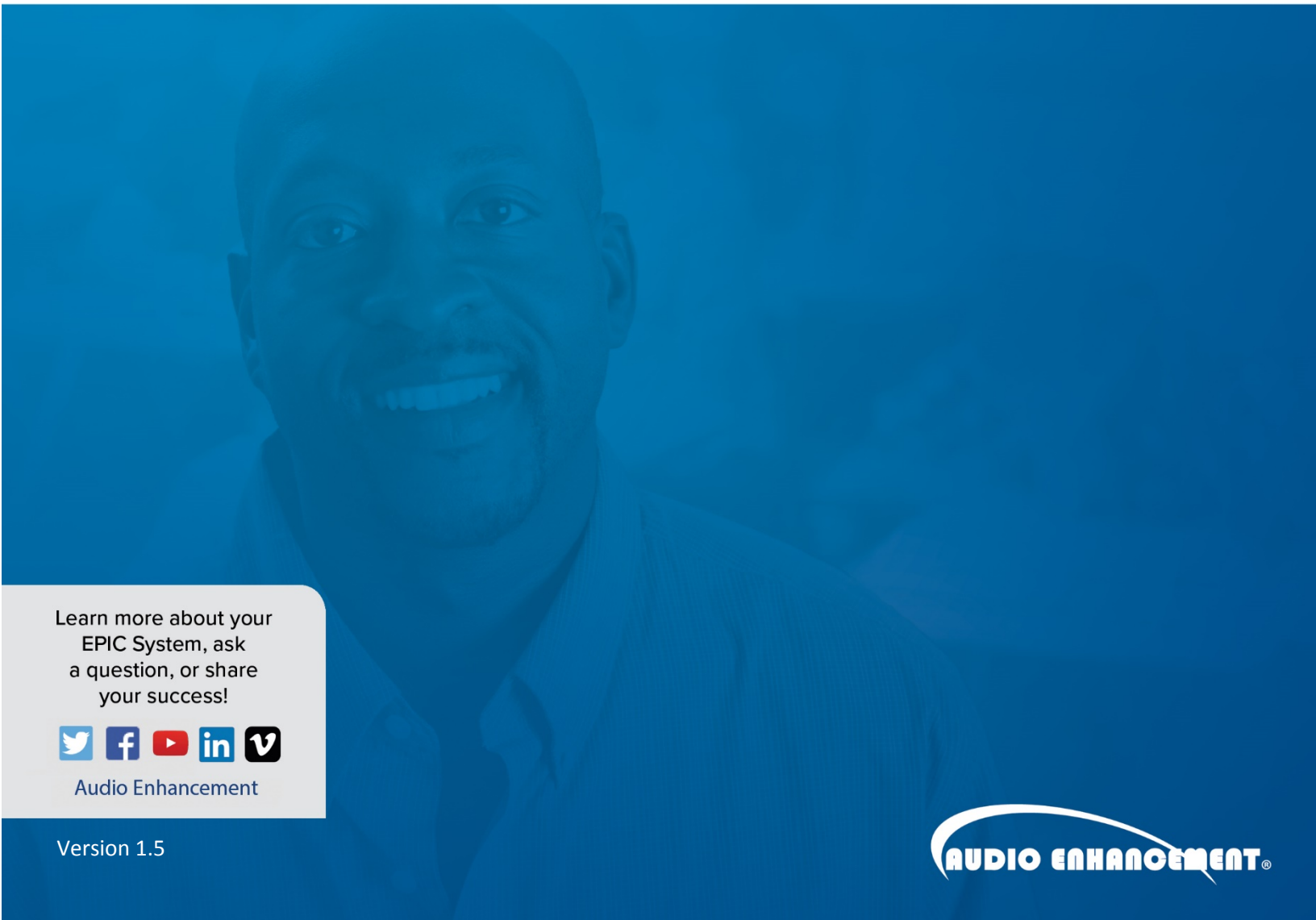
EPIC System™

Education Paging & Intercom Communications

Admin Manual



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Audio Enhancement

Version 1.5

AUDIO ENHANCEMENT®

EPIC System: Intercom, Paging, Bells, and SAFE System Administration Manual

Overview

This manual provides details on the software administration and troubleshooting of the EPIC System for Intercom, Paging, Bells and SAFE system functions. The focus of this document is the web-based administration of the server and includes adding or editing bells, zones for paging or bells, and more. It is intended primarily for technology administrators. See available videos or quick start guides for specific end user documentation.

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Login

The server is web-based and can be logged in to via Google Chrome. Contact your school IT representative to get the log in IP address or server weblink for when a DNS (Domain Name System) entry is added.

Note: If there is a security warning, simply click “advanced>proceed to site.” If an SSL certificate is added, this will no longer show up. Below is the login prompt users will see when accessing the system.

Fig. 1

Log in using provided credentials (see Fig.1). This may be a standalone user, the default EPIC Console in the front office is school:school123. The default admin account is schooladmin:password. If LDAP has been enabled, this will be the normal login account used for email, computer, etc. User will be logged in and see the portions of the software to which rights have been granted. The first page is the “Home” screen, which is a visual representation of the school (see Fig. 2 on next page).

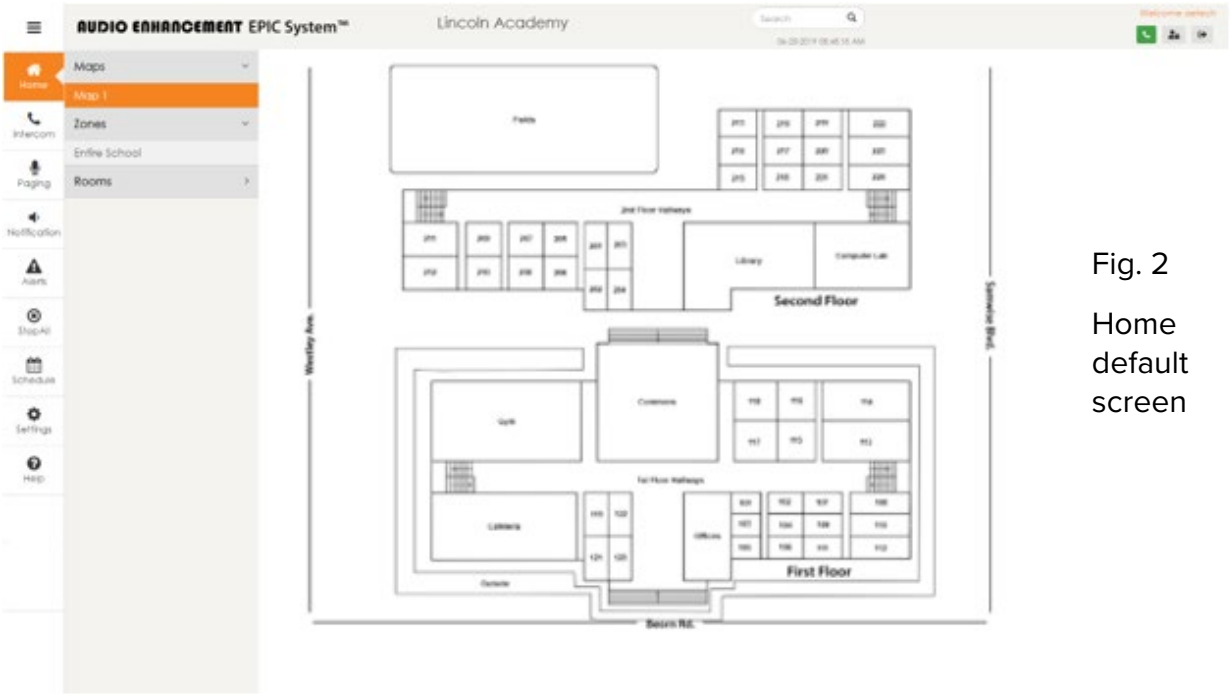


Fig. 2

Home default screen

The menu along the left side allows users to click these icons to perform the appropriate tasks. For administration, click the “Bell Schedule” calendar icon or the “Settings” gear icon. The Bell Schedule allows the editing of the bells for one or many days, while the Settings tab will be used to modify any other necessary “back-end” settings in the system.

Please see available Quick Start guide or help menu for end-user specific details and operation of the system.

Help Menu

In the bottom left corner there will always be a **?** icon. Clicking this will bring up a context-sensitive help menu. This is directed to assist the end-users specifically but there is helpful information on the operation and administration of the system. It is helpful to have a “big picture” understanding of the system before editing individual sections of the software.

Manage Bell Schedule

Helpful definitions used in this section:

Schedule: This refers to the entire Calendar Schedule – showing the dates for the year and which day types are applied to days throughout the year. This is the “Home Page” for bells.

Day Type: A day type is a specific set of bells that make up a type of day. For example, the Tuesday/Thursday day type has bells set to match the Tuesday/Thursday days at the school. There may be bells set to different zones within each day type (period bells that go to all, but

cleanup bells 10 minutes before the period bells to shop classes/choir/band rooms). The day type is represented by the “color” that a specific day will have applied to it.

Bell Event: A Bell is setup within a specific day type to ring at a specified time to a specified zone or zones. Individual zones can have bell events - each with a specific tone or file played at each bell. One or multiple bells will make up a day type.

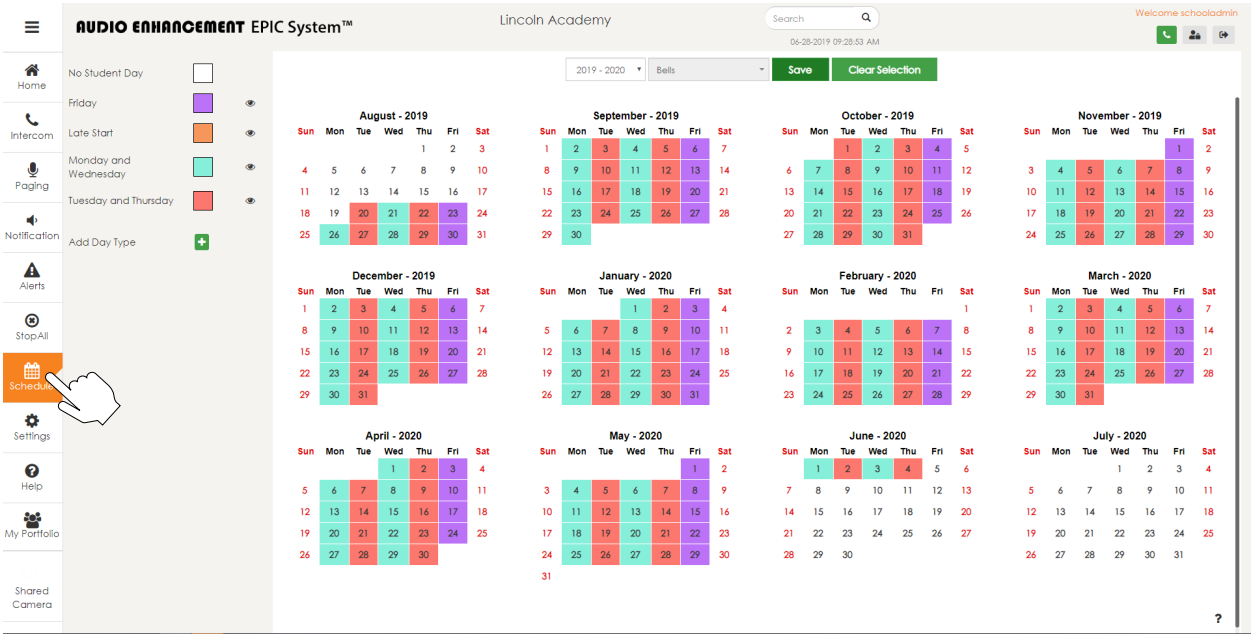
Zone: Group of rooms or areas to which a bell can be played, or a Paging announcement can be directed. Each bell can play to one or multiple zones.

Navigate to Bell Schedule

Click the “Bell Schedule” calendar icon on the left navigation bar.

The Bell Schedule for the year will come up with this screen (see Fig. 3a):

Fig. 3a



By clicking the **?** in the bottom right corner, visual instructions for the bell schedule can be seen (see Fig. 3b):

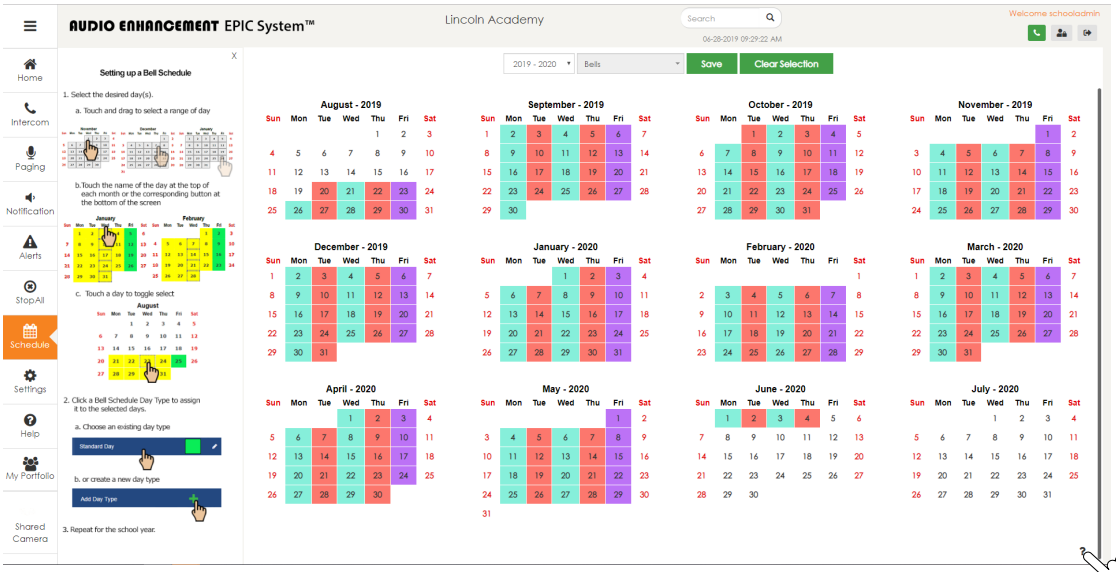


Fig. 3b

Additionally, clicking the main help menu in the bottom left panel will provide further textual instructions.

Fig. 4 shows some instructions for how to change bell schedules or apply a specific schedule type to a certain day, as well as the currently applied schedule for every day. The following section will go over details on how to change a bell for a specific day (see Fig. 4). Click the “x” to close these instructions and view the day types again.

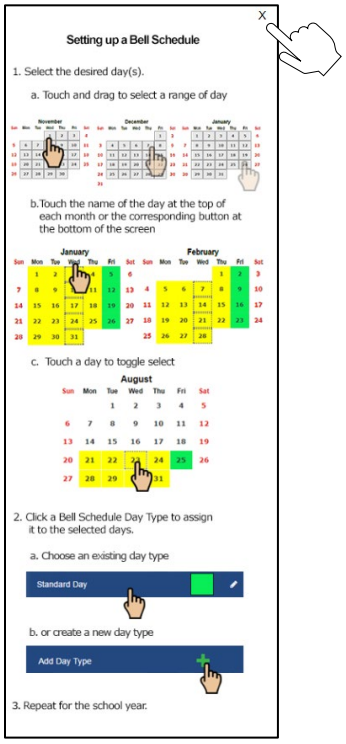


Fig. 4

Change Bell Schedule for a Specific Day

From the Bell Schedule calendar page, simply click on one or multiple days where the schedule type needs to be changed. This could be to set a testing schedule, assembly schedule, holidays, etc. Any selected day will have a blue border around it. The “Day Type” bar will pop open when any day(s) are selected.

Notice that by default, all weekends have “No student day” applied and any weekday would need to be manually set.

Select Single Day (Example: Snow Day)

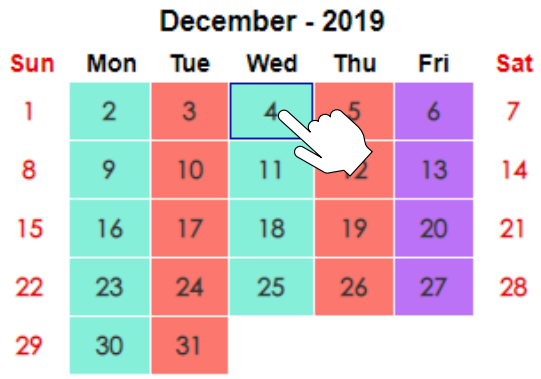


Fig. 5

Simply touch/click the desired day to change the schedule for the existing day schedule (see Fig. 5).

Select Multiple Days (random days of the year – Example: pre-determined assembly days)

Touch/click every day that needs to be changed (do not hold/drag), see Fig. 6.

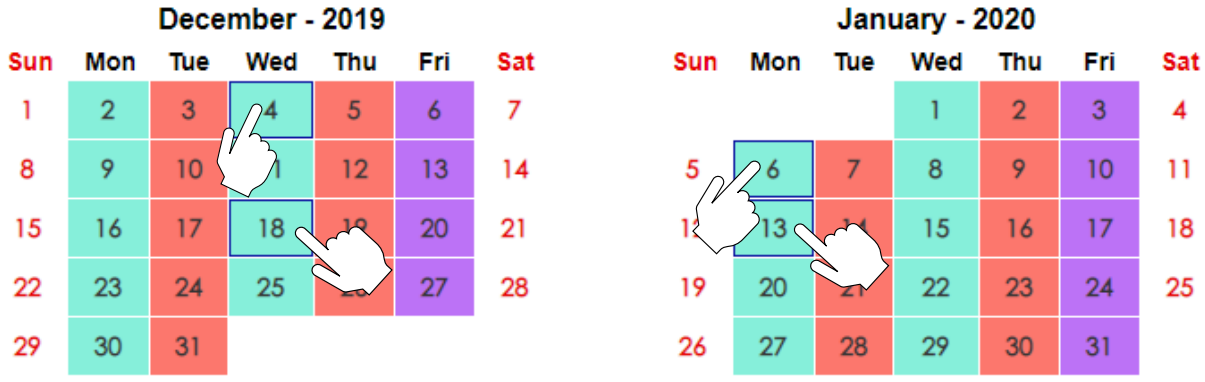


Fig. 6

Select Range of Days (Example: Dec 22nd -Jan 1st “Holiday Break”)

Touch/Click and drag from the first day in the range to the last (even across multiple months) day (see Fig. 7).

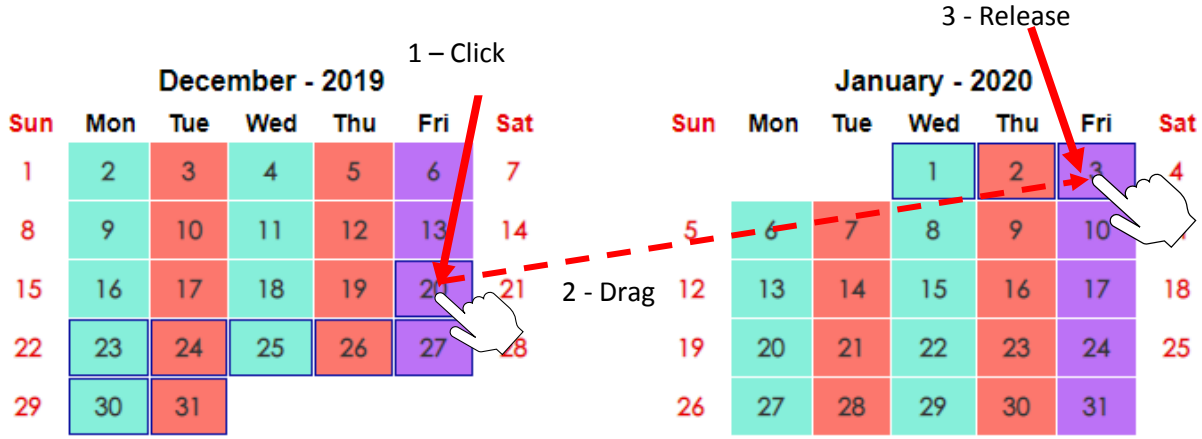


Fig. 7

Select All Tuesdays (Example: Tuesday Schedule changes to be different than Thursday, needs own schedule type)

Click the Weekday “Label” below any month and it will highlight all those days that already have a schedule applied (see Fig. 8). **Note:** If currently set as a “non-student day” (white/no schedule assigned) then it will not be highlighted using this method.

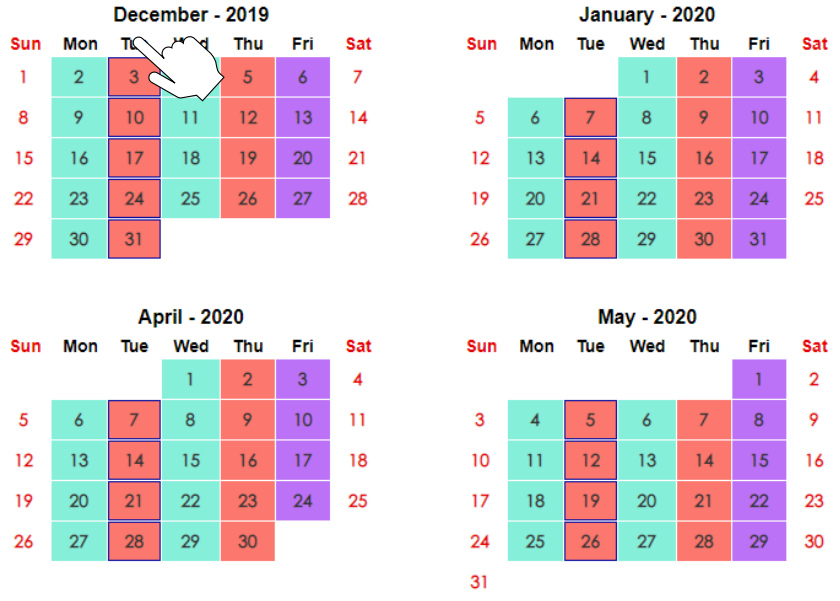


Fig. 8

Apply Different Day Type to Selection

Once the days that need to be changed have been selected using the instructions above, a different day type can now be applied to that selection. Once the selection has been made, the day type panel will have appeared on the left side of the screen (see Fig. 9).

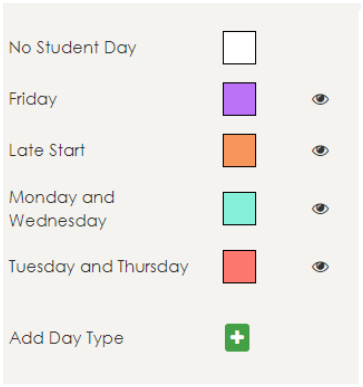
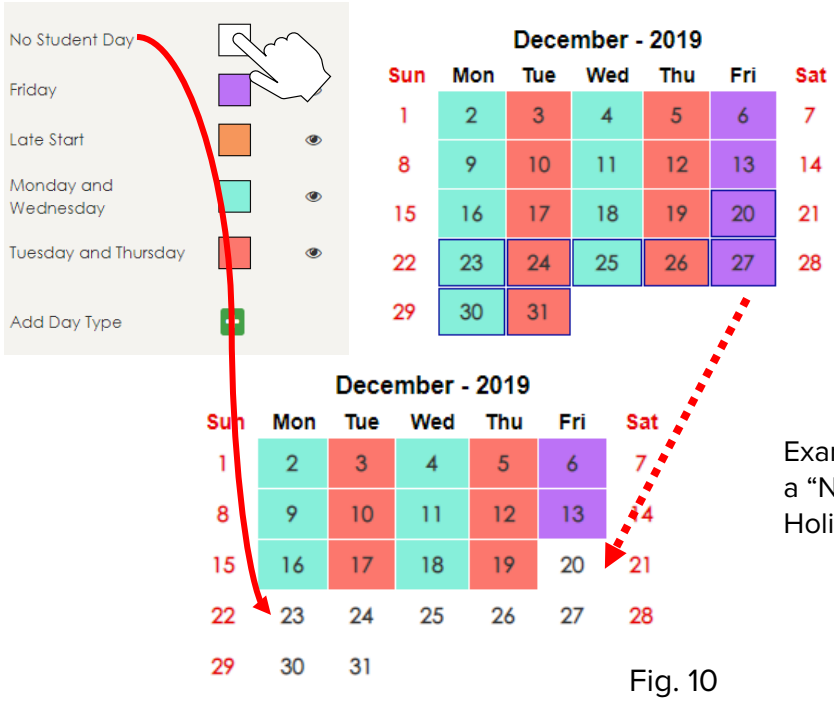


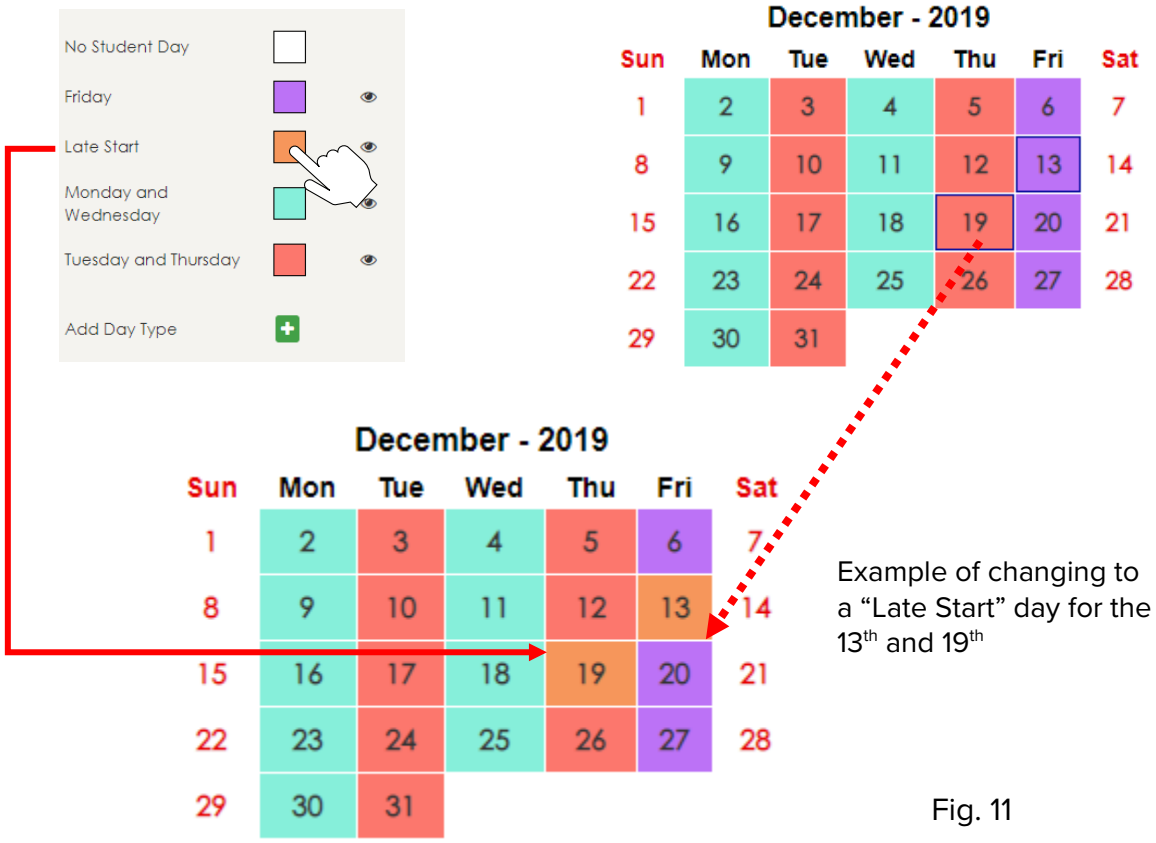
Fig. 9

The day type can now be selected by clicking on the desired day type that is to be applied to the selected days and a color change will be reflected on the calendar indicating the new day type (see Fig. 10 and 11). The bell schedule for those days has now been changed. Alternatively, click “No Student Day” to have no bell schedule applied to the selected day(s). Click “Save” once done to finalize changes to the schedule.



