

# LS450 ConfigTool

Installation and Operation Manual

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## **IL855 LS450 ConfigTool Manual Wireless Nurse Call Installation Manual**

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# Introduction

This manual provides an introduction to the LS450 ConfigTool software which is used to program various Tek-CARE systems.

The LS450 ConfigTool 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 software. Make sure to have all of the appropriate manuals accessible when preparing modules, master stations, servers, and systems for installation.

## Installing the Software

**Note:** A newer LS450 ConfigTool 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, and use it to update the Tek-CARE system.**

A laptop running a Windows operating system can be used to run the LS450 ConfigTool. A new Tek-CARE system is shipped with an LS450 ConfigTool Programming Software USB flash drive. Insert this flash drive into a USB port of the laptop that will be used for programming the configuration. View the USB flash drive's contents using the 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. Go to <https://www.tekton.com/resources/> to find the latest available update.

## Network Setup

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

Access the network connections settings in Windows by going to **Start>Control Panel>Network and Internet>View Network Status and Tasks**.

Click on the **Ethernet Connections** and go to **Properties**. Click **Internet Protocol Version 4 (TCP/IPv4)** and click **Properties**. Check **Use the following IP address** and enter the following:

Tek-CARE IP address: 192.168.1.178 | Subnet Mask: 255.255.255.0

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

## Running the LS450 ConfigTool Software

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

1. Open the LS450 ConfigTool on the programming laptop that is connected to the Tek-CARE Network to start the LS450 ConfigTool Software.
2. In the Tek-CARE ConfigTool splash screen, select the IP Address of the network interface that is connected to the Tek-CARE Network.
3. Click **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** (which will change the names of the patients), or **Cancel Loading** which will bring the user back to the splash page.

The screenshot shows the Tek-CARE Config Tool Elite interface. The main window is titled "Tek-CARE Config Tool Elite - C:\Program Files\TekTone\LS450\Configs\test.nc4". The interface is divided into several panes and sections:

- Page Selection Pane:** Located at the top left, it contains a list of system components such as Server Settings, Passwords, Masters, Stations, Points, Locations, Patients, Transmitters, Call Types, Faults, Fault Filters, Zones, Equipment, Pagers, Phones, Mobile Apps, Email, Reports, TVs, Staff, Assignments, Rounding Settings, Rounding Schedules, Scheduled Messages, Central Monitoring, Serial Ports, Interfaces, Foreign Rule Sets, Foreign Rules, and Foreign Devices.
- Editing Pane:** A central pane with a table of modules. The table has columns for "Module", "Type", and "Location". The first row shows "01" for "NC120/NC160" and "NC455CE".
- Pages:** A section below the editing pane showing a list of pages (01-31) with a "Hide Unused" checkbox.
- Configuration Sync Icon:** A green checkmark icon in the bottom right corner.
- Configuration Location Icon:** A location pin icon in the bottom right corner.
- Configuration Save Icon:** A floppy disk icon in the bottom right corner.
- Consistency Check Icon:** A checkmark icon in the bottom right corner.
- Network Icon:** A globe icon in the bottom right corner.
- Details Pane:** Located at the top right, it shows "Type: NC120/NC160" and "Location: Attached Devices".
- Status Bar:** At the bottom, it displays "Ready."

Callout boxes provide the following information:

- Page Selection Pane:** The Page Selection Pane shows all the available pages on the system. Depending on the system licensing, all options shown here may not be available on every system.
- Editing Pane:** Area within the page that contains information or system settings that may be edited are referred to as Editing Panes. To edit this information, unlock editing panes by clicking (Edit) button.
- Pages:** This area shows the information that relates to the selection in the Page Selection Pane.
- Configuration Sync Icon:** When the configuration shown in the Config Tool and the configuration loaded onto the Tek-CARE systems are the same, a green check mark appears in this box. When the configurations do not match, a yellow triangle appears.
- Configuration Location:** This icon shows whether the configuration is loaded from a saved location or if it is loaded from the Tek-CARE system.
- Configuration Save Icon:** When the configuration in the Config Tool has been saved, a green check mark appears in this box. When the configuration has not been saved or has been modified without saving, a yellow triangle appears.
- Consistency Check Icon:** The Consistency Check will check the configuration in the Config Tool for compatibility and errors.
- Network Icon:** When the configuration exists only on a standalone system, this icon is displayed. When the configuration is part of the Tek-CARE Network, this icon is displayed.

## Work Flow

The LS450 ConfigTool supports several methods of importing data, and may be used in different ways depending upon circumstances.

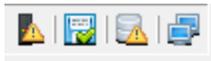
Below is a general example of the work flow for configuring a new system:

1. Install the hardware and check all wiring for shorts, grounds, and opens.
2. Open LS450 Config Too and select **Load Configuration from System**.
3. Review the detected **Modules** 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 Page on page 13**).
4. Go to the **Masters** page to make sure all of the masters have been detected and are included in the configuration (**Masters Page on page 14**). Rename if necessary.
5. Go to the **Stations** page to make sure all of the stations have been detected and included in the configuration (**Stations Page on page 14**). Rename as necessary.
6. Set up zone names and place the stations and masters within those zones (**Zones Page on page 22**).
7. If applicable, edit room controller points (TC120, TC160, and TC400 P5+). Refer to **Points Page on page 15**.
8. Locations may already be added into the config (**Locations Page on page 17**). Edit or add new locations if necessary.
9. If necessary, go to **Paging** to enable the paging feature (**Pagers Page on page 22**).
10. Add staff members and staff groups (**Staff Page on page 25**).
11. Create and define assignments for each staff member or group (**Assignments Page on page 26**).
12. Go to **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 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 alert you to when configurations are synced to the system, where the configuration is stored, if the configuration has had a consistency check, and if the Tek-CARE Appliance Server is maintaining a connection to the Tek-CARE Network.



