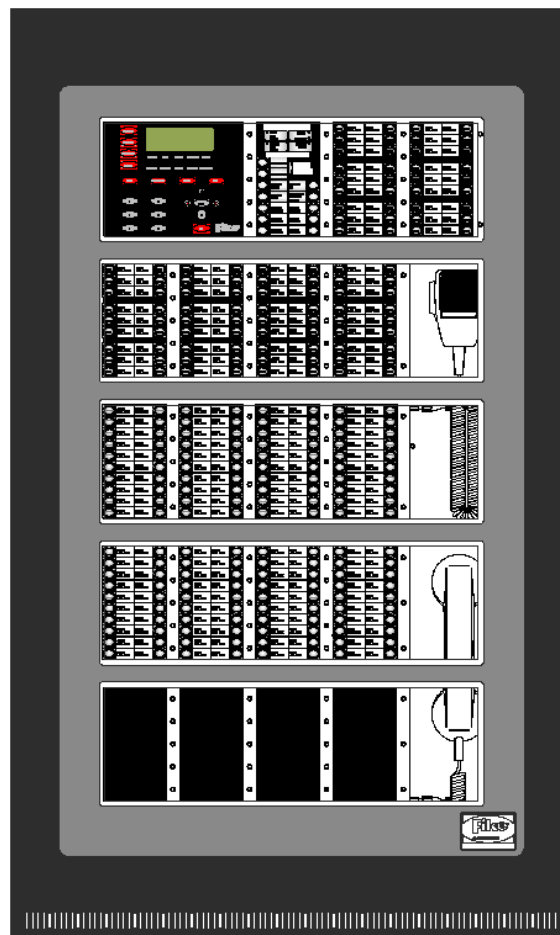




Emergency Communication System



Fire Command Center Enclosure

DEVELOPED BY

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1.0 ABOUT THIS MANUAL

This guide provides information on how to operate Fike's integrated Emergency Communication System (ECS). Any person who may be responsible to operate the ECS system in an emergency, should thoroughly read and understand the basic operating instructions contained within this guide before an emergency situation occurs.

The information presented in this guide is generic in nature and refers to the system components in general terms only. Each system is custom designed to suit the requirements of the specific project. Refer to the project-specific instructions, provided by the installing Fike distributor, to determine the exact operation of your system.

1.1 PRODUCT SUPPORT

If you have a question or encounter a problem not covered in this manual, you should first try to contact the distributor that installed the protection system. Fike has a worldwide distribution network. Each distributor sells, installs, and services Fike equipment. Look on the inside of the door, left side, there should be a sticker with an indication of the distributor who sold the system. If you can not locate the distributor, please call Fike Customer Service for locating your nearest distributor, or go to our web-site at www.fike.com. If you are unable to contact your installing distributor or you simply do not know who installed the system you can contact Fike Fire Alarm Product Support at (888) 628-FIKE (3453) Option 2, Monday through Friday, 8:00 AM to 4:30 PM CST.

1.2 REVISION HISTORY

Document Title: Emergency Communication System, User's Guide

Document Reorder Number: 06-547

Revision	Section	Date	Reason for Change
0	All Sections	05/2010	Initial Release
1	All Sections	05/2013	Product Updates

1.3 RELATED DOCUMENTATION

Further details about the components referenced in this guide can be found in the following manuals.

Document Title	Part Number
Amplifier Card Product Manual	06-576
Digital Paging Assembly Product Manual	06-564
Input/Output Card Product Manual	06-446
Audio Control Card Product Manual	06-558
Fire-Phone Card Product Manual	06-559
Supplemental Fire-Phone Card Product Manual	06-560
Fire-Phone Housing Installation Instructions	06-568
Paging Control Card Installation Instructions	06-575
Class-A Speaker Card Installation Instructions	06-574
Microphone Housing Installation Instructions	06-569

1.4 TERMS USED IN THIS MANUAL

The following are various terms used in this manual with a brief description of each.

Alarm State - ("Alarm" Red LED ON, Piezo pulsing) The alarm occurs when an input circuit configured for alarm operation has been activated. Activation typically initiated by a detector or contact device. The alarm state is a latching event in the CyberCat. The operator will be required to RESET the CyberCat in order for the panel to exit/clear the alarm state.

Digital Paging Assembly – The primary component of Fike's emergency communication system. Assembly includes the digital paging module (P/N 10-2727), paging control card (P/N 10-2741), and microphone housing (P/N 10-2757). Assembly mounts within the fire command center enclosure.

Emergency Communication System (ECS) – A system for the protection of life by indicating the existence of an emergency situation and communicating information necessary to facilitate an appropriate response and action. Includes in-building EVAC and in-building MNS systems.

In-building Fire Emergency Voice/Alarm Communications (EVAC) – Dedicated manual or automatic equipment for originating and distributing voice instructions, as well as alert and evacuation signals pertaining to a fire emergency, to the occupants of a building.

Initiating Device - A system component that originates transmission of a change-of-state condition, such as in a smoke detector, manual fire alarm box, or supervisory switch. This manual interchanges the terms initiating device and input device.

Initiating Device Circuit A circuit to which automatic or manual initiating devices are connected where the signal received does not identify the individual device operated. This manual interchanges the terms initiating device circuit and input circuit.

Local Operating Console (LOC) – A station used by authorized personnel and emergency responders to activate and operate an in-building mass notification system.

Mass Notification System (MNS) – A system used to provide information and instructions to people in a building(s) or other space using intelligible voice communications and including visible signals, text, graphics, tactile, or other communication methods.

Normal State - ("Trouble" Yellow LED OFF) The system is in the normal state when the power supply and all circuits are configured properly, connected, and responding properly. The system remains in normal state until a trouble condition occurs.

Notification Appliance - A fire alarm system component such as a bell, horn, speaker, light, or textual display that provides audible, tactile, or visible output, or any combination thereof. The device notifies building occupants of system status. This manual interchanges the terms notification and audible appliance.

Notification Appliance Circuit - A circuit or path directly connected to a notification appliance(s). This manual interchanges the terms notification appliance circuit and audible circuit.

Supervisory State - ("Supervisory" Yellow LED ON, Piezo Warble) The supervisory state occurs upon activation of a supervisory input circuit. The supervisory state is non-latching and will follow the status of the supervisory input contact.

Synchronization (SYNC) – A means of coordinating notification appliances so that they operate in unison.

System Operator – The person in charge of operating the system in response to a system event. Typically the facility manager or fire chief.

Trouble State - ("Trouble" Yellow LED ON, Piezo Constant) The trouble state occurs upon any detectable condition which could impair system operation including connection problems, ground faults, hardware problems, power problems, or configuration problems. Certain trouble conditions are latching; others allow the system to reset upon trouble condition removal. Depending upon the type of trouble condition, the system may or may not remain operational. When the system is in trouble state, it is not in the normal state.

Zone – A defined area within the protected premises that can define an area from which a signal can be received, an area to which a signal can be sent, or an area in which a form of control can be executed.

2.0 SYSTEM OVERVIEW

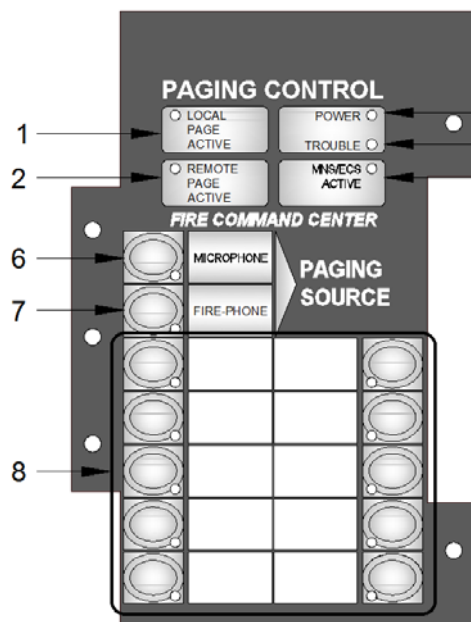
Fike's Emergency Communication System (ECS) components are designed to be seamlessly integrated into Fike's CyberCat 254 and CyberCat 1016 fire alarm systems. The components are designed to provide the control and display functions necessary to meet the operational requirements of an in-building fire Emergency Voice/Alarm Communication System (EVACS) and/or an in-building Mass Notification System (MNS).