Example of changing to a “No-Student Day” for Holiday break

Fig. 10



Example of changing to a "Late Start" day for the 13th and 19th

Fig. 11

Manage Bell Schedule "Day Types" (Example: Tuesday/Thursday Schedule)

Now that applying day types to the schedule is known, next will be to learn how to view the bells that make up one of these day types and manage the bells in those types. Note that if a day type is already applied to one or more days on the schedule, it will not be necessary to reapply the day types after editing the day type, it will automatically update with any changes made (if a new bell is added to the Tuesday/Thursday day type, there is no need to reapply all the Tuesdays and Thursdays on the schedule).

View Bells within a Day Type

The Day Type panel sits to the left of the calendar. Click the eye icon to view or edit that day type (see Fig. 12).

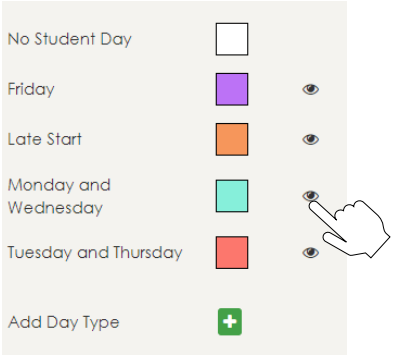


Fig. 12

This will highlight that day and bring up all the bells for that day (see Fig. 13). Scroll through this window to see the bell time, name, the selected audio for that bell, and the zone(s).

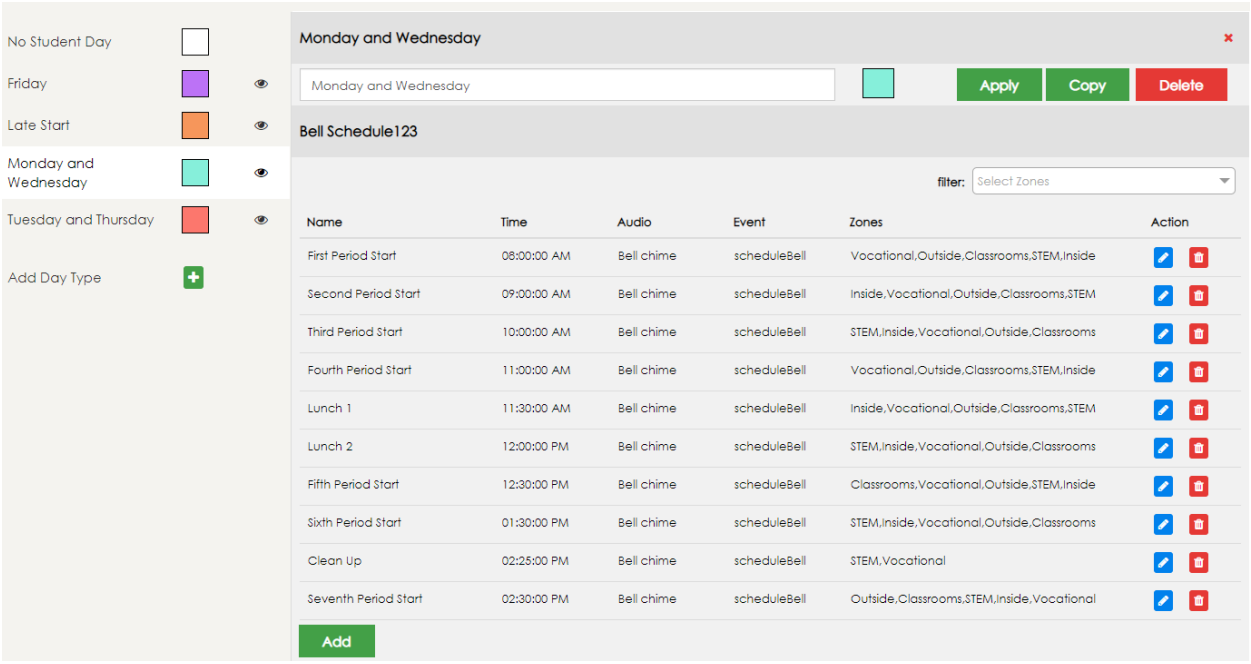


Fig. 13

Specific zones can be searched for and filtered to see the bells for just the selected zone(s) (see Fig. 14). Below shows all the bells that will go to the STEM zone.

Fig. 14

Edit Day Type Name/Color

Once the edit day type window has been brought up, the name or the color can be edited by typing in the new name or clicking the color which will bring up a selection of available colors to pick from. Click “Apply” once to save the changes (see Fig. 15).

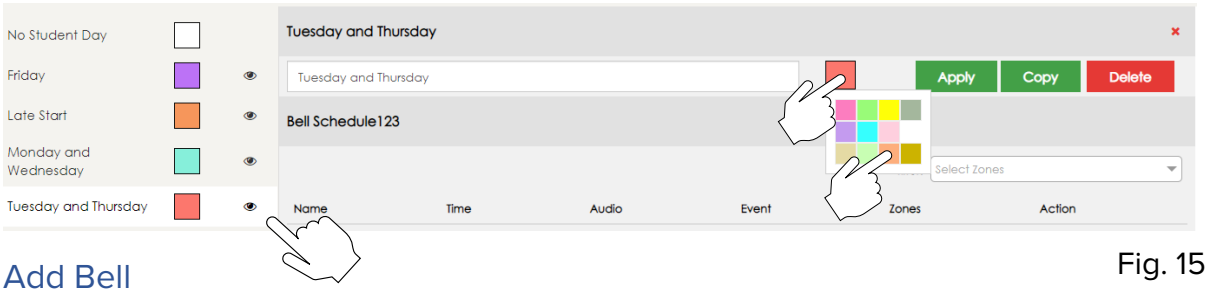


Fig. 15

Add Bell

To add a bell, click “Add” at the bottom of the list of bells.

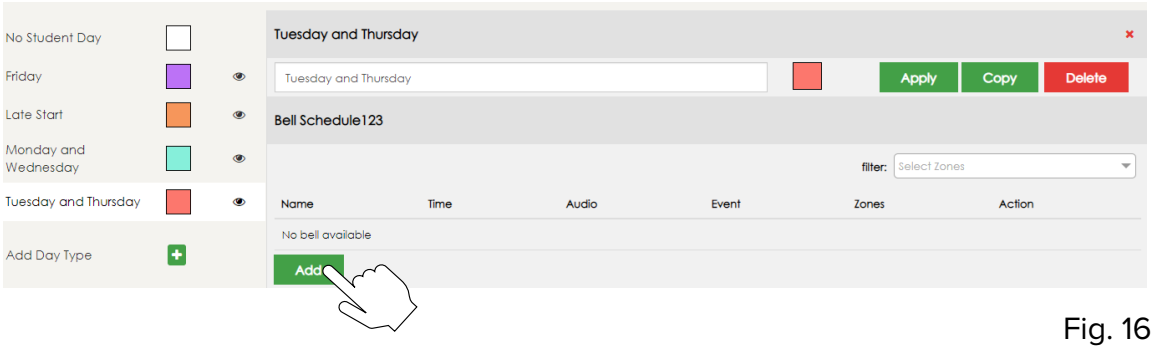


Fig. 16

When “Add” is clicked, the “Edit Bell” (see Fig. 16) window will pop up. Select the appropriate zone(s) for the bell to play to, name the bell if desired (this can be helpful to identify the schedule, e.g. “tardy bell” or “1st period end”), enter the time and select the audio file for the bell (the bell file can be previewed by clicking the play icon next to the audio file name while selecting the file, see Fig. 17), and then click “Save.”

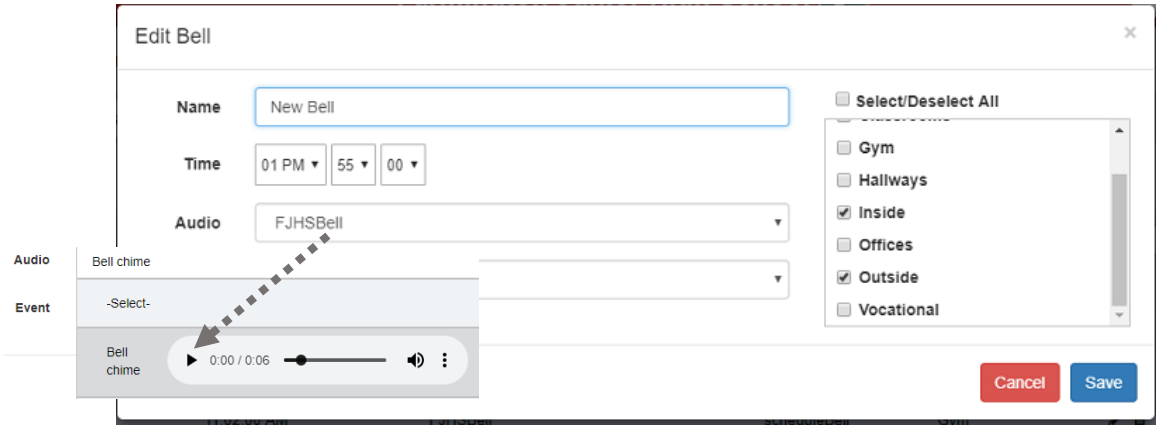


Fig. 17

Note: When multiple bells are added, each consecutive bell will start with the information from the last bell that was saved, only the time of the bell should need to be edited.

If an attempt is made to add a bell at the exact same time as an already scheduled bell on the SAME day type, this warning will appear (see Fig. 18). In this event, either edit the time of the bell being added to make it different than the existing bell or create a bell in a different zone than the existing bell.

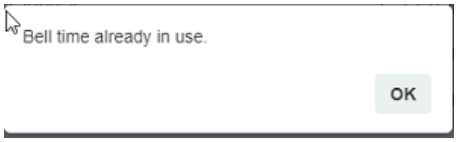


Fig. 18

Edit Bell

To edit an existing bell, click the pencil icon ✎ next to the bell. The “Edit Bell” window (see Fig. 19) will pop up. Change the time, file, or zone that needs to be edited and click “Save” to finish the edits. Click the garbage can icon 🗑 to delete the bell.

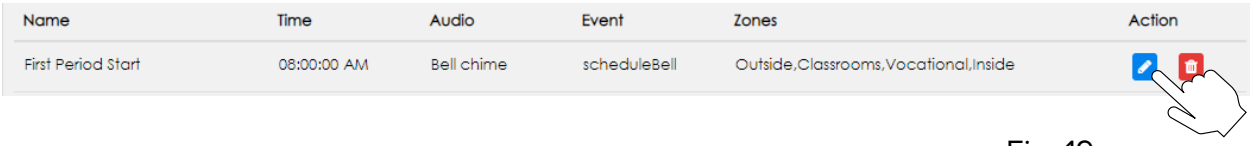


Fig. 19

Add Day Type

To add a day type, simply click “Add Day Type.” Give it a name, pick a color and click “Save.” It will show up in the list. Once added, click the eye icon 👁 to edit and add the necessary bells to the new Day Type (see Fig. 20 and 21).

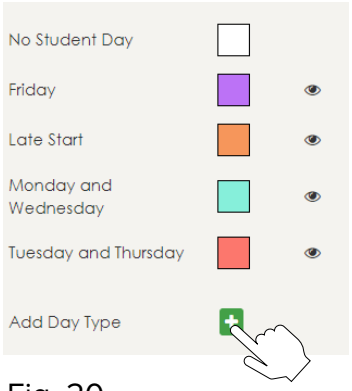


Fig. 20

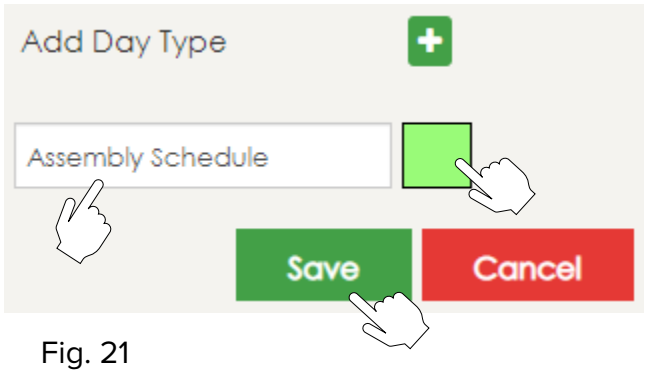


Fig. 21

Manage Devices

The system uses IP devices to receive the intercom, paging and bells communication. Each device receives a signal from the server during a bell event. During a page, all devices receive a SIP (Session Initiation Protocol) page from the server. All classrooms can have a two-way intercom call from the main console or a VoIP phone. An ambient microphone can be installed in each room to communicate back to the caller and a call button to initiate a call to the office. The devices must be online and registered to the server to function properly.

Common areas have one IP device, which feeds a constant voltage amplifier, which in turn feeds all the speakers in that zone. Example: Zones may be set up for Hallways, Offices, Outside, Cafeteria or Gym. These are physical zones, not to be confused with virtual zones which can be made up of one or multiple physical devices.

Automated Device Management

With the release of EPIC System version 1.5, device management and configuration is automated by EPIC System when using Audio Enhancement supported devices. EPIC System will discover and recognize the devices on the network automatically. When added to the system, the device settings are stored and managed from EPIC System – no need to login to the endpoint device. Devices can be added, programmed and updated all from within EPIC System.

Device Discovery

From the Devices tab within settings, the “Discover” module will run automatically (see Fig. 22). This is the home and primary page for existing device status and editing as well. When the page loads, EPIC System will check the network (LAN discovery only) and if it finds any Audio Enhancement devices on the network that it has not registered, it will list them in the “Unknown Devices” list. The devices can be seamlessly added into EPIC System. If there are no unknown devices, this section will be collapsed and only the known devices will be displayed. This section can be manually expanded or collapsed by pressing the – button.

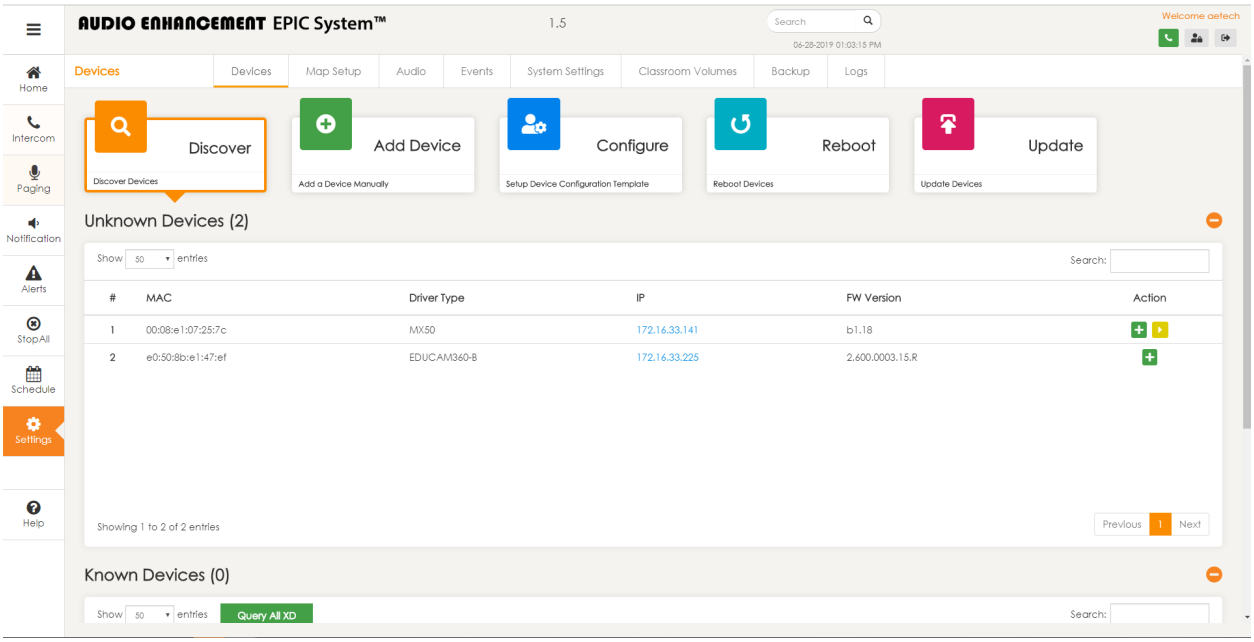


Fig. 22

All “Known” devices will be listed on this page as well (see Fig. 23). When EPIC System registers a device, it stores that specific MAC address to distinguish it from all other devices on the network and lists it in the known devices list.

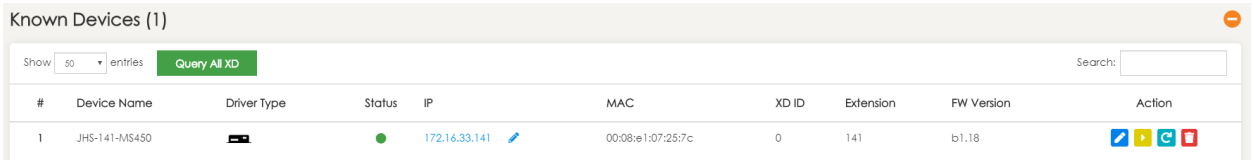


Fig. 23

Add Device

Devices can be added to EPIC System by clicking the “+” icon within the unknown devices list (see Fig. 24).

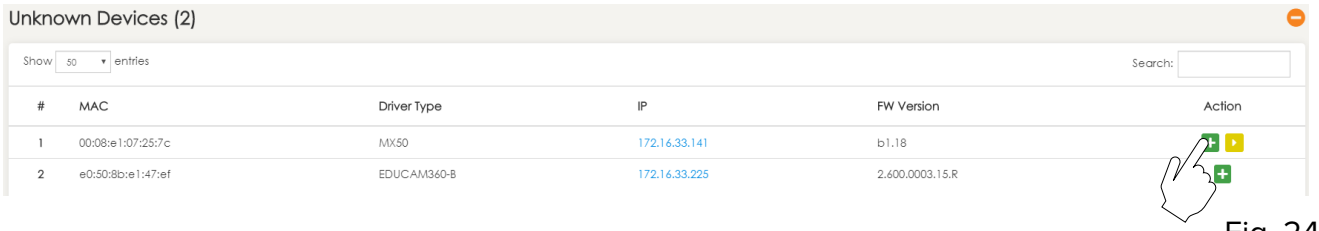


Fig. 24

This will bring up a pop-up window “Identify Unknown Device”. This is the easiest and preferred method to adding a device. The user will need to specify desired device name (Audio Enhancement standard is SchoolAbbreviation-RoomNumber-DeviceType – e.g. JHS-141-MS450),

the extension for the device (EPIC System manages its own extensions, this can be any number. Audio Enhancement standard is to match the room number and extension whenever possible – e.g. Room 141 would be extension 141.), and what type of AE audio and alert receiver is in the room – XD, TLD, or none if there is no receiver. If XD, the receiver ID will be greyed out until the device is registered. This is explained further in *XD* section below (see page 20). Click submit. EPIC System will register the device and push its settings and site standard configuration* to that device and it's ready to go.

*See more details in *Site Configuration Templates* in the *Configure* section below (see page 23). User may wish to modify template settings prior to adding devices.

Example: Add MS-450 from Discovery (see Fig. 25)

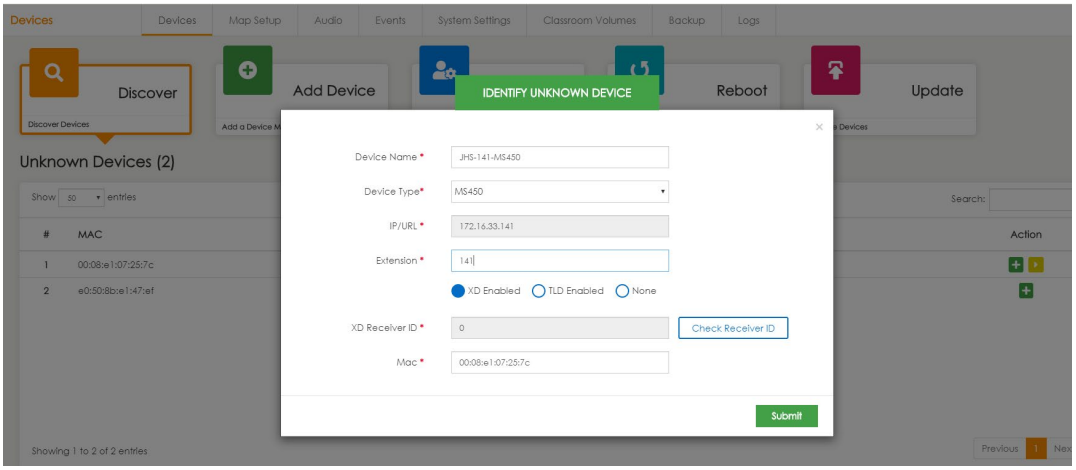


Fig. 25

Example: Add EduCam360 from Discovery (see Fig. 26)

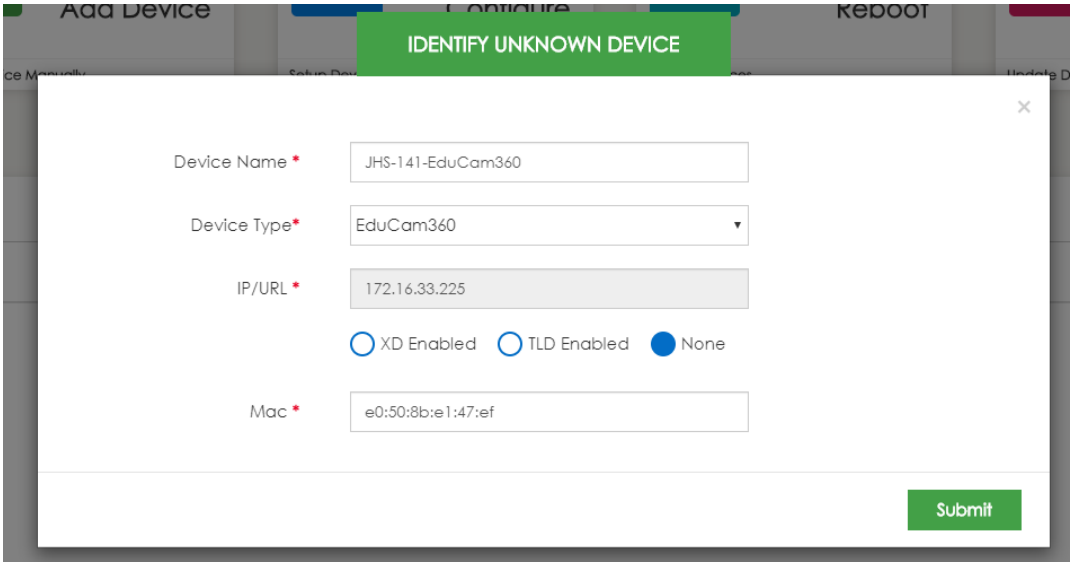


Fig. 26

Manually Add Device

If the device is not yet on the network or for some other reason the device is not automatically discovered by EPIC System, the device can be manually added by clicking the “Add Device” module within the Devices tab. The same information from above is required. The user must enter the device info and click Submit (see Fig. 27). The user must also manually enter the MAC address of the device being added. This is required so EPIC System recognizes it as a known device. EPIC System will configure the device so it’s ready for use.

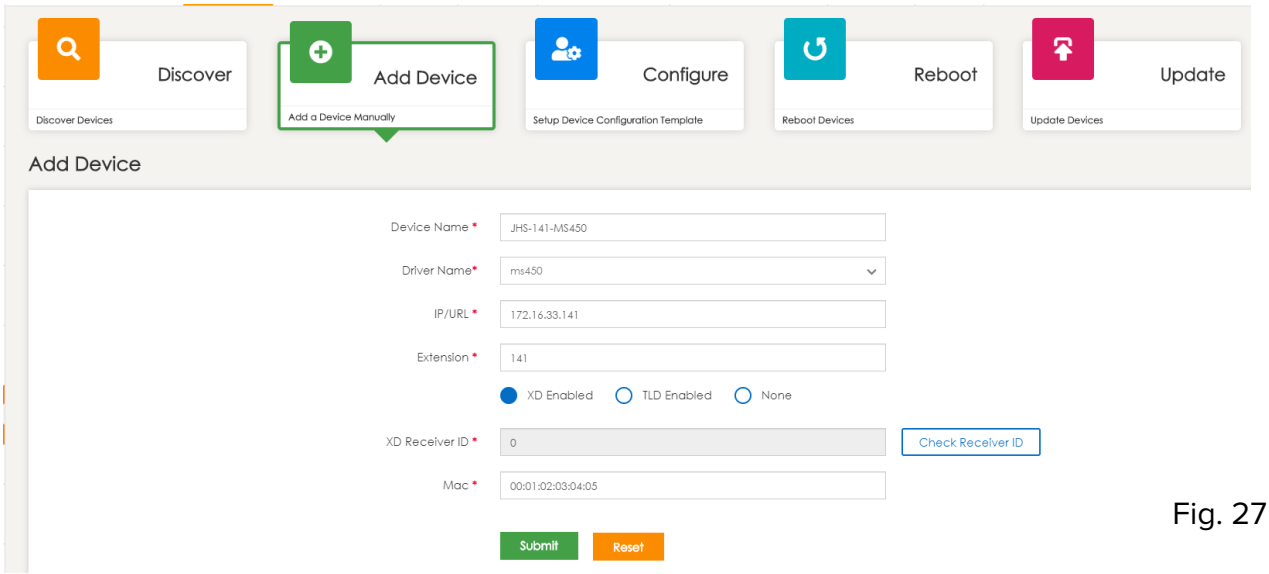


Fig. 27

Understanding XD and TLD and Updating XD Receiver ID

XD and TLD receivers refer to the audio and alert receiver that is often part of an Audio Enhancement classroom system installation. Assigning this setting in a device tells the EPIC System that there is an alert receiver in that room and enables specific behavior to listen for SAFE System teacher microphone alerts. If the classroom or device does not have any receiver physically connected to it, select None – *EPIC System may see the device as offline if the device is incorrectly configured with a receiver that doesn’t in fact exist*.

