitimate calls from the room will place it back into the rounding cycle.

Select the **Reset Button** box if room station reset buttons will be used to trigger a rounding event. Hold down that same button for approximately three seconds to disable the rounding event.

Select the **L1**, **L2**, or **L3** boxes if those buttons (found on the SF124) will be used to trigger a rounding event. Select **Apply** when finished.

Rounding Schedules Tab

Use the **Rounding Schedules** tab on the **Patients** page to create a schedule for the rounding feature.

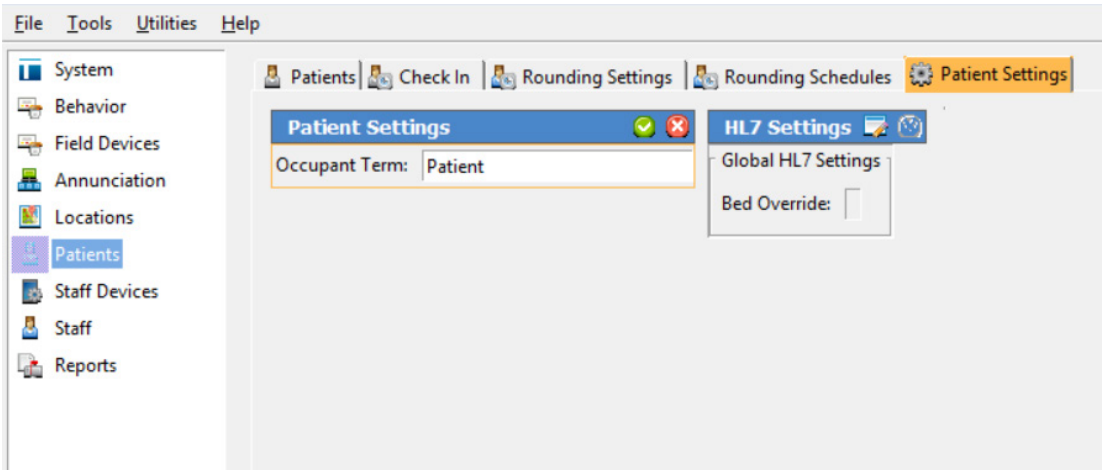


Select **Add** in the **Rounding Schedules** pane. In the **Details** pane, enter a **Start Time** and **End Time** and choose the week days for the schedule.

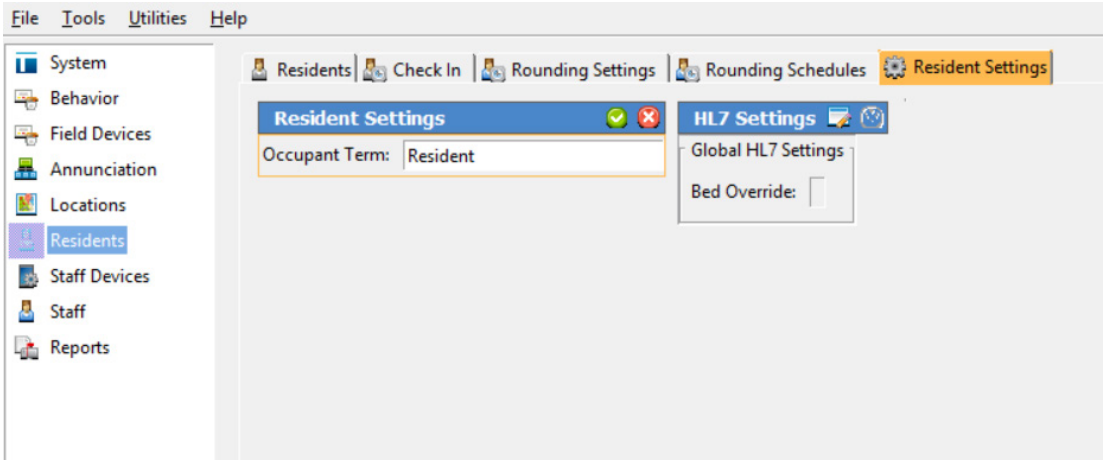
The default **Rounding Period** is set to one hour. If applicable, change this setting to the facility's preference.

Enter the number of minutes before the end of the rounding period to send a rounding reminder message to staff in the **Reminder (minutes)** field. The default **Reminder (minutes)** to send a reminder to staff is 5 minutes. The reminder can be edited if desired. Once complete, select **Apply**. Then, select the **Stations** tab on the **Field Devices** page to enable rounding and select the appropriate schedule for that station.

Patient Settings Tab



To change the **Occupant Term** displayed in the page selection pane, select **Add** in **Patient Settings**. Enter a different occupant term such as resident, guest, etc., then select **Add**.



The **Global HL7 Settings** enable the Tek-CARE system to receive patient information from a facility's ADT system via HL7 messages. Setting a bed override character will override the bed field in all HL7 messages. This is useful if there is only one bed per room and the ADT system is filling in the bed field with a copy of the room number. Select **Edit** in the **HL7 Settings** pane, then enter a character to override the bed field in the messages. This is set up as a foreign interface.

Staff Devices Page

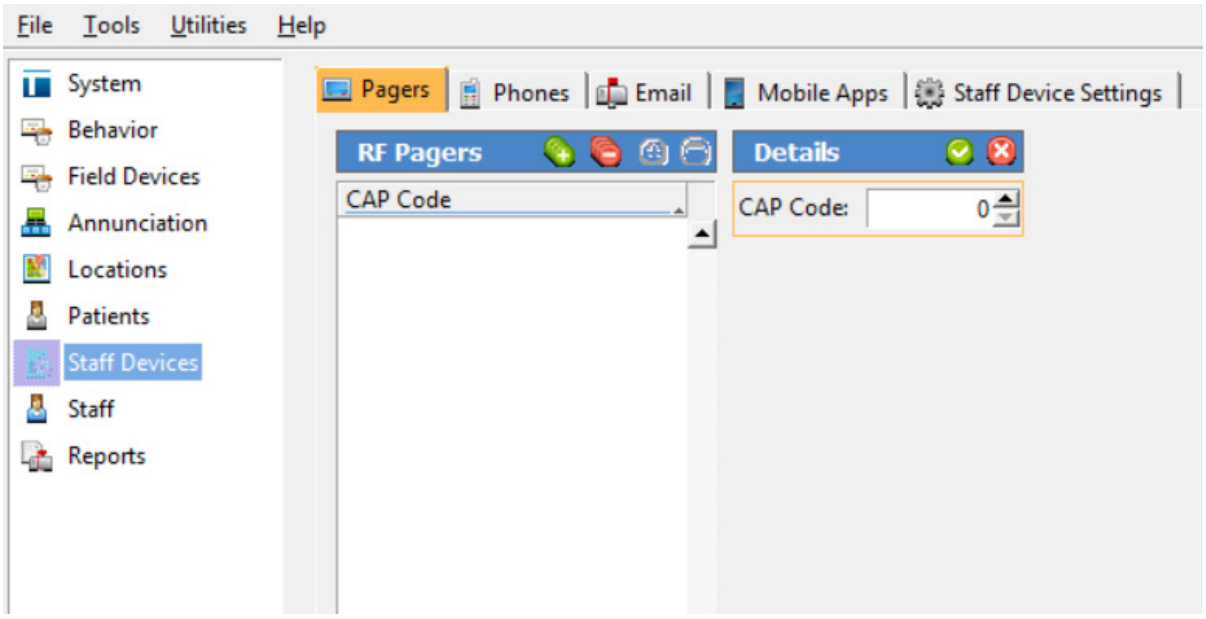
The staff devices page allows for management of staff device notifications such as pagers, phones, and mobile apps.

Pagers Tab

NOTE: Paging must be enabled for email capabilities.

To add a pager, select the **Pagers** tab in the **Staff Devices** page and select **Add**. Enter a **CAP Code** under the **Details** pane and select **Apply**.

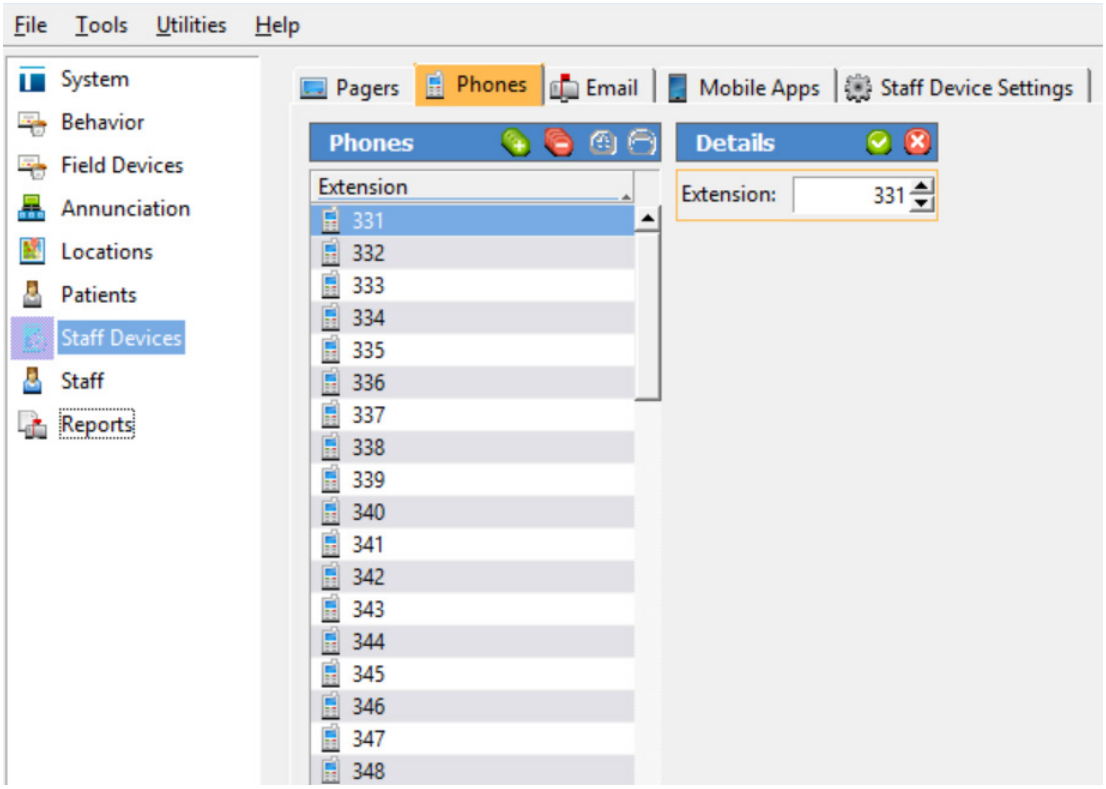
Use the **Staff Device Settings** tab to apply additional settings for these devices. See **Staff Device Settings Tab on page 51** for further details.



