GAI-TRONICS®
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Elemec3 IP Access Panel

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Confidentiality Notice

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General Information

The E3 (*Elemec3*) IPAP (IP Access Panel) is a software version of a physical access panel supplied by GAI-Tronics to interact with E3 systems. The IPAP application is installed on a Windows 10 device running a minimum version 1803 build 17134. Access panels provide high level control of an E3 system from any location running the IPAP.

Licensing

E3 architecture uses concurrent connection licensing allocated to the E3 controllers for metering IPAP connections. PINs (Panel Identification Numbers) are assigned to IPAP configurations when they are created in E3 Console. Each license allows one connection to a dedicated controller from any IPAP configuration, designated by its PIN. However, once a PIN is in use, no other IPAPs can connect using that same PIN.

Additional connections using other PINs require additional connection licenses. If multiple connections are necessary from identically configured access panels, then IPAP configurations need to be created with distinct PINs for the number of identical panels required and the number of connection licenses installed on the controller needs to meet or exceed the total number of connections required.

When a user chooses to connect a defined IPAP, they simply enter the PIN provided for the panel they wish to connect to. An operator can be provided with multiple PINS, allowing for management of different processes or multiple operators can be given the same PIN for shared responsibilities.

In networked installations or for sites with multiple separate E3 systems, IPAPs can be created on separate controllers using identical PINs when defining the configurations in E3 Console. The access panel configurations on different controllers can be identical or unique for a give PIN, depending upon access and control requirements in multiple E3 system installations. Each controller must have connection licenses for the number of connections that may be needed.
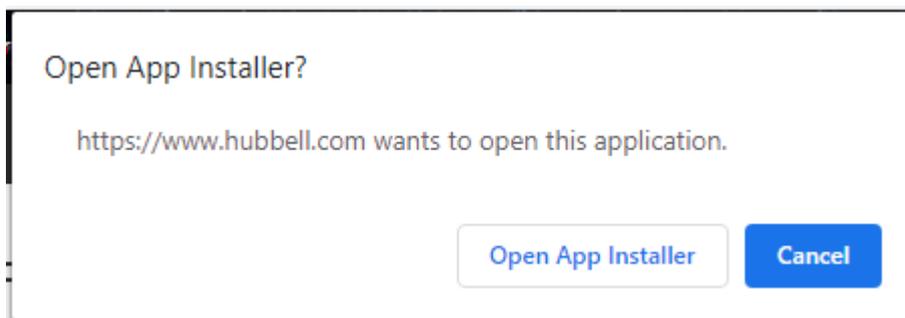
Installation

The IPAP software requires side-loading of applications on the Windows device where it will be installed. The minimum system requirement for the IPAP software is a Windows 10 device running Version 1803 Build 17134. To install and run the IPAP software on a Windows 10 device:
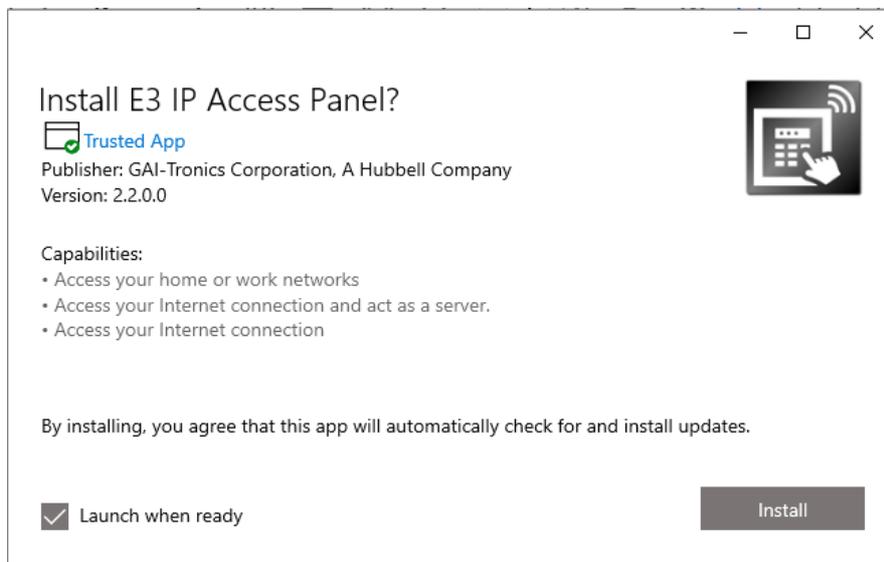
1. Install the IPAP software from the following link: https://www.hubbell.com/gai-tronics/en/elemec-download.

2. Click INSTALL THE ELEMEC 3 ACCESS PANEL button.

3. The Windows Application Installer dialog box opens:


4. Click OPEN APP INSTALLER

5. Click the INSTALL button and the IPAP application installs.

The IPAP application can be launched immediately or later from the Start menu.