**System Data Icon** - Shows whether the configuration stored with the LS450 ConfigTool 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 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** - Shows whether the current LS450 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** - Shows 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** - Shows the network selection that was made when starting the LS450 ConfigTool.

-  One of the active network connections on this machine was selected.
-  The LS450 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, click this button to unlock the pane for editing.



**Apply:** Click this button to confirm programming changes. After clicking this button, the field being edited will be locked.

**NOTE:** This does NOT save the configuration to disk.



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



**Add:** This button is 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.

**Input Controls** - The Input Controls provide all the basic editing for each component. First, click **Add** or **Edit**. Next, use the various controls, each of which performs specific functions, to customize each component. Click **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** - Clears all data and reverts to the initial values for all components. This is a blank configuration with only an existing NC475 Tek-CARE Appliance Server.
- **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** - 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 Hardware** - 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, most of which are 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 into TC500 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 or PM456** - When Tek-CARE400 PM456 or 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 also used when monitoring an TC300II with the NC475 Tek-CARE Appliance Server 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.
- **Export Foreign Device Rules to New File** - Export one or more foreign device rule sets 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 VFD Master Images** - The NC401VFD masters have slots at the top of the membrane switch to slide in strips of button labels. These labels are unique to each master.
- **Generate Label Images** - 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.
- **Upgrade Modules** - This option upgrades the first generation Tek-CARE modules to the current software version.
- **Recover Modules** - This option will recover first generation Tek-CARE modules that are unresponsive.
- **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 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.
- **Force VFD Update** - Use this option to force the software update to the specified NC401VFD Master Station when the initial update process failed to run.
- **NC475/NC402TS Update Server** - This option will upgrade NC475 Tek-CARE Appliance Servers and NC402TS master stations. To update the NC402TS master station, networking must be enabled and the laptop running the ConfigTool must be connected to the NC402TS either directly with an ethernet patch cable or via the Tek-CARE Network.
- **Upgrade NC120/160/NC455CE/NC356CE Modules** - 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 license version in the ConfigTool.
- **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.
- **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.

## Help

The **Help** menu displays options related to system information, troubleshooting, and software updates.

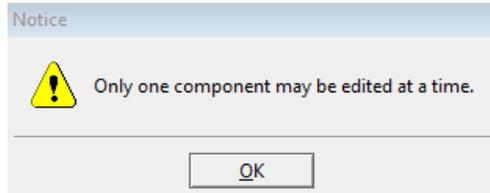
- The **Fault Table** shows a list of all available faults on the system along with a brief description of each fault.
- The **Change List** shows what changes have been made to the Tek-CARE software suite since the last code release.
- **About** will provide information about the currently installed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

**Note:** You must have a PDF viewer in order to view the **Fault Table** and **Change List**.

# Configuration

The page index is a list of configuration page names in the page selection pane. Click a page name to display that page, or use keyboard shortcuts to cycle through the pages: **Ctrl+Tab** selects the next page; **Ctrl+Shift+Tab** selects the previous page.

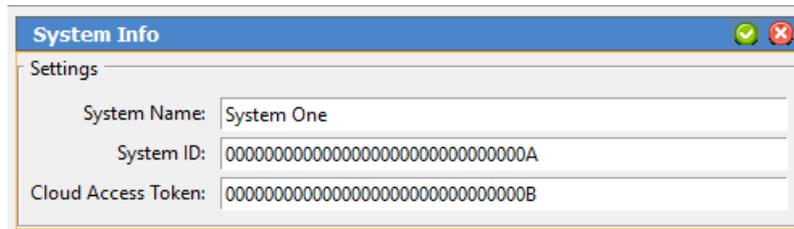
Only one page can be edited at a time. Click either **Apply** or **Cancel** on the current pane being edited before making changes elsewhere or the below notice will appear.



**Important:** The page selection pane of the LS450 ConfigTool on the programming laptop may not contain all of the provided options included in this chapter. The different pages that are available in this manual represent all available licenses that may be purchased for a Tek-CARE system.

## System Page

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



Click **Edit** on the System Info page to enter in the system settings. Create a **System Name** to easily identify the configuration. Once the cloud system has been set up for the facility, TekTone will supply the **System ID** and **Cloud Access Token**. Once that information has been entered, click **Apply**.

## Modules Page

Modules are the main components of the Tek-CARE system. Once either **Default Configuration with Detected Hardware** or **Sync Configuration with Detected Hardware** have been selected, the ConfigTool will detect the modules on the Tek-CARE system. To find the detected modules in the ConfigTool, go to **Modules** in the page selection pane.

Under **Modules**, select the module address and click **Edit** under the **Details** pane. Change the type of module and enter a location for the module. Detected stations or peripherals that are connected to that module are under **Attached Devices**.

Click **Apply** once the **Module** page is finished being edited. Select **Hide Unused** to provide only the modules that exist and hide the rest of the modules that are not used.

## Server Settings Page

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

## Passwords Page

Password protection is useful to prevent unauthorized facility staff from making changes to the LS454 ConfigTool Live and the Tek-CARE system such as 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, go to **Passwords** in the page selection pane and click **Add**. In the **Settings** pane, create a password. The password can be up to 16 characters. The blank entry that exists by default doesn't require a password to access the various features. If a password is created, those features need to be removed from the blank entry. Check the boxes of each feature that the facility would like password protected. Click **Apply** and save the configuration. To delete a password, click the password and click **Delete**.