If a classroom has both an EduCam360 and an MS-X device, it is critical to assign the XD receiver only to the device that actually has the physical connection to the receiver. The Audio Enhancement standard in these cases is to connect to the MS-X device.

XD receivers each have a unique ID – this is to handle alert location mapping if a teacher is roaming away from the normally paired classroom during an alert. When XD is enabled, the ID must be set for the SAFE System to function properly. There are several methods for associating the XD receiver ID with the device in EPIC System.

Query All XD

The easiest and preferred method is to use the “Query All XD” button on the devices table (see Fig. 28).

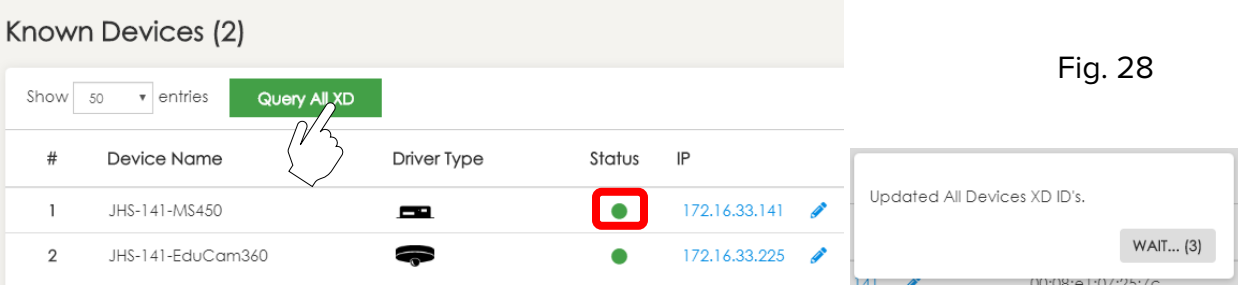


Fig. 28

Pressing this button, **after** all devices are added to the system and communicating properly, will reach out to every device and try to ask the XD receiver for its ID. All devices that are configured, communicating and wired correctly will respond back with their IDs and EPIC System is ready to go.

Check Individual Receiver ID

If an individual device was not working or a single device is being added or edited, there is a “Check Receiver ID” button (see Fig. 29)

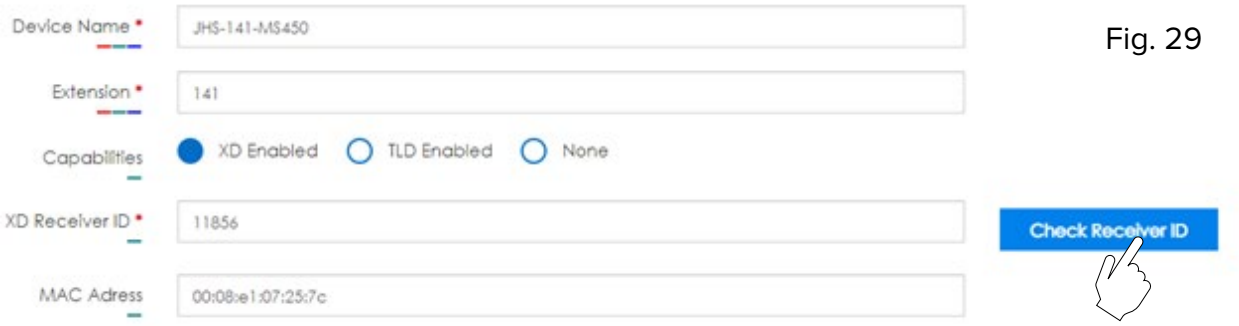


Fig. 29

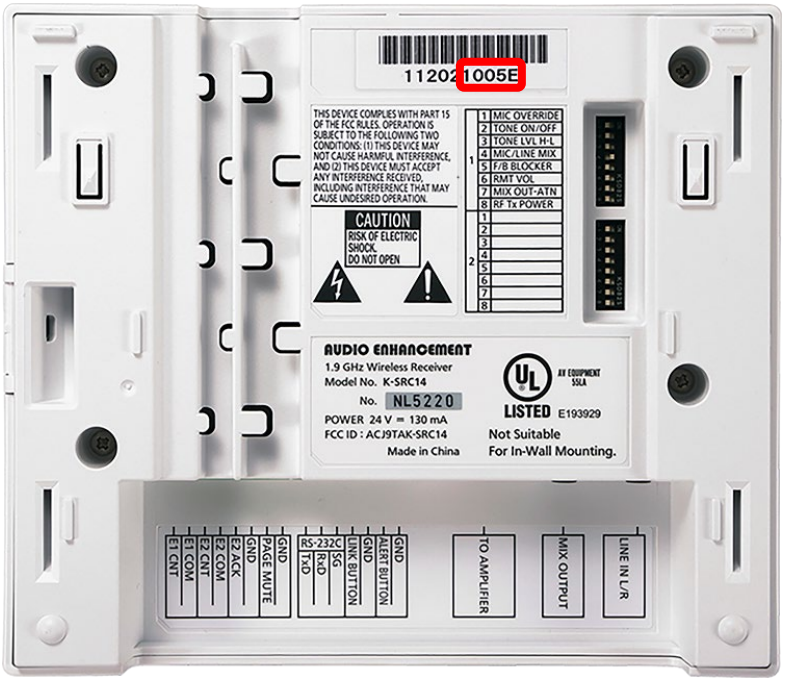
Pressing this button will reach out to that individual device and ask the XD receiver for the ID just as described above.

This is a GREAT troubleshooting tool. If the check receiver ID button works, that means the device is online, configured properly, wired properly and all devices are communicating properly and ready to receive SAFE System alerts.

Manually Enter Receiver ID

Finally, the receiver ID can be manually entered for each device by entering the last 5 digits on the XD receiver’s top barcode on the back of the receiver (pictured in Fig. 30 – 1005E is example receiver ID).

Fig. 30



Edit Device

A device may need to be edited to change a setting in the device or to change the properties of the device in how EPIC System recognizes it. Editing anything about a device can be done by clicking the pencil icon in the devices table.

Edit Device Properties

The device properties (see Fig. 31) are the core properties that EPIC System must know about a device to operate. The device name, its MAC and IP addresses, the extension and any alert receiver that may be attached. Editing these settings will update the EPIC System database. The extension setting will also affect what is configured on the individual device for the SIP Extension.

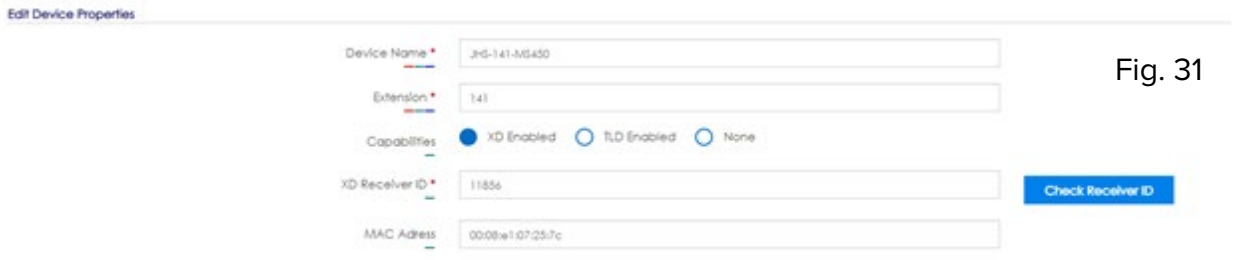


Fig. 31

Edit Device Configuration

The device configuration refers to the settings within the device itself. Out of the box, the settings will reflect the site configuration template to reflect the baseline settings – see section below for more details. However, each device may have requirements, so each option is configurable and will be remembered for each device. By updating these, EPIC System will remember each

device's specific configuration options. EPIC System will also send the configuration to the device. No direct input is required on the device to update its configuration. By default, only a few of the more frequently modified user settings are shown here. However, a user can click the advanced button at the top of the page to reveal all settings in the device.

If devices are not updating when changing settings, verify communication to the device and check the global device password set in the *Configure* (see page 23) module for that device type.

Edit Device IP

EPIC System can modify the IP address and network settings of a device. This can only be performed from the Devices table by clicking the pencil icon next to the IP address (see Fig. 32).

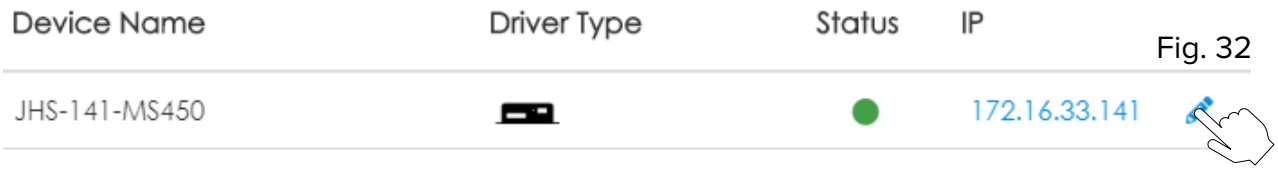


Fig. 32

Enter the network settings and click save (see Fig. 33). EPIC System will update the database IP address and send the new IP settings to the device.

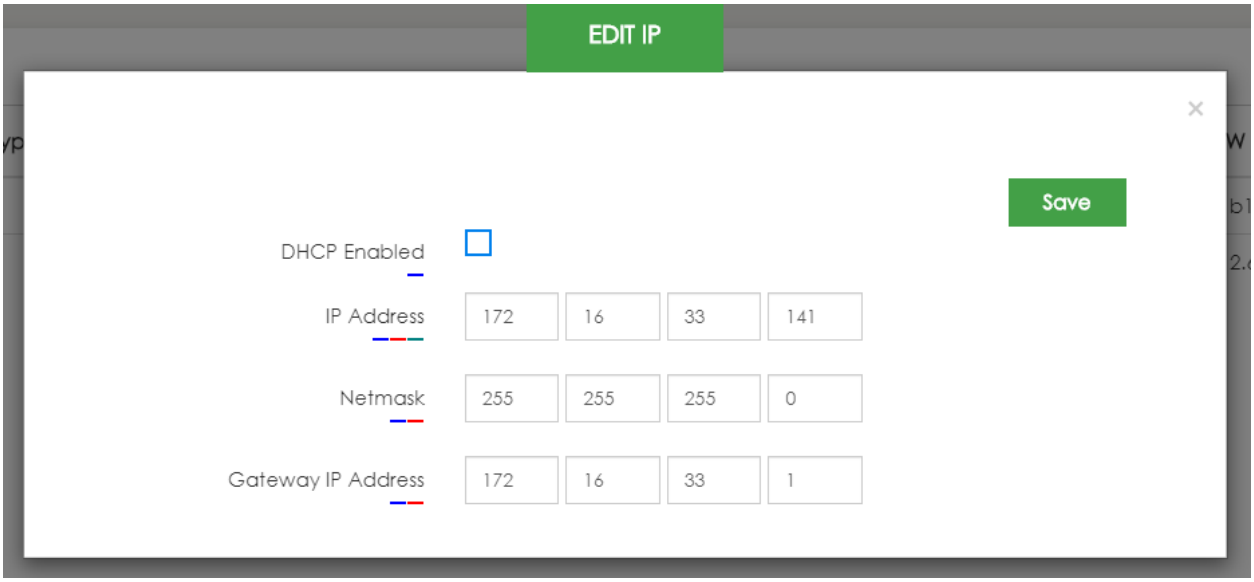
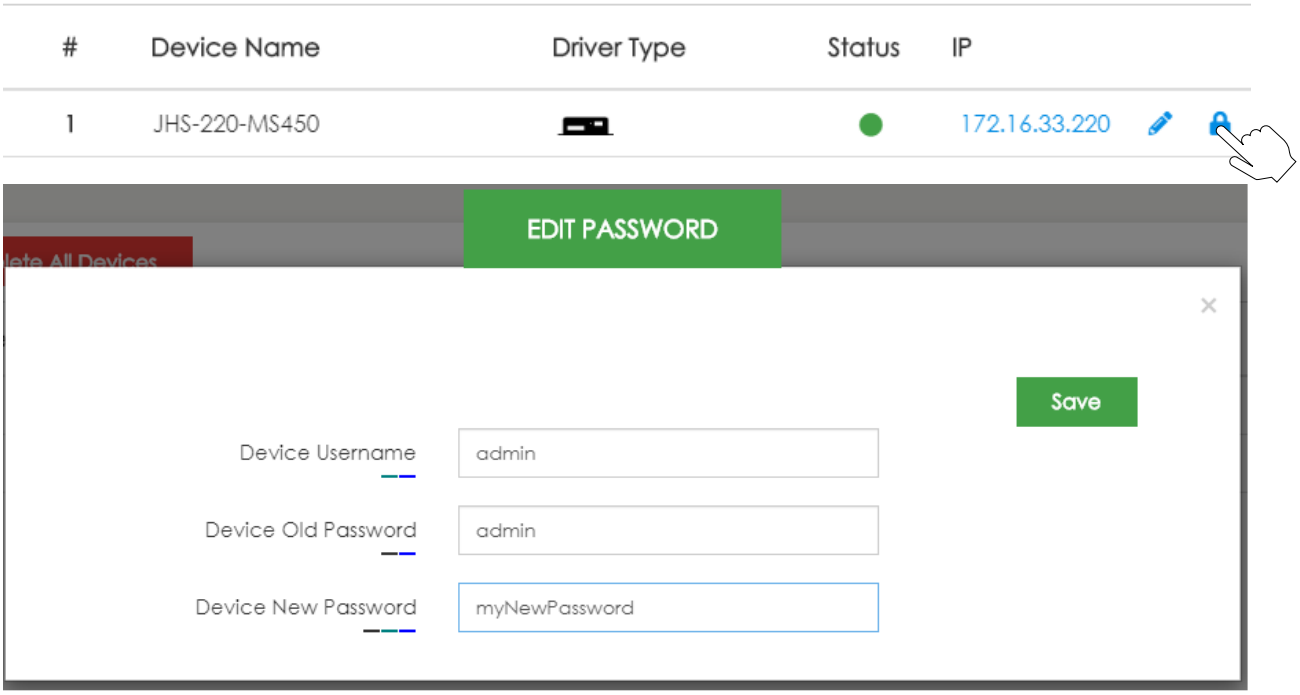


Fig. 33

Edit Device Password

EPIC System can modify the credentials used to authenticate with the device. This will update the properties in EPIC System and also update the credentials on the device itself. Click the lock icon next to the device IP (see Fig. 34). Enter the username, "old password" (the current password on device) and the new password. Click update; the device will be updated, and EPIC System will use that new password.

Fig. 34



Configure

The Configure Module within EPIC System allows users to define configuration templates for the devices in the system and to make global configuration changes to all devices. Where editing an individual device allows users to set and push configuration settings for a single device, this allows global changes to all devices in the system.

Site Configuration Templates

Editing the site configuration for a template affects the baseline settings for any new devices added to the system. Audio Enhancement has an out of the box “Factory Default” baseline template, but a specific site may have some settings, such as bell or paging priority levels, background music or device passwords. When a user clicks “Configure” there will be a tab for configuration templates for each device type (see Fig. 35 on the next page).

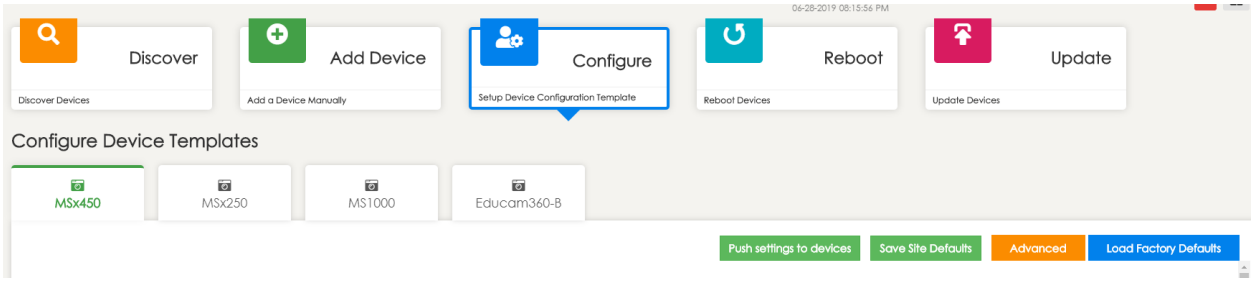


Fig. 35

Navigate between the device tabs to change the templates for each device type as desired. The principle is the same for all devices, but this guide will show the MS-450 configuration template.

The options in the template will match what is seen when editing an individual device. Those settings are explained in detail below in the *Settings Definitions* section (see page 26). Prior to explaining the individual settings, there are four buttons at the top of the configuration page to understand.

Push Settings to Devices

This will allow the user to mass configure all devices of that type (notice the MS-450 tab will allow configuration of MS-450s, EduCam360 tab configures only EduCam360, etc.). Whether the user has updated the site configuration template or simply wants to re-send settings to all devices, they can press this and select using the checkboxes which devices to send the settings to. Then click “push settings” and the devices will be configured (see Fig. 36). There is a “status” which will show the progress as it moves through the devices.

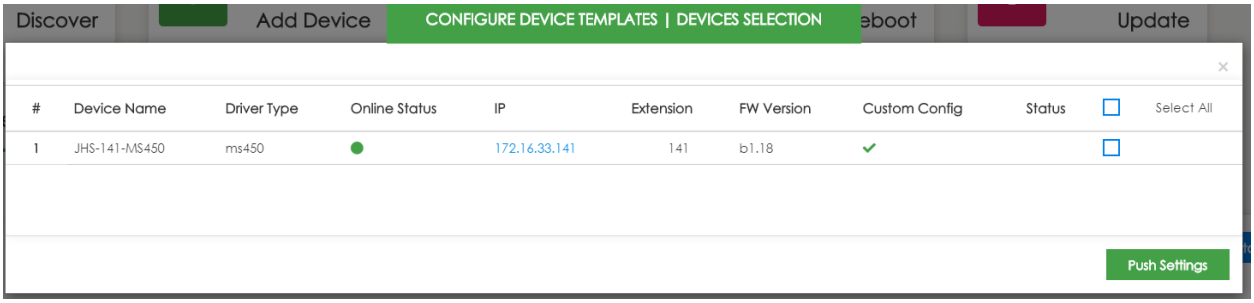


Fig. 36

The “custom config” column will show the user if there are any values stored on the device that differ from the site configuration template. The user may wish not to overwrite those settings and can uncheck that device. Or they can leave it checked but it will overwrite the device’s custom settings.

When using the push settings here, the unique identifying settings for each device (IP, Extension, etc.) will remain intact, this only affects the configurable options seen on the configuration template page.

Save Site Defaults

This button will update the site default template for the device type tab the user is currently working on. Therefore, if the user modifies the settings, they must press “Save Site Defaults” to save those defaults as the new configuration baseline for the site.

Advanced

By default, the pages only show the most common user changed settings for each device type. To show or change additional settings, click “Advanced”. The page will now show additional settings which the user can update and save as the new configuration template.

Load Factory Defaults

If at any time the user made an error or wishes to return to the out of the box settings templates, they can simply click “Load Factory Defaults”. This will reload all settings to the out of the box Audio Enhancement baseline settings template. Clarification on two items: 1) this does NOT perform a factory default on the devices. This only refers to the settings templates. 2) after loading the defaults, the user must still press “Save Site Defaults” to update the settings template.

Modify Password

The devices within EPIC System all require authentication for the operations of the system. Standard device operation such as viewing the camera or changing the settings rely upon EPIC System knowing the password for the devices. Each device type has a configurable global username and password that EPIC System uses to communicate with all devices. Out of the box, the devices all use username= admin and password= admin (see Fig. 37). Audio Enhancement recommends users to modify these passwords so they are unique for their site. Any user with access to the configuration page can see these passwords.

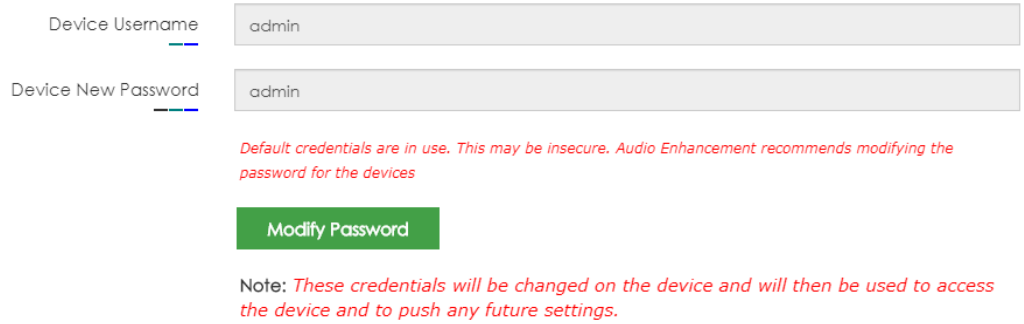


Fig. 37

To modify the passwords, which will also automatically modify the passwords on the end devices themselves, the user can click “Modify Password”. The user can then enter the “Device New Password”. This new password will be stored in EPIC System to communicate with the devices and will be updated on the devices (see Fig. 38). If the modify password returns an “authentication error”, the user should click “Advanced” and ensure that the “Device Old Password” matches the existing password on the devices. If this does not match, EPIC System will not be able to authenticate to update the devices to the new password.

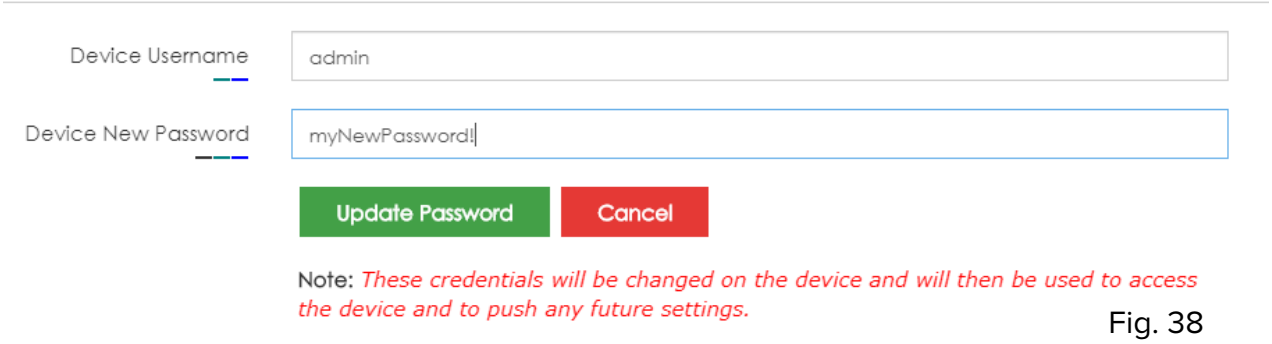


Fig. 38

When the user clicks “Update Password” the push settings pop-up will appear, and user can select devices to update the password. It is recommended to select all devices and click “push settings” (see Fig. 39). The password will be updated.

Fig. 39

Settings Definitions

All settings pages have a basic and an advanced page. The basic includes the most common configurations and is generally all that is needed for most users. The advanced presents all options available for the devices.

***Basic Settings are* Bolded, *Advanced Settings are* *Italicized* – *Section Headers are* Both**

MS Devices (250/450/500)

Network Settings

Use Sonic IP – this setting enables a readout of the IP address whenever the device is rebooted. It is off by default.

DHCP Enabled – if checked, it will set the devices to use DHCP instead of Static IP addresses. This is not recommended and if implemented must use DHCP reservations.

Primary and Secondary DNS – these are the DNS servers’ settings for the devices.

Outbound Call Settings

Call Button Extension to Dial – this is the number that will be dialed when the user in the room presses the call button. It should come from the "Front Office Extension" setting in "SIP Basic section". The default is 6000, which is a ring group where multiple extensions can be dialed simultaneously.

Input 2 Call ID – this would be the extension to dial if IO2 is triggered. By default, this is left blank as it is reserved for the SAFE Alert. If a number should be dialed, enter that extension here.

Intercom and Paging

Intercom/Paging Buffer – this is the buffer in milliseconds that the device will use when receiving intercom or paging (SIP) communications. It will store a certain amount of data in the buffer to have the smoothest playback possible (similar to YouTube). The default is 75 milliseconds but some networks may require increased buffer to remove issues of sound cutting in and out due to jitter or network performance. Since this is live communication audio, it is generally better to have a low setting here to make for the most natural communication.

Beep on Call Answer – when any intercom or paging communication is received, this setting controls whether or not the device will send a pre-announce beep tone. Default is on.

Echo Cancellation Mode – while in an intercom call, the room's ambient microphone will be muted while the office is speaking. This is an auto audio detection mute. When the office stops talking, the mic is automatically unmuted and the classroom can speak. This eliminates the office hearing themselves back on calls. Disabling this will make the classroom mic always on. Default is on.

Audio Settings

Input Source – this controls the input source for the MS devices. By default, the selection is Mic for the MS-250 and MS-450 and Line for the MS-500.

Encoding – this is the encoding method for SIP calls. The devices use uLaw G.711 and this should be set by default.

Intercom and Paging Volume – there are separate volume controls in the devices. This setting controls both intercom and paging (anything over SIP) volume. Range is 0-100%, default is 60.