Network Adapter Configuration

When multiple network interface connections are available and active, the IPAP will only function on the NIC (network interface card) designated as #1 on the metric interface setting screen. Below is the process to set the metric interface for the applicable NIC:

1. Click the START MENU button.

2. Click SETTINGS.

3. Click NETWORK AND INTERNET.

4. Click the CHANGE ADAPTER OPTIONS option under CHANGE YOUR NETWORK SETTINGS.
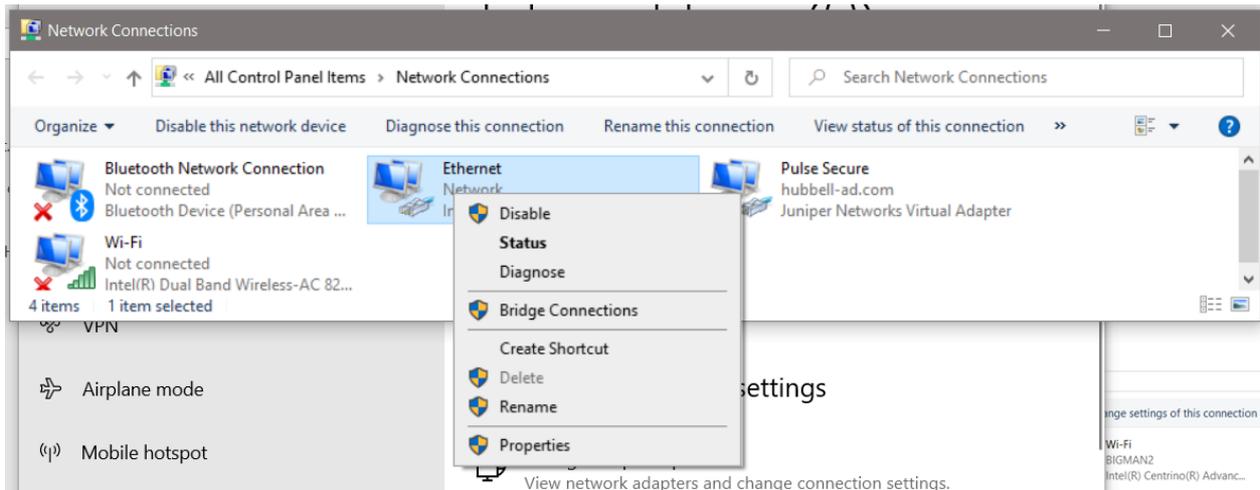
5. Right click the network adapter on the same LAN as the IPAP.

6. Select PROPERTIES from the dropdown list.
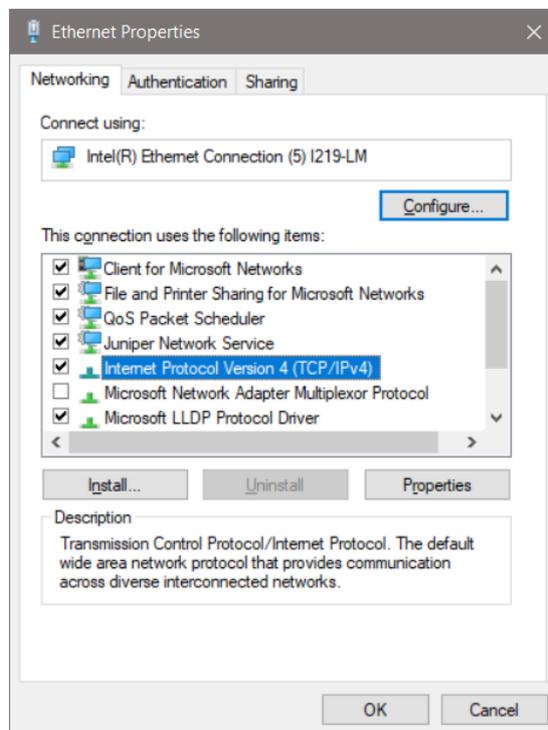
7. Double click INTERNET PROTOCOL VERSION 4(TCP/IPv4) from the list of services and protocols (Do **NOT** deselect the checkbox.) or single click it and then click the PROPERTIES button.