## Masters Page

A master station displays calls on the Tek-CARE Network. To set up a master station within the ConfigTool, go to **Masters** in the page selection pane. Click **Hide Unused** to hide the unused masters. Choose a master and click **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 **Paging** under **Options**. This option allows the master to receive audio pages.

**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** and **Zones Watched** that are to be annunciated by that master. Click **Apply** once all of the master stations have been created. Refer to **Call Types Page on page 19** and **Zones Page on page 22** for more information on those two features.

## Stations Page

To detect and configure a new station, go to **Stations** in the page selection pane. Select a station and click **Edit** under the **Details** pane. Create a name for the station which is usually the room number.

If there is more than one side to a station (such as IR421/2P5 allowing for sided calls like Side A and Side B), select the correct **Side** for the station. The **Type** of station will determine the different options you will have to set for that specific station. The **Behavior** of the station will determine which 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 zone or system paging, check **Paging** under **Options** and choose the correct zone (s) for the station.

If rounding will be used on the station, check **Rounding Enabled** and select the appropriate **Rounding Assignments** schedule for that station. It is recommended to start with **Rounding Settings Page on page 27** and **Rounding Schedules Page on page 27** for global options first, and then enable rounding on the station level. Once the rounding is enabled on the station(s), go to the **Behaviors Page on page 21** to verify the rounding behavior. If the station is placed in an unoccupied room, uncheck **Rounding Enabled**.

If **Audio Settings** is applicable, choose either Half or Full Duplex. Half Duplex only allows audio to work from one station 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** which adjusts the input volume to the station being edited. Enter a **Relay Name** for the output Relays 1 and 2 to show relay controls on the master stations.

If using IR41xP5 stations with PM420 modules and **Relay Enabled** is checked, it will cycle the call LED while a call is active at the station. Relay 1 is momentary for 20 seconds. Relay 2 is latching. Relay 3 and 4 have to be checked to be enabled. Relay 3 cycles with the call and Relay 4 will activate while a call is on the station. Click **Apply**.

## Points Page

Points are the six physical connections on the rear of each room controller or P5+ station which is used in Tek-CARE120/160 and Tek-CARE400 P5+ Nurse Call Systems. Refer to IL992/1024 for TC120/160 Installation manual and IL1059 TC400 P5+ Installation manual for more information. 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.

**NOTE:** If using rounding on the TekCARE120/160 system, the station must have an SF123 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.

Check **Hide Disabled** and **Hide Detectable** to only see existing points.

To edit points, go to **Points** in the page selection pane and find 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 disabled/ detectable/ exists, select the station the point is assigned to, select the hardware type, and select the correct function. Click **Apply**.

To edit a group of points, select a point and click **Edit Multiple** under the **Details** pane. Change the applicable points to show as **Existing**, give them a type and create a function for each point.

Under **Exists**, select whether the point exists, is disabled, or detectable. Go through the drop-down list to distinguish which **Assigned Station** this point is assigned to. Select which type of device that is plugged into the point. Choose the **Function** for that point. Click **Apply**.

## Locations Page

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

Go to **Locations** under the page selection pane and either click **Add** or select a location and click **Edit** under the **Details** pane. Choose a name for the location.

Select a proximity map if there is one already uploaded to the ConfigTool. Select the applicable transmitters and patients that will be assigned to that location.

To create a **Proximity Map**, click **Add** under Proximity Maps and create a name under the **Details** pane and choose **Load From File**. Acceptable file formats for proximity maps are .bmp, .gif, .jpeg, and .png. Select the **Proximity Map**. Plot the various points on the map and click **Apply**. Once the configuration is saved and committed, the Proximity map will place icons on the map for location and display those locations on the NC404TS or any monitor if **List and Map** is selected on the **Monitors** page. Refer to the **Monitors Page on page 25** for more information.

To delete a location, select a location and click **Delete**.

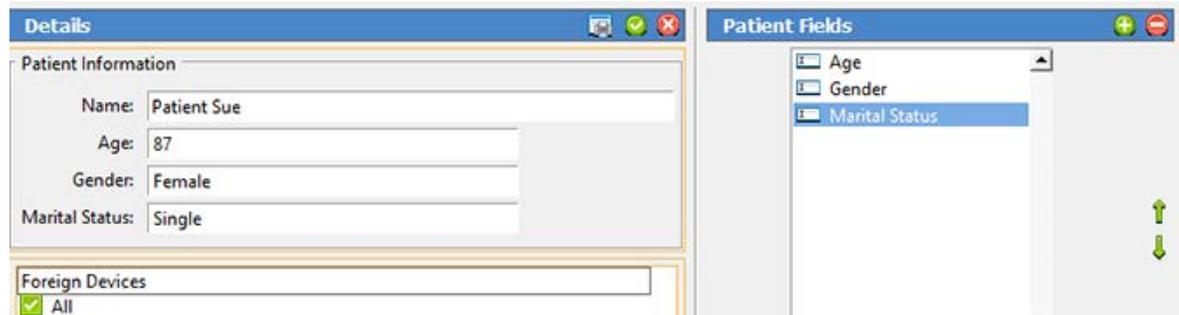
## Patients Page

To add a patient in the ConfigTool, go to **Patients** in the page selection pane and click **Add**. Enter the patient's name. You can upload a picture of the patient to the left by clicking **Add** in the **Images** pane. Image files such as .bmp, .gif, .jpg, and .png may be uploaded to the ConfigTool. Click **Apply**.

Select a default **Location** and **Default Side** if applicable.

By default, **Patient Information** just shows the name for the patient. To add more fields, click **Add** under **Patient Fields**. **Patient Fields** to create additional information about the patient. A good example of a patient field would be key notes about the patient such as allergies, age, marital status, address, etc.

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 and then click the up and down arrows to move the patient field up or down in the list.