Microphone Gain – this controls the sensitivity of the microphone in the classroom. The higher the value, the more sensitive the classroom ambient mic. This may improve the ability of the office to hear the classroom. By default the setting is 39 dB.

A/D Amplifier Gain – this controls the Line Input amplification, making the classroom ambient microphone louder in the front office. For the MS-500, the default is 10.5 dB. For the MS-250/MS-450 the default is 0.

Acoustic Echo Cancellation – The default is enabled.

Control Interfaces

UDP Control Port – the devices can be monitored and controlled using this port. Default 12301.

TCP Control Port – EPIC System connects with this port to monitor the status and IOs of device. Default 12302.

Use Serial Port For – device has multiple options for serial port. For EPIC System use, Serial GW, TCP, Passive

Serial GW TCP Port – EPIC System connects this port to send and receive data to the device or control the devices in the room. The alert receiver in the room sends data for the SAFE Alert. Default 12303.

Bells and Notifications

Priority – this controls the priority of the system. EPIC System will give priority to either Bells and Notifications OR to Paging and Intercom. This means that whichever is set as priority will override the other type of message in the event of a conflict. By default, the priority is Bells and Notifications.

Notification Audio IP Address – this restricts the IP the device will use to receive notification and bell messages in conjunction with port. A specific IP or multicast address can be used to restrict source. Default is 0.0.0.0 and allows from any source.

Notification Port – this port is used to receive bells and notification messages. Default is 4444.

Bells and Notifications Volume – this controls the volume of all Bells and Notifications received by the device. It is a separate volume control from the paging and intercom. The range is 0-100% with default of 60%.

Bells and Notifications Buffer – this controls the buffer for bells and notifications received by the device. As these are recorded messages, a larger buffer is preferred. Default is 300.

Background Music

Background Music Enabled – the devices have a lowest priority (lower than Intercom, Paging, Bells and Notifications) network stream option that can be used to receive background music streams from an Audio Enhancement streaming device. By default, the MS-450 has this setting off and the MS-250 has this setting on so that common areas would receive background music but not classrooms. This can be configured for each device type or individual device as required. Enabling this setting turns on the background music listening function for the device and displays the other settings for background music.

Background Music Volume – like the other volumes, this is an independent volume control specifically for the background music that is received. Range is 0-100% with default of 80%. This is generally set higher than the other volumes so that the source streaming device (phone) has more control of the streaming volume.

Background Music Buffer – similar to the buffers mentioned earlier, this stores the data from the network stream for a defined amount of time prior to playing on the device. Because this is not live audio, the buffer is larger, set to a default of 600 milliseconds.

Background Music IP – This is the IP address that the devices will listen to for the background network stream. 0.0.0.0 means it will accept any stream to its port. This can also be a multicast address or individual IP address to restrict to only specific sources. Default is 0.0.0.0

Background Music Port – This is the port the devices will use to receive the background music stream. It's used in conjunction with the IP to allow streaming from only certain sources. The default is 5555.

Note on Background Music: the stream must be a MPEG audio format. The EPIC System's primary purpose is to serve as communication for the school. Any implementation of the background music should take care to not detract from that goal.

MS-1000

DHCP Enable – Enables DHCP on the device. Disabled by default. If turned on, DHCP reservations must be used.

DNS Servers – DNS servers used by the device.

NTP Servers – NTP servers in order, used by device to synchronize the device time. If none configured, device has list of public servers it will attempt first.

Time Zone – Time Zone used by the device. Defaults to EST.

Daylight Savings – controls whether daylight savings time is observed. Default is enabled.

Server Address for Firmware Upgrade – there are internal server entries for standard firmware upgrades. However, this address can be used by pressing the alert silence button during boot to update firmware if no external access is available.

EduCam360-B

Only the EduCam360-B can be used with autoconfiguration. Panasonic EduCam360 is supported in EPIC System, but autoconfiguration is not supported.

Network Settings

DHCP Enable – enables DHCP on the device. Disabled by default. If set on, DHCP reservations must be used.

DNS Servers – DNS servers used by the device for address resolution. Default public DNS servers are set.

Video – Main Stream – all settings in this section affect the primary stream in the camera, generally used for VIEWpath recordings.

View – controls the view of the camera for the stream. Teacher can control separately if VIEWpath is active on the server.

Install Mode – Ceiling is Default and should be set. Only Ceiling mode is supported in VIEWpath.

Video – Sub Stream

Quality Profile – controls preset values for the quality of the camera view. Low, standard and high are available. Standard is default.

FPS – frames per second used in camera view and recording. 20 is Maximum.

Bitrate – this is the bitrate used for quality and data size of live view and recordings. 6144 default. Higher bitrate will make larger file sizes.

Bitrate Control – this controls whether a constant bitrate or variable is used. Default is constant (CBR).

Video GOP – default 60.

Video – Sub Stream – all settings in this section affect the secondary stream in the camera, which is always a fisheye view generally used for continuous NVR recordings and the EPIC SAFE Alert live stream.

Enable – this enables the secondary stream. It may limit the quality of the primary stream. It must be enabled for EPIC System live view and security recordings. Default is enabled. Note – if looking at camera interface it appears “disabled” when lens is closed.

Video – Main Stream

Quality Profile – controls preset values for the quality of the camera view. Low, standard and high are available. Standard is default.

FPS – frames per second used in camera view and recording. 20 is Maximum.

Bitrate – this is the bitrate used for quality and data size of live view and recordings. 6144 default. Higher bitrate will make larger file sizes.

Bitrate Control – this controls whether a constant bitrate or variable is used. Default is constant (CBR).

Video Compression – this is the compression mode used. Default is H.264H.

Audio Attributes

Audio Source – controls the audio source used by the camera live view or recordings. The options are Teacher Microphone "line in" (comes from the Audio enhancement system, passing multimedia and teacher microphone) or Camera Ambient Microphone "Mic" (this uses an ambient mic which picks up all noise in the room). The teacher can control this setting manually in VIEWpath.

Audio Input Level – this controls the volume level of the audio input. 75 is default.

Audio Noise Filter – enables an environmental noise filter. Default is on.

Audio – Main Stream - the following apply to live and recorded audio on the primary stream.

Enable Audio – this enables the audio on the live view and recordings. Enabled by default.

Encode Mode – changes the mode. AAC is default and supported method.

Frequency – changes the audio frequency. 32K is default and supported frequency.

Audio – Sub Stream – the following apply to the live and recorded audio on the secondary stream.

Enable Audio – this enables the audio on the live view and recordings. Enabled by default.

Encode Mode – changes the mode. AAC is default and supported method.

Frequency – changes the audio frequency. 32K is default and supported frequency.

Settings – general system settings on camera, including time. For VIEWpath in particular, time settings must match the time on the server. Recordings will not work if time is not in sync.

Display Time on Camera – this will put a display of the camera time on the live and recorded image. Default is false.

Display Title on Camera – this will put a display of the camera title on the live and recorded image. Default is true.

Daylight Savings Time – enables Daylight savings time observation on the camera. Default on.

NTP Time Zone – controls the time zone on the cameras. EST is default.

NTP Enable – enables synchronization with a time server. Default is enabled.

Time Server – specifies the NTP server to sync with. Default is public time server pool.ntp.org.

NTP Port – default is standard NTP port 123.

NTP Update Period – controls how often NTP resyncs. Default is 30.

Add User
Fill out username and password to add a new user for the camera. This is not required and rarely used but can be added if a secondary user with lower access is required for a recording system to access the camera or similar use case. Memo is a note on the reason for the user. The Group is the access level of the user. Admin or user are default groups. Check reserved and shareable. Click add user when done to add the user.

Reboot

Reboot allows the user to reboot all or a selected group of devices. This could be useful in troubleshooting. Select the devices to be rebooted and click “reboot selected devices” (see Fig. 40). This does not reboot the server (server reboot is available under System Settings > Network).

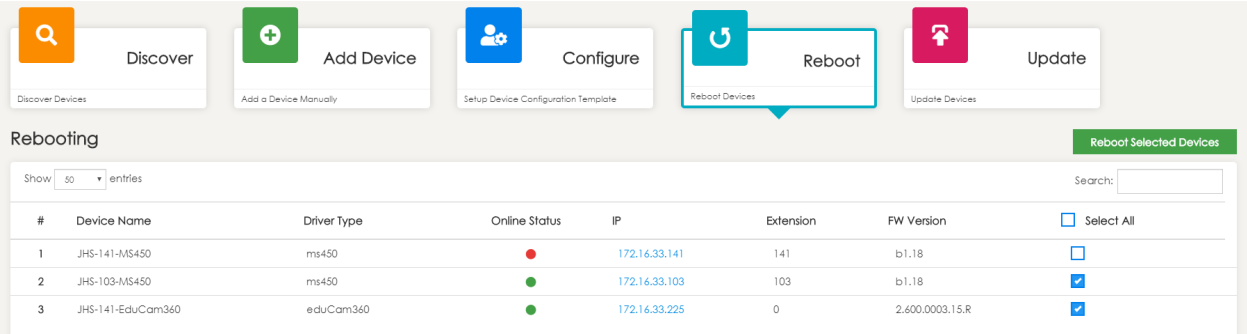


Fig. 40

A pop-up will show while the systems are rebooting (see Fig. 41). When complete, EPIC System will show a checkmark for all devices successfully rebooted. If any failed, a red X will be shown (see Fig. 42).

Fig. 41

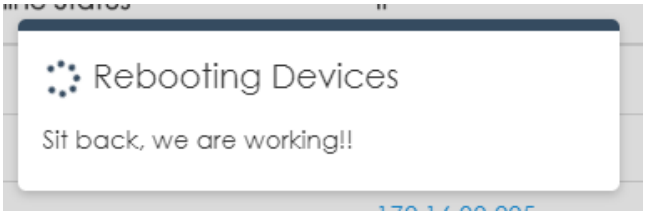


Fig. 42

Update

As of Version 1.5, Update is not fully integrated and is set for future use.

Update allows for automated firmware management of the devices. A base firmware is included with EPIC System, but in case there is ever a required firmware for any of the network devices EPIC System manages, the Update module will allow the user to upload the new firmware to EPIC System as the new base firmware for the devices. All devices or a selection of devices can be selected for firmware update. To update, select the device type by tab, then select the devices to be updated and click “update selected devices” (see Fig. 43 on next page).

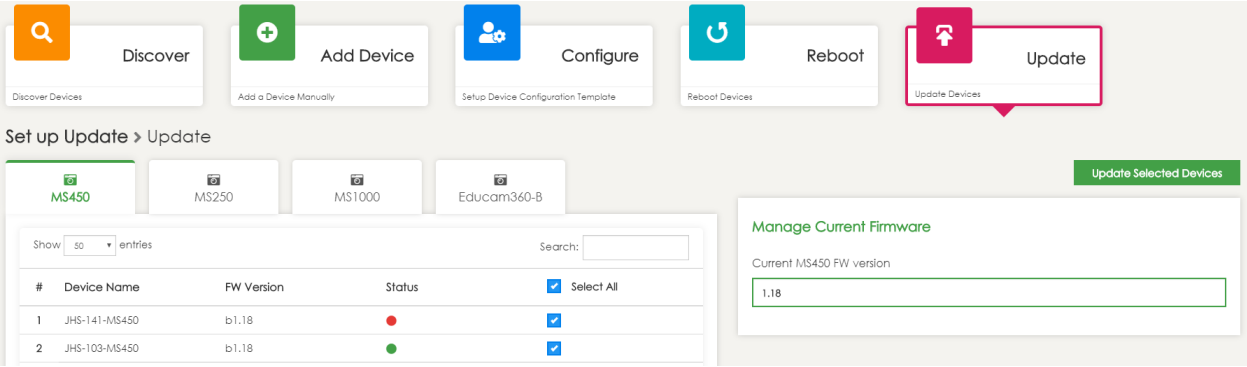


Fig. 43

This process can take a few minutes, especially on a large number of devices.

To manage the base firmware version, click the “manage current firmware” then browse to the files provided by Audio Enhancement and specify the version. Click save.

Note for MS-450 and MS-500: there is an audio amplifier firmware that is separate from the network firmware. At this time, it is not possible to update that via the network. It must be updated using the mini or micro USB port on the device itself.

View Device Status

If a room or area is not functioning as expected, the first thing to check is whether that device is online. Click the settings icon ⚙ to view all devices. There will be a red or green or yellow dot: red signifies offline, green is online (see Fig. 44). Yellow dot (see Fig. 45 on next page) indicates that the device is online, but not all functions are behaving properly. Hover over the yellow dot to find out more and troubleshoot potential issues. If there is a red dot (see Fig. 46 on next page), attempt to navigate or ping the IP address. If it is not responding, there is an issue with the device or network and it will need to be inspected and troubleshot. Offline device emails can be sent to an administrator to ensure devices are operational.

If an MSX device is yellow and won’t clear but doesn’t physically have an XD/TLD receiver ensure “None” is checked in the device properties or else it will give this error as it expects the receiver to respond and sees this as a trouble scenario!

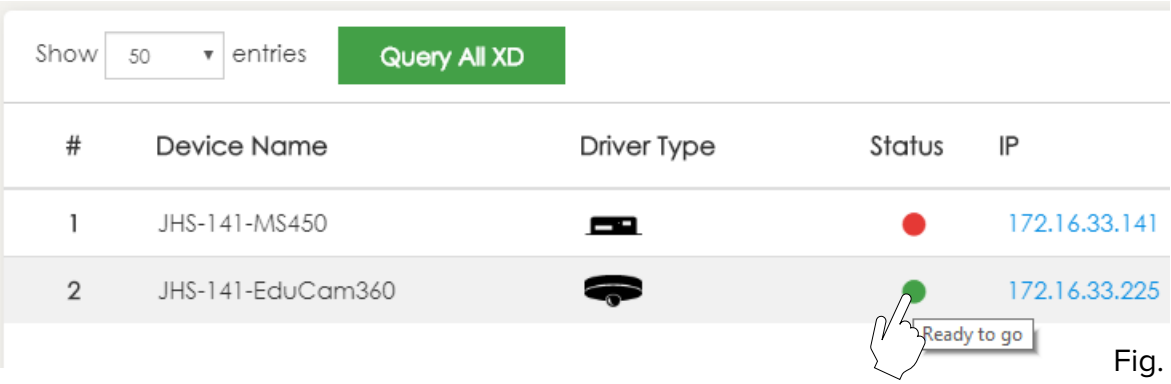


Fig. 44

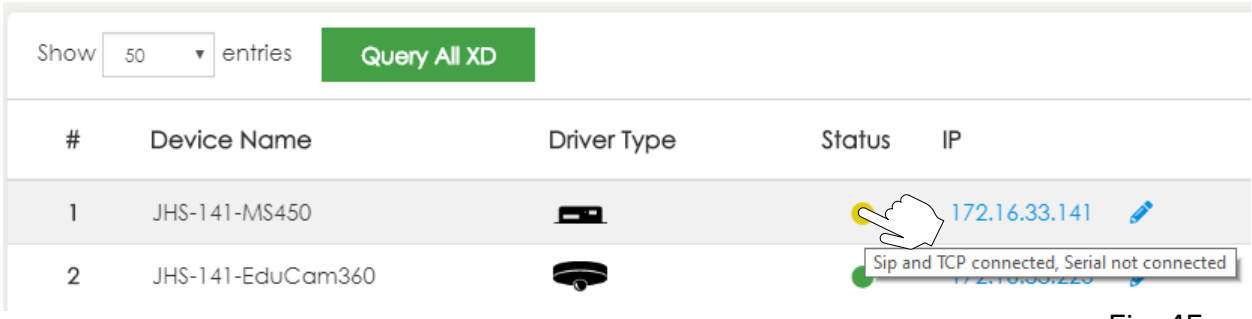


Fig. 45

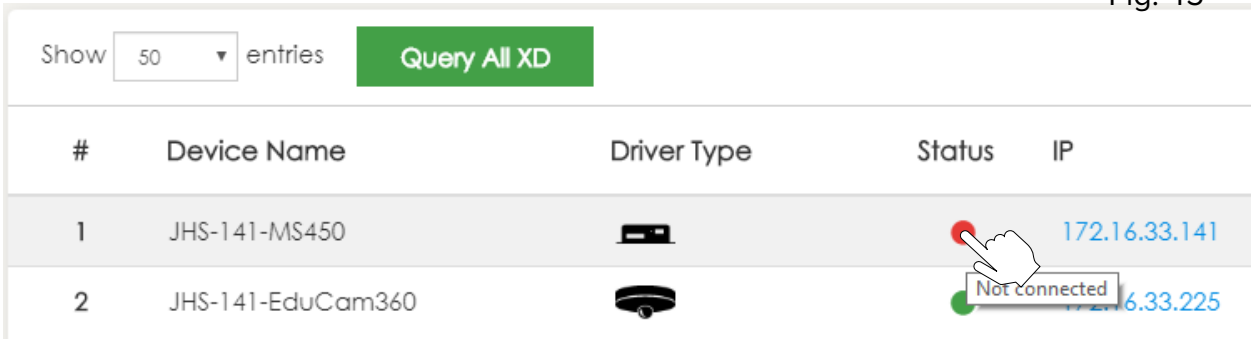


Fig. 46

Offline devices will also show up on the standard map home page (see Fig. 47). The user will see that a classroom or area may not be working and can communicate that to an administrator to fix the problem and get it working. The rooms will turn yellow if a device in the room is not communicating.

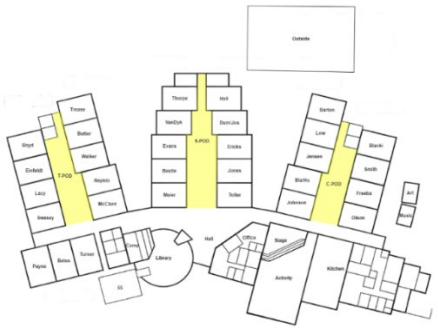


Fig. 47

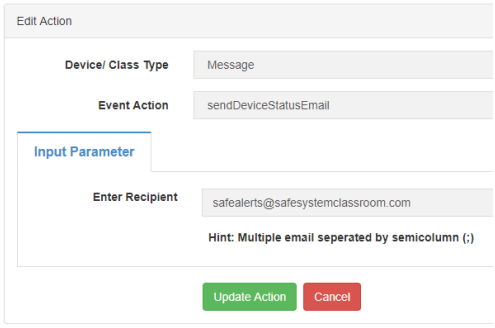


Fig. 48

Device Actions

Many of the device actions detailed above can be performed on a single device by clicking on the action for that device in the devices home page (see Fig. 48). The icons should match with the module header. For example, click the reboot icon in the actions column to reboot that specific device (see Fig. 49).

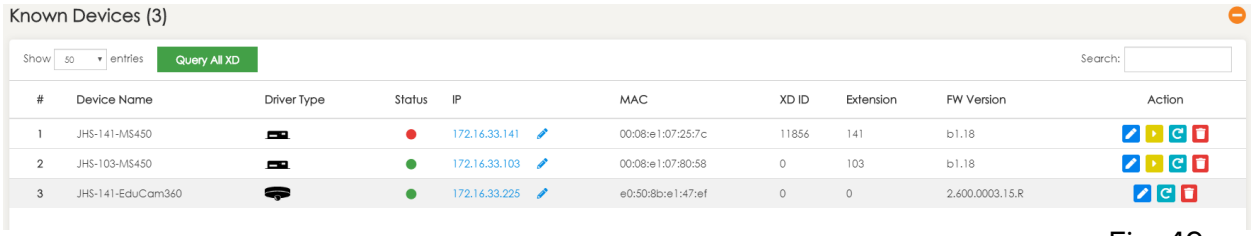


Fig. 49

Some actions are only available on specific devices or when appropriate. For example, the “play” icon will send a test bell to a device and only works on MSX devices. A firmware update icon will show up on a single device when its firmware is out of date.

Replace Device

The “replace device” icon will allow a user to swap a device. If a device has malfunctioned and is being replaced with a different physical box, EPIC System can bring in that new device with the exact config of the old device automatically. The “bad” device should be taken offline before attempting this process and the new replacement device should be plugged in and discoverable by EPIC System.

Click the replace icon to begin the process. EPIC System will show the details of the old device being replaced and user will select the newly discovered device to be configured in its place. Confirm the selection and the details and click replace. The process will run and display status when completed. The new device is ready for use.

Map

The map in EPIC System is critical to end user functions. Rooms and Zones are created for seamless, user friendly interaction with the Intercom and Paging functions as well as the bell schedule. To modify the map, click “Map Setup” under the settings menu (see Fig. 50).

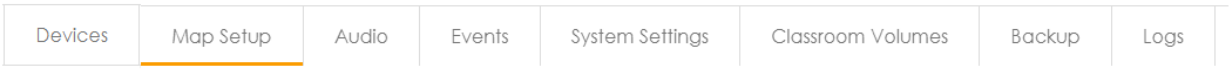


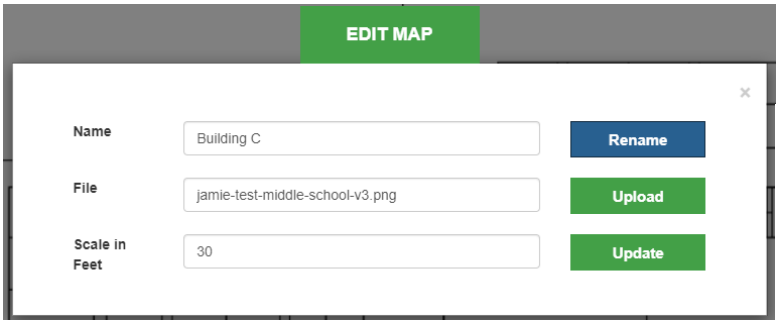
Fig. 50

Add/Edit Map

The “map” is a PNG image with room objects overlaid. The map image itself can be updated to a new PNG. Additional maps can be added for separate buildings or floors as appropriate.

Click Add Map to add a new map. Provide a friendly name for the map and click rename. Note: the maps will be displayed by alphabetical order on the Home Screen. Click upload and browse to and select the file for use. The scale default is 30 which is generally the standard size of a classroom (see Fig. 51a) – find the scale bar on the map and = to one classroom (see Fig. 51b).

Fig. 51a



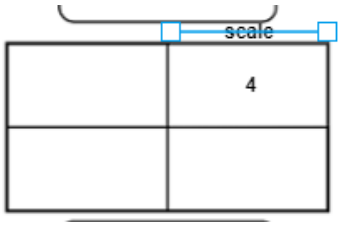


Fig. 51b

Edit Map will take the same steps. If a new PNG is uploaded when editing an existing map, the room objects will all stay intact. If major differences exist in the map image, the room objects may need to be moved.

If the user clicks the “delete” button on a map, the map and all rooms will be removed.

Manage Rooms

Rooms are what the users logically interact with on the map – users don’t call a device, they call a room. Rooms are defined as objects that contain the devices and are visually represented on the map. Rooms can receive individual calls or be a part of zones. Only zones can receive bells or pages, so a device must be added to a room AND zone to receive bells.

Note: This requires a keyboard and mouse during set up.

Add Room

To add a room, first navigate to Settings ⚙ then click “Map Setup.” (see Fig. 52 and 53)

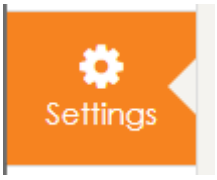


Fig. 52

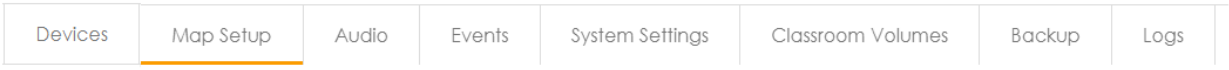


Fig. 53

Click “Maps” and then click on the school map to display the map (see Fig. 54 on next page).

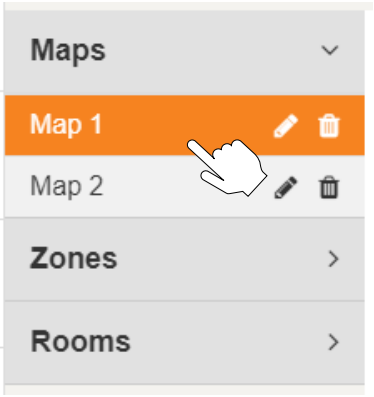


Fig. 54

Click “Add Room” on the right side of the screen, to add a new room (see Fig. 55).