Phones Tab

Select the **Phones** tab in in the **Staff Devices** page and select either **Add** or **Add Multiple**. Select **Edit** under the **Details** pane to enter the extension available for use on the facility PBX. Select **Apply** to finish.

Use the **Staff Device Settings** tab to apply additional settings for these devices. See **Staff Device Settings Tab on page 51** for further details.



Email Tab

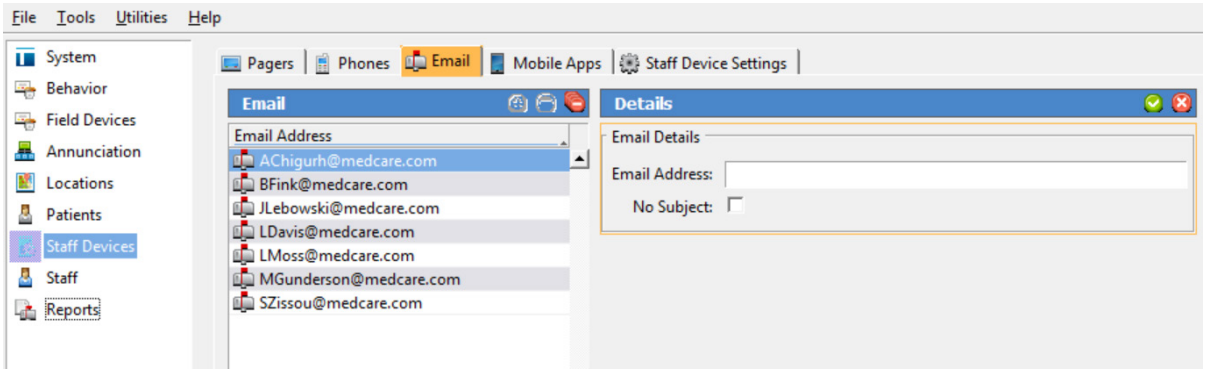
NOTE: Paging must be enabled for email capabilities.

Facility faculty members and support personnel can receive reports and notifications via email. The facility must have an in-network email server for this feature to work.

To create an email address for the facility staff, select the **Emails** tab on the **Staff Devices** page. Select **Add** to add an email address. If the email server does not require a subject, select **No Subject** in the **Details** pane. Select **Apply** when finished.

To delete an email address, select the email address, then select **Delete**.

Use the **Staff Device Settings** tab to apply additional email settings. See **Staff Device Settings Tab on page 51** for further details.



Mobile Apps Tab

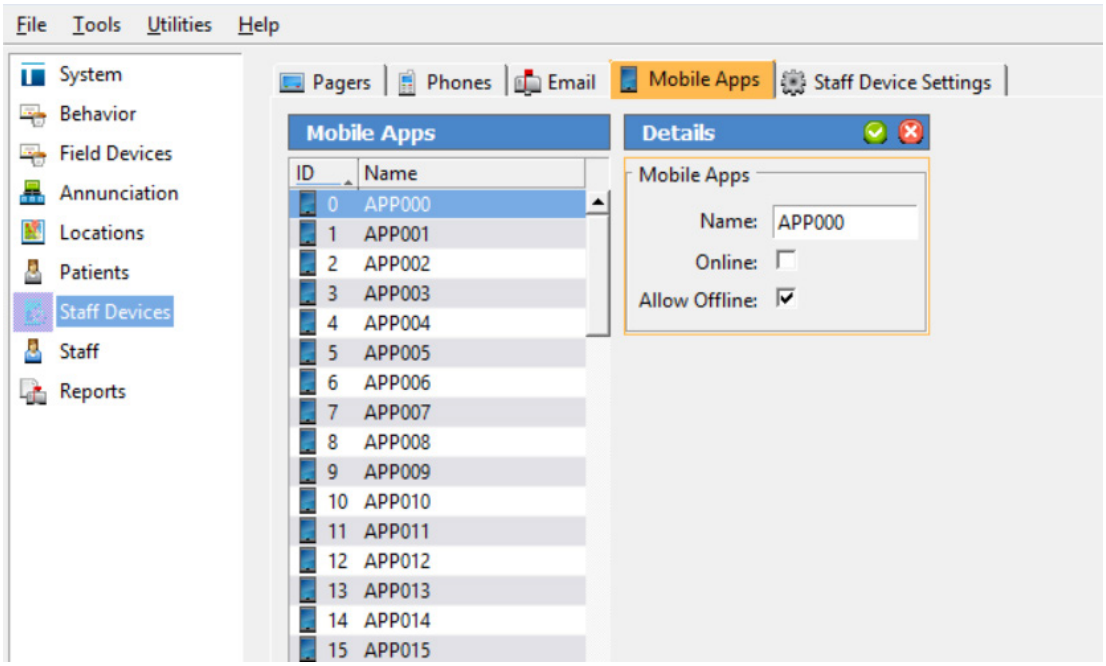
The **Mobile Apps** tab enables facilities to distribute nurse call alerts and information to staff quickly and easily on their mobile device. Paging must be enabled for mobile apps functionality.

Refer to IL1010 Mobile Apps Installation manual for more information.

Select the **Mobile Apps** tab from the **Staff Devices**. The list in the **Mobile Apps** pane shows the ID (0-254) and default name (App0-App254) for each of the licensed mobile apps.

To change the default name for an app, select the app to rename, then select **Edit** in the **Details** pane. Enter a new name for the app. Choose whether the mobile app will be **Online** and be receiving notifications or **Allow Offline** to not receive notifications (if the device is locked to the server), then select **Apply**. Repeat as needed for all apps to be renamed.

Use the **Staff Device Settings Tab on page 51** to apply additional settings for these devices.



Staff Device Settings Tab

Use the **Staff Device Settings** tab to customize settings for pagers, phones, email, and mobile apps.

To change the phone settings, select **Edit** under the **Phone Settings** pane.

Select an option in the **Phone Out Mode** drop-down to select the method used to send messages to phones.

The **Dial Prefix** is the code that is dialed to connect to the nurse call system. Use a comma to generate a pause in the dialing sequence.

The **Access Code** is an optional numeric password that protects against unwanted telephone access to the nurse call system.

Select **E.161 Layout** if the phone being used has that type of keyboard. Uncheck this option if the phones do not have Q on the 7 key and Z on the 9 key.

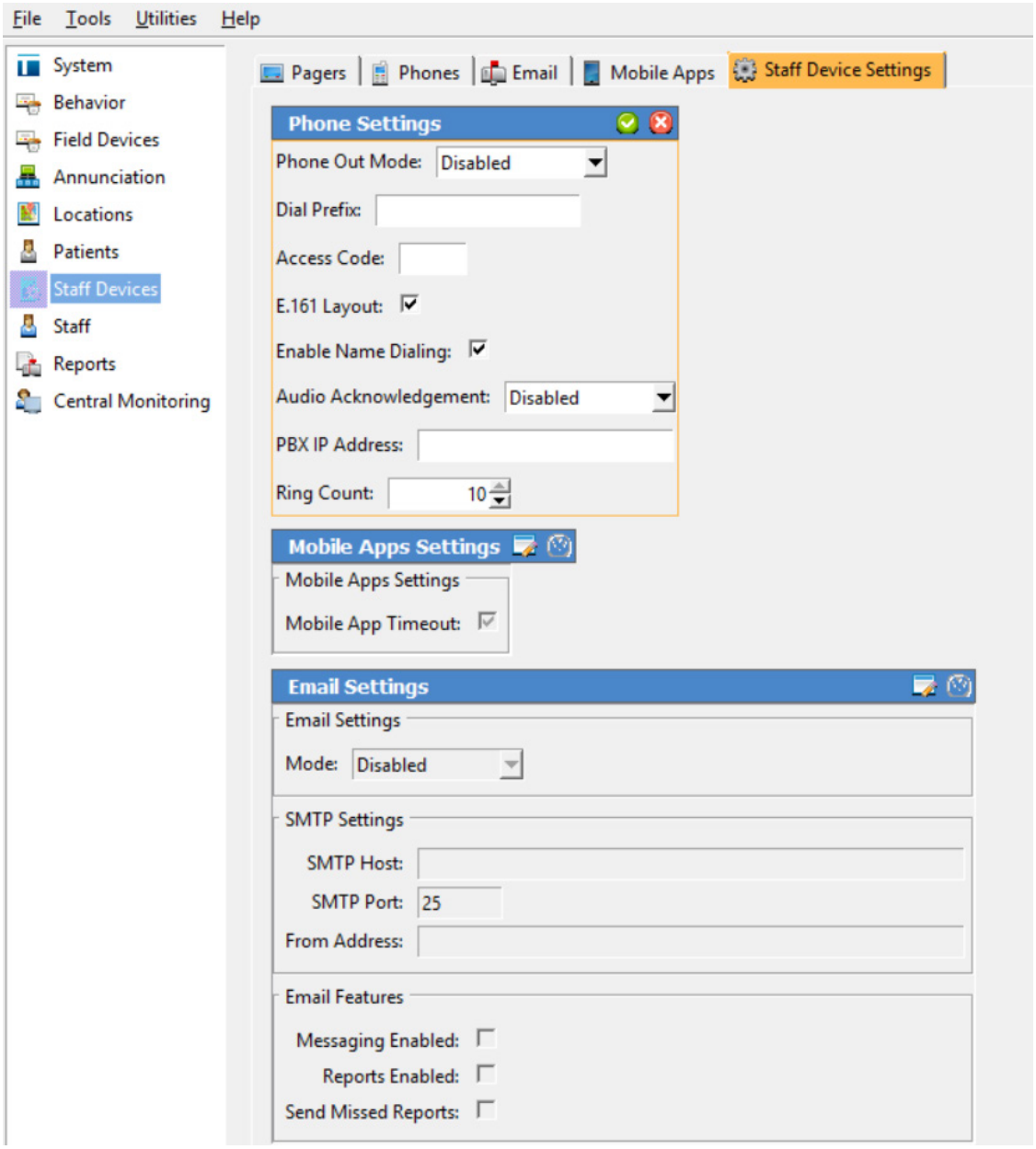
Select the **Enable Name Dialing** box to enable phones to dial stations by name. Leaving the **Enable Name Dialing** box unchecked will allow address-based dialing without requiring # prefixes.