To change the **Occupant Term** that shows in the page selection pane, click **Add** in **Patient Settings**. Type a different occupant term such as resident, guest, etc. and click **Add**.

The **Global HL7 Settings** enable the Tek-CARE system to receive patient information from a facility's ADT system via HL7 messages. Enter a character to override the bed field in the messages. This is set up as a foreign interface.

To delete a patient/resident, select the patient and click **Delete**.

Once all patients have been added, go to **File>Save Configuration**.

## Check In Page

A Check In requires the patient or resident within the facility to check-in at certain times. Check-in windows are created and then transmitters are assigned to that window. Transmitters have to be set up individually for check-in on the **Transmitters** page. If the patient/resident does not check in when expected to, an inactivity call will be produced on the Tek-CARE Network showing on the event monitor, masters, pagers, and mobile apps to alert facility staff that the check-in was not made.

To create a check in time, go to **Check In** in the page selection pane and click **Add**. Enter the **Time Interval** under **Details** for the required time frame and days of the check in. Select the stations which will be used for **Check In Assignments**, if applicable.

If the patient is going to be on vacation, click **Edit** under **Vacation** and set up the correct time for the patient which will temporarily remove that device from the requirement until the patient is back in the facility. Click **Apply**.

To delete a Check In, select the **Check In Time** and click **Delete**.

## Transmitters Page

To create a new transmitter, go to **Transmitters** in the page selection pane. Click **Edit** under the **Settings** pane and check to enable either the FA or the ES Inovonics Receiver. Click **Apply**.

**Note:** Be sure to mark the correct setting as this is a global action for all transmitters.

Click **Add** in Transmitters and under the **Details** pane, choose a transmitter family of **FA** for Frequency Agile or **ES** for Echostream devices. Either **Add Barcode** on the **Transmitters** page or the LS454 ConfigTool Live can be used to add an ES (Echostream) transmitter. Enter a **Device #** which should be located on the back of the device or the label on the device can be scanned for the Device ID. (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. If the facility does not want to display a tamper fault, check **Ignore Tamper**.

Under the **Hardware** pane, select a hardware model for the transmitter and its use. If there is more than one use for the transmitter, click the **Used as** drop-down and select another use for the transmitter.

Select a **Zone** and choose a **Check In** for the patient/resident created on the **Check In** page.

Select the **Supervision** interval at which the transmitter will send supervision signals and when the timeout will show if the transmitter has gone missing.

Choose a location for where the transmitter is installed. Select the correct zones that will be watching the transmitter under **Zones**.

If the rounding feature will be used with the transmitter, select the appropriate **Rounding Schedule**. Click **Apply**.

## Call Types Page

The **Call Types** page creates custom call types, change the various defaults such as; LED settings, call definition, dome light settings, and create or modify call filters.

To create a new call type, go to **Call Types** in the page selection pane and click **Add**. Under the **Details** pane, check to apply the call type to master station call filters, annunciation station call filters, or other specific call filters.

Under **Call Definition**, 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** which 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.

A **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** allows to choose the rate and style of the **CALL LED**, **Peripheral LED**, **Duty Toning**, and create a **Duty Indicator**.

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

The **Variable Color Dome Lights** section is for TC400 P5/P5+ LI484P5 lights.

The **Two-Color Dome Lights** section is for TC120/TC160 LI122 or LI122BL room controllers with dome lights.

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

Under **Options**, check **Silenceable** to be able to silence the call. 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 calling station 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 which background color will be used to display the call on a master station, monitor, or mobile app.

**RF Page Level** will assign the escalation code (priority) for that call type which will 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. Click **Apply**. Click **Add** under **Call Filters** and create the name of the new call filter under **Details**. Select the different call types to have within that call filter. Click **Apply**.

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

## Faults Page

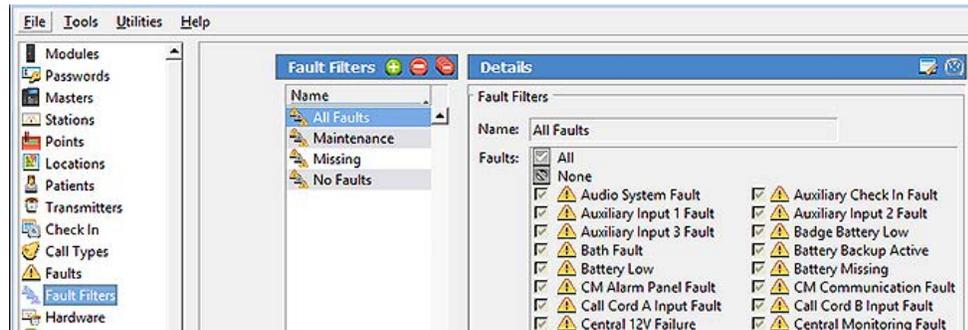
To enable maintenance fault, go to the **Faults** page on the page selection pane and click **Edit** on the **Fault Settings** and check the box to **Enable Maintenance Fault**. Click **Apply**.

**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 Page

A fault filter includes a list of faults that will be annunciated on duty/zone stations and staff assignments once a fault appears on the system.

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



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

To delete a fault for the filter, deselect a fault to remove it from the filter. Click **Apply**. To delete a fault filter, select the fault and click **Delete**. For a description of each of the faults, go to **Help>Fault Table**.

## Behaviors Page

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

Go to the **Behaviors** page in the page selection pane. This page shows the default behaviors for all hardware. To change the hardware, choose a **Hardware Type** and click **Edit** under **Hardware Type Details** and select different defaults and behavior details. Click **Apply**.

To add a new behavior to a specific hardware, click **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, click **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.