8. Click the ADVANCED button at the bottom of the GENERAL tab.

9. Uncheck AUTOMATIC METRIC and enter 1 in the INTERFACE METRIC: field.
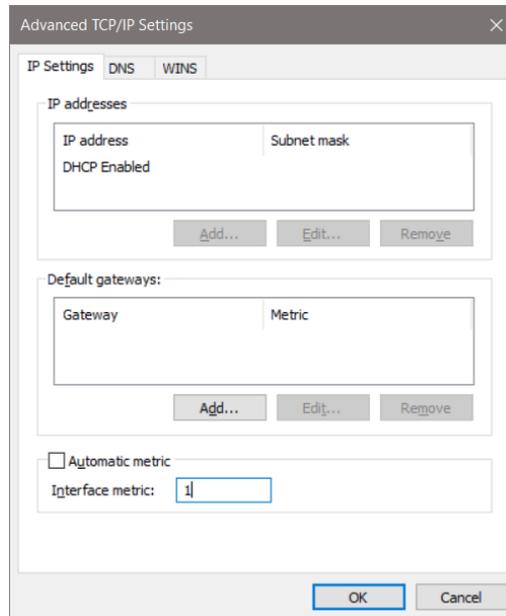
10. Click OK, OK, OK to save and exit back to the SETTINGS window.

Operation

1. Launch the IPAP application from the start menu or taskbar shortcut.

   The taskbar shortcut will not initially exist after installation and must be manually added from the icon on the Start menu. The following splash screen is displayed while the program loads:

   The PIN (Panel Identification Number) entry screen displays:
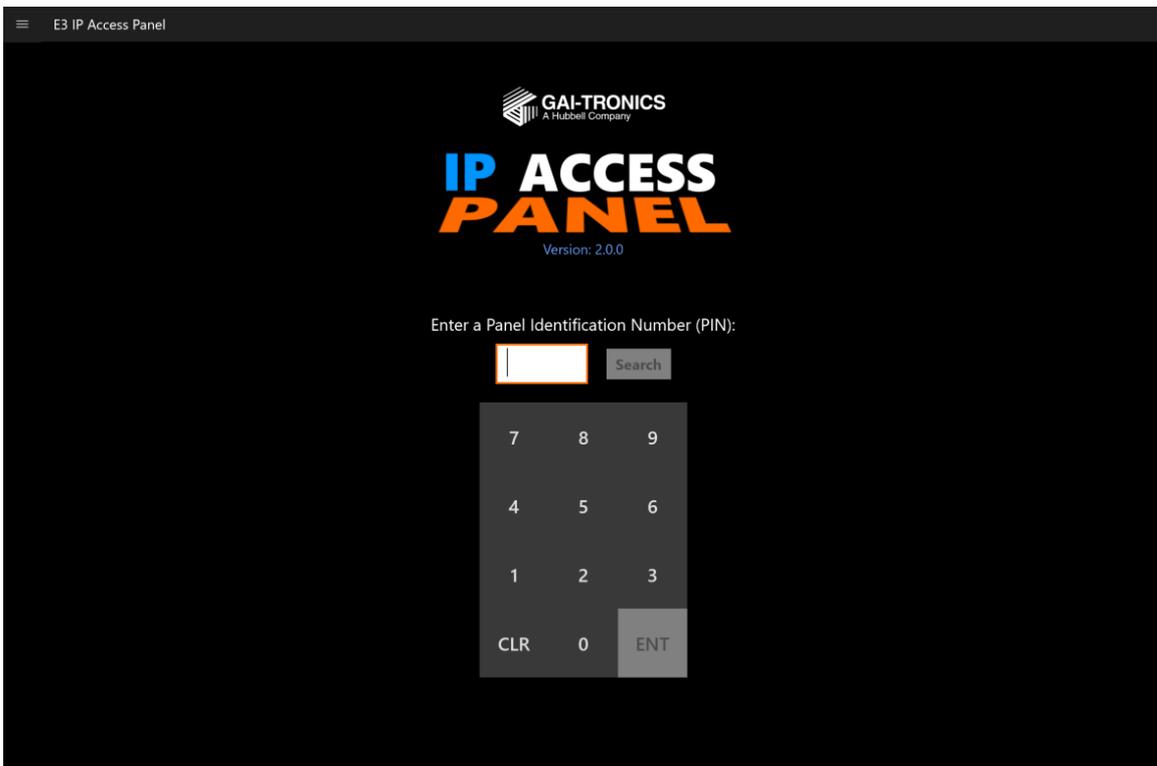
2. Enter a valid four-digit numeric PIN that defines the E3 controller IPAP configuration to start the controller discovery process.
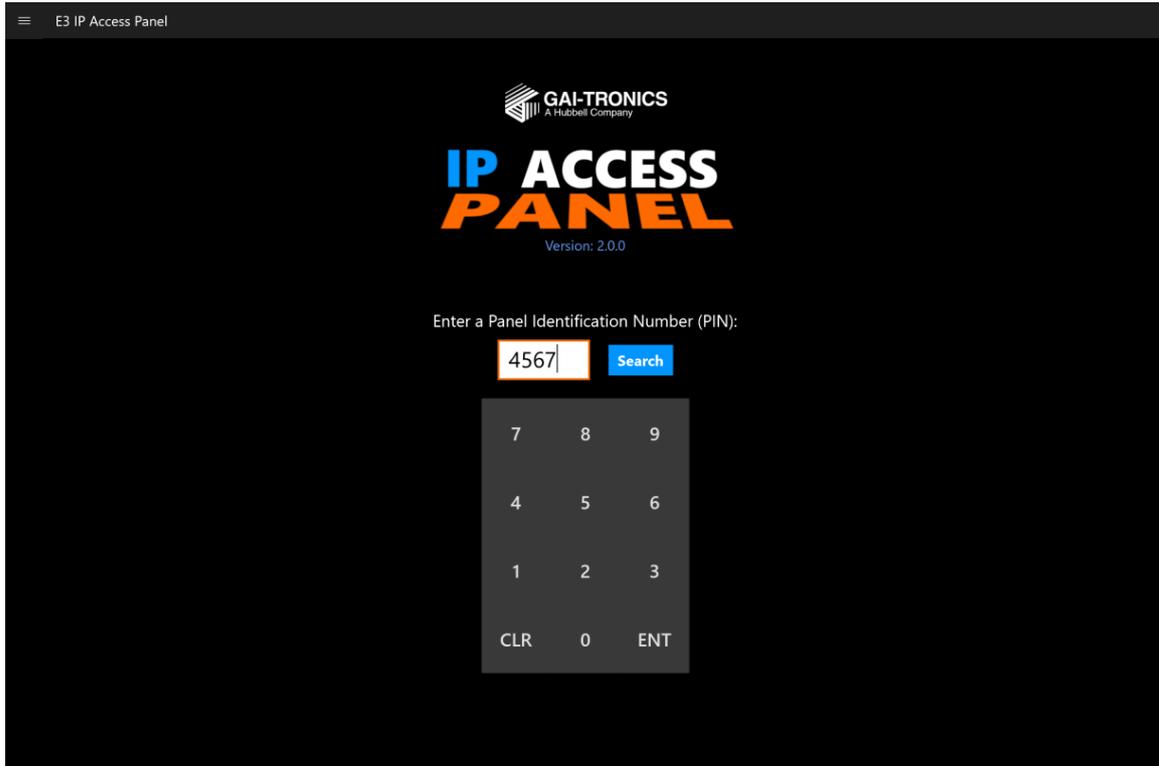