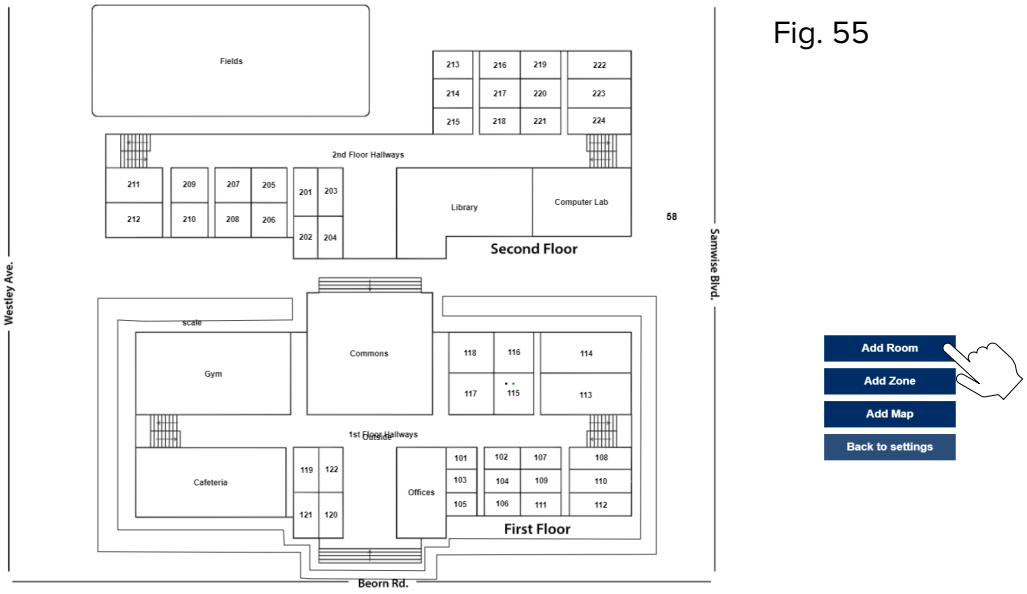


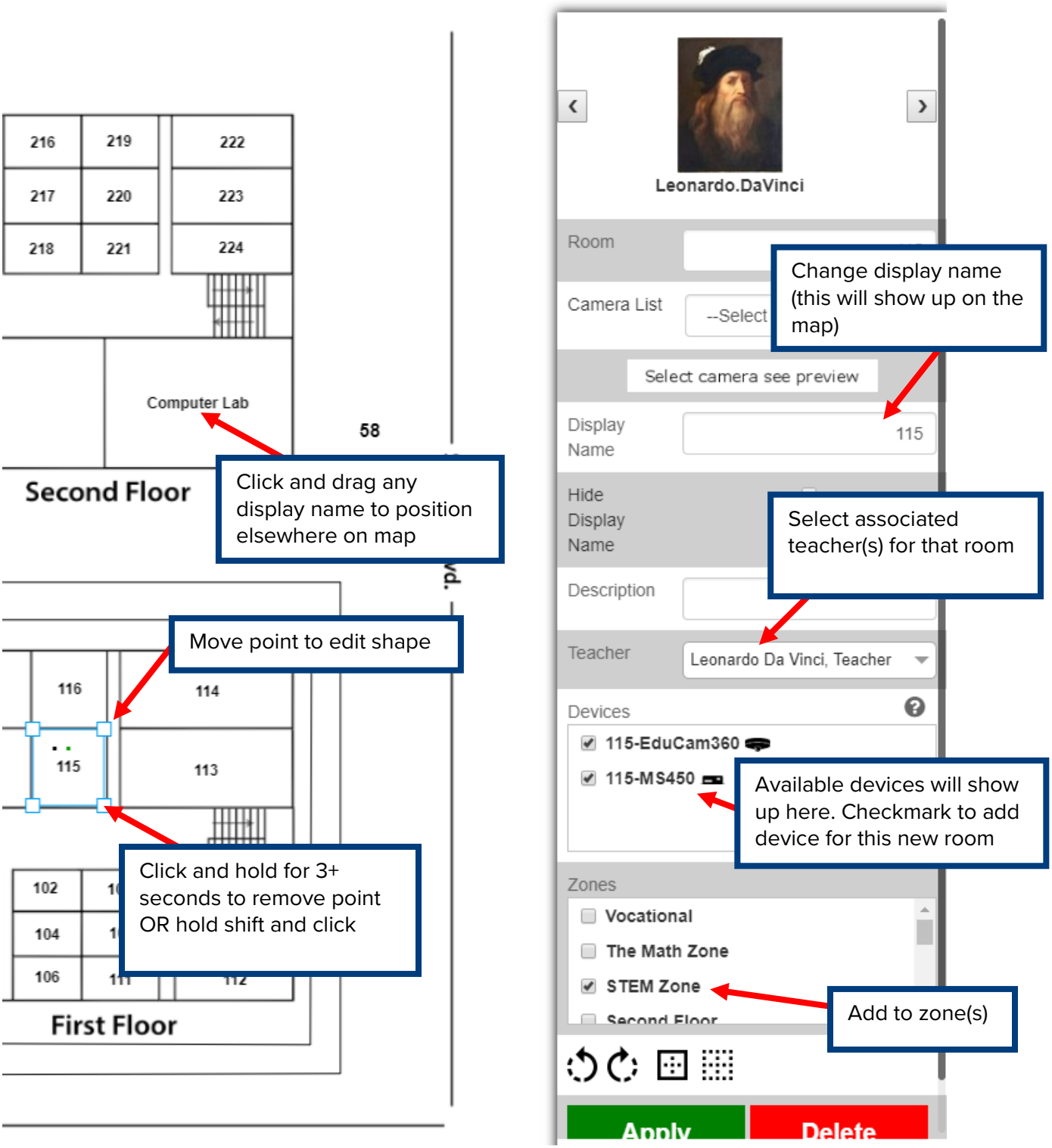
Fig. 55

The new room will come up along with the room information panel (see Fig. 56 on next page). Resize/shape the room by clicking and dragging the four (4) points on the corners and placing them in the appropriate shape.

If the line is clicked, it will add a new point in the shape to be moved and manipulated. If any points need to be removed, click and hold the new point for three-seconds and it will be deleted.

Enter the information for the room. The Display Name is what will show up on the map. Enter the name and description and select the zones it should be a part of. Scroll down and click “Apply.” (See Fig. 56 on next page)

Fig. 56


216
219
222
217
220
223
218
221
224
Computer Lab
58
Second Floor
Click and drag any display name to position elsewhere on map
Move point to edit shape
116
114
115
113
Click and hold for 3+ seconds to remove point OR hold shift and click
102
104
106
First Floor
Leonardo.DaVinci
Room
Camera List
--Select
Change display name (this will show up on the map)
Select camera see preview
Display Name
115
Hide Display Name
Select associated teacher(s) for that room
Description
Teacher
Leonardo Da Vinci, Teacher
Devices
115-EduCam360
115-MS450
Available devices will show up here. Checkmark to add device for this new room
Zones
Vocational
The Math Zone
STEM Zone
Add to zone(s)
Apply
Delete

Edit Room

To edit a room, change the name of a room, change the zone(s) the room belongs to or change the devices belonging to the room, go to “Map Setup” and click the room. The information panel will come up and any information can be edited. Click “Apply” to save the changes to that room. To edit the shape, click on the room to reveal corners. Drag the corners to reshape the room.

Manage Zones

Zones in the system refer to objects that contain one or more rooms. A zone is a group of rooms or areas to which a bell can be played. These are critical objects in the system. They can contain as few or as many devices as is necessary and a device can belong to one or multiple zones. Examples of zones include:

- Entire School: Containing all rooms and common areas, outside included
- Inside: Containing all devices inside the school (no outside speakers)
- Classrooms: Containing all the classrooms only
- Vocational: Containing the Art and Shops classes
- “Fifth Grade Testing”: containing all fifth-grade testing classrooms

There is an immense amount of flexibility with zones.

Add Zone

To add a zone, go to the map setup and click the map then “Add Zone.” The zone information panel will pop up on the right (see Fig. 57). Name the zone. When paging to a zone, a paging extension is automatically added (this is used to page that zone from a VoIP phone). If the zone extension already exists, it will display an error.

Simply checkmark the rooms that should be a part of that zone or click them on the map. The rooms in that zone will be highlighted in blue to visually verify that the correct rooms are a part of the zone. Click “Apply” to save. An existing zone can also be nested into the new zone.

Fig. 57

Edit Zone

To edit a zone, go to map setup and expand “Zones” (see Fig. 58). Select the zone that needs to be edited and the panel will pop up (see Fig. 59).

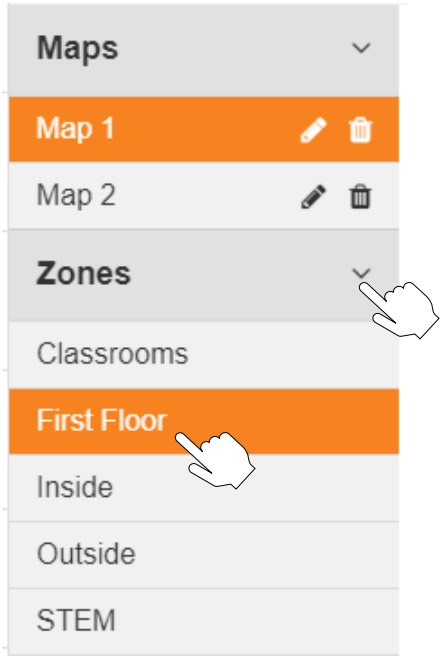


Fig. 58

Edit the zone information as necessary, click rooms to select or deselect them to add or remove them from the zone and click “Apply.” Zones can be removed by clicking “delete” here.

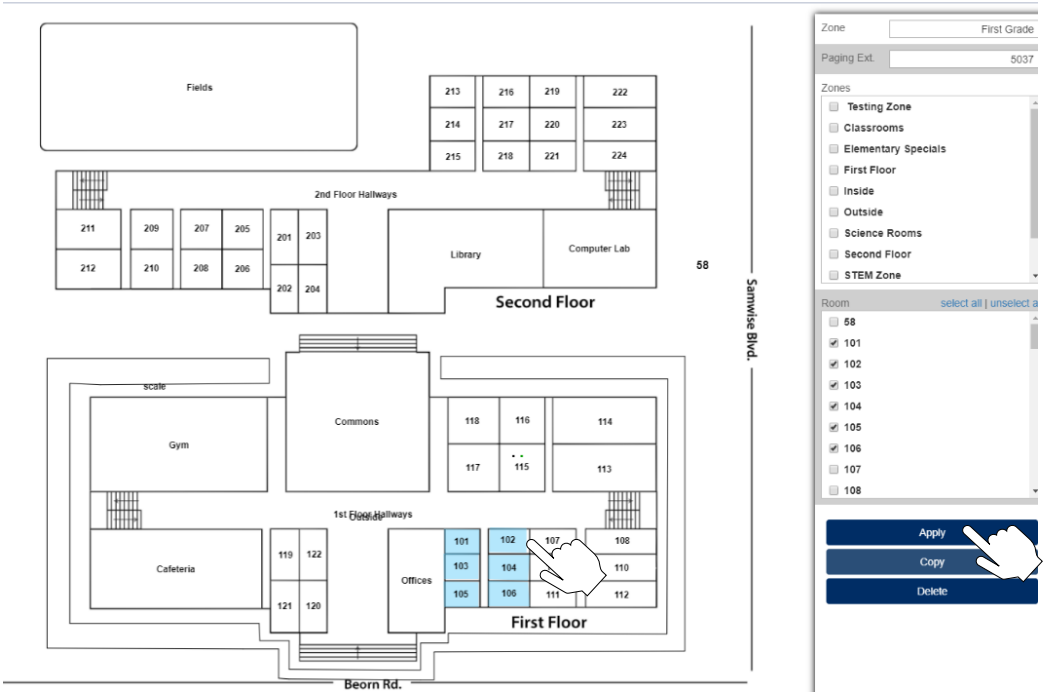


Fig. 59

Manage Audio Files

Preview Audio

Go to Settings ⚙ , then click “Audio” to view the list of all audio files uploaded to the system. Click the play button next to each file to preview that audio file (see Fig. 60). This will play the file through the speakers of the computer that is being used, not the devices.

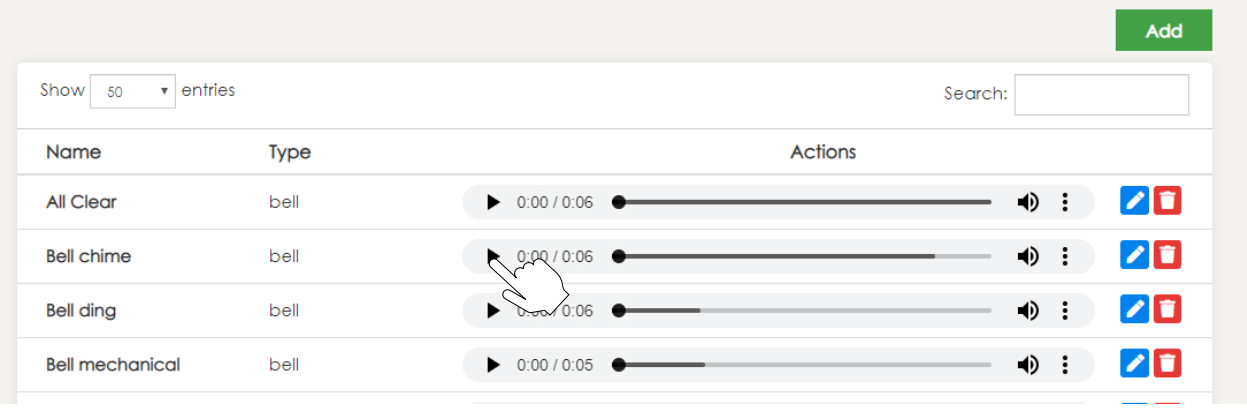


Fig. 60

Files can be edited to change the name by clicking the pencil ✎ next to the file as well.

Upload New Files

To upload a new file, simply click “Add” at the top of the window (see Fig. 61).

Fig. 61

The “Add Audio” window will pop up (see Fig. 62 on next page). Give the bell a name, select the desired file to play and choose “Bell” as the audio type. ANY wav or mp3 file can be selected here and the system will automatically put it in the correct format for playback to the devices.

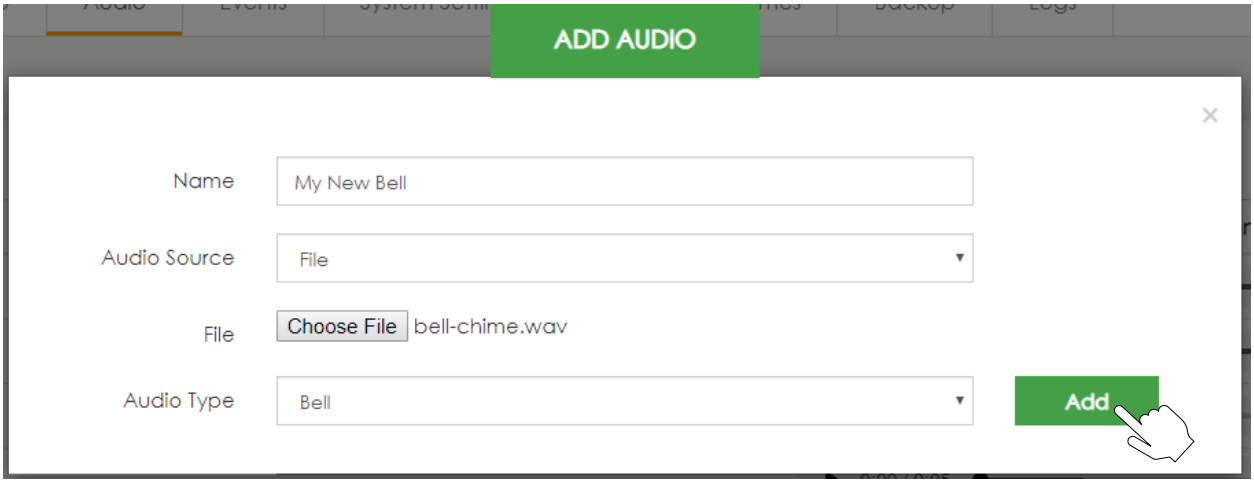


Fig. 62

Now that the file has been added, it will be selectable in any of the “add bell” screens as a selectable bell.

Record Audio Files

One of the powerful features of the EPIC System is that users can use their own audio files for an emergency notification (explained next section) to give personalized instructions to the school in case of an emergency. In addition to file upload, EPIC System can now record files directly from the Audio Page. Follow these instructions on how to record an Audio file.

Record Audio

Navigate to Settings ⚙, then Audio tab and click “Add” at the bottom of the window.

Start Recording

The add audio pop-up will appear. Give the recording a recognizable, friendly name (My School’s Fire Instructions). Change Audio Source to “Record”. When ready (ensure a good microphone is plugged in – recording from the EPIC Console is recommended), click “Start Recording” (see Fig. 63 on next page).

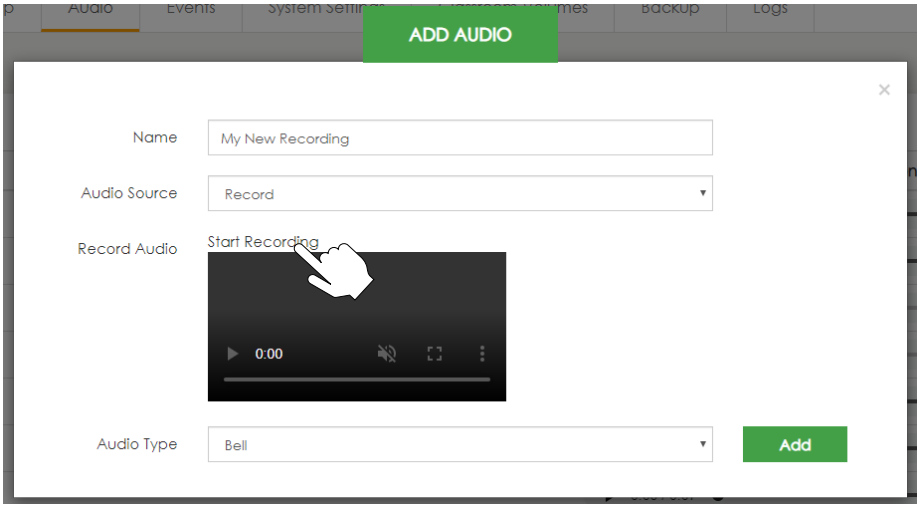


Fig. 63

Stop Recording

When finished, press “Stop Recording” (see Fig. 64).

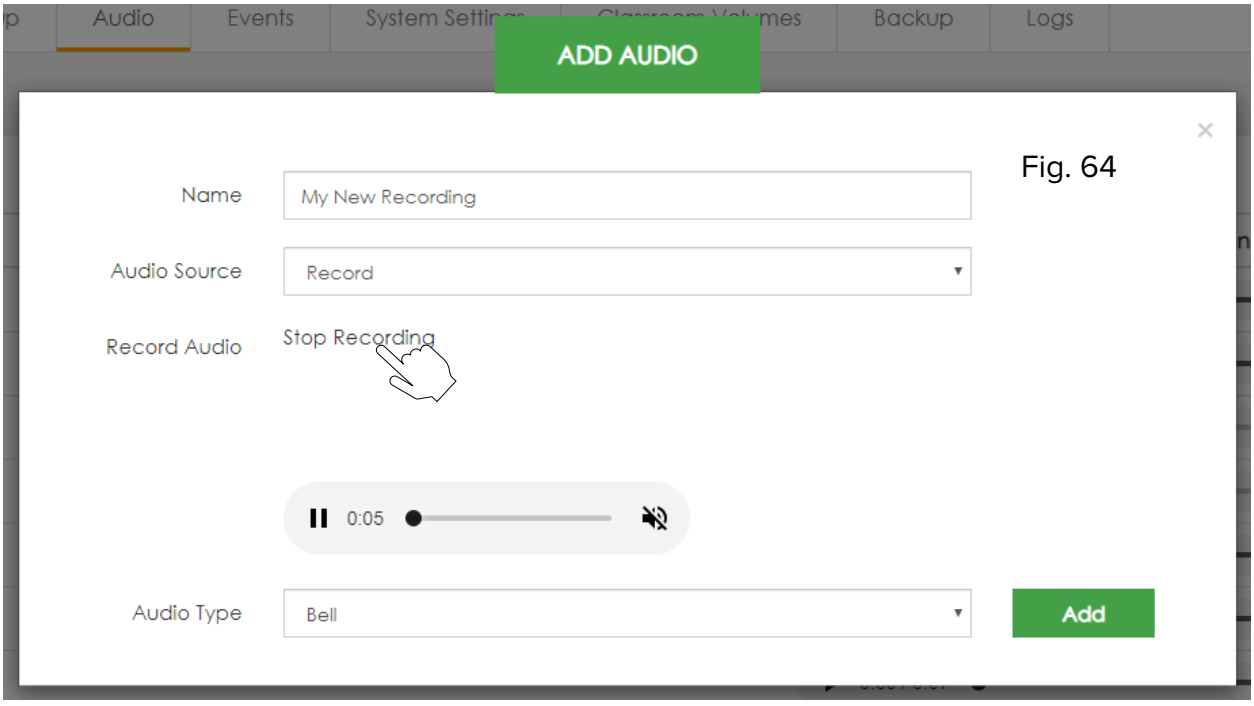


Fig. 64

Preview and Save

The recording can be previewed by clicking the “Play” ▶ icon and listen to the recording. Simply press start recording again to re-do the recording. When satisfied, click “Add” and the file will now be available in EPIC System (see Fig. 65).

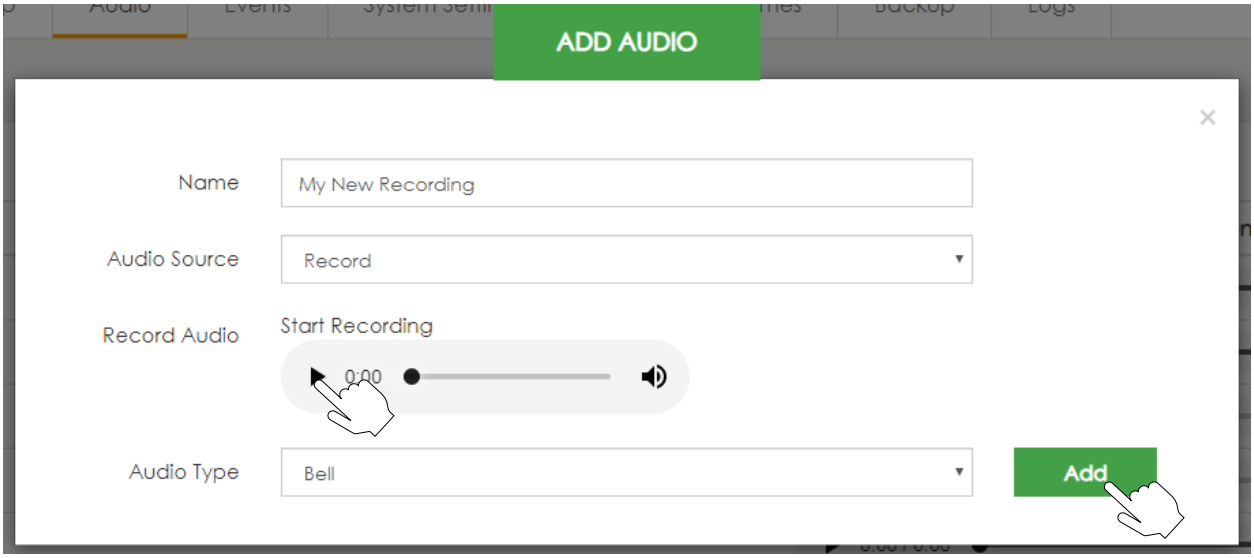


Fig. 65

Broadcast Notifications

There are notifications built into the system which can be triggered by various means, but most commonly by clicking the notifications icon and then launching the appropriate notification. This would be used to send a pre-recorded audio message to the school over the Public Address (PA) system during a fire, earthquake, lockdown or other situation. These can be customized.

Launch Notification

Click the Notifications Icon (see Fig. 66).

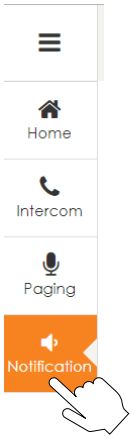


Fig. 66

The list of notifications will come up (see Fig. 67a). To launch a notification, press the play button next to the notification and click “Start Notification” on the confirmation pop-up (see Fig. 67b). Whatever actions are defined for that event will happen. These can be edited; the text can change or be represented by picture icons as seen below. If a looping notification is setup, stop the Notification by clicking the “Stop” button that replaces the play button.

Fig. 67c

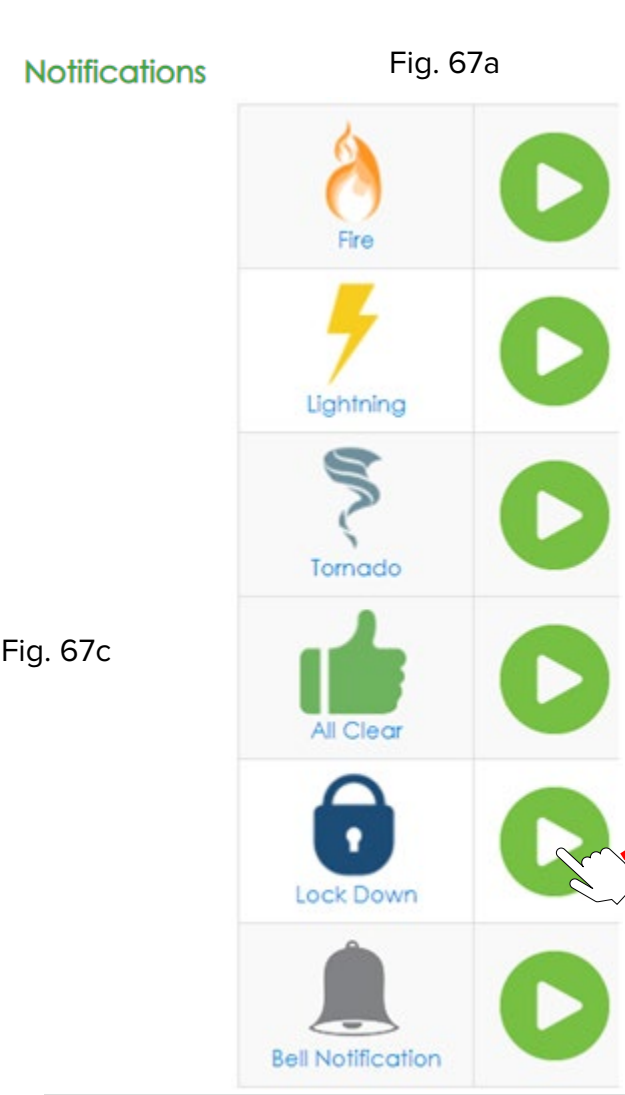


Fig. 67a

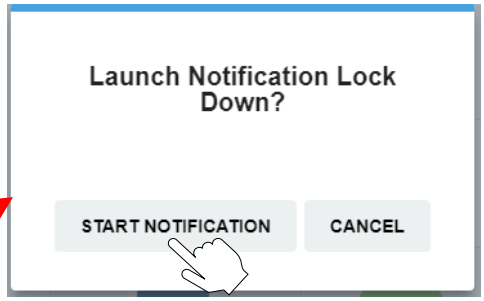


Fig. 67b

When the notification is activated, if setup to broadcast a message across all speakers, the icon will turn to a red, pulsating stop icon (see Fig. 68). Press the red stop button to turn off the notification when the event has resolved. There is additionally a “stop all” button available in the main left-hand menu at any time which will stop any bell or notification (see Fig. 67c).

Edit Notification

Fig. 68

To edit a notification, go to “Settings” then “Events.” Click “Event Properties” (see Fig. 69). Find the event and click the pencil to edit. The name can be changed, or a picture can be uploaded to represent the event. Click “update event” when done.