Click **Apply**. To delete a hardware behavior, select a hardware behavior and click **Delete**.

**Note:** Any changes made to a hardware type will be applied to all transmitters or stations of that hardware type on the system.

## Zones Page

Zones are a number of stations grouped together for various reasons.

The system has 75 preset zones named Z01 through Z75. Each of these zones 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, go to **Zones** in the page selection pane and click **Add**. To edit a zone, select a zone and click **Edit** in the **Details** pane.

If desired, type a new name for the zone. In the **Stations** pane, select all of the applicable stations that will be within that zone.

Under the **Annunciation Locations**, check the stations that should annunciate call from devices in that specific zone. Click **Apply** once the zone has been created. To delete a zone, select a zone and click **Delete**.

## Equipment Page

Add asset trackers for foreign devices on the **Equipment** page in the ConfigTool.

To add equipment, go to **Equipment** in the page selection pane. Click **Add** and create a description for the equipment under **Details** and click **Apply**. The **Badges** section was used for the older legacy systems and is no longer applicable.

To delete equipment, select the equipment and click **Delete**.

## Pagers Page

Pagers are convenient devices for nurses to receive notification or escalation codes for their patients. Paging has to be enabled for email to work as well.

To add a pager, go to **Pagers** in the page selection pane and click **Add**. Enter a **CAP code** and click **Apply**. Click **Edit** under **RF Paging Settings**.

Under **General Settings**, select **Enabled** to enable the paging functionality. Select **Base Supervision** to create a fault if the paging base is disconnected.

Under the **Automatic Paging Settings**, select **Auto Page** if automatic paging assignments have been created for staff. If necessary, change the default seconds to delay a page between **Escalation** levels.

Under the **Message Fields**, select the fields to show in a message on a pager.

- **Notification Type** will show either **Call**, **Reset**, **Fault**, or **Clear** based on the call event.
- **Event Type** will show the call or fault type in the message.
- **Device** will include either the device name or ID in the message.
- **Patients** will show the patient's name in the message.
- **Location** and **Detected Location** will show the location and the last detected location of the device in the message.
- **Start Time** will show the start time in the message.

Under **Protocol Settings**, select the protocol for the **Base Type** which is either COMP2, Scope, or TAP. Enter the **CAP Base** (this is only applicable to the Scope or TAP protocol).

Under **Other Settings**, choose whether or not global paging should be optimized and select the **Global CAP** code which is programmed into all of the pagers.

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. Check **Esc Char** to send an escalation character.

Under **Other Settings**, check **Global On** to enable global paging. Select the correct **Global Cap** for all pagers. Select the correct **Pager Type**.

**Escalation Code Labels** are defaulted as **A:Low** to **D:Urgent**. However, these can be changed to the facilities preferences.

To delete a pager, select the Cap code for the pager and click **Delete**.

## Phones Page

To add a phone, go to **Phones** in the page selection pane and click either **Add** or **Add Multiple**. Click **Edit** under the **Details** pane and enter the extension available for use on the facility PBX. Click **Apply** when finished.

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

Select an option for **Phone Out Mode** to select which method should be 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.

Check **E.161 Layout** if the phone 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.

Check the box **Enable Name Dialing** to enable phones to dial stations (pillow speakers) by name. Not checking this option will allow address-based dialing without requiring # prefixes.

If **Manual** is checked under **Audio Acknowledgment**, 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, 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 Appliance Server will connect to.

The **Ring Count** is the number of times a phone will be ringed per notification. The default number is 3. Select the up or down arrows to change the ring count.

## Mobile Apps Page

The **Mobile App** page enables care facilities to distribute nurse call alerts and information to staff quickly and easily on their mobile device. Paging must be enabled in order to make the mobile apps work correctly. Refer to IL1010 Mobile Apps Installation manual for more information.

To add a mobile app, select **Mobile Apps** from the page selection pane. The list that appears 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, and click **Edit** in the **Details** pane. Type 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), and click **Apply**. Repeat as needed for all apps to be renamed.

Choose **File>Save Configuration**.

## Email Page

A facility member and support personnel can receive reports and notifications via email. The facility must have an email server in order for this feature to work.

To create an email address for the facility staff, go to **Email** in the page selection pane. Click **Add** to add an email address. If the facility does not require a subject, select **No Subject**. Click **Apply** when finished.

To change the email settings, click **Edit** under the **Settings** section. Make sure **Enabled** is selected if the email will be used for communication. Enter the **SMTP Host** and **SMTP Port**. Enter an email address that will be displayed in the **From Address** field.

Click **Reports Enabled** to enable the report email component.

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

Click **Apply** once the changes have been made. To delete an email address, select the email address and click **Delete**.

## Reports Page

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

To create a new report, go to **Reports** in the page selection pane and click **Add**. Under the **Details** pane select a **Report Type** which allows the facility to get a range of reports from hourly to weekly. It is optional to either create an email **Subject** for the report or leave it blank.

The facility can have a report output as either HTML that is included within the email, or have the report attached as either an HTML or a CSV file. Choose the recipient(s) who will be receiving the report.

Under **Filtering Options**, if **Daily Shift** is chosen in the **Report Type** in the **Email Options** pane, the **Shift** drop-down under **Filtering Options** becomes available and will allow the option to choose a shift for the report. A **Response Time** will only include events whose response time was over the time that is created there.

The report will include events with the specific call and fault filters. Select **Filter Zones** to select which zones will be included in the report. If this option is not selected, the report will generate for all zones.

Under **Summary Options**, select the applicable summary to include in the report for the facility. Under **Detail Options**, choose to show details and include the zones for the reports. Choose **Overlap Gap** to overlap a time gap in between reports.

To delete a report, select the report and click **Delete**.