The type and quantity of the components used in each ECS system will vary according to the size of the building and complexity of the system design. Refer to the design documentation specifically prepared for your system for overall system layout and operation.

Note: Each voice system is uniquely designed by fire protection professionals to meet the specific requirements of the local fire codes.

A brief description of the available system control and display components is provided as follows:

2.1 FIRE COMMAND CENTER (FCC) - PAGING CONTROL CARD (P/N 10-2741)



The FCC Paging Control Card (Exhibit 1) is an integral component of the FCC Digital Paging Assembly (P/N 10-2751). The card must be mounted in the fire command center enclosure, directly adjacent to the main panel display as it provides the primary paging controls and status indicators for the Emergency Communication System.

The functions of the controls and indicators provided on the card are described below.

Exhibit 1: FCC Paging Control Card

Index	Control or Indicator	Functional Description
1	Local Page Active LED	Green LED on indicates that a page has been initiated from the Fire Command Center. Turns off upon cancellation of the page, or a page is initiated from a remote Local Operating Console (LOC) with the same or higher priority.
2	Remote Page Active LED	Red LED on indicates that a page has been initiated from a remote Local Operating Console (LOC). Turns off upon cancellation of the page, or a page is initiated from the FCC with the same or higher priority.
3	Power LED	Green LED on indicates the presence of 24 Vdc power on the FCC digital paging card.
4	Trouble LED	Yellow LED blinks to indicate the presence of a trouble event associated with the digital paging card. On solid when the event is Acknowledged at the fire alarm control panel. Turns off when the trouble event clears.
5	MNS/ECS Active LED	Red LED on indicates activation of the MNS contact input on the digital paging card, or a switch configured for an MNS function has been pressed. Turns off when the MNS input is no longer active (non-latching), MNS reset switch is pressed, or active MNS input switch is pressed again cancelling the function.

Index	Control or Indicator	Functional Description
6	Microphone Active Switch/LED	Red LED on indicates the microphone is the active paging source for the system. Turns off if the Fire-Phone switch is pressed or the system enters MNS operation. Pressing the Microphone switch selects the microphone as the active paging source (default).
7	Fire-Phone Active Switch/LED	Red LED on indicates the fire-phone is the active paging source for the system. Turns off if the Microphone switch is pressed or the system enters MNS operation. Pressing the Fire-Phone switch selects the fire-phone as the active paging source, replacing the microphone.
8	Configurable Switches/LED	<p>Pressing the switch initiates any of the programmed MNS/ECS functions as described below. Red LED flashes until fire alarm control panel accepts the command request (based on priority levels). If the requested command is denied, the LED will flash and then return to its current operational state (on or off). Turns on solid when the requested command has been accepted by the fire alarm control panel. Pressing that active switch a second time will cancel the associated MNS/ECS command. LED will flash until the fire alarm control panel accepts the command; then will turn off.</p> <p>Control card LEDs assigned to the same operation and zone will illuminate across all control cards when active. For example: A switch located in the FCC assigned to Zone 1 Page is pressed and the corresponding LED illuminates. Simultaneously, LEDs located in remote LOCs assigned to Zone 1 Page operation will illuminate.</p> <p><u>Switch Configuration Options:</u></p> <p>VOICE ALERT – Places selected zone(s) into the ALERT state. Assigned ALERT message will play in selected zone(s).</p> <p>VOICE EVAC – Places selected zone(s) into the EVAC state. Assigned EVAC message will play in selected zone(s).</p> <p>VOICE or MNS PAGE – Initiates a live page to selected zone(s). Use the system microphone or fire-phone to deliver page message to selected zone(s).</p> <p>VOICE or MNS RECORD PAGE – Initiates a record and repeat live page to selected zone(s). Use the system microphone or fire-phone to deliver page message to selected zone(s). Message will be recorded and repeated over and over until canceled or over written.</p> <p>VOICE or MNS PLAY MESSAGE ID – Forces playback of selected message ID in selected zone(s).</p> <p>VOICE PAGE to ALERT – Initiates a live page to all zones currently in the ALERT state.</p> <p>VOICE PAGE to EVAC – Initiate a live page to all zones currently in the EVAC state.</p> <p>MNS RESET – Resets the MNS system. Voice events are NOT affected.</p> <p>MNS SILENCE – Silences active MNS events. Voice events are NOT affected.</p>

2.2 OPTIONAL AUDIO CONTROL CARDS

The optional Audio Control Cards (Exhibits 2 and 3) can be installed within the FCC enclosure to expand the voice activation and paging capabilities of the Emergency Communication System. The quantity of cards used in each system will vary according to the size of the building and complexity of the voice system design.

The cards allow the system operator to manually initiate audio messages (EVAC and Alert) or to initiate live paging messages to selected areas (zones) of the building. This allows the system operator to take charge of the facility during a fire event by controlling the movement of the building occupants.

Note: When initiating a Page or Record and Repeat Page from the optional audio control cards, the FCC DPM is automatically selected as the system paging source.

2.2.1 AUDIO CONTROL CARD (P/N 10-2661)

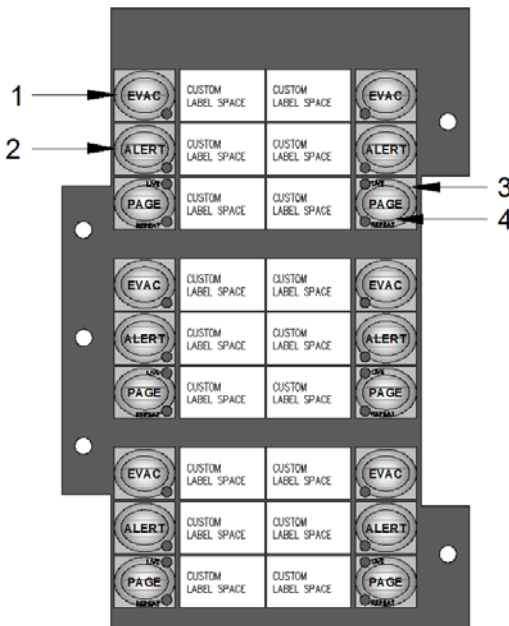


Exhibit 2: Audio Control Card

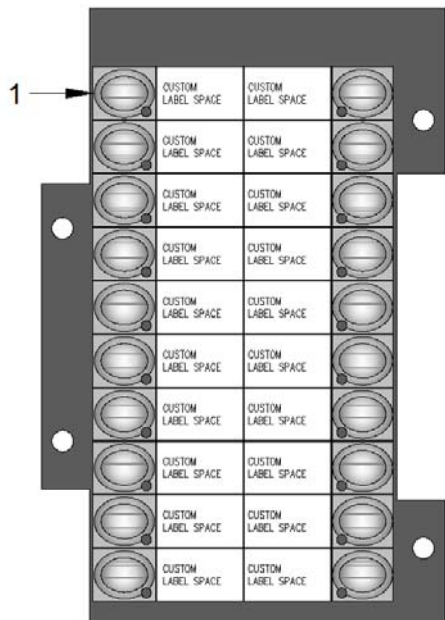
The Audio Control Card (Exhibit 2) is designed to provide six (6) groups of three (3) switches that can be used to manually direct EVAC and Alert signals, as well as page messages to individual areas of the facility in response to a fire event. This card is commonly used in systems that do not sound signals throughout the entire facility during a fire event. The card mounts in the fire command center enclosure.