Controller Discovery and Connection

An E3 system discovery takes place after entering a valid PIN. All E3 systems with an access panel configuration matching the PIN respond. During the discovery process the notification to the right is displayed. If an invalid PIN is entered or there is no response from an E3 controller, then the system discovery timeout notification is displayed.

With successful polling, the discovered systems are presented for connection.

- An E3 controller will not respond to the discovery process if an IPAP with the requested PIN already has a connection to the E3 system.

- Performing a discovery on a single controller when all IPAPs are already in use produces the SYSTEM DISCOVERY TIMEOUT notification.
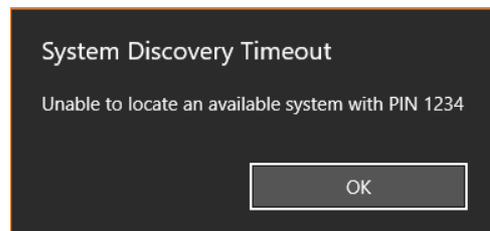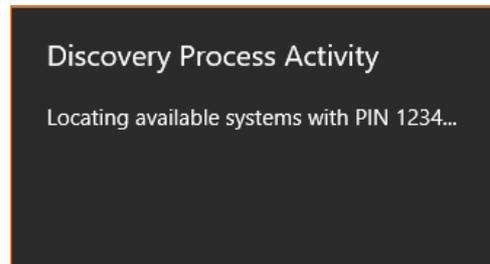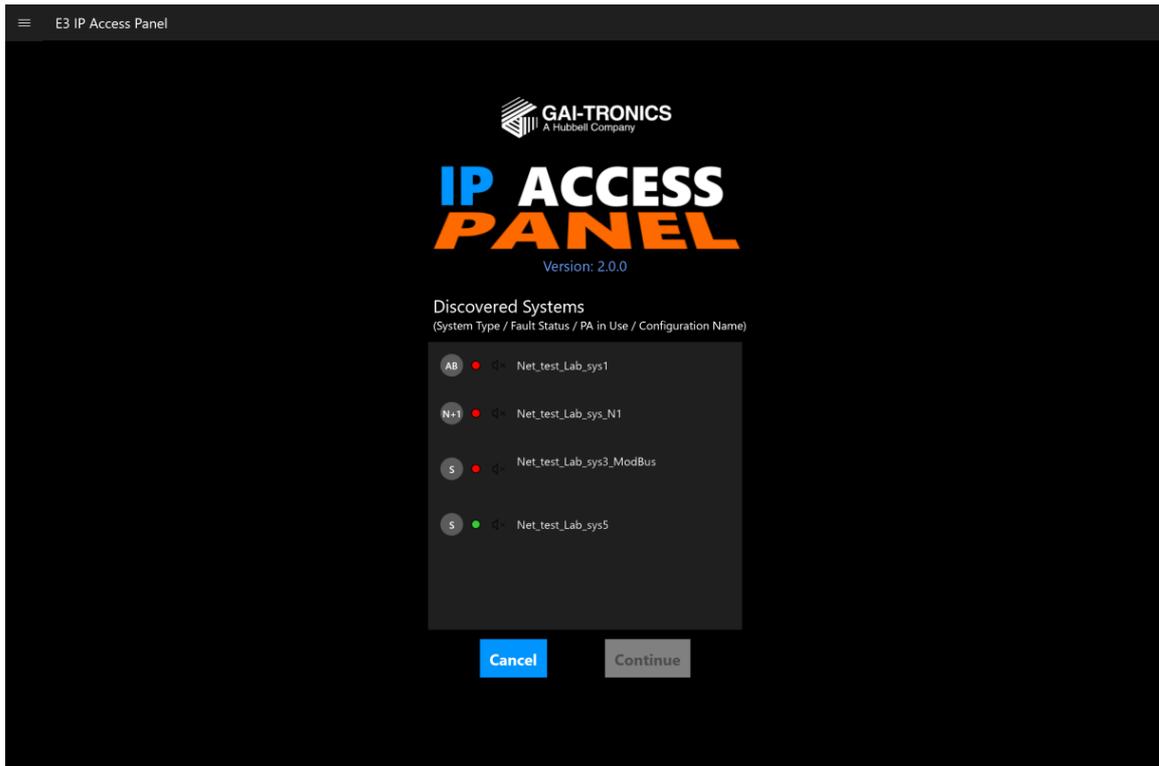
3. Pick the system to connect to from the list and press or click the CONTINUE button to load the configuration for that IPAP.