## Monitors Page

The **Monitors** page gives the option to add a monitor, and decide which call filters will annunciate on the monitor.

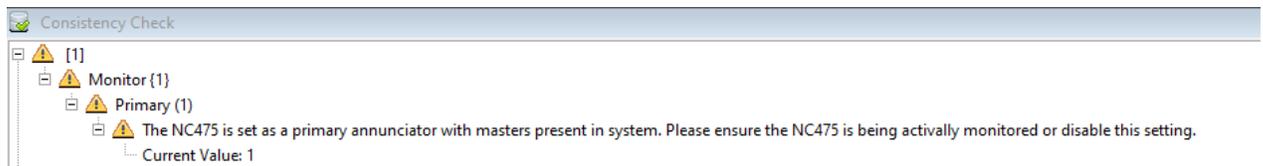
To add a new monitor, go to **Monitors** in the page selection pane and choose a monitor and click **Edit**. Change the name of the monitor to something that is easily recognizable. If this monitor is to be recognized on the Tek-CARE Network, check **Exists**. If the monitor disconnects from the network and the facility wants a fault displaying that information, click **Supervised**.

For the **Type**, select either **Standard**, **Non-Interactive**, or **Paired with NC404**. Standard is interactive - such as the NC403TS, whereas Non-Interactive - such as an Apple TV with the Tek-CARE TV app, is for viewing purposes and display 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.

Check **Play Sounds** for the monitor to play sounds when a call is coming in.

The NC475 will 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 uncheck **Primary Annunciation**. If the **Primary Annunciator** is checked for the NC475, the following warning will be displayed when the configuration commits to the system.



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** under Views. The List and Icon view will produce a visual layout to be created in the LS450 ConfigTool.

Under **Zones** and **Call Filter**, select the applicable zones and calls that are to be annunciated on the monitor. Click **Apply**.

## TVs Page

A Tek-CARE TV is a non-interactive app on an Apple TV which displays calls.

To add a Tek-CARE TV in the ConfigTool, select **TVs** from the page selection list. The license quantity will start with ID 0. The page that appears shows the ID (0-254) and Name (TV0-TV254) for each of the Apple TVs, as well as the annunciation setting for the selected TV. To edit attributes of a TV, select the TV, and click **Edit** in the **Details** pane.

TVs can be filtered by **Zone** and **Call Filter**. Select the zones and call types to be annunciated by the selected TV. **Display Patient Names** can be disabled for privacy reasons. Click **Apply** to accept the changes.

Repeat this process for all TVs installed in the facility. Once all TVs have been added, choose **File>Save Configuration**.

## Staff Page

To add facility staff, go to **Staff** in the page selection pane.

To add a new staff member, click **Add** to unlock the **Details** editing pane. Type the staff member's name in the **Name** field, select the correct type (if any) from the **Staff Type** drop-down menu, and check the **Active** box to enable the staff member.

If an email address has already been entered for the staff, check the email address.

Check the box for the **Mobile App** that the staff member will carry, if applicable. If the staff member is to be assigned to all zones, leave **All Zones** checked. Click **Apply**.

If desired, staff groups can also be created and are mostly used for assignments and/or messaging options. 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. A staff member can be added to multiple staff groups.

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

To add or edit a **Staff Type**, either select a staff type and click **Edit** in the **Details** pane or click **Add** to add a new staff type. This option is mostly used for assignments and messaging. Once the details are complete, click **Apply**.

To add or edit preprogrammed text messages for the staff, go to **Text Messages**. Select one of the text messages and click **Add** or **Edit** in the **Details** pane. Select the applicable staff type for the text message and click **Apply**. To delete a staff member, select a staff member and click **Delete**.

Once all staff members have been created, choose **File>Save Configuration** before proceeding.

## Assignments Page

Assignments define which calls are sent to each staff member or staff group. To add an assignment, select **Assignments** in the page selection pane.

Click **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** settings to choose what calls announce on the mobile apps that were chosen in the Details pane.

The **Type** drop-down menu has five choices. Choose from **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 announced by the assignment, then select which faults, if any, should be announced using the **Fault Filter** menu.

The **Page Resets** selection does not affect the mobile app announcement.

Use the **Settings** options 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**. The **Start** and **End** time need to be specified in 24-hour format. Choose the days of the week for the shift. Click **Apply**. To delete an assignment, select the assignment and click **Delete**.

## Rounding Settings Page

The rounding feature ensures staff members will attend to their associated patients in a timely manner. Reports ran by the facility will show the rounding times by each assigned staff member. This feature can be used with Tek-CARE300II (with PM356 module), Tek-CARE300III, Tek-CARE400 P5/P5+, Tek-CARE120/160, Tek-CARE500 systems, and foreign devices.

**NOTE:** Assigning a point as a room reset for the SF123 station is required for the rounding feature to be used on Tek-CARE120/160 systems.

The **Rounding Settings** are global. Check **Enabled** to enable the rounding feature. In order to disable rounding with a long press, check to **Disable Rounding With Long Press**. Check **L1**, **L2**, or **L3** if any of those buttons will trigger as well as disable the rounding feature on the SF124.

Check the **Reset Button** to activate the rounding feature once the button is pressed on stations in other systems within the Tek-CARE platform. A press on the dedicated button will serve as a rounding event on that station. Hold down that same button for approximately three seconds to disable the rounding event.

Click **Apply** once finished. Next, go to **Rounding Schedules Page on page 27** to create schedules for the staff.