The card also allows the system operator to switch the selected system amplifiers into record and repeat mode. This mode allows the system operator to record a live audio message and then send it to the selected amplifiers (zones) where it is stored in internal memory. Once the live page is complete, the amplifiers will begin playback of the message, repeating it over and over until the page switch is pressed again.

The functions of the controls and indicators provided on the card are described below.

Index	Control or Indicator	Functional Description
1	EVAC Switch/LED	Pressing the switch initiates the programmed EVAC message in the selected zone(s). Red LED flashes until the fire alarm control panel accepts the command request (based on priority levels). If the requested command is denied, the LED will flash and then return to its current operational state (on or off). Turns on solid when the requested command has been accepted by the fire alarm control panel. Pressing the active switch a second time will cancel the EVAC command. LED will flash until the fire alarm control panel accepts the command and then will turn off.
2	Alert Switch/LED	Pressing the switch initiates the programmed ALERT message in the selected zone(s). Red LED flashes until the fire alarm control panel accepts the command request (based on priority levels). If the requested command is denied, the LED will flash and then return to its current operational state (on or off). Turns on solid when the requested command has been accepted by the fire alarm control panel. Pressing the active switch a second time will cancel the ALERT command. LED will flash until the fire alarm control panel accepts the command and then will turn off.
3	Page Switch/LED	Pressing the switch initiates a PAGE in the selected zone(s). Red LED (LIVE) flashes until the fire alarm control panel accepts the command request (based on priority levels). If the requested command is denied, the LED will flash and then return to its current operational state (on or off). Turns on solid when the requested command has been accepted by the fire alarm control panel. Pressing the active switch a second time will cancel the PAGE command. LED will flash until the fire alarm control panel accepts the command and then will turn off.
4	Repeat LED	Pressing the PAGE switch twice initiates a Record and Repeat page in the selected zone(s). White (REPEAT) LED flashes until the fire alarm control panel accepts the command request (based on priority levels). If the requested command is denied, the LED will flash and then return to its current operational state (on or off). Turns on solid when the requested command has been accepted by the fire alarm control panel. Pressing the active switch a second time will cancel the Record and Repeat Page command. LED will flash until the fire alarm control panel accepts the command and then will turn off.

2.2.2 INPUT/OUTPUT CARD (P/N 10-2659)



The Input/Output Card (Exhibit 3) is designed to provide twenty (20) switches that can be individually programmed to perform general system functions as well as manual ECS/MNS functions, including page operation. This card is commonly used where partial evacuation or relocation of building occupants is required in response to a fire event. The card mounts in the fire command center enclosure.

The functions of the controls and indicators provided on the card are described below.

Exhibit 3: Input/Output Control Card

Index	Control or Indicator	Functional Description
1	Configurable Switch/LED	<p>Pressing the switch initiates any of the programmed functions described below. Bi-color Red/Yellow LED flashes until fire alarm control panel accepts the command request (based on priority levels). If the requested command is denied, the LED will flash and then return to its current operational state (on or off). Turns on solid when the requested command has been accepted by the fire alarm control panel. Pressing the active switch a second time will cancel the associated command. LED will flash until the fire alarm control panel accepts the command; then will turn off.</p> <p>Bi-color LED can be individually configured to illuminate Red or Yellow in response to a system event or condition.</p> <p><u>Switch Configuration Options:</u></p> <p>VOICE ALERT – Places selected zone(s) into the ALERT state. Assigned ALERT message will play in selected zone(s).</p> <p>VOICE EVAC – Places selected zone(s) into the EVAC state. Assigned EVAC message will play in selected zone(s).</p> <p>VOICE or MNS PAGE – Initiates a live page to selected zone(s). Use the system microphone or fire-phone to deliver page message to selected zone(s).</p> <p>VOICE or MNS RECORD PAGE – Initiates a record and repeat live page to selected zone(s). Use the system microphone or fire-phone to deliver page message to selected zone(s). Message will be recorded and repeated over and over until canceled or over written.</p> <p>VOICE or MNS PLAY MESSAGE ID – Forces playback of selected message ID in selected zone(s).</p> <p>VOICE PAGE to ALERT – Initiates a live page to all zones currently in the ALERT state.</p> <p>VOICE PAGE to EVAC – Initiate a live page to all zones currently in the EVAC state.</p> <p>MNS SILENCE – Silences active MNS events. Voice events are NOT affected.</p>

2.3 OPTIONAL FIRE-PHONE CONTROL CARDS
FIRE-PHONE CARD (P/N 10-2728)
SUPPLEMENTAL FIRE-PHONE CARD (P/N 10-2730)

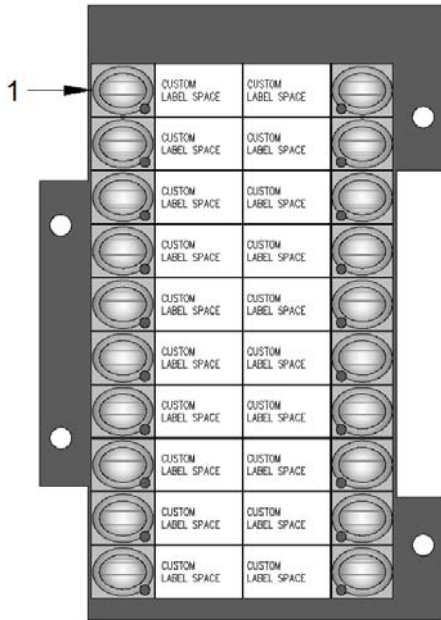


Exhibit 4: Fire-phone Card

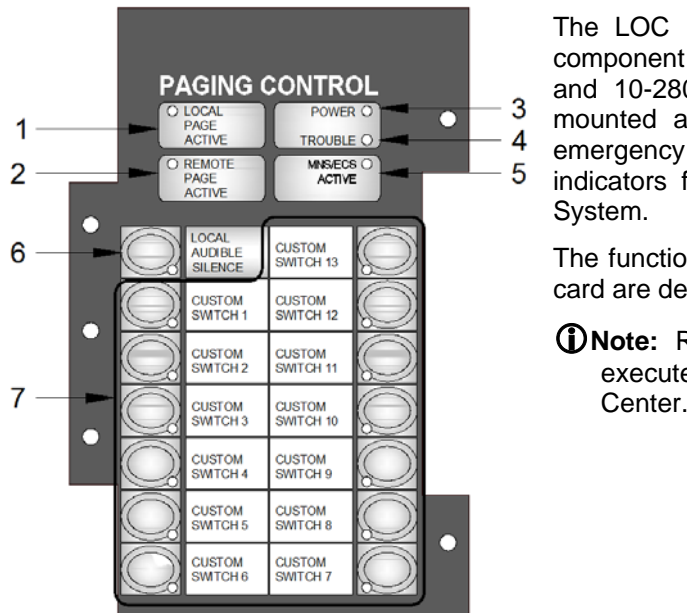
The optional Fire-Phone Control Cards (Exhibit 4) are designed to provide twenty (20) switches that allow the system operator to manually connect firefighters phones, located throughout the building, to the system's fire-phone bus. This connection facilitates two-way communication between the handset located in the Fire Alarm Control Panel enclosure and remote phones located throughout the building. The card(s) mount in the fire command center enclosure.

The ECS system allows a maximum of five (5) phones to be connected to the phone bus at one time, excluding the primary handset located in the fire command center. The quantity and location of these cards will vary from system to system; however the basic functionality is similar.

The functions of the controls and indicators provided on the card are described below.

Index	Control or Indicator	Functional Description
1	Configurable Switch/LED	When a fire-phone is plugged into a remote phone jack, the corresponding switch LED will begin to flash and the audible on the fire-phone card will sound. Press the corresponding switch to connect the fire-phone to the phone bus and silence the fire-phone card audible. Red LED illuminates solid to indicate the connected status of the phone. If the phone fails to connect, the Red LED will continue to flash to indicate a connection problem. Press the switch a second time to disconnect the fire-phone. The last unused switch on the Fire-Phone card(s) is automatically designated as a SILENCE switch. When pressed, it will silence the local audible provided on the fire-phone card (P/N 10-2728).