    During the connection the following microphone and connection status dialog boxes are displayed:
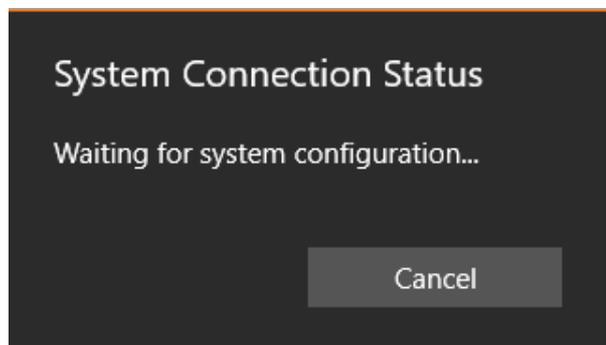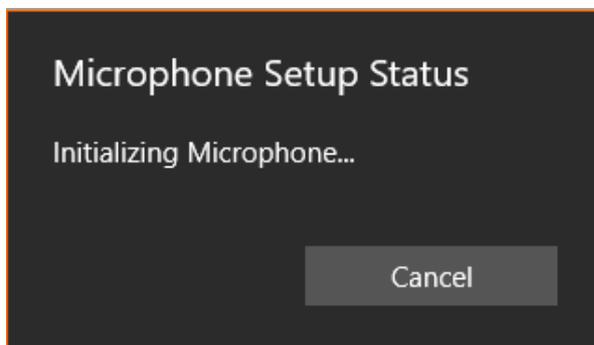
IPAP Screen Layout

The IP access panel screen is arranged with a title bar at the top, access panel button screens in the center, and a status bar at the bottom.

- Screen navigation arrows appear on each side of the button screen when multiple button screens are defined for an access panel.

- The button screens are assigned names that appear in the title bar for each button screen.