## Rounding Schedules Page

Go to the Rounding Schedules page to create a schedule for the rounding feature. Click **Add**. Under **Details**, select a **Start Time** and **End Time** and choose the week days for the schedule. The default **Rounding Period** is set to an hour. If applicable, change this setting to the facility's preference. Select the number of minutes before the end of the rounding period to send a reminder message to the staff for their rounding schedules. The **Default Reminder (minutes)** to send a reminder to staff is 5 minutes. The reminder can be edited if desired. Once complete, click **Apply**. Then go to the **Stations Page on page 14** to enable rounding and select the appropriate schedule for that station.

## Scheduled Messages Page

Scheduled messages may be sent to staff with pagers and mobile devices. Change the settings, timing, and who the scheduled messages go to.

To create a new scheduled message, go to **Scheduled Messages** in the page selection and click **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 **Schedule**, choose a time and the week days you want the scheduled messages to be sent out. Under **Staff**, you have the option to send these scheduled messages to all staff, a group of staff, or a specific staff member. Click **Apply** once you are finished with this screen.

To delete a scheduled message, select the scheduled message and click **Delete**.

## Central Monitoring Page

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 transmits the events to the central monitoring facility.

Select **Central Monitoring** in the page selection pane of the ConfigTool. Click **Edit** in the **Settings** pane and select either **Disabled**, **NC502**, or **NC503** from the **Mode** dropdown.

Type the facility's 4-digit account code, as assigned by the central monitoring facility, in the **Account** box. (Valid characters are the numbers 0–9 and the letters A–F.) This 4-character code is sent with every event to the central monitoring facility, and is used to identify the events on the Tek-CARE Network.

Note the facility's Account Code 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. That 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. Click **Apply**.

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

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.

Click **Add** in the **Phone Numbers** pane. Type the central monitoring facility's telephone number and click the **Apply** button. Repeat 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 click on the up and down arrows at the right to move the phone number up or down in the list.

Click the **Apply** button to accept the changes.

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

## Serial Ports Page

A serial port is used for paging, various interfaces, and to communicate between a foreign device and the Tek-CARE Network. The **Serial Ports** page in the LS450 ConfigTool is used to create a virtual serial port through a serial converter.

By default, there are six standard serial ports included on this page. To add an additional Serial Port, go to **Serial Ports** in the page selection pane and click **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 for the IP/Serial converter. Click **Apply**. To delete a serial port, select the serial port and click **Delete**.

## Interfaces Page

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

To create a new interface, go to **Interfaces** on the page selection pane and click **Add**. Under the **Details** pane, select the protocol and enter the port number. The protocol is the data stream and the port is the port number that the data stream runs off.

Enter the correct **Options** for each protocol such as Baud Rate, Byte Size, Parity, Stop Bits, etc.

Choose a **Rule Set** which is the foreign rule set used for this interface. This will determine which rules run on each message that comes in on this interface, as well as which hardware behaviors are available to assign to foreign devices on this interface. Click **Apply**.