2.4 LOCAL OPERATING CONSOLE (LOC) - PAGING CONTROL CARD (P/N 10-2798)



The LOC Paging Control Card (Exhibit 5) is an integral component of the Local Operating Consoles (P/N 10-2800 and 10-2801). The LOCs are designed to be remotely mounted away from the FCC panel in order to provide emergency response personnel controls and status indicators for operation of the Emergency Communication System.

The functions of the controls and indicators provided on the card are described below.

Note: Record and Repeat page operation cannot be executed from the LOC, only from the Fire Command Center.

Exhibit 5: LOC Paging Control Card

Index	Control or Indicator	Functional Description
1	Local Page Active LED	Green LED on indicates that a page has been initiated from the Local Operating Console. Turns off upon cancellation of the page, page is initiated from the Fire Command Center or from a remote Local Operating Console (LOC) with the same or higher priority.
2	Remote Page Active LED	Red LED on indicates that a page has been initiated from the Fire Command Center or from a remote Local Operating Console (LOC) with the same or higher priority. Turns off upon cancellation of the page or a page is initiated from the LOC.
3	Power LED	Green LED on indicates the presence of 24 Vdc power on the LOC digital paging card.
4	Trouble LED	Yellow LED blinks to indicate the presence of a trouble event associated with the digital paging card. On solid when the event is Acknowledged at the fire alarm control panel. Turns off when the trouble event clears.
5	MNS/ECS Active LED	Red LED on indicates activation of the MNS contact input on the FCC digital paging card, or a switch configured for an MNS function has been pressed. Turns off when the MNS input is no longer active (non-latching), MNS reset switch is pressed, or active MNS input switch is pressed again cancelling the function.
6	Local Audible Silence Switch/LED	Pressing the switch silences the local audible on the LOC digital paging card (if enabled). Red LED on indicates the silenced state of audible.

7	Configurable Switches/LED	<p>Pressing the switch initiates the programmed MNS/ECS function described below. Red LED flashes until fire alarm control panel accepts the command request (based on priority levels). If the requested command is denied, the LED will flash and then return to its current operational state (on or off). Turns on solid when the requested command has been accepted by the fire alarm control panel. Pressing the active switch a second time will cancel the associated MNS/ECS command. LED will flash until the fire alarm control panel accepts the command; then will turn off.</p> <p>Control card LEDs assigned to the same operation and zone will illuminate across all control cards when active. For example: A switch located in the FCC assigned to Zone 1 Page is pressed and the corresponding LED illuminates. Simultaneously, LEDs located in remote LOCs assigned to Zone 1 Page operation will illuminate.</p> <p><u>Switch Configuration Options:</u></p> <p>VOICE ALERT – Places selected zone(s) into the ALERT state. Assigned ALERT message will play in selected zone(s).</p> <p>VOICE EVAC – Places selected zone(s) into the EVAC state. Assigned EVAC message will play in selected zone(s).</p> <p>VOICE or MNS PAGE – Initiates a live page to selected zone(s). Use the system microphone or fire-phone to deliver page message to selected zone(s).</p> <p>VOICE or MNS RECORD PAGE – Initiates a record and repeat live page to selected zone(s). Use the system microphone or fire-phone to deliver page message to selected zone(s). Message will be recorded and repeated over and over until canceled or over written.</p> <p>VOICE or MNS PLAY MESSAGE ID – Forces playback of selected message ID in selected zone(s).</p> <p>VOICE PAGE to ALERT – Initiates a live page to all zones currently in the ALERT state.</p> <p>VOICE PAGE to EVAC – Initiate a live page to all zones currently in the EVAC state.</p> <p>MNS RESET – Resets the MNS system. Voice events are NOT affected.</p> <p>MNS SILENCE – Silences active MNS events. Voice events are NOT affected.</p>
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3.0 GENERAL OPERATION

Fike's Emergency Communication System (ECS) allows both the in-building emergency voice/alarm communication system (EVACS) and the in-building mass notification system (MNS) to be combined into a single integrated system; however, the general operation of each sub-system must remain independent. The CyberCat control panel provides the required coordination between the two systems to effect related control actions such as operational priority of the EVACS system over the MNS system.

A brief description of how each ECS subsystem works is provided below.

3.1 EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM (EVACS)

EVACS is typically used in high-rise applications and large area buildings, where evacuation of the entire building on every alarm is not practical or desirable. People most affected by the event can be instructed to evacuate the area immediately; whereas, people not in immediate danger can receive an alert signal instructing them to hold and await further instructions.

Fike's EVACS operation is based on the standard Zone and State relationship that is used by the CyberCat control panel. Each amplifier card is programmed to activate its speaker circuits based on any of the panel's 254 zones and any of the following panel operating states (i.e., Page; Drill; EVAC; Alert; Alarm; Test Alarm; Supervisory, Process, and MNS). Each operating state can be assigned a corresponding audio message (16 available messages per amplifier) that will play in response to the event.

When a system event occurs, the CyberCat control panel will determine the highest priority state for the affected zone and will instruct each amplifier as to which audio message to play in response to the event. Refer to Section 3.4 for detailed explanation of control priorities. All speaker circuits on each amplifier will play the same audio message (single-channel audio), unless the system is configured for dual-channel operation (two amplifiers coupled together). Dual-channel allows the each individual speaker circuit to play either the EVAC or Alert message based on panel programming.

3.2 MASS NOTIFICATION SYSTEM (MNS)

MNS is used to provide real-time information to all building occupants or personnel in the immediate vicinity of a building during emergency situations. Occupants hearing the MNS signal can be notified of threats and instructed as to what should be done in response to those threats in order to reduce the risk of mass casualties. MNS signals can be activated by the MNS contact input on the digital paging module (DPM)¹, which will cause a system wide MNS event, or they can be manually directed to individual areas of the building using a control switch programmed for MNS operation (i.e., MNS Page, MNS Record Page, or MNS Play Message ID).

3.3 RESET AND SILENCE (EVACS AND MNS)

Operation of the EVACS and MNS systems must remain independent from one another. This operational separation also applies to RESET and SILENCE functions for each sub-system as described below.

EVACS is directly tied to the base operation of the CyberCat system; therefore, the panel's standard SILENCE and RESET functions will affect the ECS system when activated. Activation of a SILENCE switch, either at the fire alarm control panel or remote input, will turn off any speaker circuit active for EVACS operation, if programmed as silenceable. In addition, the LEDs on the corresponding control card(s) will turn off once the silence switch is pressed. Should a subsequent EVACS event occur of equal or higher priority, the speakers will re-sound if programmed to do so and the corresponding control card LEDs will re-illuminate. The panel's Standard SILENCE and RESET functions will have no effect on the MNS system. For instance, if any MNS event is active on the system and the CyberCat panel is SILENCED or RESET, the active MNS event will remain active without interruption. Only a control switch configured for MNS SILENCE or MNS RESET will impact the operation of the MNS system.

¹ DPM is provided as part of the FCC Digital Paging Assembly (P/N 10-2751).

MNS is directly tied to the MNS contact input on the digital paging assembly and to any control switch programmed for MNS operation (i.e., MNS Silence, MNS Page, MNS Record Page, MNS Play Message ID, and MNS Reset). MNS Silence and Reset is accomplished solely through control switches programmed for MNS Silence and MNS Reset. Activation of an MNS SILENCE switch, either at the fire alarm control panel or remote input, will turn off any speaker circuit active for MNS operation if programmed as silenceable. In addition, the LEDs on the corresponding control card(s) will turn off once the MNS silence switch is pressed. Should a subsequent MNS event occur of equal or higher priority, the speakers will re-sound if programmed to do so and the corresponding control card LEDs will re-illuminate. MNS SILENCE and MNS RESET will have no effect on the EVACS system. For instance, if any EVACS event is active on the system and the MNS system is SILENCED or RESET, the active EVACS event will remain active without interruption. Only the panel's standard SILENCE and RESET will impact the operation of the EVACS system.