- The primary screen is typically named HOME (this is not required).
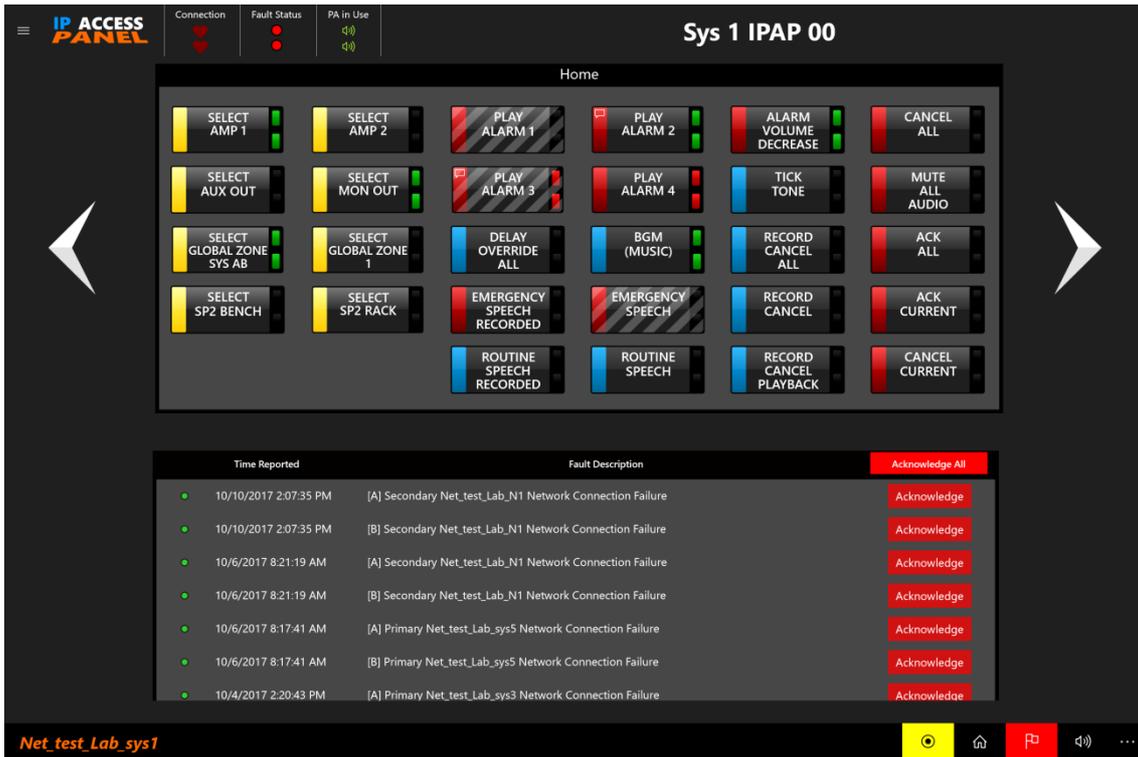

Title Bar

The title bar displays the SYSTEM MENU, CONNECTION heartbeat(s), FAULT STATUS indicator(s), PA IN USE indicator(s), and the name of the currently running IPAP as configured in the E3 Console.

System Menu—The system menu contains access panel functions that control the use of the access panel such as SYSTEM LOGOUT, SYSTEM RECONNECT, CONNECTED SYSTEMS listing, MICROPHONE SETTINGS, and EXIT APPLICATION. Click the system icon at the left end of the title bar to access it.

- **System Logout**—Disconnects the user to from the currently accessed controller and returns to the initial IP access panel screen.

- **System Reconnect**—Allows the user to disconnect from the controller and attempts to reconnect if a fresh connection is needed.

- **Connected Systems**—Provides a list of E3 controllers on the network that have an IP Access Panel configuration for the current IPAP PIN. The user can press or click on one of the configurations listed to disconnect from the currently selected system and switch to the desired system.

- **Microphone Settings**—Displays the MICROPHONE SETTINGS dialog box. Use this dialog box to disable the microphone or set the MINIMUM LEVEL THRESHOLD. The MINIMUM LEVEL THRESHOLD governs the sound level necessary for the microphone to pick up ambient audio. The E3 controller also uses this level to determine if the microphone is present and functioning properly.
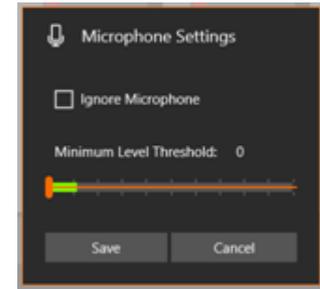
    NOTE: Setting the level too high will cause the system to flag the microphone as faulted whereas setting it too low will prevent it from picking up the ambient audio necessary for determining fault conditions.

- **Exit Application**—Closes the connection to the controller and exits the application.

Connection Heartbeat(s)—The connection heartbeat indicator(s) verify the connection state to the controller(s) with a pulsating red heart. The DISCONNECT screen displays if the access panel loses contact with the controller for any reason.

Systems with redundant controllers display two heartbeat indicators, one for each controller. A white heartbeat signals a loss of connection to that controller. The IPAP still functions while connected to only one controller. The primary screen changes to display a message notifying the operator of the connection loss when this occurs. See the AB and N+1 Controller Connection Loss section for information on this message.

Fault Status Indicator(s)—Provides indication of the current fault status on the controller. Redundant systems display two LEDs. The color and pulse of the status indicator matches the fault LED on the controller and always represents the most urgent fault in the system.

PA In Use Indicator(s)—Provides indication of when audio is being transmitted for each controller. Two green indicators are present in redundant systems.

IPAP Name—The name given to this IP access panel when defined in the *Elemec3* Console application.