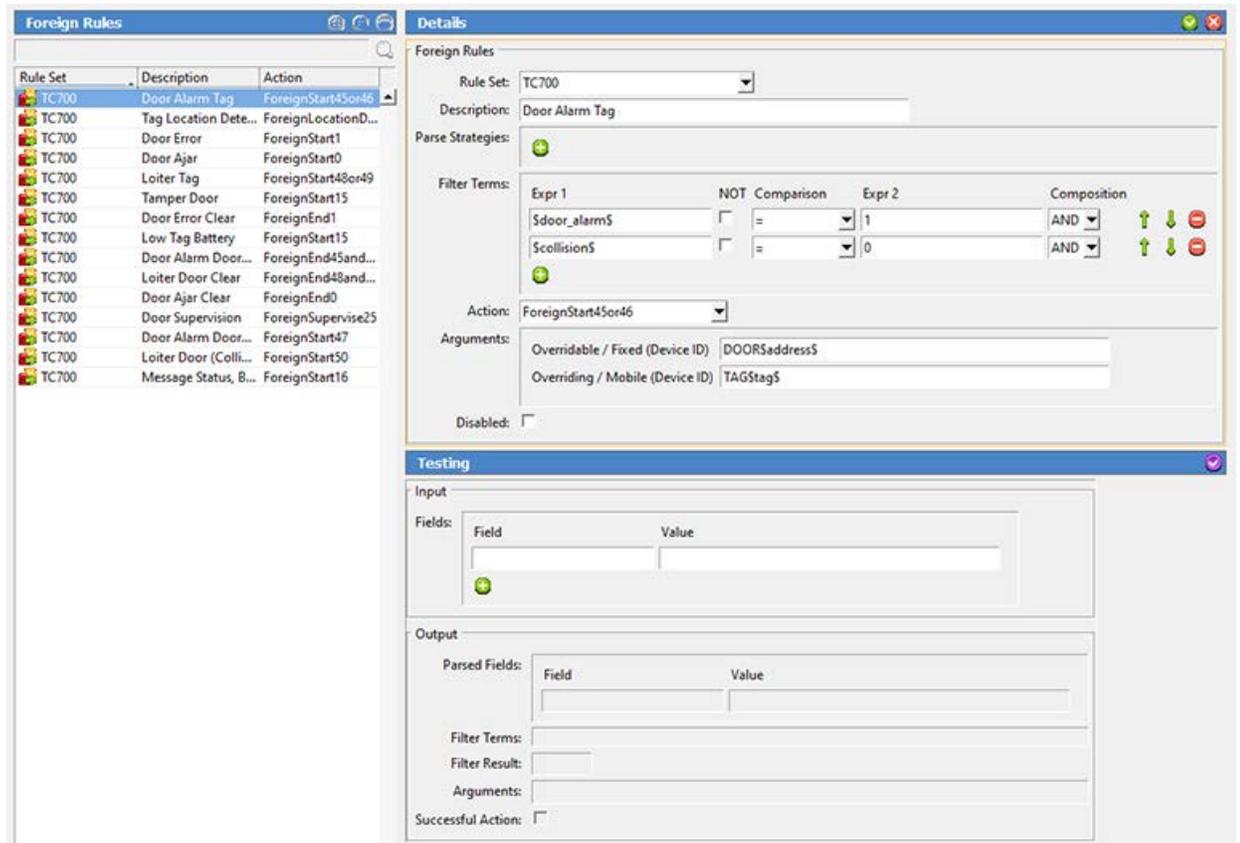
## Foreign Rule Sets

A foreign rule set acts as a container for the rules and hardware behaviors that it takes to characterize a foreign system type. Go to **Foreign Rule Sets** in the page selection pane to create a foreign rule set. Click **Add** to create a name for the foreign rule set. Click **Apply**. To delete a foreign rule set, select it and click **Delete**.

## Foreign Rules Page

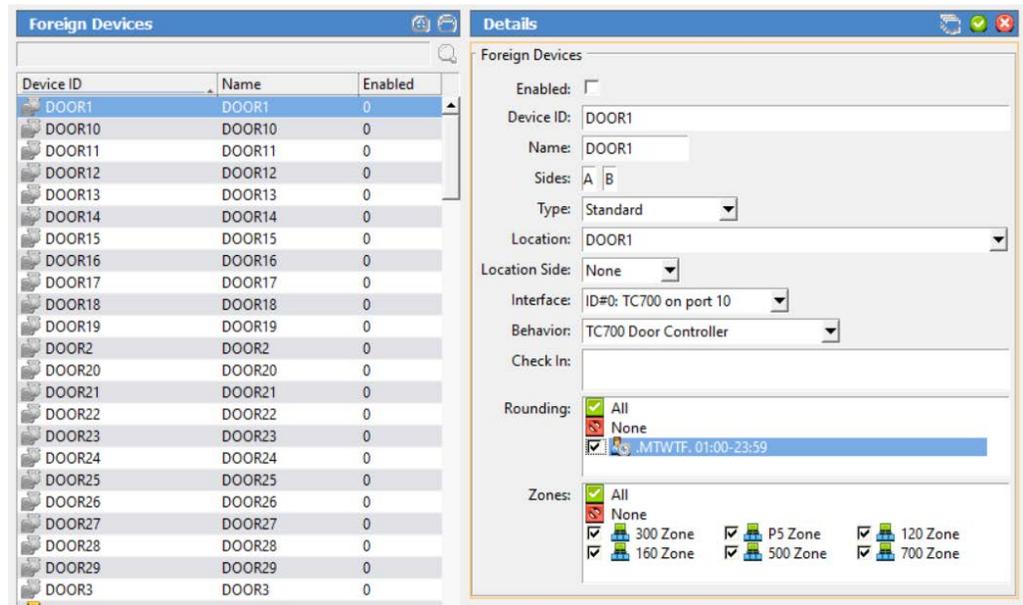
The foreign rules map messages come from interfaces which either activate or deactivate call inputs of various foreign devices.

Go to **Foreign Rules** in the page selection pane and click **Add** to create a foreign rule. Under **Details**, select the appropriate rule set which you created earlier. Click **Apply**. To delete it, select the foreign rule and click **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.



## Foreign Devices Page

A good example of a foreign device would be a security system, fire alarm, etc. that you integrate with the Tek-CARE Network. To add a new device, go to **Foreign Devices** in the page selection pane and click **Add**.



The **Details** pane allows you to enable the foreign device as well as creating a name, device ID, location, etc. If a location is created on the **Locations** page, it can be chosen from the **Location** drop-down list along with the **Location Side**. Once an interface has been created on the **Interface** page, it will show as an interface option. If there is not an interface to choose from, create a new one on the **Interface** page in the page selection pane. Select a **Behavior** for the foreign device that was created on the **Behaviors** page.

If the rounding feature will be used with the foreign device, select the appropriate **Rounding Schedule**. Click **Apply**.

If assignments have already been created, select a **Check In** and choose the correct **Zone** that will annunciate this device. Click **Apply**. To delete a foreign device, select the device and click **Delete**.

# Software Updates

Before updating system software, go to **File>Load Configuration From System** and click **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 Appliance Server.
  - If the facility is on software version 7253 or older, you need to contact support for additional steps. Contact our Technical Support Department by email at [tektsupt@tektone.com](mailto:tektsupt@tektone.com) or by phone at 828.524.9967. Choose Option 3.
- For the **NC475 Tek-CARE Appliance Server**, go to <https://www.tektone.com/resources/> and go to 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 NC120/160/NC455CE/NC356CE Modules.**
- **Upgrade Modules.**

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 to a PM456, NC356CE, or as 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 or PM456

When Tek-CARE400 PM456 or 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 PM456 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 or PM456**.
  - b. When the file browser requests the location of the stations.db file, locate the file and click **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. Each populated PM456 station port on the Tek-CARE is shown as an option, including a match percentage that indicates how much it appears to be the port in question (with respect to populated addresses, the station types, and the peripherals present). Carefully identify the new locations and click **OK**.
  - d. Next, the **Import Options** dialog will ask which station settings to include in the import. Select which settings to import and click **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 clicking **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 up 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 okay; 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 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.
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 (Code-det)	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.
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.
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.
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		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 (Mast Con)	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 Version (MastVer)	Station Name	A master has connected to the system and failed to automatically update its software from the module.
Media Gateway Fault		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.
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.
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.

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.
Report Emler Fault (RprtEml)		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 (SpecBatt)	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.
Tamper (Tamper)	Transmitter ID	A tamper signal has been sent from a transmitter.
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 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.