3.4 CONTROL PRIORITIES

Fike's Emergency Communication System allows assignment of control priority levels to each input that is used to initiate EVACS or MNS functions. The priority levels enable the CyberCat panel to resolve which ECS event has operational priority over another. Priority levels can be set from 1 – 254, with 1 being the highest priority and 254 being the lowest priority. Priority levels can be assigned to the following panel states: ALARM, TEST ALARM, SUPERVISORY, and PROCESS. Priority levels must also be set for each control switch used for emergency communication system functionality.

The following examples describe how control priorities work.

Example 1: A switch in the FCC enclosure and LOC enclosure are both programmed for EVAC Zone 1. The switch in the FCC enclosure has been assigned a priority level setting of 1, while the switch in the LOC enclosure has been assigned a priority level setting of 2. Pressing the switch in the FCC enclosure will cause Zone 1 to enter into the EVAC state. Both the switch in the FCC enclosure and the LOC enclosure will indicate the EVAC state is active in Zone 1 by turning on the corresponding switch LED. Since the switch in the LOC enclosure has a lower priority than the switch in the FCC enclosure, pressing the Zone 1 EVAC switch in the LOC enclosure to cancel the EVAC will have no effect. The corresponding switch LED will flash and then will return to its current operational state (on or off). The fire alarm control panel display will indicate that the requested switch selection has been denied by displaying (D) after the switch message.

Example 2: A switch in the FCC enclosure and LOC enclosure are both programmed for Page Zone 1. The switch in the LOC enclosure has been assigned a priority level of 2, while the switch in the FCC enclosure has been assigned a priority level of 1. Pressing the switch in the LOC enclosure will cause Zone 1 to enter into the PAGE state. Both the switch in the FCC enclosure and the LOC enclosure will indicate that the PAGE state is active by turning on the corresponding switch LED. The Local Page Active LED in the LOC enclosure will activate and the Remote Page Active LED in the FCC enclosure will activate. Since the switch in the FCC enclosure has a higher priority than the switch in the LOC enclosure, pressing the Zone 1 PAGE switch in the FCC enclosure will cause the PAGE control to transfer to the FCC enclosure. The Local Page Active LED in the FCC enclosure will activate and the Remote Page Active LED in the LOC enclosure will activate.

Example 2A: The MNS/ECS input on the digital paging card is programmed for priority level 1 (highest). Upon activation of the input, the MNS/ECS line level input on the digital paging card will become active. The MNS/ECS active LED in the FCC enclosure and LOC enclosure will activate to indicate that the MNS state is active in the system. The Local Page Active LED in the FCC enclosure will activate and the Remote Page Active LED in the LOC enclosure will activate. The microphone and fire-phone source selection on the FCC paging control card will be disabled until the MNS input is no longer active.

Note: Fire Alarm signals must take precedence over any other announcement except where mass notification messages (as deemed by a risk analysis) are deemed to be a higher priority than fire.

3.5 AUDIO SYNCHRONIZATION

During normal operation, it is possible for the audio messages generated by the system amplifiers to become out of sync (i.e., audio message starts and stops at different times). This can potentially cause an echo effect where multiple amplifiers serve a common audio zone due to message playback delay. Page operation is the most common cause for the amplifiers to become out of sync. For example, if a page is initiated to one or more amps, it temporarily interrupts the playback of the automatic audio message. Once the page is complete, the amplifier(s) will recommence playback of the automatic audio message, which will be out of sync with the amplifiers not affected by the page.

Fike's emergency communication system can be configured to maintain audio synchronization using the following programming features. When properly configured, the system will ensure that all amplifiers serving common audio zones will operate in unison.

AUDIO RESTART

The Audio Restart command is issued by the FCC or LOC digital paging modules when configured for amplifier synchronization and when set as the audio bus master. The command is automatically initiated whenever a new audio zone is activated in the system, or whenever any zone changes state in the system. Audio restart forces all system amplifiers that are configured for sync operation to stop playing the current audio message, and re-start audio playback so that all amplifiers start message playback at the same time.

RESTART AUDIO DELAY

The Restart Audio Delay timer is directly tied to the Audio Restart command issued by the FCC and LOC digital paging modules. The delay is primarily used when the audio system consists of networked panels with synchronization across zones. In this scenario, there can be a small delay between each amplifier receiving the audio re-start command due to communication lag between each panel in the network (based on field wiring). The restart audio delay which can be set between 0 – 50 seconds, delays the amplifiers from commencing message playback after receiving the audio restart command until the timer expires. This ensures that all system amplifiers re-start audio message playback at the same time. During the audio restart time delay, each amplifier can be configured to continue playing their configured message ID, play a new message ID, or simply play tones until the time delay expires and the amplifiers re-start audio playback.

AMPLIFIER SYNCHRONIZATION

Each audio amplifier that is required to participate in audio synchronization must have Amp Sync Enabled to allow it to respond to the audio restart command issued by the FCC or LOC digital paging modules. In addition, each amplifier must be configured as to whether it should continue playing the configured message ID, play a new message ID, or simply play tones during the re-start audio delay (if applicable).

4.0 SYSTEM OPERATION BY EVENT

The system operation described in this section provides a general description of how the ECS/MNS system operates during each panel state.

4.1 NORMAL

During NORMAL system operation (no events present), the AC Power LED on the main CyberCat display and the Microphone and Power LEDs on the FCC paging control card will be illuminated as shown in Exhibit 6. All other LEDs should be off. The Microphone LED on the paging control card is continually illuminated to signify the connected status of the paging microphone to the digital paging cards live audio bus (default selection).

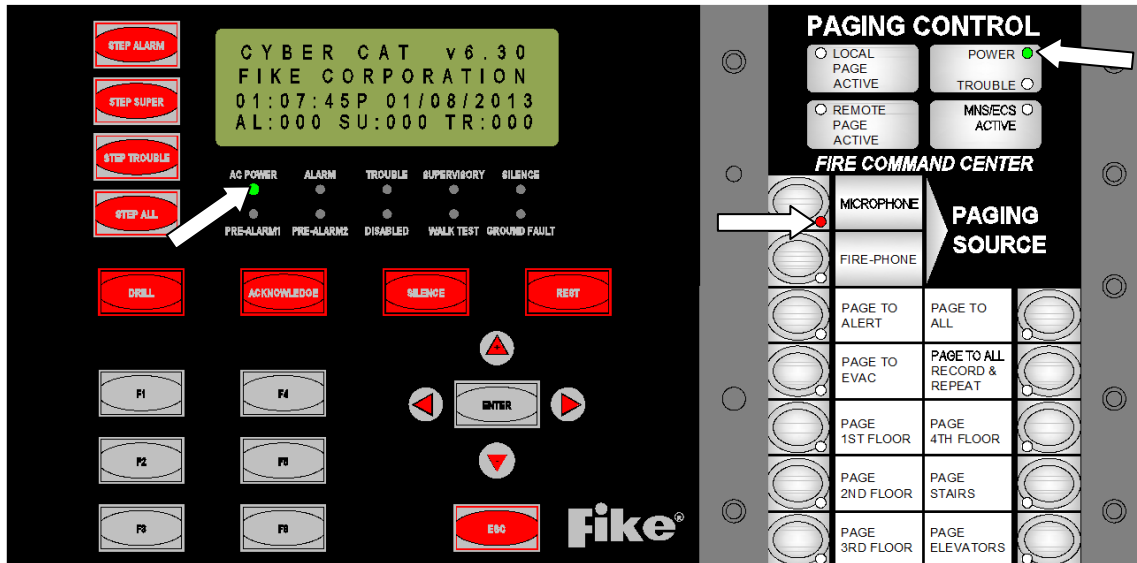


Exhibit 6: System Normal Operation

The information presented on the main display will change to indicate the operating condition of the ECS system. Indication of each switch press will be displayed and stored in the control panel's history buffer for event history tracking. Exhibit 7 shows a typical event display for an activated Alert switch that has been accepted by the fire alarm control panel.