Main Screen Area

The main screen area contains the button screens configured in the E3 Console for the currently connected IPAP and can also display the E3 system fault listing. Screen navigation arrows display for all panels defined with more than one button screen. Click either navigation button repeatedly to return to the first screen after the last screen is displayed. The primary button panel is typically named HOME, but this is not required. The house button in the status bar transports the operator back to the primary button screen regardless of its defined name.
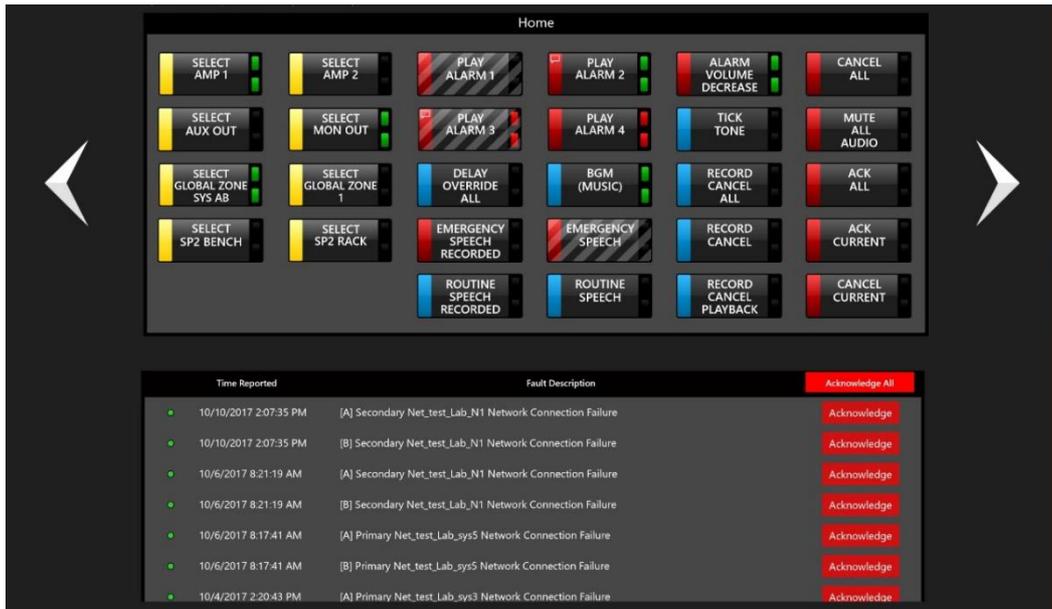
Button Panels—Button panels are configured in the E3 Console and operate similarly to the button panels on hardware access panels. Button configuration is implementation specific so button functionality will not be covered here. The primary differences between an IPAP and a hardware panel are that the IPAPs can have an unlimited number of button pages and include software functionality for button press protection and/or confirmation. Buttons can have either button interlock type or both.

- **Button-press Protection**—Buttons configured with button-press protection require the operator to acknowledge their action by pressing the button a second time to initiate the button's actions. These buttons display black/gray diagonal stripes overlaid on the button.

- **Button-press Confirmation**—Buttons defined with button-press confirmation open a confirmation dialog box requiring the operator to confirm the action to activate the button's defined function.

- **Button-press Indication**—Buttons configured with indicators display a green LED in the upper right corner of the button. Redundant AB and N+1 systems also have a green indicator in the lower right corner of the button when pressed.
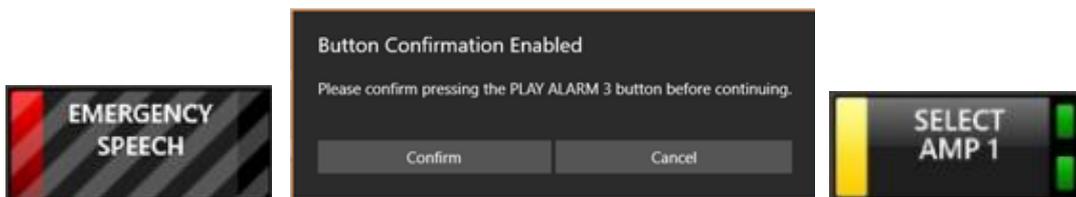
Button Press Protection, Confirmation, and Indication

Fault Listing—Display the fault listing by clicking the flag icon at the right end of the status bar when the fault status indicator in the title bar illuminates. The flag icon will match the title-bar indicator in color and pulse.

Status bar

The status bar, located at the bottom of the screen, displays the name of the connected controller, with the zone selection indicator, home button, fault list button, and volume control button at the right. The ellipsis button at the far right expands the status bar to reveal the labels under each button.

Zone Selection Indicator—The zone selection button appears as a yellow bulls-eye icon when a zone or zones are selected. Click the indicator to open the DESIGNATED ZONES: dialog box. The DESIGNATED ZONES dialog box enables deselection of previously selected zones without having to deselect them individually in the IPAP main screen. Click the CLEAR ZONES button to deselect all currently selected zones.
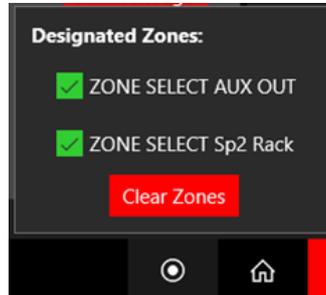
Home Button—The home button provides a hyperlink to the first button screen defined when the access panel was configured in the E3 Console.