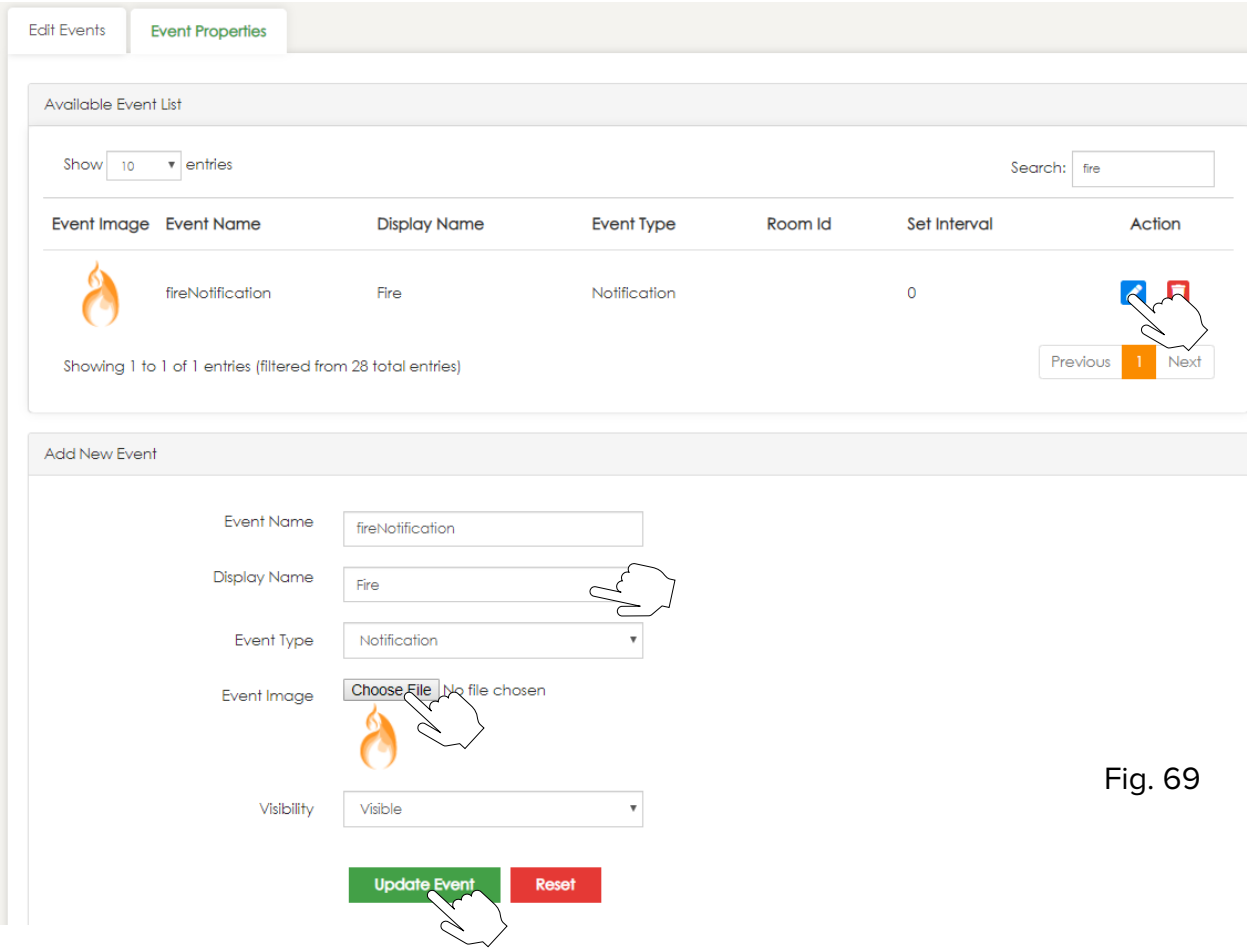
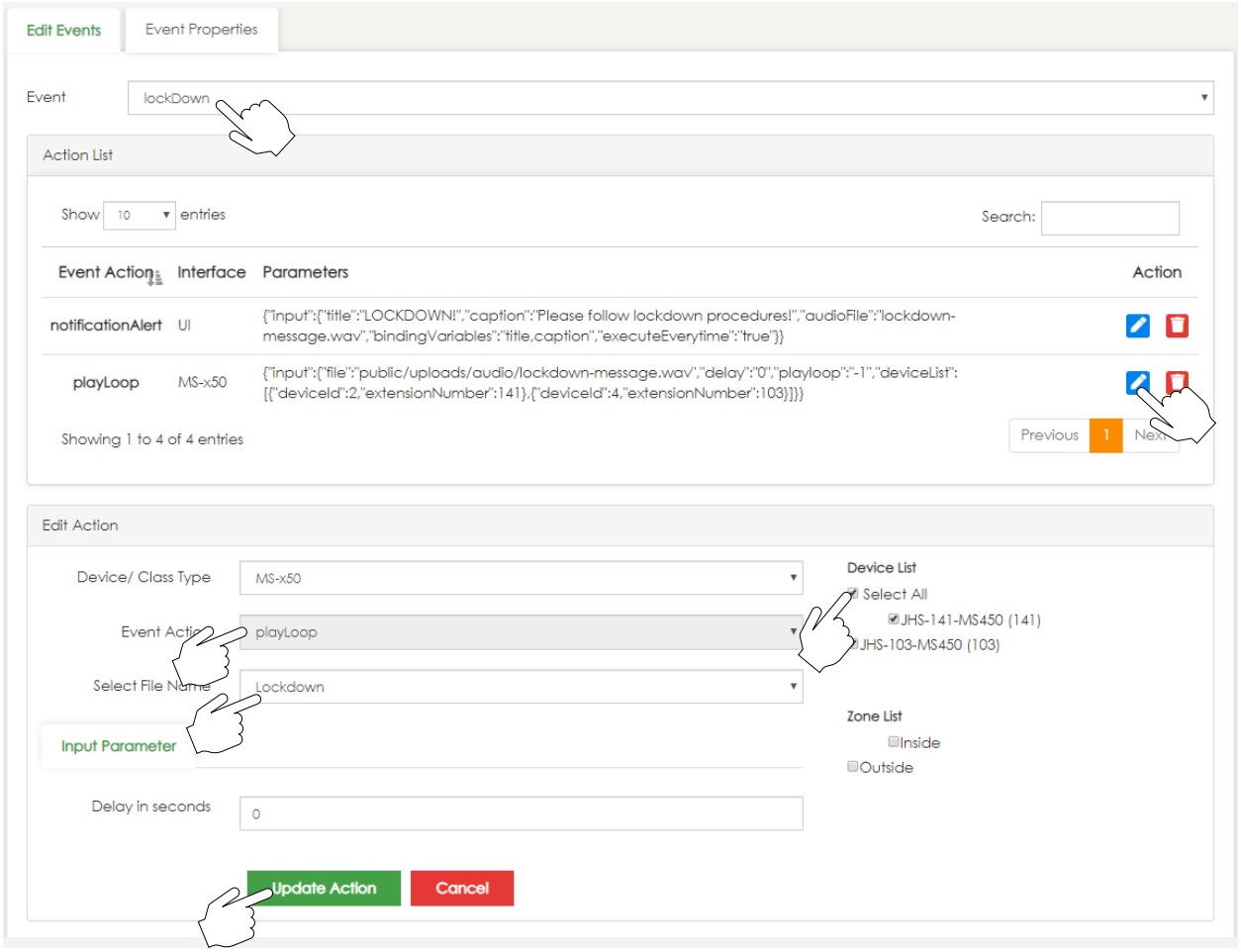


Fig. 69

Edit Notification Actions

The actions within a notification can also be edited to suit the site’s needs. Go to “Edit Events” to edit the actions. Select the event to modify (see Fig. 70 on next page), in this example “Lockdown.” Now click the pencil to edit the “Playloop - ms-x50” action. Choose the “lockdown message” file to play to all devices on a lockdown event. There are two types of “play” messages to the devices. “Play” will play the audio file once and then end, whereas “playloop” will play on a loop until the user manually stops the notification. Click “Update Action” with all the settings below and the action has been edited. Follow for any other notifications.

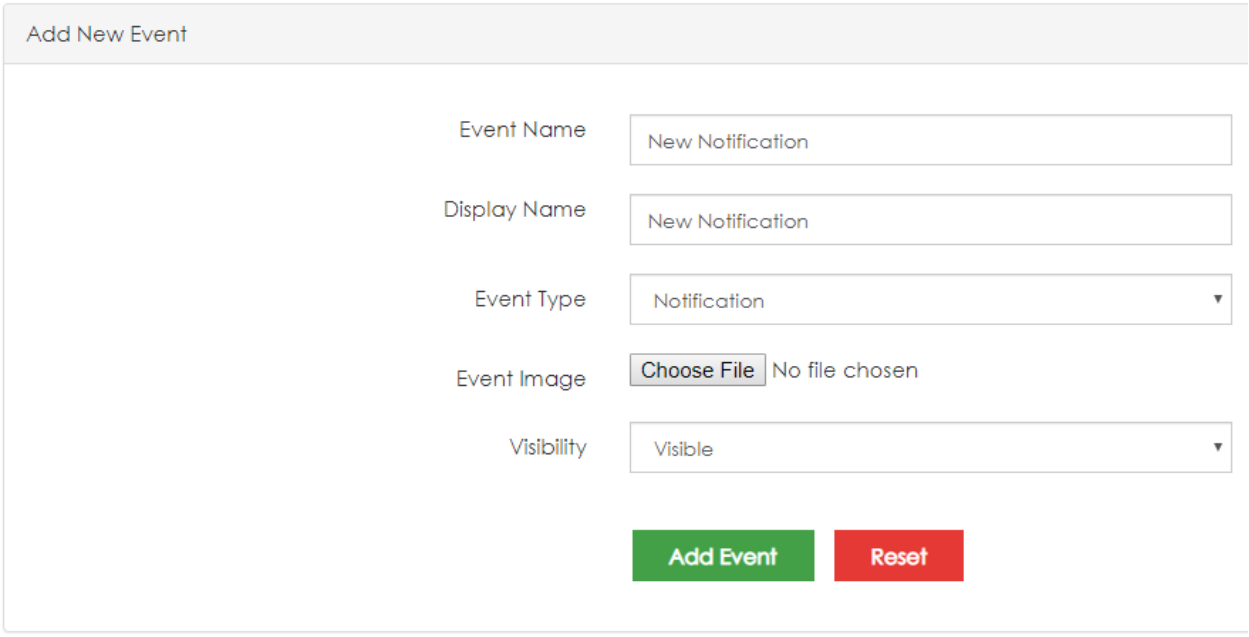
Fig. 70



Add Notification

Adding a new notification is very similar to editing. Navigate to “Event Properties.” Under “Add New Event” (see Fig. 71 on next page), add an “Event Name” and a “Display Name” then choose “Event Type” as “Notification.” Any of the “Event Type” notifications will show up on the notifications screen, so only add it if it can be used. Add an image and click “Add Event.”

Fig. 71



The event can now be selected under “Edit Events” (see Fig. 72). From there, follow the same steps taken above under “Edit Event” to add the notification event here, only for the newly added event now.

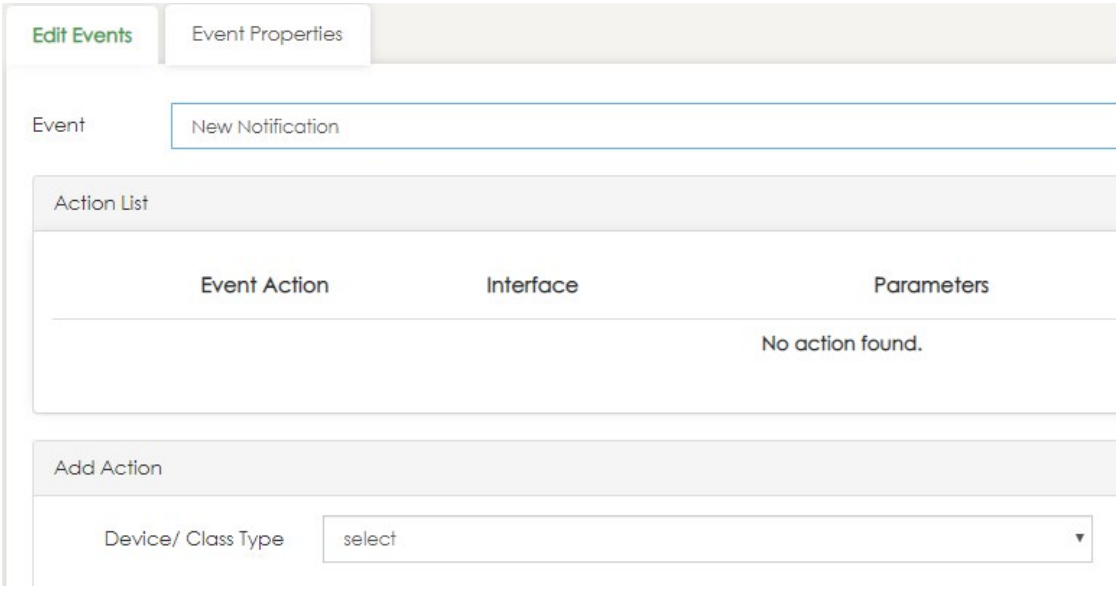


Fig. 72

SAFE Alert Configuration

The SAFE alert has some “out of the box” configuration already completed but can be modified to fit the needs of each school. Any additional requirements for SAFE Alerts can be programmed in the event engine of the EPIC System.

SAFE Alert Explanation and Options

The SAFE alert happens when a user presses the alert “F” button on their microphone (IR) or squeezes the two SAFE alert buttons located on each side of the pendant mic (XD). By default, the EPIC Console will display a map and any connected MS-1000s will alarm, giving an audible alert and a visual strobe. If there is a camera in the room, the EPIC Console will show live audio and video feed from the camera in the classroom, enhancing situational awareness during the alert and simplifying the staff’s surroundings so they can effectively handle the alert (see Fig. 73).

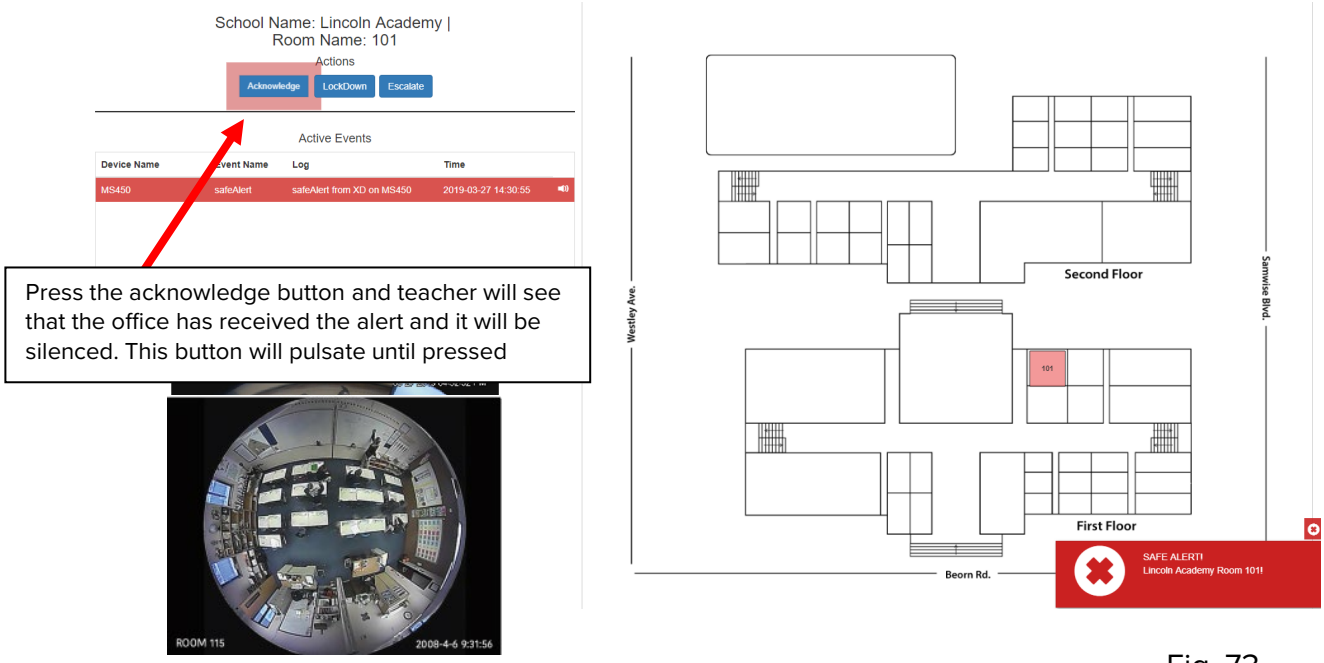


Fig. 73

Furthermore, additional options can be provided to notify users.

Text and email messaging can be setup to notify additional people or groups to the situation. Due to integration with the intercom system, pre-recorded calls can be placed to alert security office or local police. Lockdown can be initiated as well, including integration to other systems such as access control. There are many options to ensure the proper fit for the school’s needs and policies.

Separate user guides provide more instruction on the end user handling the alert scenario. Here, the setup of the SAFE actions will be covered.

SAFE Alert Event Configuration

Go to the Settings s and then Edit Events tab and select safeAlert from the dropdown (see Fig. 74). Notice that there is a nonpairedSafeAlert event as well, more on this in a moment.

Here, a safeAlert event can be seen. By default, there are two actions – alert the UI (EPIC Console or anyone else logged in via web browser to EPIC System) and alert the MS-1000.

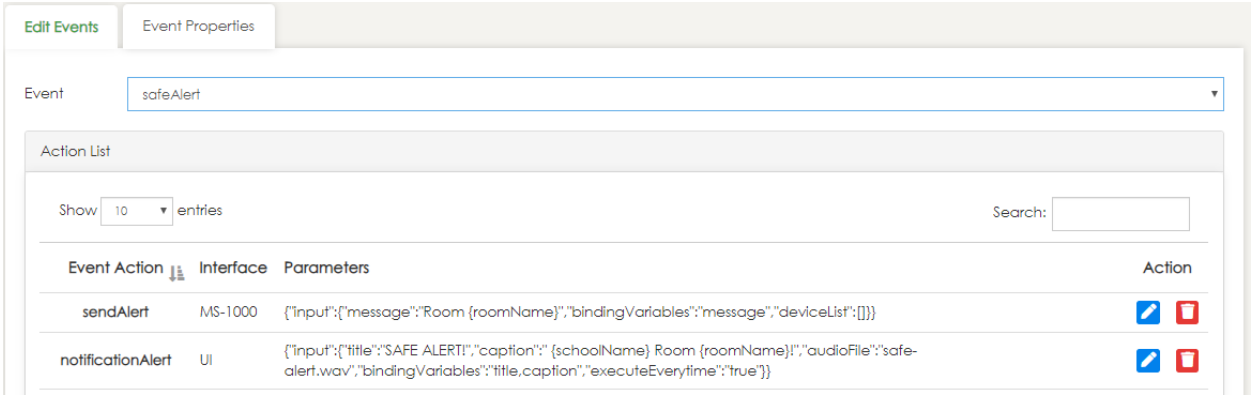


Fig. 74

UI Alert

Click the pencil icon to edit the UI notification first.

This will open the edit action window. Here, the audio file that plays (stock file or user uploaded file) can be changed. The message that appears during a SAFE alert can also be edited in this window. Note the use of variables, this makes the alert dynamic so the correct room that sent the alert can be seen. Use the reference below to use the variables (see Fig. 75) – **case sensitivity does matter.** Click Update Action when finished editing.

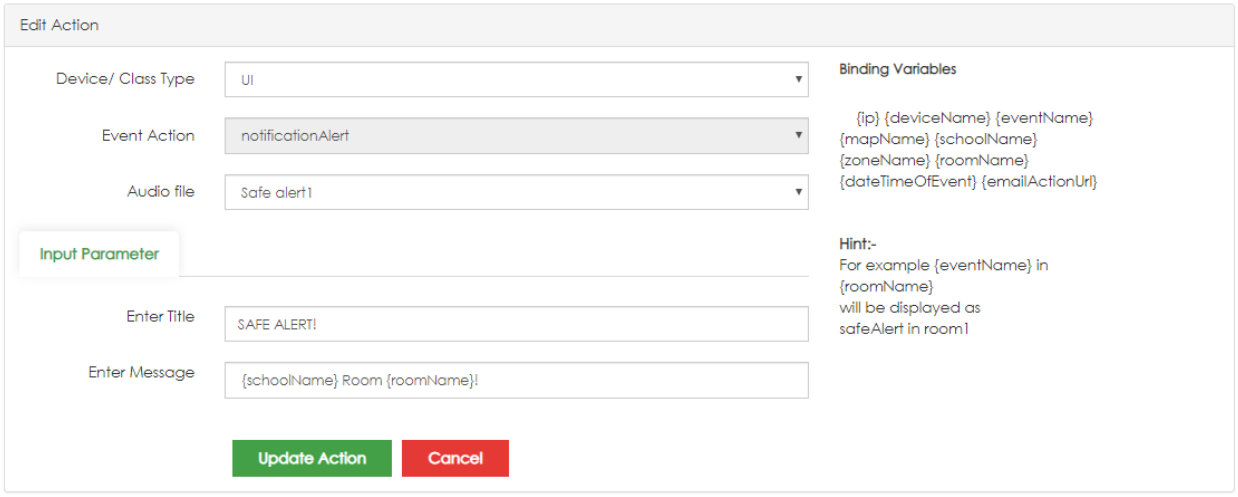


Fig. 75

MS-1000 Alert

The MS-1000 alert can be edited by clicking on the pencil next to it.

A custom message for the MS-1000 alert can be specified here (Note: **there is a 40-character limit**). The MS-1000 LCD display will show the message created here. The MS-1000(s) in which the alert is being sent must be selected. Once selected, click Update Action (see Fig. 76).

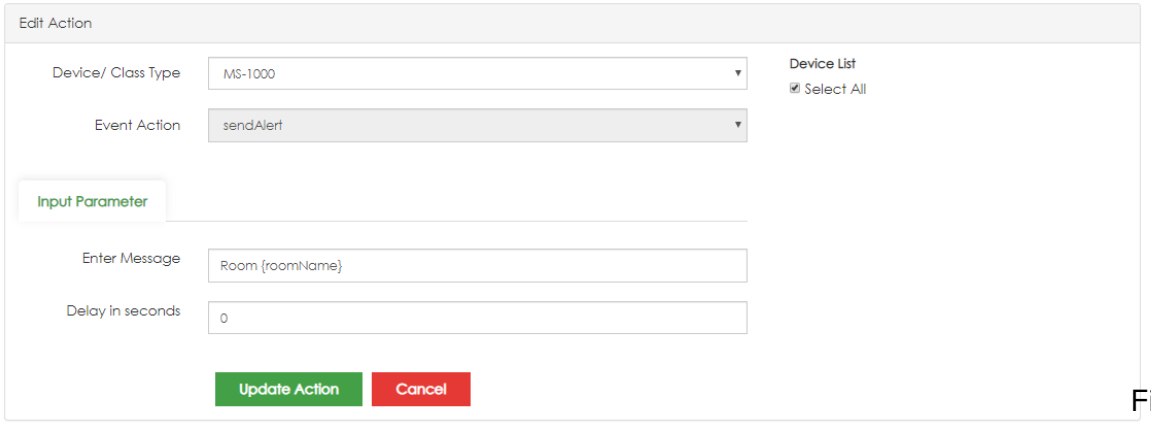


Fig. 76

Add Text or Email Messaging

Under the safeAlert event, the dropdown under “Add Action” can be clicked to add other events to be assigned to happen when there is a SAFE alert. Email and text messaging will now be reviewed.

Sending Email

Select “Message” for device/class type and then sendEmail (see Fig. 77 on next page). There is a pre-populated email template, which can be edited to fit the needs of the school. Once the subject and message are as desired, add recipient(s) by adding them to the field. Use a semi-colon to add multiple recipients. Click “Add Action” when completed.

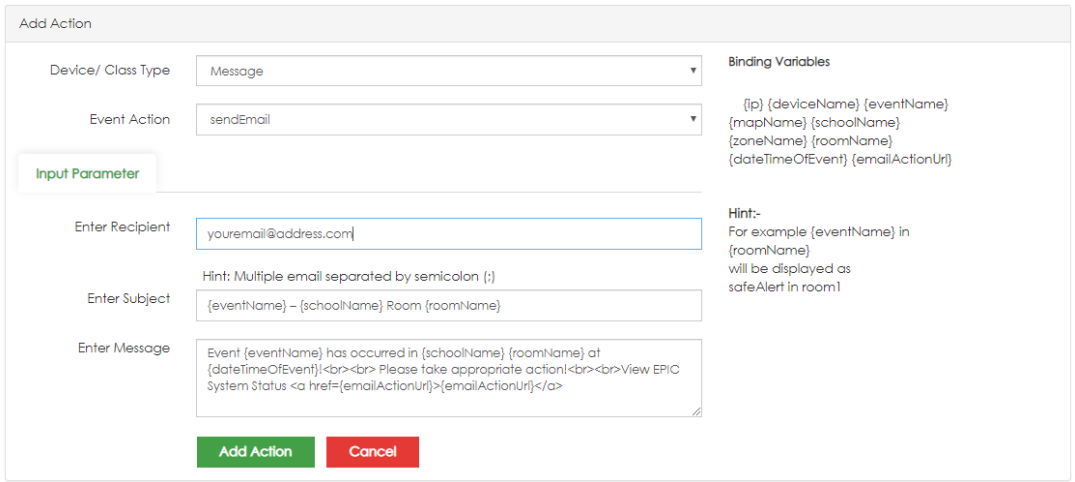


Fig. 77

SMS Texting

Select Message and then click sendSMS (see Fig. 78). The message and use variables can be edited just as before. Notice the phone number must be in the format as shown below.

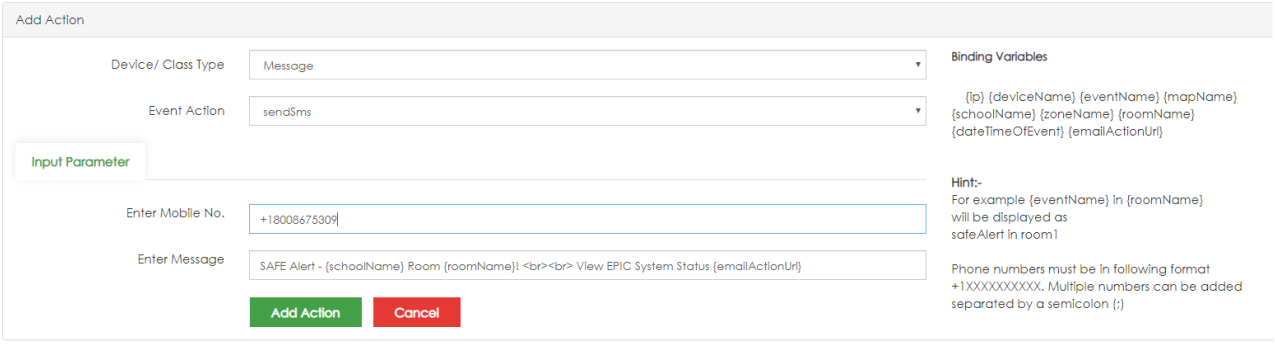


Fig. 78

Non-Paired SAFE Alert

If a school has XD microphones and teachers try to use their microphones to send an alert while not in their paired rooms, the microphone will switch into what's known as non-paired alert mode. The important thing is that the microphone will transmit its alert even when not in its paired "home room".