	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0
A	P	E	R	#	0	5		A	L	E	R	T			S	W	#	0	3	
B	P	E	R	I	P	H	E	R	A	L		M	S	G					0	2
C	0	1	:	2	3	:	2	9	P		0	6	/	1	4	/	2	0	1	3
D		E	V	E	N	T		0	1	3	6		O	F		0	2	3	1	

Exhibit 7: ECS Event Display

Exhibit 8 shows a typical event display for an activated Alert switch that has been denied by the control panel. When a switch input is denied by the fire alarm control panel, it is indicated by the (D) designation as shown on Row A below.

	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0
A	P	E	R	#	0	5		A	L	E	R	T	(D)	S	W	#	0	3
B	P	E	R	I	P	H	E	R	A	L		M	S	G					0	2
C	0	1	:	2	3	:	2	9	P		0	6	/	1	4	/	2	0	1	3
D		E	V	E	N	T		0	1	3	6		O	F		0	2	3	1	

Exhibit 8: ECS Event Display (denied)

Note: Denial of a switch input is based on the control priorities set for the system. Refer to Section 3.4.

4.2 PAGE

Paging is a manual function that allows the person who is in charge of the facility during an emergency to deliver live voice commands to the building occupants over the speakers. This allows the operator to direct the occupants of what actions to take for safe egress from the building. Page messages are preceded and followed by the standard Code-3 temporal tone. If a page is initiated and no message is delivered (microphone keyed), the system will report a trouble condition. There are four (4) distinct paging functions available as described below.

Note: When a page is initiated from the fire command center using the paging control card, audio control card, or input/output card, the emergency communication system automatically selects the DPM as the paging source.

4.2.1 SELECTIVE PAGE (EVACS OR MNS)

Selective Page (i.e., EVAC or MNS) turns on the selected system amplifiers for paging when the page switch is pressed. All selected amplifiers then receive and broadcast the incoming page message. Selective page can be directed to a single audio zone, multiple audio zones, or all zones (All Call). The page message replaces the audio message currently being played in response to the fire event (if active).

	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0
A	P	E	R	#	0	5		P	A	G	E					S	W	#	0	3
B	P	E	R	I	P	H	E	R	A	L		M	S	G					0	2
C	0	1	:	2	3	:	2	9	P		0	6	/	1	4	/	2	0	1	3
D		E	V	E	N	T		0	1	3	6		O	F		0	2	3	1	

Exhibit 9: EVAC Page Display

	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0
A	P	E	R	#	0	5		M	N	S	P	A	G	E		S	W	#	0	3
B	P	E	R	I	P	H	E	R	A	L		M	S	G					0	2
C	0	1	:	2	3	:	2	9	P		0	6	/	1	4	/	2	0	1	3
D		E	V	E	N	T		0	1	3	6		O	F		0	2	3	1	

Exhibit 10: MNS Page Display

Procedure:

1. Open the cabinet door (Fire Command Center or Local Operating Console).
2. Remove the microphone or fire-phone from its holder by lifting up and then out.
3. If initiating the page from the fire command center, select the microphone or fire-phone (if your system is equipped with firefighter's telephones) for paging by pressing the corresponding switch on the paging control card (See Exhibit 1). The RED LED will illuminate steady to indicate the devices connected status.
4. Select the areas (zones) you wish to address by pressing the corresponding page switch on the control card. The RED switch LED will flash until the control panel accepts the command request (based on priority levels) and the system amplifier(s) is captured and ready to broadcast the live page; at which time the LED will illuminate steady. If Page request is denied, the LED will flash and then return to its current operational state (on or off). Paging zones can be added or removed from participating in the active page simply by pressing the corresponding control switch.
5. While holding the microphone near your mouth, press the microphone key and deliver your message. If using the fire-phone to deliver the page, simply talk into the handset as it is constantly active until deselected as the paging source at the paging control card.
6. Press the active control card switch again to return the selected amplifier(s) to automatic operation. System amplifiers will automatically begin playing the active message that was being played (if any) prior to the page. Red LED will flash until the fire alarm control panel accepts the command; then will turn off.

4.2.2 PAGE TO EVAC (EVACS)

Page to EVAC only affects system amplifiers currently in the EVAC state. When the switch is pressed, all “EVAC” amplifiers will receive and broadcast the incoming page message. The page message replaces the EVAC message currently being played in response to the fire event.

	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	
A	P	E	R	#	0	5		E	V	2	P	A	G	E		S	W	#	0	3	
B	P	E	R	I	P	H	E	R	A	L		M	S	G						0	2
C	0	1	:	2	3	:	2	9	P		0	6	/	1	4	/	2	0	1	3	
D		E	V	E	N	T		0	1	3	6		O	F		0	2	3	1		

Exhibit 11: Page to EVAC Display

Procedure:

1. Open the cabinet door (Fire Command Center or Local Operating Console).
2. Remove the microphone or fire-phone from its holder by lifting up and then out.
3. If initiating the page from the fire command center, select the microphone or fire-phone (if your system is equipped with firefighter’s telephones) for paging by pressing the corresponding switch on the paging control card (See Exhibit 1). The RED LED will illuminate steady to indicate the devices connected status.
4. Press the Page to EVAC switch on the control card. The RED switch LED will flash until the control panel accepts the command request (based on priority levels) and the system amplifier(s) is captured and ready to broadcast the live page; at which time the LED will illuminate steady. If Page request is denied, the LED will flash and then return to its current operational state (on or off). EVAC zones can be added or removed from participating in the EVAC page simply by pressing the corresponding control switch.
5. While holding the microphone near your mouth, press the microphone key and deliver your message. If using the fire-phone to deliver the page, simply talk into the handset as it is constantly active until deselected as the paging source at the paging control card.
6. Press the active Page to EVAC switch again to return the selected amplifier(s) to automatic operation. System amplifiers will automatically begin playing the active message that was being played (if any) prior to the page. Red LED will flash until the fire alarm control panel accepts the command; then will turn off.



4.2.3 PAGE TO ALERT (EVACS)

Page to Alert only affects system amplifiers currently in the Alert state. When the switch is pressed, all “Alert” amplifiers will receive and broadcast the incoming page message. The page message replaces the Alert message currently being played in response to the fire event.

	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	
A	P	E	R	#	0	5		A	L	2	P	A	G	E		S	W	#	0	3	
B	P	E	R	I	P	H	E	R	A	L		M	S	G						0	2
C	0	1	:	2	3	:	2	9	P		0	6	/	1	4	/	2	0	1	3	
D		E	V	E	N	T		0	1	3	6		O	F		0	2	3	1		

Exhibit 12: Page to Alert Display

Procedure:

1. Open the cabinet door (Fire Command Center or Local Operating Console).
2. Remove the microphone or fire-phone from its holder by lifting up and then out.
3. If initiating the page from the fire command center, select the microphone or fire-phone (if your system is equipped with firefighter’s telephones) for paging by pressing the corresponding switch on the paging control card (See Exhibit 1). The RED LED will illuminate steady to indicate the devices connected status.
4. Press the Page to Alert switch on the control card. The RED switch LED will flash until the control panel accepts the command request (based on priority levels) and the system amplifier(s) is captured and ready to broadcast the live page; at which time the LED will illuminate steady. If Page request is denied, the LED will flash and then return to its current operational state (on or off). Alert zones can be added or removed from participating in the Alert page simply by pressing the corresponding control switch.
7. While holding the microphone near your mouth, press the microphone key and deliver your message. If using the fire-phone to deliver the page, simply talk into the handset as it is constantly active until deselected as the paging source at the paging control card.
5. Press the active Page to Alert switch again to return the selected amplifier(s) to automatic operation. System amplifiers will automatically begin playing the active message that was being played (if any) prior to the page. Red LED will flash until the fire alarm control panel accepts the command; then will turn off.