Fault List Button—The fault list button appears as a flag icon at the right end of the status bar. The background color turns red when faults exist in the E3 system. Click the button with existing faults to display the listing. Use the scroll bar on the right side of the listing to see the events that do not appear on screen. Click the title bar on the fault list to expand it to the full IPAP window. Acknowledge individual faults or all faults from this listing.

Volume Button—Use the volume button to control the volume of the IPAP application. Volume adjustment is linked to the Windows system volume setting. Click the speaker icon at the left end of the volume slider to mute the audio to the IPAP. The mute feature in the application is independent of the Windows system mute setting.
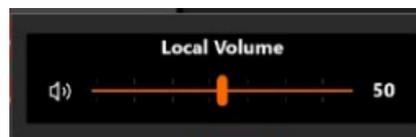
Screen Zoom

E3 IP access panels have a screen zoom feature activated by pinching or spreading fingers on touch screens. Use Ctrl+MouseWheelDown to zoom out or Ctrl+MouseWheelUp to zoom back in on non-touch screen displays. Zoom out to display up to four button panels on the screen simultaneously. Use the scroll bar to view the remaining screens if more than four button panels are defined for the IPAP . All buttons are functional in the zoomed-out mode. The button panel that the mouse is over becomes the active button panel when zooming in to an individual button screen. Expand any button panel by selecting the title bar of that button panel.
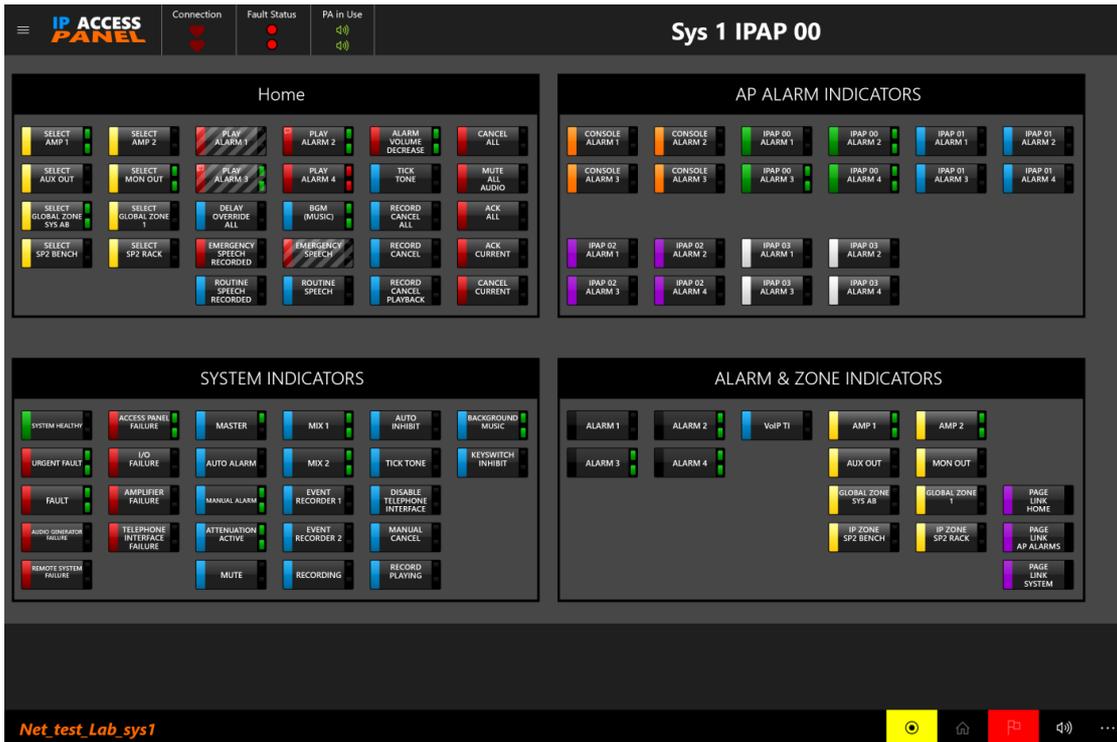
AB and N+1 Controller Connection Loss

If communication is lost with either controller in an AB or N+1 system, the main screen area changes to display a notification alerting the operator of the connection loss. Two buttons are presented to reconnect or simply dismiss the notification. Press the RECONNECT button to attempt reconnection to the disconnected controller. The message displays again if the controller is still unavailable. Click the DISMISS button to remove the message from the screen. The disconnected system automatically reconnects when the controller is online again. All buttons are active while the message is onscreen.