If **Manual** is selected under the **Audio Acknowledgment** drop-down, pressing 9 on the phone during an audio connection to a station will clear any call that would be cleared by an audio connection from a master. If **Auto** is selected under the **Audio Acknowledgment** drop-down, the calls will be cleared when the audio connection is terminated.

The **PBX IP Address** is the IP Address of the PBX the NC475 Tek-CARE Central Equipment will connect to.

The **Ring Count** is the number of times a phone will be ringed per notification. The default number is 10. Select the up or down arrows to change the ring count.

In the **Mobile Apps Settings** pane, select **Edit**, then select the **Mobile App Timeout** box to automatically consider disconnected mobile apps as offline 1 week after being disconnected from the system (this stops push notifications until reconnected to the system).



To edit email settings, select **Edit** in the **Email Settings** pane. Ensure that **Enabled** is selected in the **Mode** drop-down so that email communication is sent.

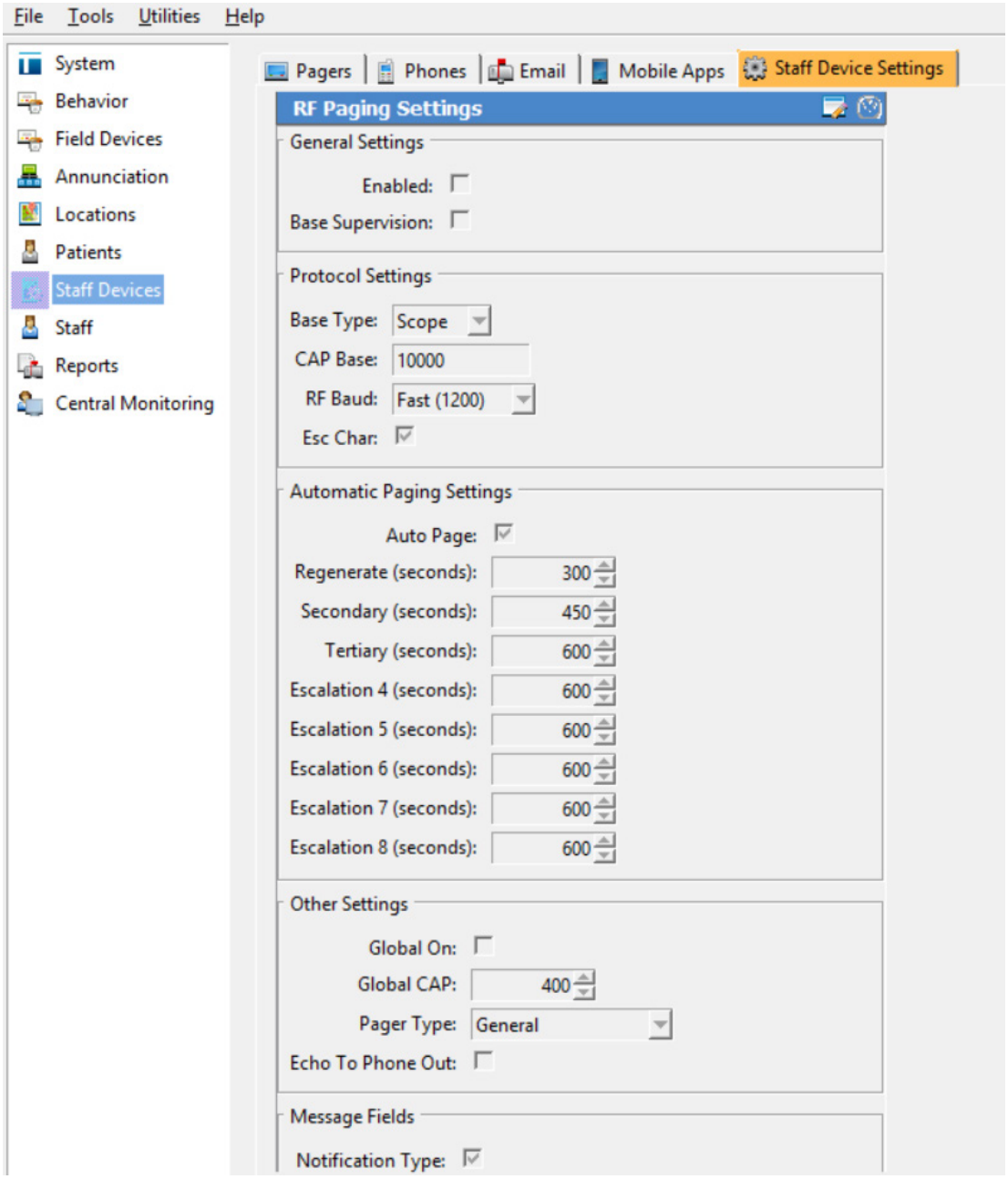
Enter the **SMTP Host** and **SMTP Port**. Enter an email address to be displayed in the **From Address** field.

Select the **Messaging Enabled** box to allow email addresses to be used with direct messaging features. Select the **Reports Enabled** box to enable the report email component, and the **Send Missed Reports** box to send reports missed during times when the email system is down.

If the report email component is not running, check the **Send Missed Reports** box to send out those reports via email.

Select **Apply** once the changes have been made.

To delete an email address, select the email address, then **select** Delete.



To edit pager settings, select **Edit** in the **RF Pager Settings** pane. Select **Enabled** in the **General Settings** pane to enable the paging functionality. Select **Base Supervision** to create a fault if the paging base is disconnected.

In the **Protocol Settings** pane, select the protocol for the **Base Type** (COMP2, Scope, or TAP).

Enter the **CAP Base** (only applicable to the Scope or TAP protocol).

Select the **RF Baud** rate from the drop-down if using the Scope Protocol under **Base Type**. This rate is used to send messages to pagers.

Select the **Esc Char** box to send an escalation character.

In the **Automatic Paging Settings** pane, select the **Auto Page** box if automatic paging assignments have been created for staff. If necessary, change the default seconds to delay a page between Escalation levels. Regenerate does not apply to apps, because the event remains on screen until resolved.

In the **Other Settings** pane, select the **Global On** box if global paging should be optimized, then select the **Global CAP** code which is programmed into all of the pagers. Use the **Pager Type** drop-down to select the pager type. The **Echo To Phone Out** box is a legacy setting; when selected, RF pages will also be sent to the legacy NC464 CCM.

In the **Message Fields** pane, select the fields to show in a message on a pager:

Select the **Notification Type** box to show either Call, Reset, Fault, or Clear based on the call event.

Select the **Event Type** box to show the call or fault type in the message.

Select the **Device** box to include either the device name or ID in the message.

Select the **Patients** box to show the patient's name in the message.

Select the **Location** and **Detected Location** boxes to show the location and the last detected location of the device in the message.

Select the **Start Time** box to show the start time in the message.