4.2.4 RECORD AND REPEAT PAGE (EVACS OR MNS)

Record and Repeat Page turns on the selected system amplifiers for paging when the page switch is pressed. All selected amplifiers then receive and broadcast the incoming page message; while at the same time, recording and storing the page message for playback. Record and Repeat paging can be directed to a single audio zone, multiple audio zones, or all zones (All Call). The page message replaces the audio message currently being played in response to the fire event (if active).

Note: Record and Repeat Page CAN NOT be initiated from a Local Operating Console (LOC), since the operation automatically selects the DPM as the paging source.

	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0
A	P	E	R	#	0	5		P	A	G	E		R	R		S	W	#	0	3
B	P	E	R	I	P	H	E	R	A	L		M	S	G					0	2
C	0	1	:	2	3	:	2	9	P		0	6	/	1	4	/	2	0	1	3
D		E	V	E	N	T		0	1	3	6		O	F		0	2	3	1	

Exhibit 13: Record and Repeat Page Display

Procedure:

1. Open the Fire Command Center cabinet door.
2. Remove the microphone or fire-phone from the holder by lifting up and then out
3. If initiating the page from the fire command center, select the microphone or fire-phone (if your system is equipped with firefighter's telephones) for paging by pressing the corresponding switch on the paging control card (See Exhibit 1). The RED LED will illuminate steady to indicate the devices connected status.
4. **Page using Paging Control Card or I/O control card:** Press the corresponding Page Record and Repeat switch on the control card to select the areas (zones) you wish to address. The RED LED will flash until the system amplifier(s) is captured and ready to broadcast the live page; at which time the LED will illuminate steady. Audio zones can be added or removed from participating in the active page simply by pressing the corresponding control switch.
5. **Page using Audio Control Card:** Press the corresponding Page Record and Repeat switch on the control card to select the areas (zones) you wish to address. The WHITE LIVE LED will flash until the system amplifier(s) is captured and ready to broadcast the live page; at which time the LED will illuminate steady. Once the LIVE LED is lit solid, press the page switch again to initiate the record and repeat feature. The REPEAT LED on the card will flash until the system amplifier(s) is captured and ready to broadcast the live page; at which time the LED will illuminate steady.
6. While holding the microphone near your mouth, press the microphone key and deliver your message, If using the fire-phone as the paging source, simply talk into the handset as it is constantly active until deselected at the paging control card. The recorded message can be a maximum of 30 seconds long. After 30 seconds, recording will stop automatically and message playback will commence. To rerecord the message, you must cancel the current page and reinitiate the Record and Repeat Page.

Microphone Page - Message recording commences as soon as the microphone key is pressed and will end once it is released or the 30 second message recording time expires.

Fire-Phone Page – The fire-phone handset is not keyed; therefore, message recording commences once the fire-phone is selected as the paging source at the fire command center and will end once it is deselected at the paging control card or the 30 second message recording time expires.

7. The recorded message will be played over and over until the panel is silenced or the Page Record and Repeat switch is pressed again, deactivating the page operation. Red LED will flash until the fire alarm control panel accepts the command; then will turn off.



4.3 DRILL

The Drill function is designed to allow the system operator to initiate a practice fire alarm drill/building evacuation test. The drill function is activated either from the main control panel, remote display unit, input device or control switch configured for drill.

	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	
A				D	R	I	L	L		F	U	N	C	T	I	O	N				
B								L	O	O	P		1								
C	0	1	:	2	3	:	2	9	P		0	6	/	1	4	/	2	0	1	3	
D		E	V	E	N	T		0	1	3	6		O	F		0	2	3	1		

Exhibit 14: Drill Display

Each of the voice system's amplifiers can be configured to play a custom message in response to the drill activation. Refer to the CyberCat Operation and Maintenance manual (P/N 06-326-2) for further information on drill operation.

4.4 EVAC

The EVAC signal is designed to notify the building occupants that they must exit the building. The evacuation signal is activated either by the Alarm state of the CyberCat control panel or by activation of a control switch programmed for EVAC.

	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	
A	P	E	R	#	0	5		E	V	A	C	U	A	T		S	W	#	0	3	
B	P	E	R	I	P	H	E	R	A	L		M	S	G						0	2
C	0	1	:	2	3	:	2	9	P		0	6	/	1	4	/	2	0	1	3	
D		E	V	E	N	T		0	1	3	6		O	F		0	2	3	1		

Exhibit 15: Manual EVAC Display

Based on programming, the control panel will automatically initiate EVAC signals when a zone enters into the Alarm state. The EVAC signal will continue to sound until the system event is silenced by the fire alarm control panel or a page is initiated.

Procedure:

1. Open the cabinet door (Fire Command Center or Local Operating Console).
2. Press the EVAC switch on the control card to initiate the programmed EVAC message in the selected zone(s). The RED switch LED will flash until the fire alarm control panel accepts the command request (based on priority levels). If the requested command is denied, the LED will flash and then return to its current operational state (on or off). Turns on solid when the requested command has been accepted by the fire alarm control panel.
3. Press the active EVAC switch again to cancel the EVAC command. The switch LED will flash until the fire alarm control panel accepts the command; then will turn off.

4.5 ALERT

The Alert signal is designed to notify the building occupants that an emergency has been reported in the building. Occupants hearing the alert signal are not in immediate danger, but should prepare to evacuate.

	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	
A	P	E	R	#	0	5		A	L	E	R	T				S	W	#	0	3	
B	P	E	R	I	P	H	E	R	A	L		M	S	G						0	2
C	0	1	:	2	3	:	2	9	P		0	6	/	1	4	/	2	0	1	3	
D		E	V	E	N	T		0	1	3	6		O	F		0	2	3	1		

Exhibit 16: Manual Alert Display

Alert operation is directly tied to an alarm event in adjacent zones. When one or more zones enter into the Alarm state, the control panel determines which amplifiers should be activated in response to the event. The amplifiers serving the adjacent zone(s), if programmed to do so, will automatically broadcast an Alert message in response to the Alarm event; thus notifying building occupants in non fire areas of the fire situation. The Alert message will continue to sound until the system event is silenced at the fire alarm control panel, fire is detected within the Alert zone(s), or a page is initiated.

Procedure:

1. Open the cabinet door (Fire Command Center or Local Operating Console).
2. Press the Alert switch on the control card to initiate the programmed Alert message in the selected zone(s). The RED switch LED will flash until the fire alarm control panel accepts the command request (based on priority levels). If the requested command is denied, the LED will flash and then return to its current operational state (on or off). Turns on solid when the requested command has been accepted by the fire alarm control panel.
3. Press the active Alert switch again to cancel the Alert command. The switch LED will flash until the fire alarm control panel accepts the command; then will turn off.

4.6 ALARM

Alarm is a standard CyberCat panel event that is initiated by a sensor, manual pull, or any input configured for detector or waterflow. Through panel programming, alarms can be used to automatically initiate EVAC signals within effected zone(s) or Alert signals within adjacent zone(s).

	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0
A		M	A	N	U	A	L		P	U	L	L		A	L	A	R	M		
B	L	-	A	D	D		I	N	P	U	T		M	A	N	A	L	R	M	
C	0	1	:	2	3	:	2	9	P		0	6	/	1	4	/	2	0	1	3
D		E	V	E	N	T		0	1	3	6		O	F		0	2	3	1	

Exhibit 17: Alarm Input Display

When one or more zones enter into the ALARM state, the control panel determines which amplifiers should be activated in response to the event and directs EVACUATION message to be played in the affected areas and the ALERT message to be played in the adjacent areas (e.g., floor above and floor below). The audio messages will continue to sound until the system event is silenced by the fire alarm control panel, event clears and panel is reset, or a page is initiated.



4.7 TEST ALARM (WALK-TEST)

Walk-test is designed to allow testing of a system without unneeded disturbance to building occupants. Input and Output devices connected to the control panel's addressable loops, as well as the CyberCat controller's NAC and Relay circuits, can be individually programmed to participate in a system walk-test.