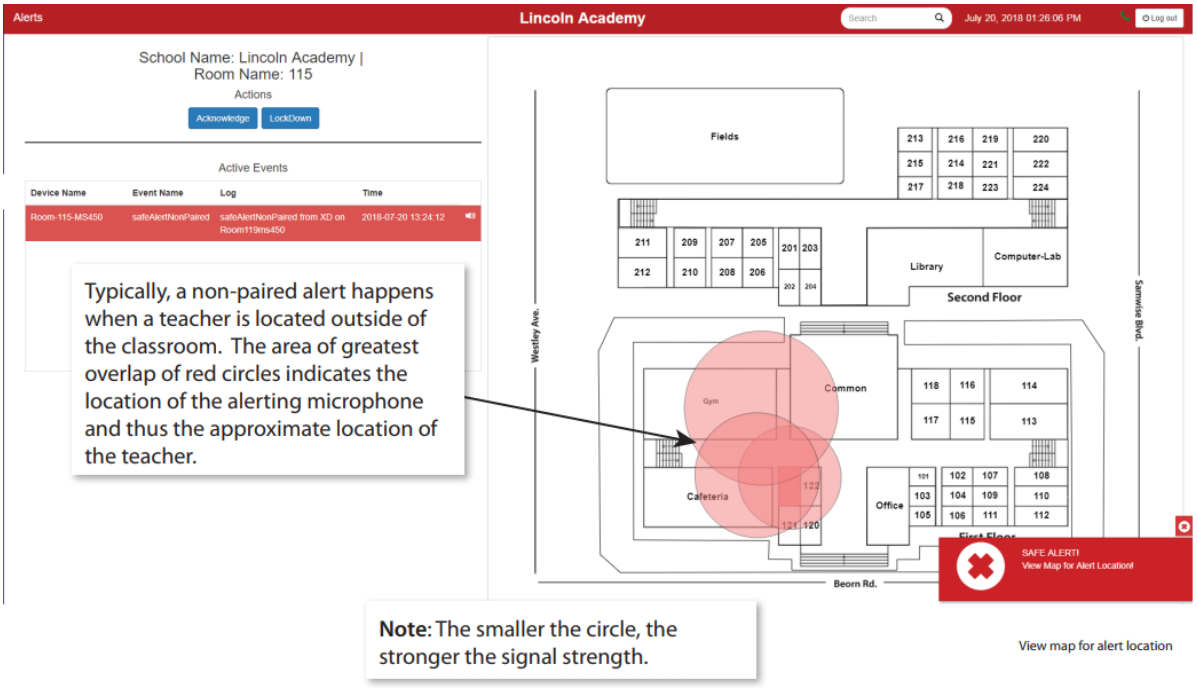


Fig. 79

There are critical factors when enabling non-paired alerts. The microphone will look for the closest receivers it can find and send that data with its alert message (see Fig. 79). This means multiple circles may be visible on the map. The room that is highlighted is where the strongest

signal came from and means that is most likely to be the closest place to where that alert is happening. When in non-paired mode, because the alert displays the probable location, the alert is not identified as being from a specific room.

There are different actions that may be setup in the event engine for a non-paired SAFE alert. For example, no cameras will pop up and a room number will not be included in the alert message. These non-paired events must be configured for non-paired alerts to work appropriately for a school. Going through the event and setting the appropriate messages that should be sent during the alert will ensure these events. Please remember the map scale, which is configured during map setup, is very important in regard to this non-paired alert as the circles are drawn based on the scale. Ensure that non-paired alerts are thoroughly tested to understand how to react appropriately and how to read the alert map in order to guide staff to the most appropriate location.

Adjust Classroom Volumes

Classrooms with the MS-450 and MS-500 amplifiers have the intercom module and the classroom audio module all built into one device. These amplifiers do not have any traditional physical volume controls. However, the volumes can be controlled in the system by going to Settings ⚙ and clicking “Classroom Volumes.” A window will pop up (see Fig. 80). Select the room to edit (it will only show MS-450/500s that are online) and then the volumes through the browser for each room necessary can be edited. The maximum for each input is 0 dB and -72 dB is the minimum. Click the speaker icon 🔊 to mute/unmute each input. Input 6 is the intercom/paging input.

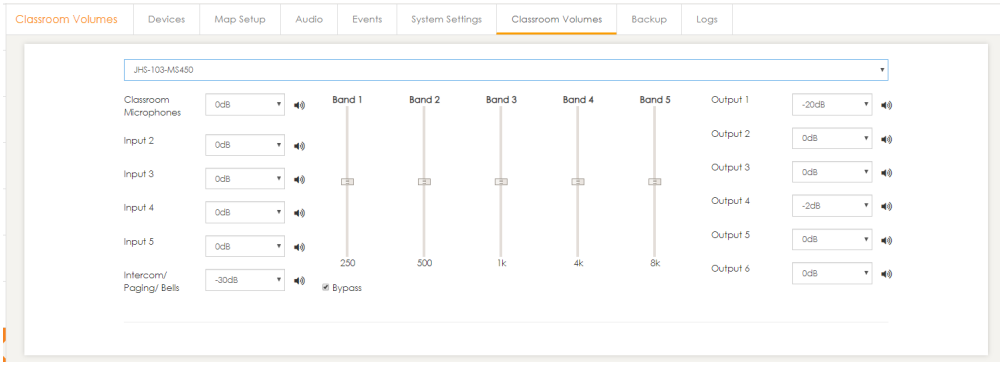


Fig. 80

System Configuration

Backend system configuration is done by going to Settings ⚙ then clicking “System Settings”. Consult Audio Enhancement if you are not sure of any setting here as it could impact the system negatively if done incorrectly.

LDAP

The system may rely on LDAP connection to log in the users and assign privileges. The LDAP settings are found under configuration. Enter the appropriate information for LDAP connection or update the username/password if credentials have changed and click “Save.” A test can be done by clicking “Test LDAP Connection,” (see Fig. 81).

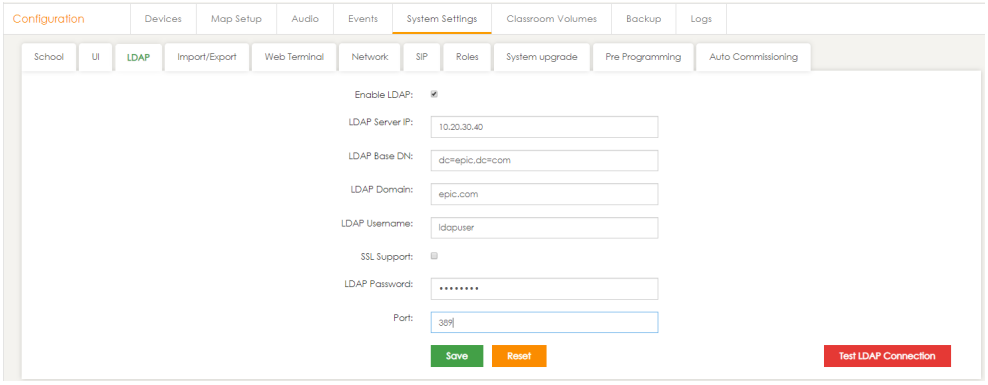


Fig. 81

Roles/Privileges

Whether LDAP is connected, or local users have been created, users are managed by role-based security groups. Go to Settings ⚙, System Settings, and then “Roles” to assign privileges (see Fig. 82).

First, map the security groups to the role each group has been permitted. Multiple groups for each role can be selected. For example, choose “Intercom Admins” group for the admin role and “Office Staff” for the Standard role. Teachers can be mapped to rooms if they are imported into the system and mapped to this group. Note: this mapping only occurs if LDAP is enabled. If local users are used, only the permissions and users list will show.

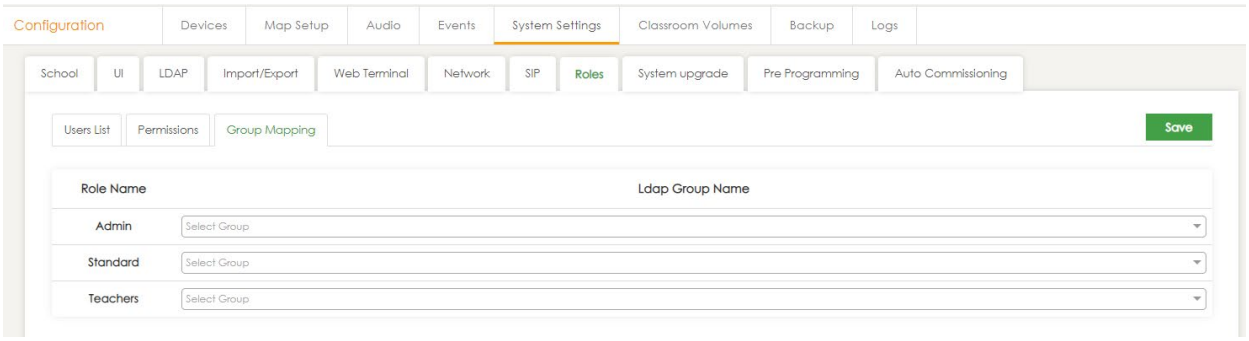


Fig. 82

Now, assign permissions to each role according to the permissions they should have.

Click “Permissions” and the permissions matrix will come up for each role (see Fig. 83 on next page). Note that “Guest” is a just another user role, that role could be used for a non-LDAP user, like a substitute receptionist.

Now, simply check the access for each user role to have. If a heading like “Home” is checked, it will check all the settings within that heading. Click “Save” once complete and permissions are updated.

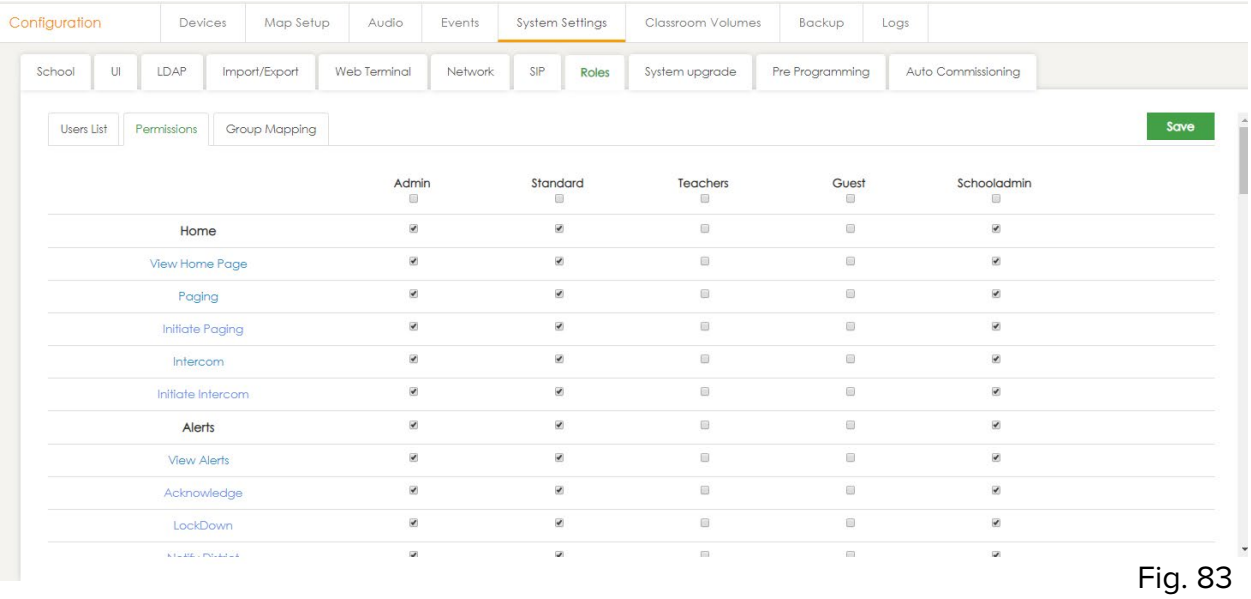


Fig. 83

General UI Settings, Date/Time

Go to Settings ⚙, then System Settings and then UI. Use this to set the time zone, 12/24 hour and Month-Day-Year or other date format preferences. Other settings, such as the default number of results on a page, as well as sets the default month and year for the calendar page are in this section also (see Fig. 84). The rooms are white and transparent by default, the UI tab also allows the administrator to define the room color and transparency should they find it appropriate. Note that the selection highlight color will always be blue and the SAFE alert highlight color will always be red. See time zone help document for additional instructions in time zone selection.

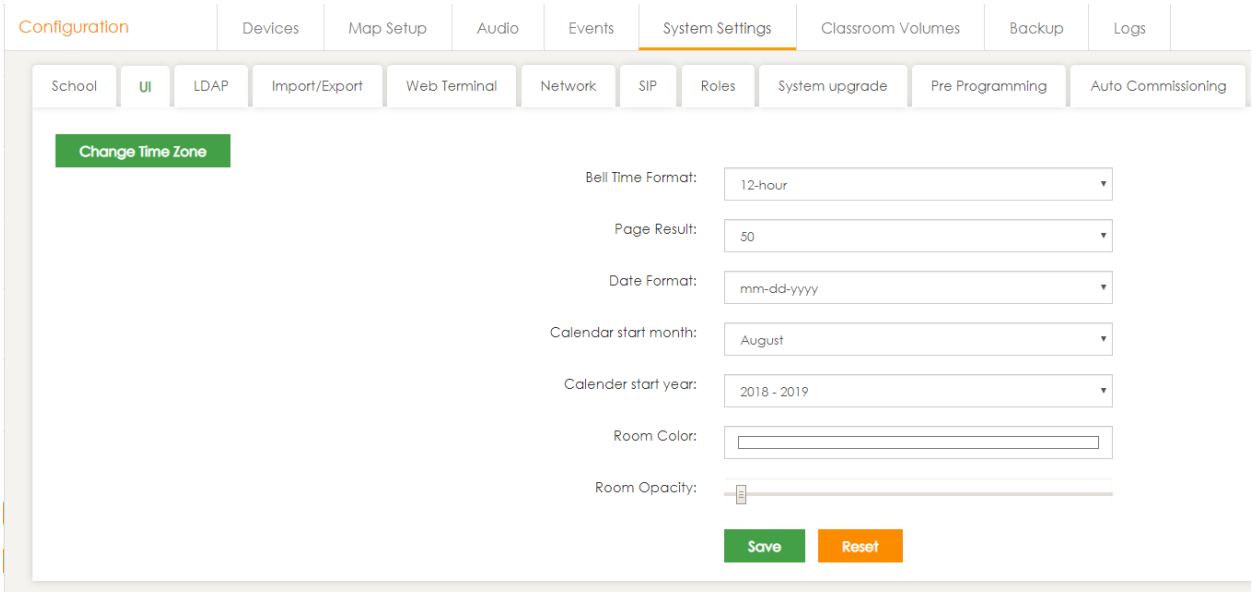


Fig. 84

Backup

The EPIC System server is a fully redundant system to ensure uptime and reliability, but it is always good practice to maintain backups whether for disaster recovery, data protection and integrity, or as rollback point for incorrect configuration or failed updates. The EPIC System has an integrated backup function to allow a backup to a network share (SMB/CIFS). Follow these steps to setup backup.

Setup

Navigate to Settings ⚙, then click on the “Backup” tab (see Fig. 85 on next page).

Reference below guide to setup for use in school’s environment. Ensure “Save” is clicked when done.

Frequency

Backups can automatically run on a daily or weekly basis. If Weekly is chosen, a second choice will appear asking for which day of the week it shall run. Backups will always run at midnight.

Backup Location

This should be the school’s remote network location (SMB/CIFS) which is the target for the backup. It should be formatted as //[hostnameorIP]/[shareName]

Username and Password

This should be the school’s Username and Password used to authenticate for the backup location.

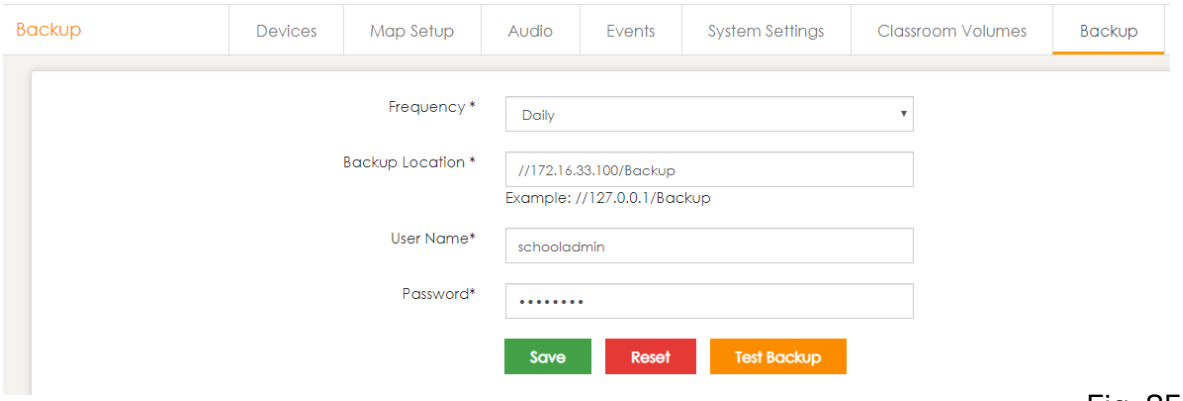


Fig. 85

Test Backup

The backup configuration can be tested by clicking “Test Backup”. This will perform a manual, immediate backup to the location. NOTE: EPIC System will say “test completed” but this does not actually validate the backup location. The backup location should be checked to verify the backup was successful.

Test function can also be used as a manual backup if a system update or multiple configuration changes are being performed so there is a restore point to revert to.

The backup will be a zipped file labeled epicsystem_backup_[date]_[time]

Restore

To restore a backup in case of scenarios above, follow instructions below. Note that a backup and restore should normally be performed within the SAME version of EPIC System. If an update caused a failure, contact Audio Enhancement Support (800-932-3578) should the restore not work as expected.

Navigate to Settings ⚙> System Settings > Import/Export.

Next to “Import Zip” there is a location to choose file. This will open the file explorer. Find and select the backup to be restored (see Fig. 86).

Click “Import Zip” button.

A success message should appear. This process may take some time. There is a short countdown and the restore should be complete (see Fig. 87).

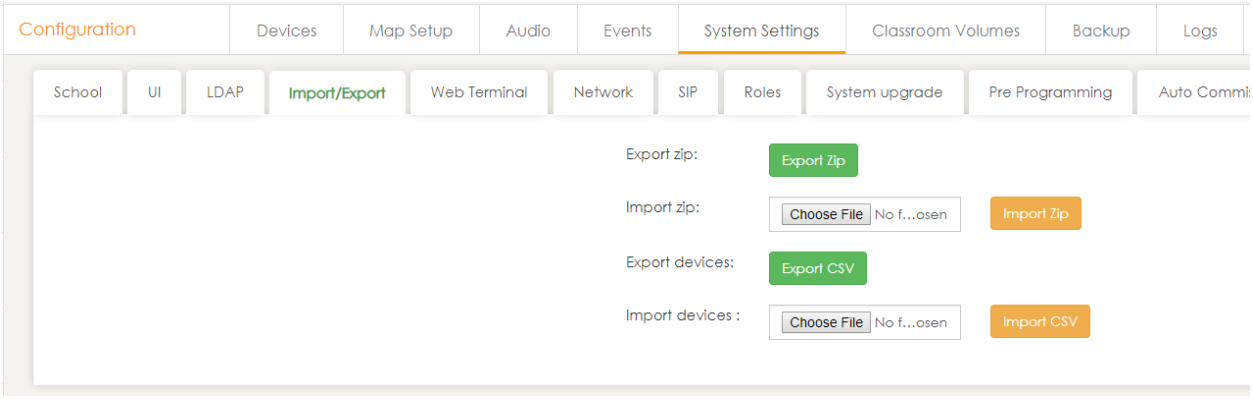


Fig. 86

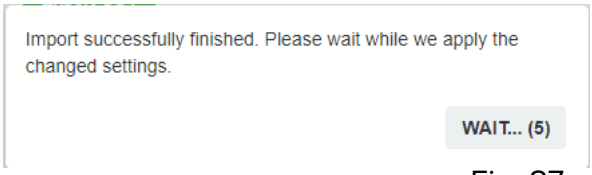


Fig. 87

Commissioning and Quality Check

As of EPIC System 1.5, there is a quality check/commissioning module built into EPIC System. This provides technicians to test the readiness of all the features of the system at any time. It is a great tool when the system is first installed, but more than that is very helpful to test the system in subsequent years. Audio Enhancement recommends running a session at least once yearly to ensure all functions perform as expected in all rooms.

Navigate to Settings > System Settings > Auto Commissioning tab. This is the commissioning home screen (see Fig. 88 on next page). Past sessions can be viewed by clicking the report icon, showing the results from previous testing sessions. Click “Start a new session” to turn on commissioning mode and begin testing. **NOTE: While the system is in commissioning mode, normal system operations including calls from classrooms and SAFE Alerts will not work.**

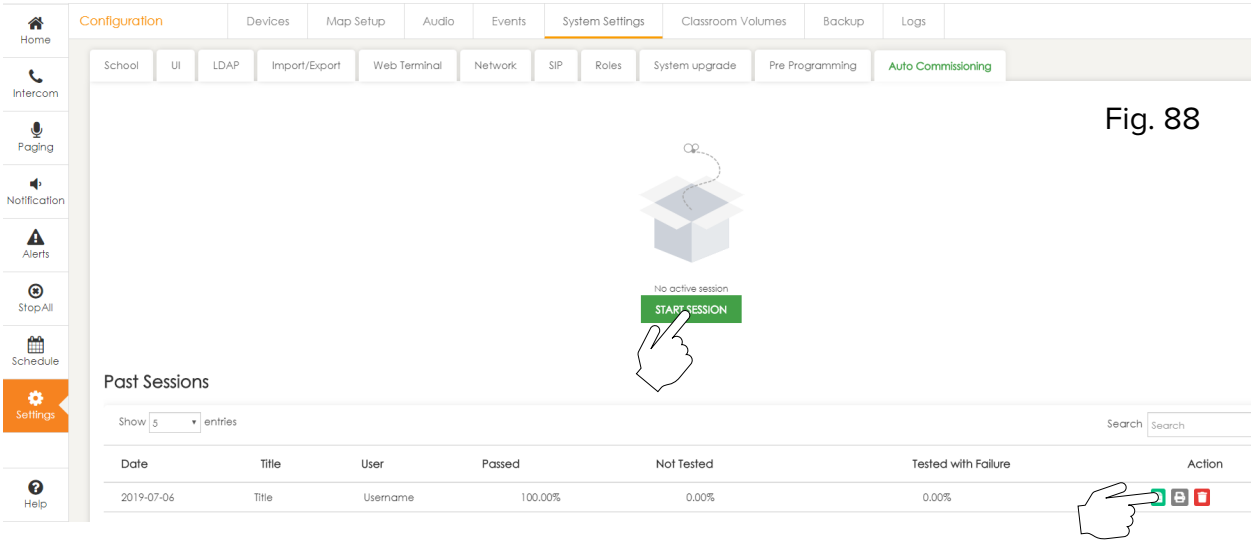


Fig. 88

The system will reload in Commissioning Mode – the user can see the notification at the top right of the screen (see Fig. 89). Navigate back to the auto commissioning tab and click “start a new session”. The user can choose 5, 20, 50 or 100% of rooms to be tested. The system will randomly select the rooms. Click “Go”. **Note: the first session will require 100% of rooms.**

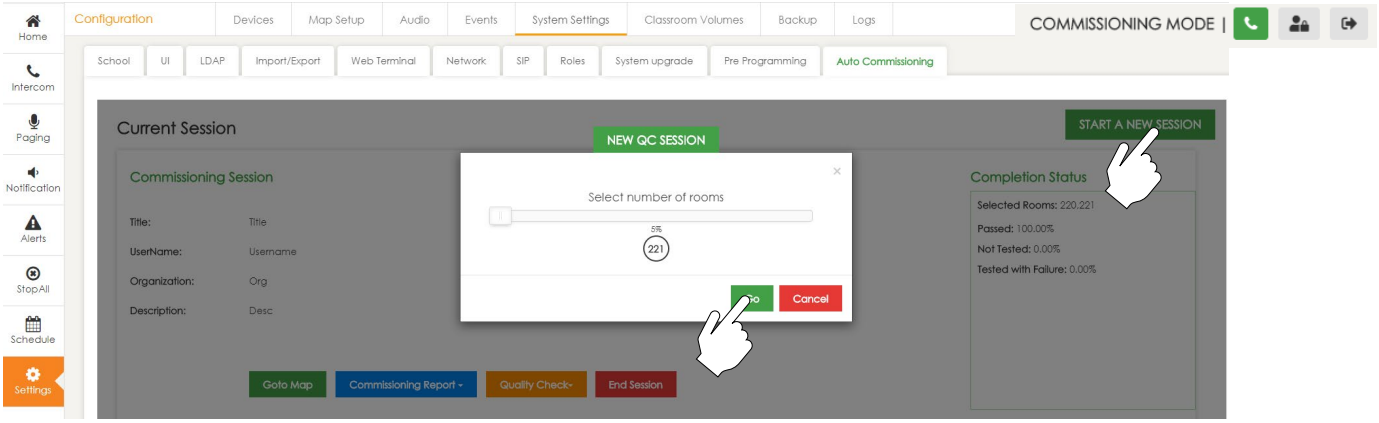


Fig. 89

Miscellaneous Tests

These are general system wide tests that do not apply to specific rooms but the system as a whole, such as the non-paired SAFE Alert – testing the alert if teachers are away from their rooms. Some of the tests may not be applicable, simply check “yes” to the questions to mark them as passed if they do not apply. Otherwise, test each capability accordingly and respond with the results. The miscellaneous tests pop-up will prompt each time the user is on the map page in the commissioning session until they have been completed. Click “Do Tests” to perform the miscellaneous tests or skip for now to move to the individual room tests. User can press the “Miscellaneous Tests” button on the map to perform these tests as well.