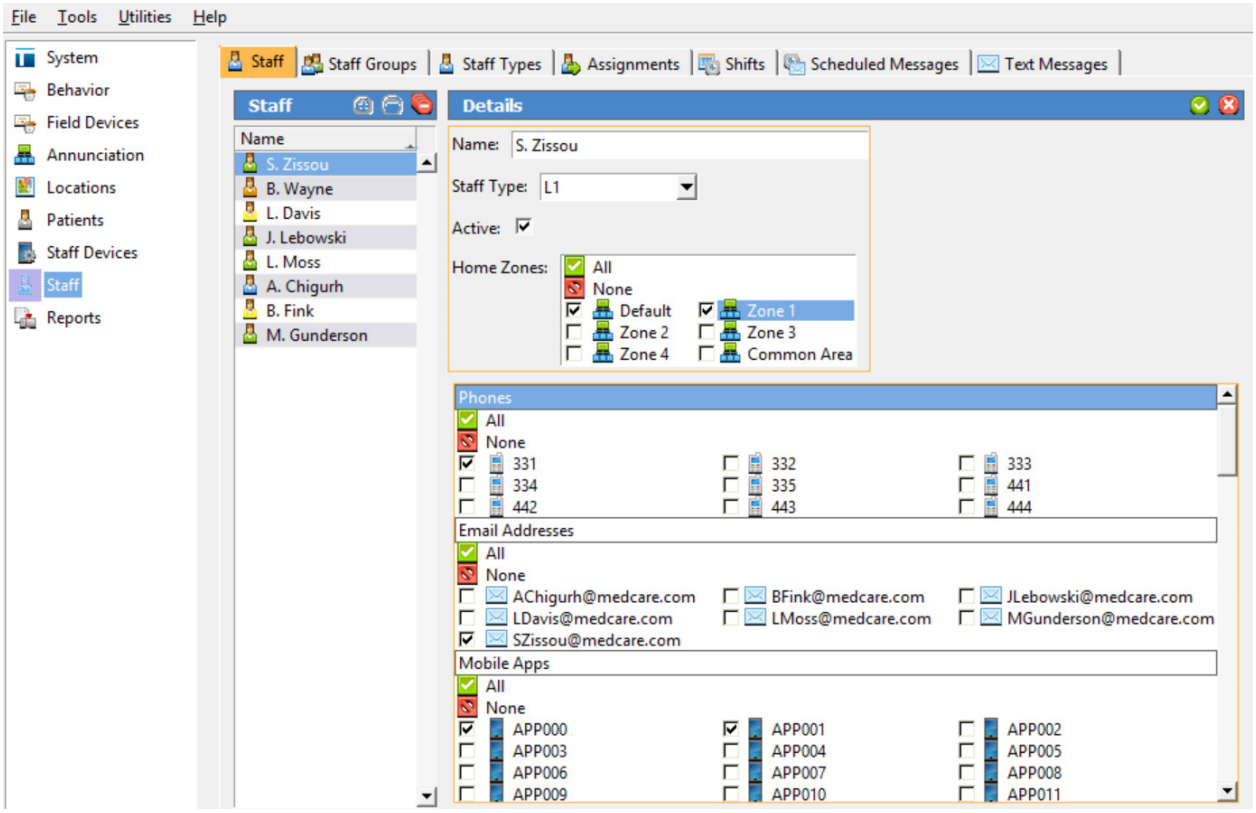
Staff Page

The staff page allows for management of staff assignments, notifications, and shifts. Staff can also be managed by group and type.

Staff Tab

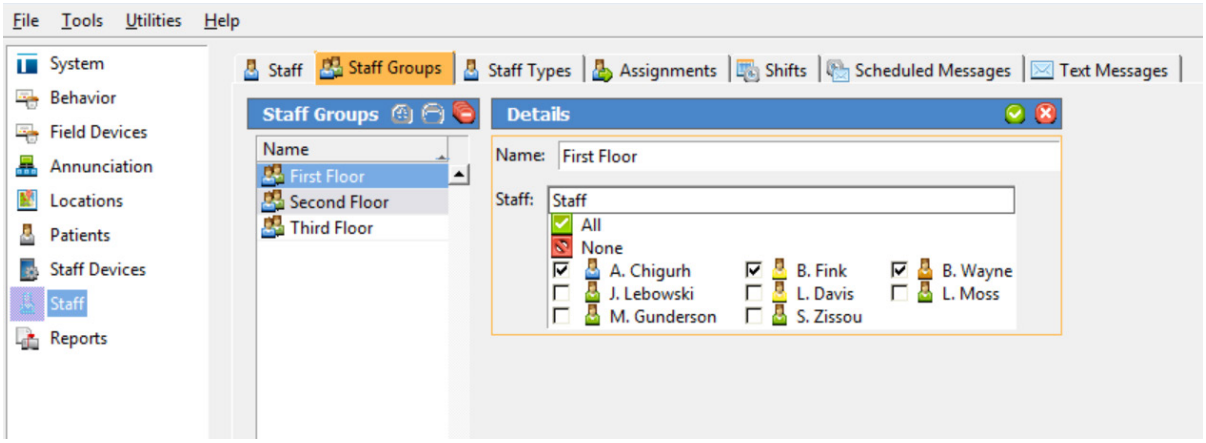
To add facility staff, select the **Staff** tab on the **Staff** page, then select **Add**.

Enter the staff member's **Name**, and select their **Type** from the drop-down. Select the **Active** box to enable the staff member. Select the staff member's **Home Zones**, **Email Address**, **Mobile Apps**, **Phone**, and/or **Pager** to be used by the staff member, then select **Apply**.



Staff Groups Tab

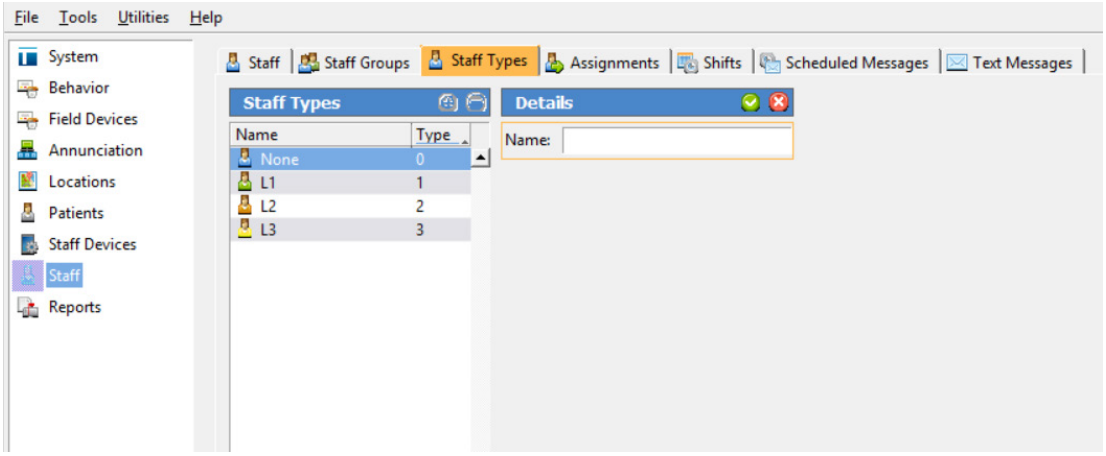
A staff group is a group of facility staff members that have similar characteristics—for example, the staff members work the same shift, cover the same zone, are all nurses, or are all aides. Staff groups are mostly used for assignments and/or messaging options. A staff member may be added to multiple staff groups.



To create a staff group, select **Add** to unlock the **Staff Groups** pane for editing. Enter a Name for the staff group, then select the staff members to be assigned to the group from the list provided. Select **Apply** to accept the changes.

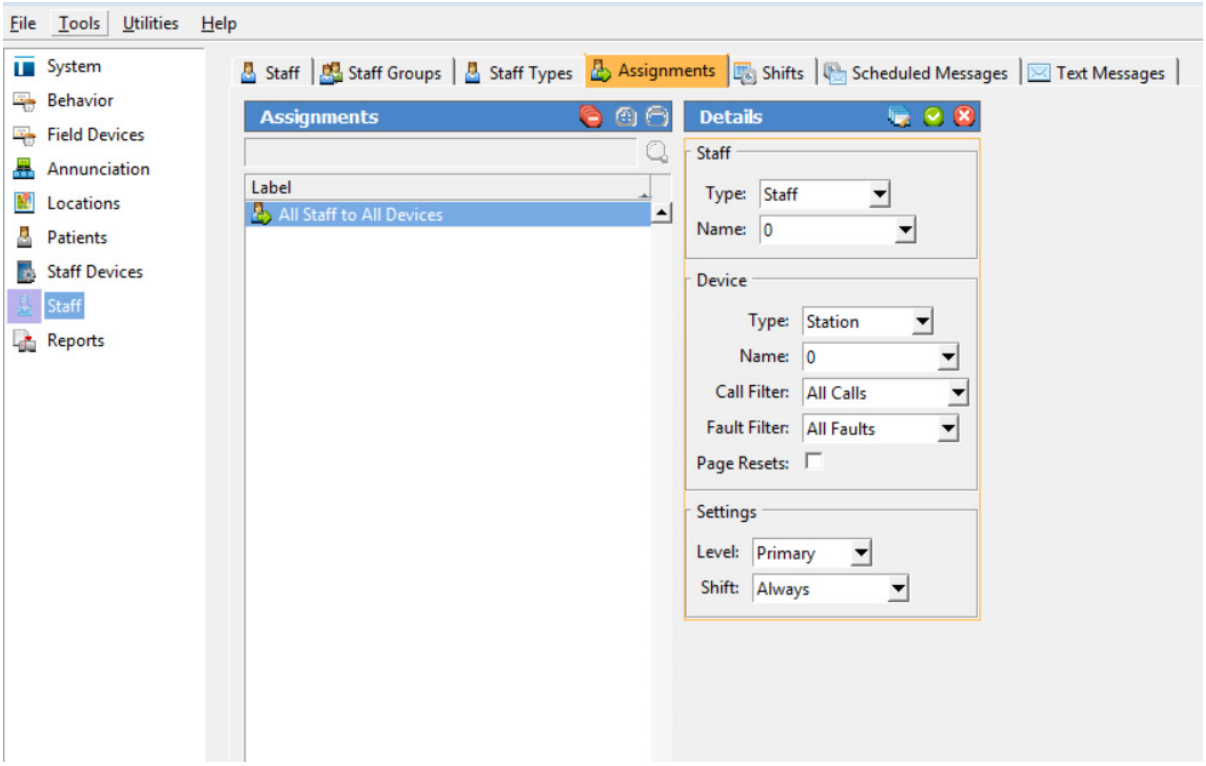
Staff Types Tab

To add or edit a **Staff Type**, either select a staff type, then select **Add** in the **Staff Types** pane or **Edit** in the **Details** pane. Once the details are complete, select **Apply**.



Assignments Tab

Assignments define which calls are sent to each staff member or staff group. To add an assignment, select the **Assignments** tab on the **Staff** page.



Select **Add** to unlock the **Details** pane for editing. Select the type of staff to be assigned from the **Staff Type** drop-down menu. Use **Staff** to assign an individual staff member, **Staff Group** to assign a group of staff, or **All Staff** to create an assignment for all active staff members.

Next, use the **Name** drop-down menu to select the staff member or staff group you wish to create an assignment for. Note that the **Name** menu is not available if **All Staff** is selected in the **Type** menu.

Use the **Device** pane to choose what calls annunciate on the mobile apps that were chosen in the Details pane. The **Type** drop-down menu has five choices: **Station**, **Transmitter**, **Zone**, **Foreign**, or **All Devices**. Stations and transmitters allow a particular device to be assigned to a staff member. The most common choice for mobile app assignments will be Zone or All Devices.

Select the **Name** of the station, transmitter, foreign device, or zone you wish to assign. Note that if **All Devices** is selected, the **Name** menu is not available.

Use the **Call Filter** menu to choose the call priority annunciated by the assignment, then select which faults, if any, should be annunciated using the **Fault Filter** menu.

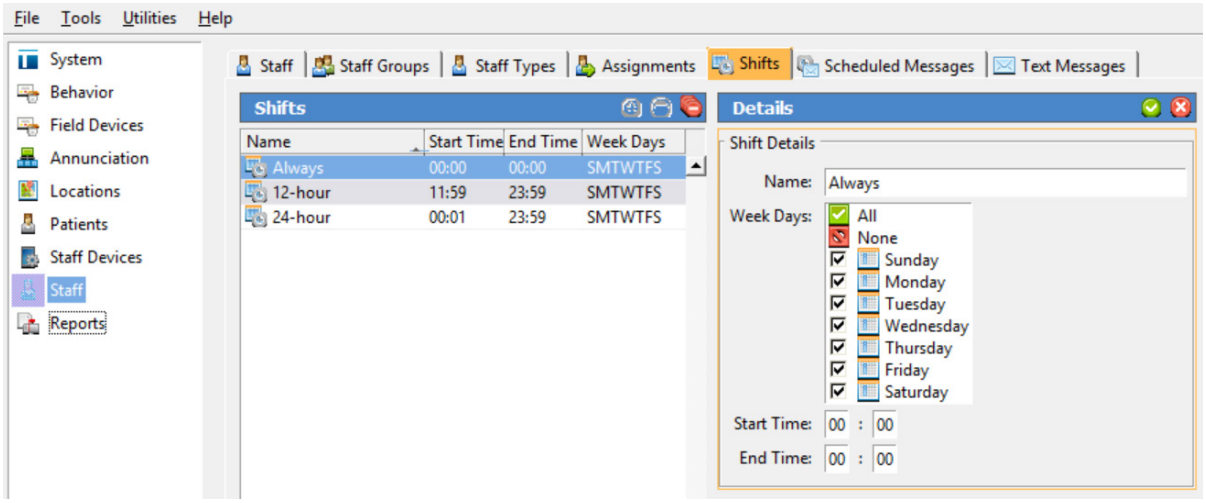
The **Page Resets** selection does not affect the mobile app annunciation, but is useful when using pagers and phones to let other staff members know the call has been reset.

Use the **Settings** pane to choose the escalation **Level** of the assignment (primary, secondary, tertiary, etc.). The **Shift** menu allows a custom shift to be selected. If custom shifts are not used, select **Always**. Select **Apply**.

To delete an assignment, select the assignment, then select **Delete**.

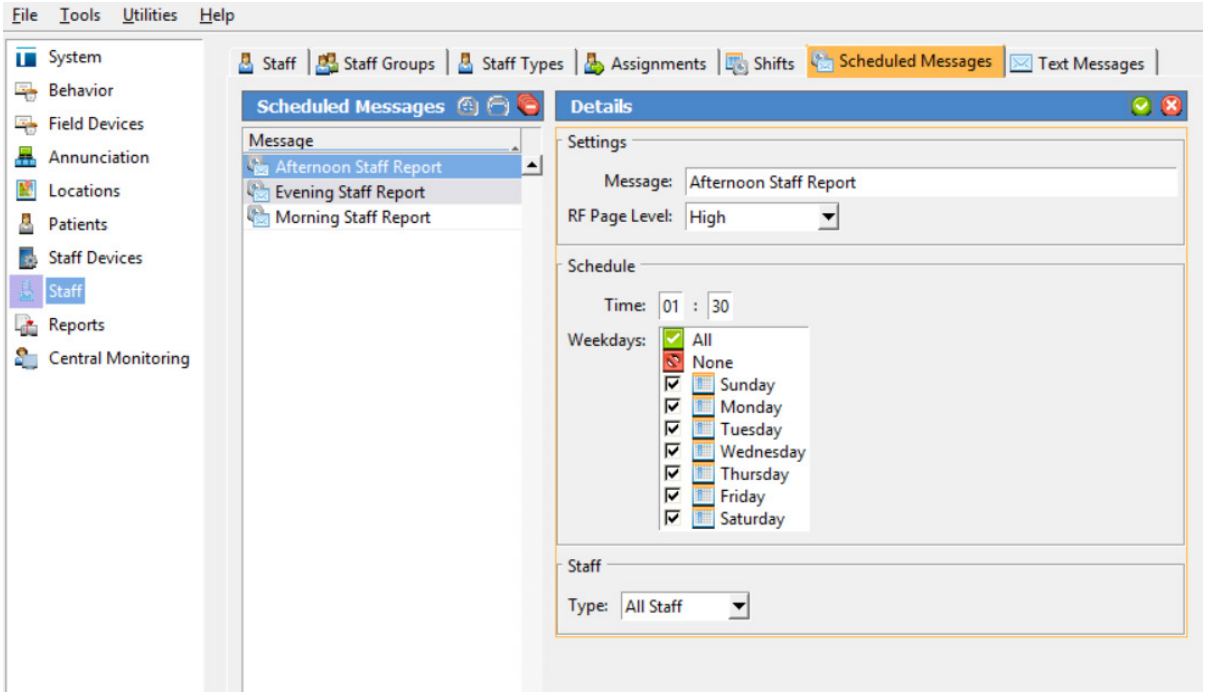
Shifts Tab

Select the **Shifts** tab to create and manage custom shifts. Select **Add**, then in the **Shift Details** pane enter the shift **Name**, choose the shift **Week Days**, enter the **Start Time** and **End Time**, then select **Apply**. The start and end times will be specified in 24-hour format.



Scheduled Messages Tab

Scheduled messages may be sent to staff with pagers and mobile devices. Users can change the settings, timing, and recipients of the scheduled messages.



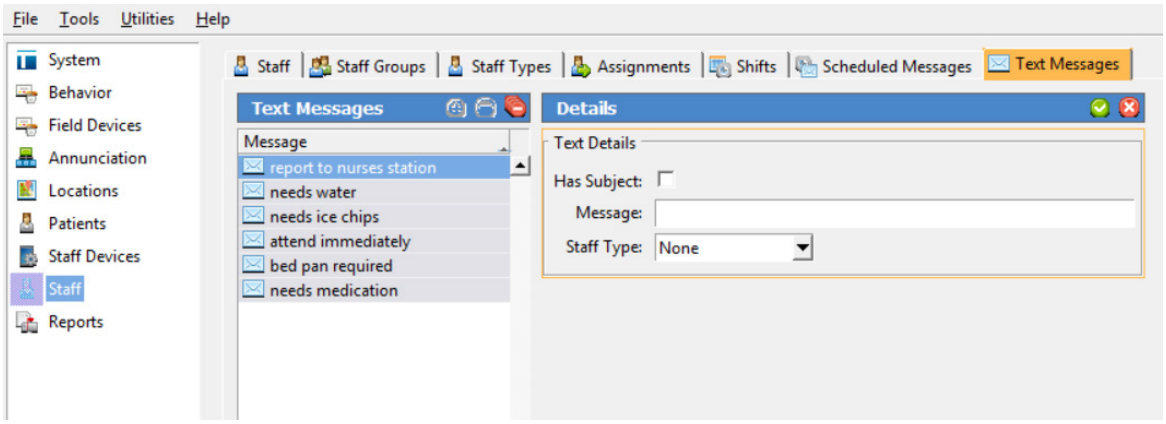
To create a new scheduled message, select the **Scheduled Messages** tab in the Staff page and select **Add**. Under the **Details** pane, create the **Message** and choose the escalation level for the **RF Page Level**. High and Urgent are the highest priority, whereas low and medium are lower priority messages.

Under the **Schedule** pane, choose a time and the week days the scheduled messages should be sent out. Under the **Staff** pane, select the **Type** drop-down to send the scheduled messages to all staff, a staff group, or a specific staff member. Select **Apply** to complete entry of the scheduled message(s).

To delete a scheduled message, select the scheduled message, then select **Delete**.

Text Messages Tab

To add or edit pre-programmed text messages for staff, select the **Text Messages** tab in the Staff page. Select the desired text message and click **Add** in the **Text Messages** pane or **Edit** in the **Details** pane. Select the applicable **Staff Type** for the text message, then select **Apply**.