Room Tests

The normal EPIC System map will show up under the commissioning tab embedded within a smaller frame (see Fig. 90). Note that users will need to scroll to see entire map and if in a QC session with less than 100% of rooms being tested, only the rooms the system has chosen will show up on the map. The rooms will display depending on their current tested status. Blue means they have not been tested. Red means they have been tested and failed at least 1 test. Green means that 100% of tests were passed. When a user clicks on a room, it will launch into a specific set of tests for that room, instead of performing intercom or other functions while in commissioning mode. A dashboard of current overall testing status shows to the right of the map.

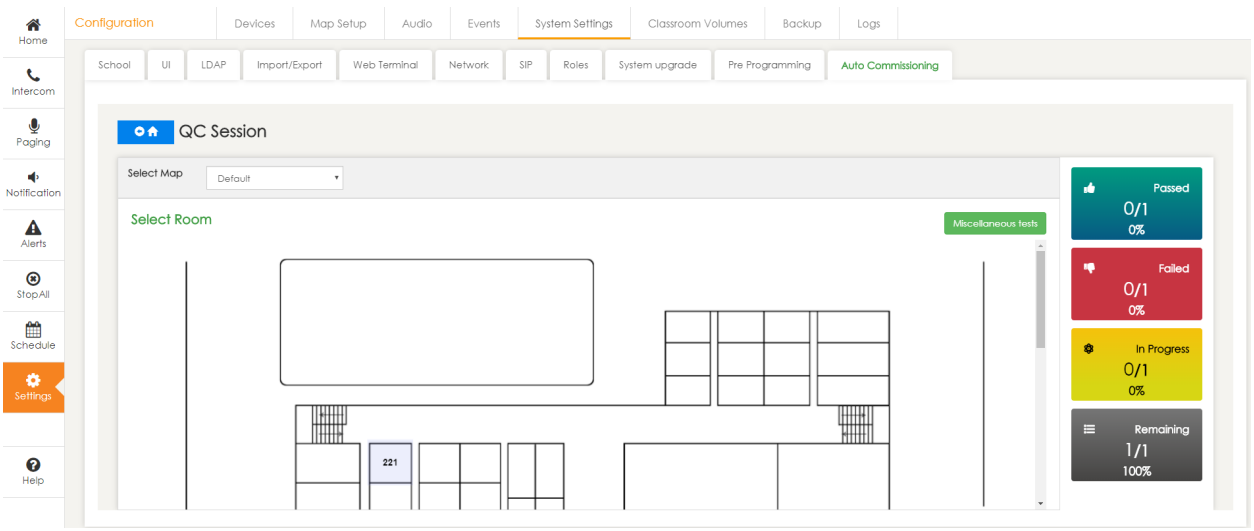


Fig. 90

When the user clicks the room, testing will immediately start based on the devices and configuration in that room. Someone must be in the room physically to perform these tests and may need the microphones paired and ready in that room. Simply follow the instructions for each test and answer the questions as appropriate. Note: if any questions appear that don't apply to the room, it may be necessary to answer Yes to the question to move on marking that room as "passed".

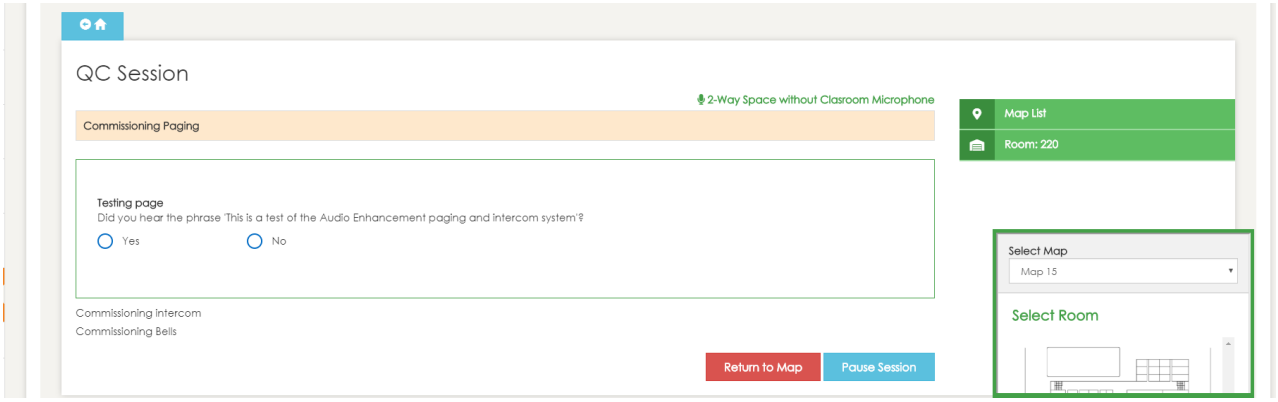


Fig. 91

If all tests pass successfully, the room will show a success message and be marked green on the map (see Fig. 91). User can click "back to map screen" to view the overall status and select another room (see Fig. 92). There is also a small map preview in the bottom right hand corner (see Fig. 93). Rather than returning to the map, the user can hover over the preview and jump right to another room by selecting it here.

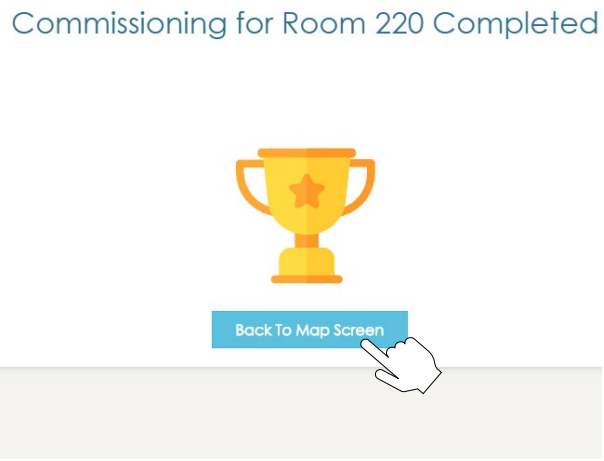


Fig. 92

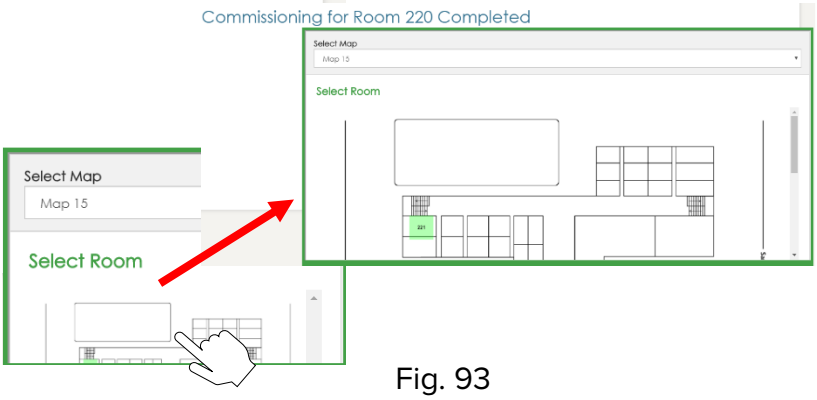


Fig. 93

If any tests fail, their sections will show up as red. Even if only a single test fails in a room, the entire room is considered failed and will be marked RED on the map. The user can check and fix any issues then click the room again and see the sections that need to be passed. The user can click the section to retry (see Fig. 94). All previously passed sections will not need to be re-tested.

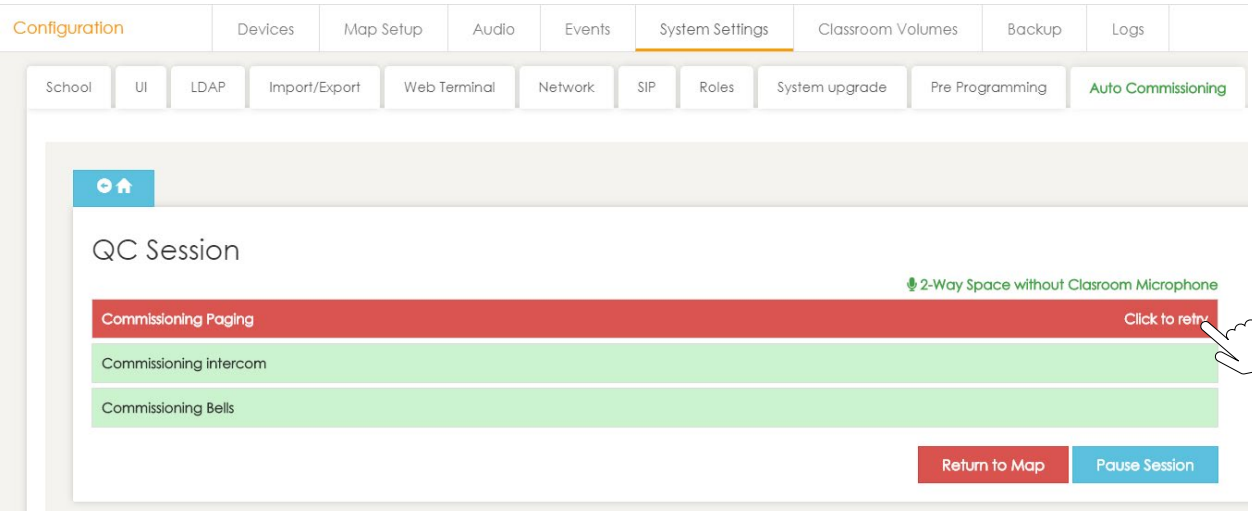


Fig. 94

Fig. 95: View of a failed room on the map, click the room to retry the failures.

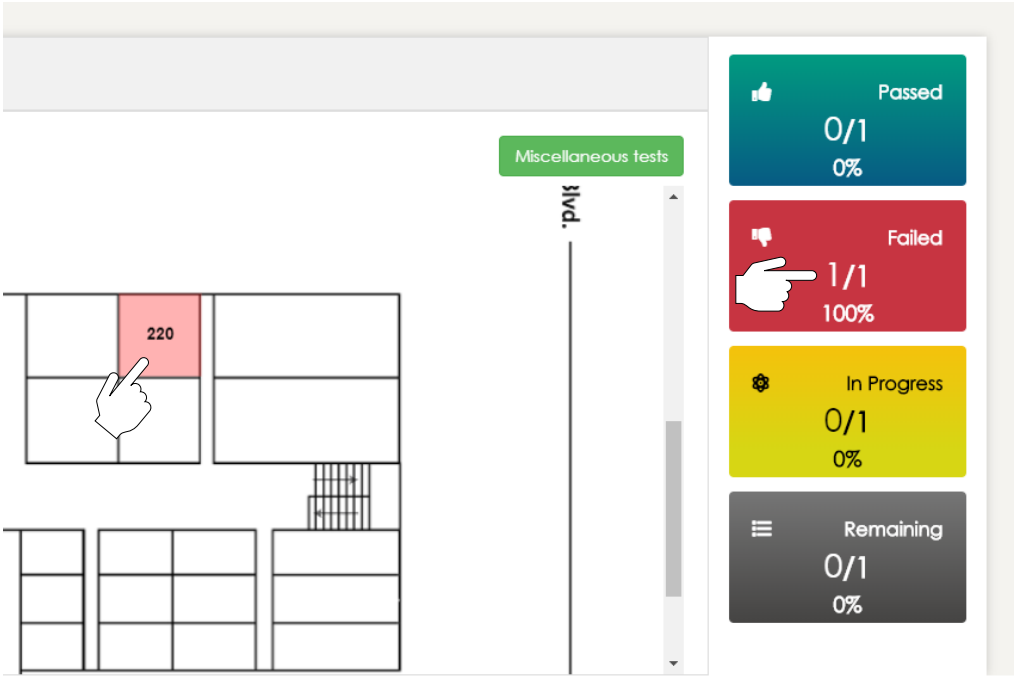


Fig. 95

Fig. 96: View of a passed room on the map. No further action needed on green rooms.

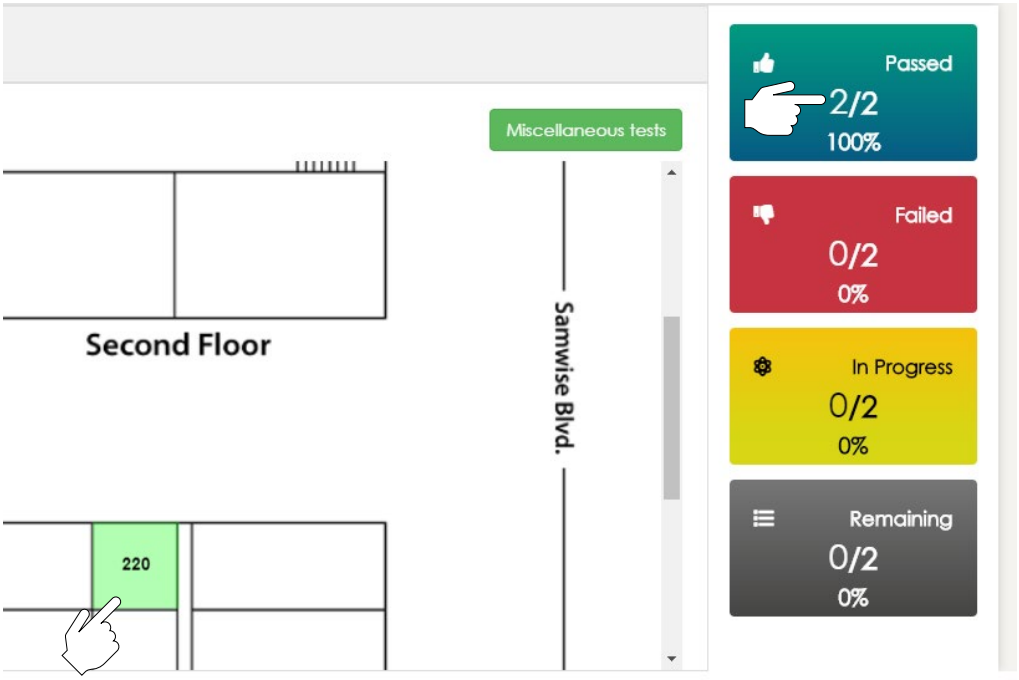


Fig. 96

Reports and End Session

When all tests (including the miscellaneous) have been passed, the user can click the return to commissioning home icon to return to the commissioning home screen. Here the user can

download the session reports or end the session. Start a new session will archive the current session (available in “past sessions”) and begin a new QC session (see Fig. 97).

Click “End Session” to exit commissioning mode and return the system to normal operation.

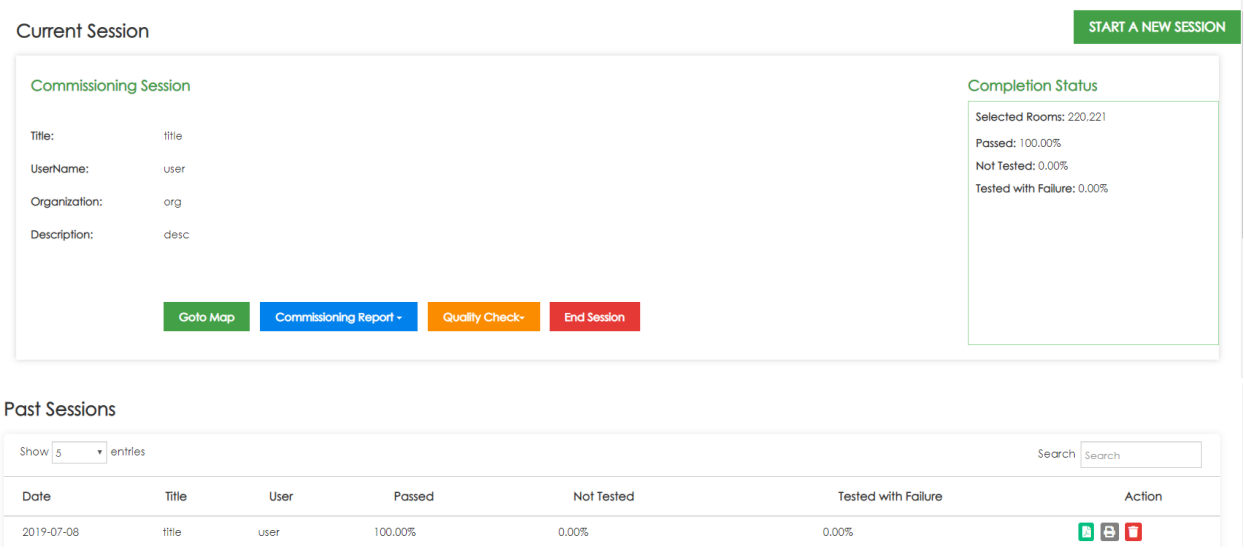


Fig. 97

Troubleshooting

EPIC System has some helpful troubleshooting information built right in. Below are a few tools to use in case of trouble – some of these may have already been covered in the manual.

Device Status

Device status is one of the most helpful indicators of success for the system. There are two helpful methods to quickly see device status. First, if a device is offline, the room it is assigned to will show up as yellow on the main EPIC System map. This will indicate immediately to the end user that something is wrong with that room so something can be done to fix it.

Additionally, within the devices menu there is a status icon that shows RED/YELLOW/GREEN depending on status. Red is completely disconnected. Yellow means that some data expected is not coming and Green means that all systems are go. If an MSX device is yellow and won’t clear but doesn’t physically have an XD/TLD receiver ensure “None” is checked in the device or else it will give this error as it expects the receiver to respond and sees this as a trouble scenario!

XD ID Check

This can be done using the “Query All XD” on the main devices page or after clicking edit on a single device. It will send a command all the way to the endpoint XD receiver, get a response back and show it. If this returns successful, it will be known that all programming and wiring is set and the devices can pass good data. This is very helpful.

QC

As seen in QC section, tests can be performed to see what components are or aren't working within a room. This can be helpful information to diagnosing any problems in the room.

Devices

When all else fails, go to the endpoint devices themselves. The IP listed in the devices table is a hyperlink and the user can login directly to the devices to see what's going on. Try to ping the devices if the web browser doesn't pull them up and verify the device is online. If able to access the web interface and login, the devices show some helpful information on the "Home" page. Even though the devices are managed via EPIC System, there are rare cases such as incorrect authentication or configuration mistakes or incorrect mapping of a device where checking the device itself can point the user in the right direction.

Registration Status

This displays the registration status for a device to EPIC System. Essentially, whether or not the device is ready to receive bells, paging, or intercom messages.

Red means failed registration: could be wrong SIP server, extension # or password (see Fig. 98a)

Green means successful registration. Calls should now be able to be made (see Fig. 98b).

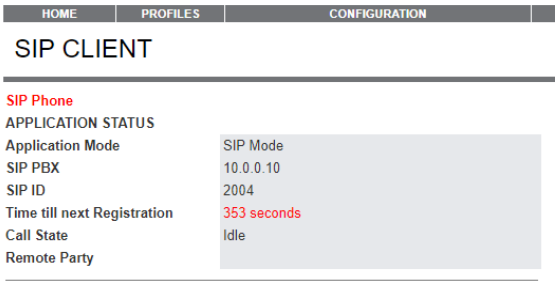


Fig. 98a

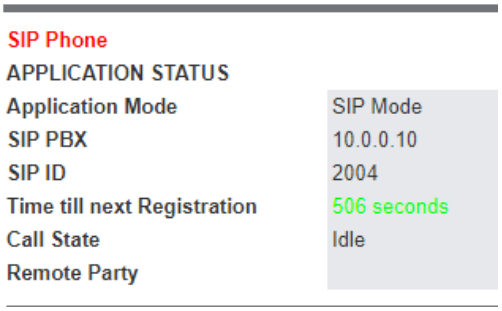


Fig. 98b

Call State

This is the status of the network signal when in a call or receiving bell/notification. This can be helpful when troubleshooting issues like "not getting bells". If status is seen here but no audio in room, it is likely to be an analog issue such as speakers not being successfully wired, a volume setting problem or a muted input.

Idle = No active call

In Active Call = Device is in a call

"Remote party" - shows the user or extension who is connected.

Playing Notification Message = Device is receiving a bell or pre-recorded notification.

See Fig. 99a-c on next page for reference:

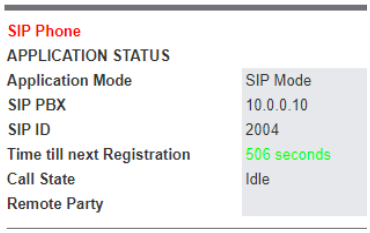


Fig. 99a

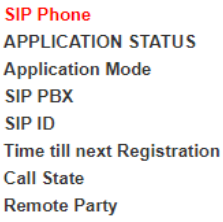


Fig. 99b

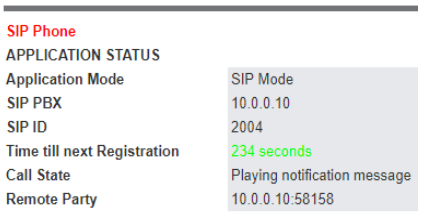


Fig. 99c

IO Status

The home page on device web interface will show if a contact closure is active as seen in Fig. 100. Green is active, grey is inactive. If a call isn't made when button is pressed or emergency button on wall plate doesn't work, this is a great place to check to ensure that the wiring is correct and the device knows it is receiving the contact closure properly.

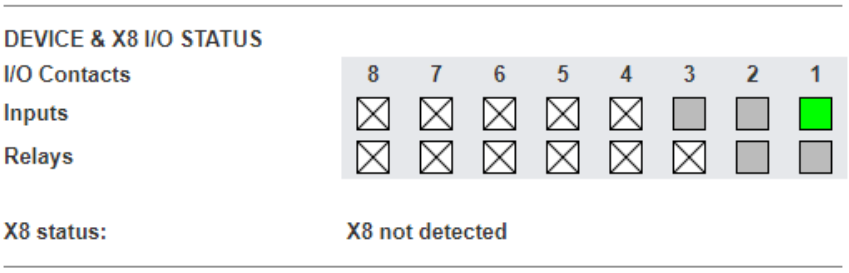


Fig. 100

Logs

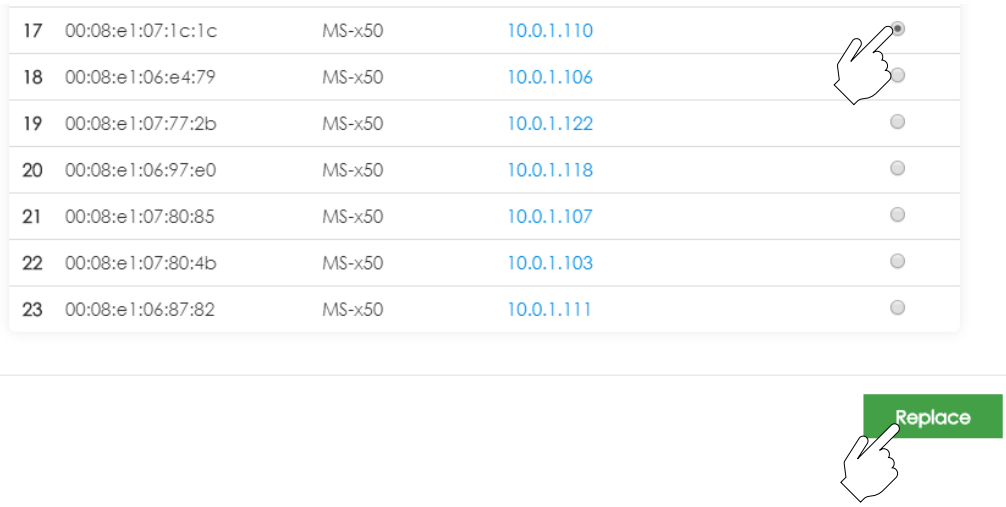
There are helpful logs under Settings > Logs. Additional logging for the SIP calls can be found under Settings > System Settings > SIP > Asterisk Logs

The logs take some nuance and understanding to read as there is a lot of data. The logs can be searched looking for a specific word or IP as needed. Logs can also be exported to Excel.

Duplicate Device MAC

If a RED device comes up in the "Unknown Devices" during discovery, it means EPIC has found a device with the same MAC Address but DIFFERENT IP ADDRESS in discovery as one of the devices in the database. This can happen if the IP is manually changed on the device.

Use the "Replace Device" feature and pick the device with the same MAC from the device list. This duplicate entry will be replaced and resolved.



Help Menu

Press the Help icon at the bottom left of the screen at any time to get help for that page. The content is also searchable for ease of finding any instructions (see Fig. 101).

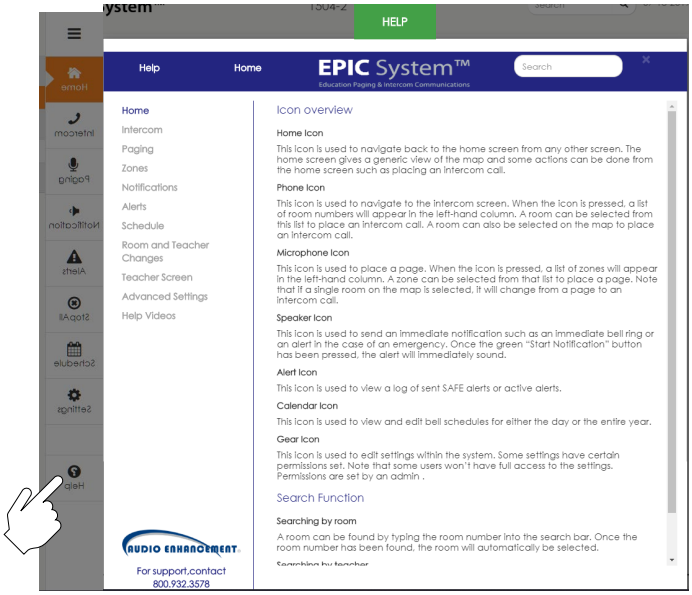


Fig. 101

Within the help menu there are several helpful user and administrative videos pre-loaded, click "Help Videos" to get user-friendly, visual help right on the screen.

Support

If you have any questions or need more information, please feel free to reach out to Audio Enhancement. Get support on a technical issue:

800.932.3578

www.AudioEnhancement.com/Support/

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