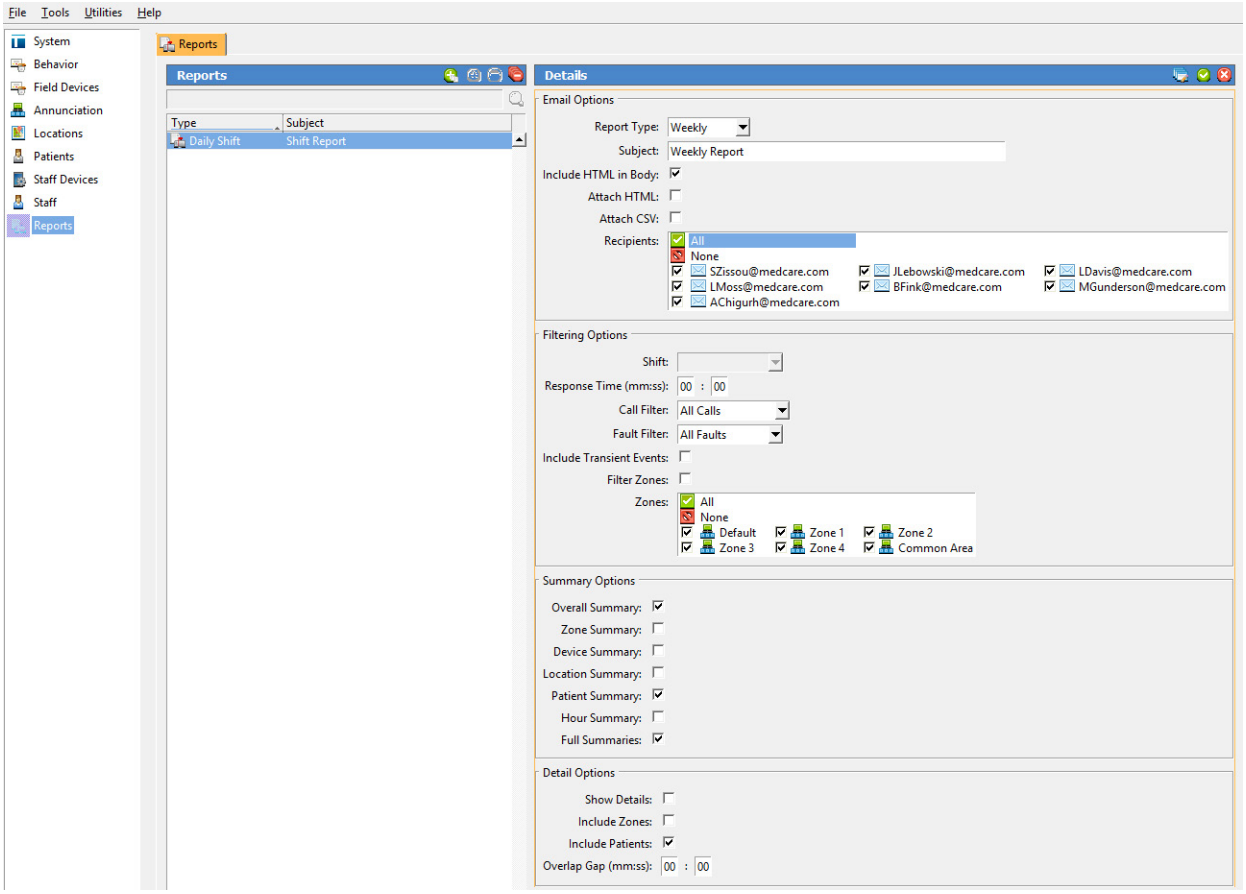


Reports

Create scheduled reports that are automatically sent to selected email addresses. This option requires LS453 Email Output Software.

Reports Tab

To create a new report, select **Reports** in the page selection pane, then select **Add**.



Under the **Details** pane select a **Report Type** which allows the facility to get a range of reports from hourly to weekly. Populate the email **Subject** for the report. The facility can choose report output as either **HTML** that is included with the email, or a **CSV** file. Choose the **Recipient(s)** who will be receiving the report.

If **Daily Shift** is chosen as the **Report Type** in the **Email Options** pane, the **Shift** drop-down under the **Filtering Options** pane becomes available and will allow the option to choose a shift for the report. Entering a **Response Time** results in reports only including events where the response time exceeds the value entered. Use the **Call Filter** and **Fault Filter** drop-downs to select the calls and faults included within the report.

Select the **Filter Zones** box to choose which zones will be included within the report. If this option is not selected, the report will generate for all zones.

In the **Summary Options** pane, select the applicable summary to include in the report for the facility.

In the **Detail Options** pane, choose to **Include Details**, **Include Zones**, and/or **Include Patients** to specify the level of detail included within the reports.

Choose a value for **Overlap Gap** to overlap a time gap in between reports.

To delete a report, select the report from the list, then select **Delete**.

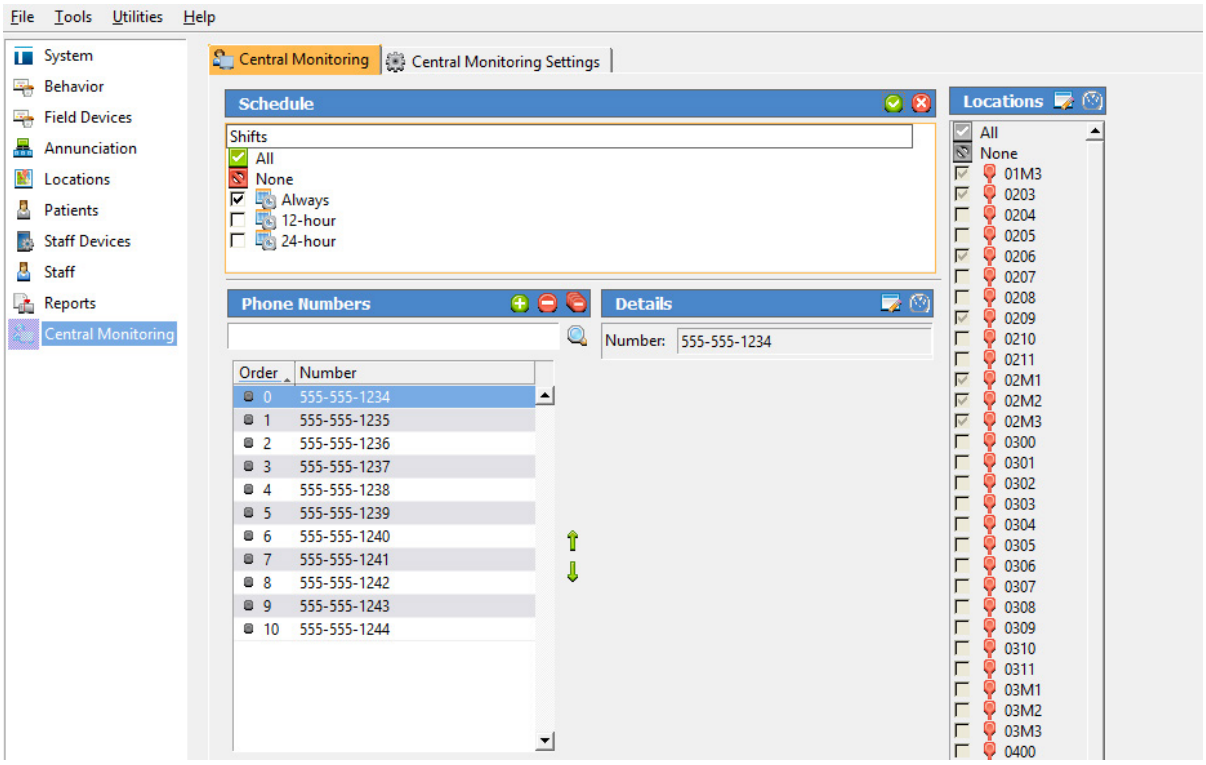
Central Monitoring

Central Monitoring Tab

When central monitoring is enabled, the ConfigTool sends events via a serial connection to the NC502 PC-Alarm Panel or the NC503 Central Monitoring Modem. Both devices dial the central monitoring facility's telephone number and transmit the events to the central monitoring facility.

When the central monitoring app sees an alarm, the software tries each telephone number in order and uses the first one that connects. If that telephone number stops working, it continues through the list until it finds another working number, retrying once per minute until it connects.

Select the **Central Monitoring** tab on the **Central Monitoring** page.



To select a schedule, select **Edit** under **Schedule** to choose a shift for the central monitoring. Select **Apply**.

Select **Add** in the **Phone Numbers** pane. Type the central monitoring facility's telephone number, then select **Apply**. Repeat these steps to add another phone number to the list.

> **NOTE:** Be sure that the central monitoring station phone numbers are entered exactly as they were provided by the central monitoring company.

To change the phone number sequence, select a phone number from the list and then select the up and down arrows at the right to move the phone number up or down in the list.

Select **Apply** to accept the changes.

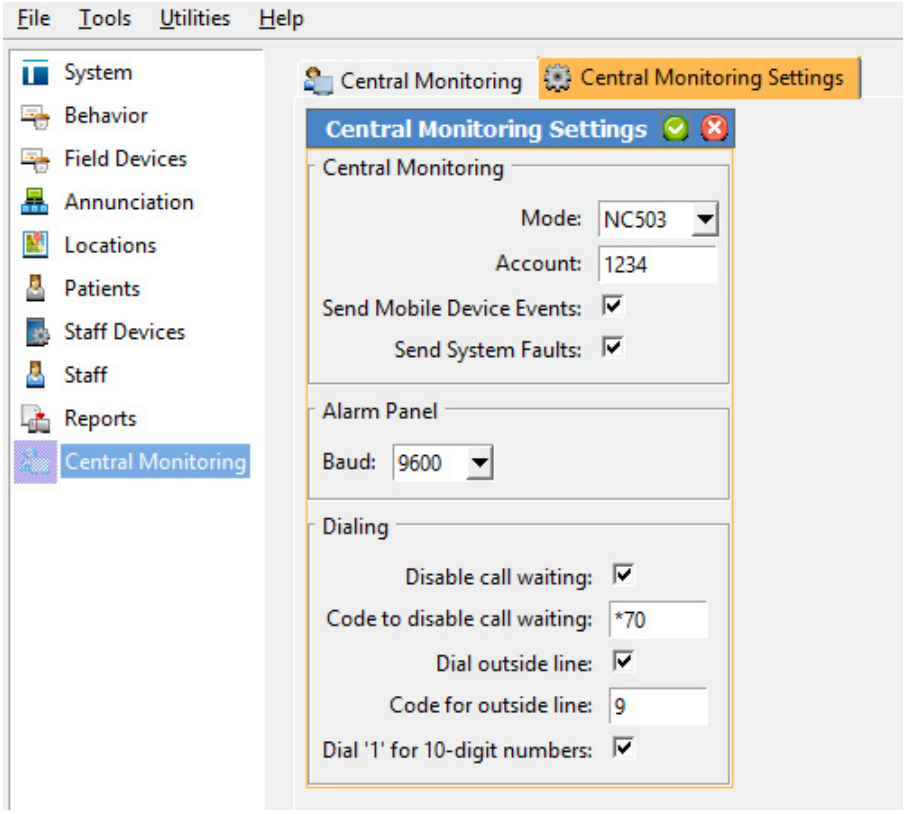
> **NOTE:** To utilize the **Schedule** pane, ensure that shifts are first created in the **Shifts** tab on the **Staff** page. To utilize the **Locations** pane, ensure that locations are first created in the **Locations** tab on the **Locations** page.

NOTE: If a location is not checked in the **Locations** list, events from that location will not be transmitted to the central monitoring facility. Select **Edit** under **Locations**, then select the locations for the central monitoring facility. Select **Apply**.

Central Monitoring Settings Tab

Select the **Central Monitoring Settings** tab on the **Central Monitoring** page.

Select **Edit**, then select either **Disabled**, **NC502**, or **NC503** from the **Mode** dropdown.



Enter the facility's **Account** code and note here: _____.

Check **Send Mobile Device Events** if the facility wants events from mobile devices to be a part of central monitoring. Check **Send System Faults** to send faults from various sources, such as repeaters, modules, etc. Choose **9600** for proper **Baud** rate between the computer and the alarm panel. The 9600 baud rate is for both NC502 and NC503.

Configure dialing options as needed to **Disable Call Waiting** or to use a prefix to **Dial an Outside Line**, or to **Dial "1" for 10-digit numbers**. Select **Apply**, then save the configuration.

Software Updates

Before updating system software, select **File→Load Configuration From System** then select **Save**.

- For the **NC474 Tek-BRIDGE Server**, 7336 is the latest version of the LS450 ConfigTool. Further updates will require an upgrade to the NC475 Tek-CARE Central Equipment.
  - If the facility is on software version 7253 or older, contact support for additional steps. Contact our Technical Support Department by email at tektsupt@tektone.com or by phone at 828.524.9967. Choose Option 3.
- For the **NC475 Tek-CARE Central Equipment**, visit **https://www.tektone.com/resources/** and select the **Tek-CARE Software Updates** pane to find the latest updated version of the LS450 ConfigTool. Install the LS450_setup_xxxx.exe on the programming laptop connected to the Tek-CARE Network.

  IMPORTANT: System settings return to the default configuration after being updated. In order to not lose the programmed configuration, be sure to save the configuration before and after being updated.

Double-click the LS450 ConfigTool on the programming laptop connected to the Tek-CARE Network. In the splash screen, select the IP address of the network interface that is connected to the Tek-CARE Network. These can be done in no particular order. Under **Utilities**, select the following options:

- **NC475 Update Server**.
- **Upgrade GEN2 Modules (NC120/NC160/NC455CE/NC356CE)**.

To reload the saved configuration, select **File→Open Configuration** and choose the saved configuration.

Test the system before turning it over to the facility.

Tek-CARE300II Database Import

There are two ways to incorporate Tek-CARE300II stations into a Tek-CARE system:

1. Replace the Tek-CARE300II system with one or more NC356CE and import the stations as full Tek-CARE stations.
2. Leave the Tek-CARE300II system running, connect it to the Tek-CARE system as a foreign interface, and import the stations as foreign devices.

With either approach, the LS450 ConfigTool provides an easy way to import station names and other settings from the Tek-CARE300II database.

Obtaining a stations.db File

Perform this procedure before importing either the NC356CE or foreign devices. Repeat this step for each Tek-CARE300II system that is being replaced:

1. While the Tek-CARE300II is running, download the stations database to a stations.db file. You may choose your own file names, using a .db extension, if multiple Tek-CARE300IIs are being replaced. (Instructions for creating the stations.db file are in the System Configuration and Programming Station Database Functions section of the IL715 Tek-CARE300II manual.)
2. Copy the stations.db file to the computer running the LS450 ConfigTool.

Importing to a NC356CE

When Tek-CARE400 NC356CE TC300II/III head-end modules will be used to replace the central equipment of a Tek-CARE300II system, this procedure can be used to import the Tek-CARE300II stations database into the Tek-CARE system. This optional step may make it easier to program station names and settings on the Tek-CARE system.

> **Note**: These instructions assume that the modules have been added to the system, and that all modules and the LS450 ConfigTool have been updated to the latest revision.

1. Power off all Tek-CARE300II central equipment.
2. Power off all Tek-CARE modules.
3. Disconnect the station cables from the NC351/A-series Central Equipment and connect them to NC356CE modules in the NC450 Central Equipment.
4. Power on all Tek-CARE modules.
5. Open the ConfigTool and select **Load Configuration From System**.
6. Repeat this step for each stations.db file downloaded:
    a. Select **Tools→NC300II Database Import to NC356CE**.
    b. When the file browser requests the location of the stations.db file, locate the file and select **OK**.
    c. The **Import Port Identification** dialog will be shown with a row for each populated port in the stations.db database. Each port will be identified by a few of the room numbers from that port in the Tek-CARE300II system. Select the location of each corresponding port (by module number and port number) in the Tek-CARE system. Carefully identify the new locations, then select **OK**.
    d. Next, the **Import Options** dialog will ask which station settings to include in the import. Select which settings to import, then select **OK**.

7. Select **File→Save Configuration As** to save a copy of the current system configuration.
8. Select **File→Commit Configuration To System** to upload the configuration to the Tek-CARE system. After the upload is complete, the system will reboot.

Importing as Foreign Devices

Tek-CARE NC300II Stations can be imported as Foreign Devices by selecting **Tools→NC300II Database Import as Foreign Devices**. A valid NC300II database file is required for import. Repeat for each stations.db file to be imported.

Faults

There are two operations that can be performed from a master station or monitor to clear faults in the system. Most faults indicate that either hardware or software is not communicating as expected. There are two ways to deal with faults:

1. Repair the situation - fix the hardware that is in fault, or fix or restart the software component that is in fault.
2. Tell the system that the situation is acceptable; the hardware or software is no longer expected to be present in the system. Go to the station giving the fault and select **Redetect**.

Name (short Name)	Device	Description
Audio Mode Incompatible (AudMode)		The station is incompatible with the audio mode configured on the NC455CE, or the NC455CE is unable to enter the configured audio mode due to an incompatible audio board.
Audio System Fault (Audio Sys)	Module Number	The audio system on this module is not functioning properly. Audio connections to devices on this module will not work.
Auxiliary Check In Fault (AuxChkIn)	Station Name	An auxiliary check in peripheral is not communicating with the system.
Auxiliary Input 1 Fault (Aux1)	Station Name	An isolated peripheral addressed 1 previously detected on the system is not communicating with its station.
Auxiliary Input 2 Fault (Aux2)	Station Name	An isolated peripheral addressed 2 previously detected on the system is not communicating with its station.
Auxiliary Input 3 Fault (Aux3)	Station Name	An isolated peripheral addressed 3 previously detected on the system is not communicating with its station.
Badge Battery Low (BadgBatt)	Badge Number	A low battery has been detected on a badge.
Bath Fault (Bath)	Station Name	A bath peripheral previously detected on the system is not communicating with its station.
Battery Backup Active (Battery)	Module Number	The modules have lost AC power and are running on battery power.
Battery Low (BattLow)	Transmitter ID	A low battery has been detected on a transmitter.
Battery Missing (BattMiss)	Transmitter ID	The primary battery for this device is missing or has not been removed.
CM Alarm Panel Fault (AlrmPanl)		The central monitoring software component can't communicate with the alarm panel.
CM Communication Fault (CMComm)		The central monitoring software component is communicating with the alarm panel, but the alarm panel is giving an error because it can't successfully dial out.
Call Cord A Input Fault (CrdAInpt)	Station Name	A call cord peripheral is not communicating with the system.
Call Cord B Input Fault (CrdBInpt)	Station Name	A call cord peripheral is not communicating with the system.
Central 12V Failure (CE 12V)	Module Number	A 12V power regulator internal to the module is not working properly.

Central Monitoring Fault (CntrlMon)		The central monitoring software component is not running or is not communicating with the rest of the software.
Cloud License Error (LicError)		The cloud license for some enabled service is unable to be loaded due to some networking error.
Cloud License Info (LicInfo)		The cloud license for some enabled service is unable to be located with the provided System ID, Cloud Access Token, and NC475 Tek-CARE MAC address.
Cloud License Invalid (License)		The cloud license for some enabled service is not valid or has expired.
Cloud License Warning (LicWarn)		The cloud license for some enabled service is expiring in 15 days or less.
Code Conflict Fault (CodeCnfl)	Station Name	Both an SF441 and an SF441-1 are connected to a single station. Only one of the two code peripherals can be connected.
Code Detection Fault (CodeDet)	Station Name	An SF441 is currently detected where an SF441-1 was previously detected. If no peripherals were swapped out, this may indicate a problem with peripheral wiring.
Code Fault (Code)	Station Name	A code peripheral previously detected on the system is not communicating with its station.
Communication Fault (Comm)		A communication fault is shown on a master that can't communicate with its module.
Configuration Conflict (Config)	Module Number	A module has a different configuration loaded than the rest of the system.
Data Error (DataErr)		Unexpected data has been received from or about this device. The device may not be functioning properly, or it might not be communicating correctly with the Tek-CARE system.
Demo License Expired (DemoExpr)		The demo license for this system has expired.
Demo Timeout Warning (DemoWarn)		The demo license for this system will expire soon.
Device Error (DevError)		The device is not functioning properly.
Dirty Sensor (Dirty)		The sensor needs to be cleaned.
Dry Contact Output Fault (DryOut)		An SF126DC dry contact output is not communicating with the system.
Duty LED Fault (DutyLED)	Station Name	A duty LED peripheral is not communicating with the system.
Duty Tone Fault (DutyTone)	Station Name	A duty tone peripheral is not communicating with the system.
EchoStream Fault (EchoStrm)		The Inovonics ES (EchoStream) software component is not running or is not communicating with the rest of the software.
EchoStream Messaging (EchoMsg)		EchoStream directed messaging mode messages detected on a system configured for broadcast mode.
EchoStream Receiver (EchoRcvr)		The Inovonics ES Network Coordinator is not properly connected or is not communicating.
Email Queue Overflow (EmailOvr)		Email output has overflowed internal buffers.
Emailer Fault (Emailer)		The email output software component is not running or is not communicating with the rest of the software.

Emergency Fault (Emerg)	Station Name	An emergency peripheral previously detected on the system is not communicating with its station.
Emergency2 Fault (Emerg2)	Station Name	An emergency2 peripheral previously detected on the system is not communicating with its station.
Event Writer Fault (EvtWritr)		The event writer (reporting database) software component is not running or is not communicating with the rest of the software.
External API Fault (ExtAPI)		The API interface is not running or is not communicating with the rest of the software.
External Battery Backup (ExtBatt)	Module Number	The PK356 is running on backup battery.
External Fan (ExtFan)	Module Number	The PK356 fan is not operating properly.
External Power Failure (ExtPower)	Module Number	The PK356 is not supplying power to the NC356CE.
Fan Speed (FanSpeed)	Module Number	Cooling fan is running out of expected speed range.
Fan Stalled (FanStall)	Module Number	Cooling fan has stalled.
Firmware Version (Version)	Module Number	A module is running a different version of firmware than the rest of the system.
Foreign Interface Fault (FrgnIf)		A foreign protocol provider is not running or is not communicating with the rest of the software.
HL7 Fault (HL7)		The HL7 software component is not running or is not communicating with the rest of the software.
Inovonics Fault (Inovncs)		The Inovonics FA software component is not running or is not communicating with the rest of the software.
Inovonics Receiver (InoRcvr)		The Inovonics FA receiver is not properly connected or is not communicating.
Integration Server Fault (IntgrSrv)		The foreign system interface is not running or is not communicating with the rest of the software.
Invalid Station Address (InvAddr)	Module Number	A station has been detected with an address set out of range.
Lamp Fault (Lamp)	Station Name	A dome light previously detected on the system is not communicating with its station.
Lamp Fault Aux (LampAux)	Station Name	An IR300 series station is unable to fully identify itself due to a lamp fault during startup. This station will not function until the lamp fault is resolved.
Maintenance (Maint)		A maintenance fault is a software-latched fault that indicates some other (possibly transient) fault has occurred on the system. It can be used as a steady fault to send to maintenance staff pagers or email addresses. It must be cleared manually with a redetect after other faults have been resolved.
Master Console Fault (MastrCon)	Station Name	A master has an internal communication problem between its circuit boards.
Master Fault (Master)	Station Name	A master previously detected on the system is not communicating with its module.
Master Network Fault (MastrNet)		A master previously detected on the system is not communicating with the server.
Master Version (MastVer)	Station Name	A master has connected to the system and failed to automatically update its software from the module.
Media Gateway Fault (MediaGW)		The media gateway software component is not running or is not communicating with the rest of the software.

Missing (Missing)	Transmitter ID	A transmitter has been marked as missing because no supervision signal has been received within the timeout period.
Module Unsupported (Unsuprtd)	Module Number	This module type is unsupported with the current version of software.
Monitor Fault (Monitor)	Monitor Name	A monitor client that was previously connected to the system is no longer connected.
NC475 LCD (NC475LCD)		There is a problem communicating with the LCD on the NC475.
Network Fault (Network)	Module Number	A module previously detected on the system can no longer be seen communicating on the network. This can be caused if a module has been turned off, removed, or there is a problem with the network connection between modules.
Orphan Call (Orphan)	Station Name	An active call at this station is not assigned to annunciate at any online master. The call will be annunciated at all masters until condition clears.
Orphan System (OrphSys)		An active fault on this module is not assigned to annunciate at any online master. The fault will be annunciated at all masters until the condition clears.
Pager Module Fault (PageMod)		A pager module previously detected on the system can no longer be seen communicating on the network.
Pager Module Overflow (Pag Over)		Paging output has overflowed internal buffers.
Pager Queue Overflow (PagQOver)		Paging output has overflowed internal buffers.
Peripheral Data Fault (Periph)	Station Name	An error was detected on the peripheral bus of the station.
Peripheral Power Fault (PeriphPw)	Station Name	There is an issue related to the power a station is trying to supply to its peripherals.
Phone Out Fault (PhoneOut)		The phone output (to CommTech CCM) software component is not running or is not communicating with the rest of the software.
Phone Queue Overflow (PhoneOvr)		The phone output (to CommTech CCM) software component is not running or is not communicating with the rest of the software.
Port Data Mode (DataMode)		Stations or Masters are marked as existing without the port set to communicate with that device type.
Port Polling (PortPoll)	Module Number	A PM455 has an internal fault related to station polling. Restart the module to resolve the situation.
Port Power Overload (Power-Ovr)	Module Number	A station port was pulling too much current and has been shut off by the software.
Power (Power)		The device has a problem with its power supply (device may be running on backup power).
Psych Key Fault (PsychKey)	Station Name	A psych station key-switch has become disconnected from the station.
Push Notification Fault (PushNtfy)		The mobile app push notification component is not running or is not communicating with the rest of the software.
RF Paging Base Fault (RFBase)		The RF pager base is not properly connected or is not communicating.
RF Paging Fault (RFPaging)		The RF pager software component is not running or is not communicating with the rest of the software.

RTC Time Invalid (RTCTime)		The real time clock on the NC475 is incorrect. This clock must be correct if any cloud features are enabled. The clock must be set in the setup menu on the NC475.
Report Emailer Fault (REmailer)		The report emailer software component is not running or is not communicating with the rest of the software.
Reset Button Fault (ResetBtn)	Station Name	A reset button peripheral is not communicating with the system.
SMTP Fault (SMTP)		The email output software component is not running or is not communicating with the rest of the software.
SMTP Send Error (SMTPErr)		The email output software component detected some error while trying to send an email to the configured email server.
Secondary Battery Low (SecBatt)	Transmitter ID	The backup battery for this device has gone low. It is likely that this device will be unrecoverable.
Server Fault (Server)		Tek-BRIDGE software previously detected on the system can no longer be seen communicating on the network. The software may simply not be running on the Tek-BRIDGE machine or the machine may have become disconnected from the network, turned off or damaged.
Speaker Fault (Speaker)	Station Name	A speaker peripheral is not communicating with the system.
Staff Peripheral Fault (Staff)	Station Name	A presence peripheral previously detected on the system is not communicating with its station.
Station Data Fault (StaData)	Station Name	A station is not able to send clear data back to its module, possibly because two stations are set at the same address talking over each other.
Station Fault (Station)	Station Name	A station previously detected on the system is not communicating with its module.
Station Missing Polls (StaPolls)	Station Name	A station is communicating with the central, but the communication is intermittent.
Station Power Fault (StaPower)	Station Name	A station is connected and communicating but it is not receiving an optimal power supply.
Station Type Changed (StTypChg)	Station Name	A station has been detected of a hardware type different from the previously detected at this address.
Station Type Invalid (StTypInv)	Station Name	A station is reporting an invalid hardware type. This could be due to a failure on the station, or because this version of the software is too old to include a new station type.
Stations Updating (StUpdate)		One or more stations on this module are updating their firmware. Please do not interrupt.
Tamper (Tamper)	Transmitter ID	A tamper signal has been sent from a transmitter.
TC570 Data (TC570Dat)		Invalid data was detected in the communication with the TC570 receiver.
TC570 Fault (TC570)		The TC570 software component is not running or is not communicating with the rest of the software.
TC570 Receiver (TC570Rcv)		The TC570 receiver is not properly connected or is not communicating.
TC570 Receiver Version (TC570Ver)		The TC570 receiver version is not supported.
Text Message Overflow (TxMsgOvr)		The text messaging system has overflowed internal buffers.

Unstable Power (UnstblPw)	Module Number	Central supply power is fluctuating on and off. Either AC power is fluctuating, or there is a problem with the DC power supply.
Unsupported Peripheral (UnPeriph)	Station Name	A point on a P5+ station is attached to a peripheral not supported by that station.
Unsupported Remote (Remote)	Station Name	A point on a P5+ station has been reassigned to a non-P5+ station which is not supported.
Versus Fault (Versus)		The Versus software component is not running or is not communicating with the rest of the software.
Weak Signal (Signal)		Messages to or from the device have a weak signal strength.