	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	
A				W	A	L	K	T	E	S	T		A	L	A	R	M				
B	C	U	S	T	O	M		M	E	S	S	A	G	E		L	-	A	D	D	
C	0	1	:	2	3	:	2	9	P		0	6	/	1	4	/	2	0	1	3	
D		E	V	E	N	T		0	1	3	6		O	F		0	2	3	1		

Exhibit 18: Test Alarm Input Display

Walk-test functions as a toggle mode, it is either On or Off. Walk-test must be initiated from the CyberCat control panel. During walk-test, as each input device is activated, the control panel activates only system output devices and amplifiers programmed for walk-test. Amplifiers configured for walk-test will play the assigned walk-test message (4 seconds long). The message will turn off once played and will resound once the next input device is activated.

4.8 SUPERVISORY OPERATION

Supervisory is a standard CyberCat panel event that is initiated by an input configured for Supervisory. These inputs are typically connected to sprinkler system tamper or low air pressure input contacts. Through panel programming, these inputs can be used to initiate Supervisory messages within effected zone(s).

	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	
A		S	U	P	E	R	V	I	S	O	R	Y		I	N	P	U	T			
B	C	U	S	T	O	M		M	E	S	S	A	G	E		L	-	A	D	D	
C	0	1	:	2	3	:	2	9	P		0	6	/	1	4	/	2	0	1	3	
D		E	V	E	N	T		0	1	3	6		O	F		0	2	3	1		

Exhibit 19: Supervisory Input Display

When one or more zones enter into the Supervisory state, the control panel determines which amplifiers should be activated in response to the event and the audio message that should be played. The audio message will continue to sound until the system event is silenced by the fire alarm control panel, event clears and panel is reset, or a page is initiated.

4.9 PROCESS OPERATION

Process is a standard CyberCat panel event that is initiated by an input configured for Process. These inputs are typically connected to non-alarm system contacts used for process management functions. Through panel programming, these inputs can be used to initiate process messages within effected zone(s).

	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	
A				P	R	O	C	E	S	S		I	N	P	U	T					
B	C	U	S	T	O	M		M	E	S	S	A	G	E		L	-	A	D	D	
C	0	1	:	2	3	:	2	9	P		0	6	/	1	4	/	2	0	1	3	
D		E	V	E	N	T		0	1	3	6		O	F		0	2	3	1		

Exhibit 20: Process Input Display

When one or more zones enter into the Process state, the control panel determines which amplifiers should be activated in response to the event and the assigned process message will be played. The audio message will continue to sound until the system event is silenced by the fire alarm control panel, event clears and panel is reset, or a page is initiated.

4.10 PLAY MESSAGE ID (EVACS OR MNS)

Play Message ID turns on the selected system amplifiers and forces them to play the selected message ID in selected zone(s), while the control switch is active. All selected amplifiers then receive and broadcast the incoming page message. Selective page can be directed to a single audio zone, multiple audio zones, or all zones (All Call).

	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	
A	P	E	R	#	0	5		M	E	S	S	A	G	E		S	W	#	0	3	
B	P	E	R	I	P	H	E	R	A	L		M	S	G						0	2
C	0	1	:	2	3	:	2	9	P		0	6	/	1	4	/	2	0	1	3	
D		E	V	E	N	T		0	1	3	6		O	F		0	2	3	1		

Exhibit 21: Play Message ID Display

Procedure:

1. Open the cabinet door (Fire Command Center or Local Operating Console).
2. Press the Play Message ID switch on the control card to initiate the programmed message in the selected zone(s). The RED switch LED will flash until the fire alarm control panel accepts the command request (based on priority levels). If the requested command is denied, the LED will flash and then return to its current operational state (on or off). Turns on solid when the requested command has been accepted by the fire alarm control panel.
3. Press the active Play Message ID switch again to cancel the play message command. The switch LED will flash until the fire alarm control panel accepts the command; then will turn off.

5.0 FIREFIGHTER'S PHONES

The two-way, firefighter's phone system shall provide a means for firefighter's and other emergency response personnel to communicate with each other during the course of an emergency. Fike's ECS system is capable of supporting either a basic fire-phone system or an addressable fire-phone system. A brief description of the operation of each type of system is described below.

5.1 BASIC PHONE SYSTEM (COMMON TALK)

The basic phone system operates on a party-line configuration. As soon as a phone is plugged into a remote phone jack, it is automatically connected to the phone riser allowing communication with any other connected phone. A maximum of five (5) phones may be connected to fire-phone bus at one time, excluding the handset located in the fire command center. The basic fire-phone system does not provide indication of an incoming call at the fire command center. The response personnel must use the FCC handset to frequently check for the presence of an incoming call.

Basic Firefighter's Phone Procedure:

1. Open the Fire Command Center cabinet door.
2. Remove the integral firefighter's phone from the holder by lifting up and then out.
3. While holding the fire-phone to your mouth, speak clearly to deliver your message.

5.2 ADDRESSABLE FIRE-PHONE SYSTEM

The addressable fire-phone system allows the system operator to manually select which phone(s) will be connected to the phone riser. Only phones connected to the phone riser by the emergency responder will be able to communicate on the phone system. A maximum of five phones may be connected to the fire-phone bus at one time, not including the integral fire-phone handset.

The addressable fire-phone system provides the emergency responder with positive indication that an incoming call is pending. The fire-phone card (See Exhibit 22) is equipped with a buzzer that will sound upon receiving an incoming call signal. In addition, each switch on the card is equipped with an LED that will flash in response to an incoming call. The LED will illuminate solid once the system operator has connected the call by pressing the corresponding switch. The incoming caller hears a ringing tone until connected by the system operator.

Procedure:

1. Open the Fire Command Center cabinet door.
2. Remove the integral firefighter's phone from the holder by lifting up and then out.
3. Using the fire-phone card (See Exhibit 22), select the fire-phone(s) that you want to connect to the phone riser by pressing the associated switch. The switches yellow LED will flash until the phone is connected; then it will illuminate solid.
4. While holding the fire-phone to your mouth, speak clearly to deliver your message.
5. Press the switch again to disconnect the fire-phone(s) from the phone riser.

Note: The last unused switch on the Fire-Phone card(s) is automatically designated as a SILENCE switch. When pressed, it will silence the local audible provided on the fire-phone card (P/N 10-2728).

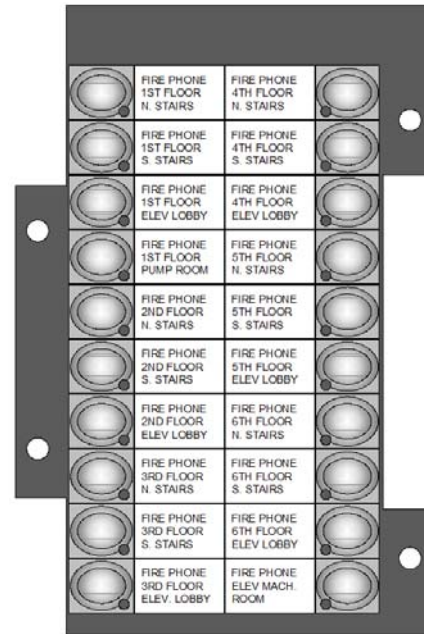


Exhibit 22: Fire-phone Card

APPENDIX A

The instructions on the following page provide basic operating instructions for Fike's Emergency Communication System (ECS) and must be framed and displayed next to the panel in accordance with NFPA 72, National Fire Alarm Code for Local Fire Alarm System.



“System Operation Posting”

P/N 06-442 REV 0
Voice Evacuation System

These instructions must be framed and displayed next to the panel in accordance with NFPA 72, National Fire Alarm Code for Local Fire Alarm System.

PAGING

Follow these steps to manually issue a live page:

Units without Selective Paging

1. Press the microphone key and deliver your message. The On-Line LED on the paging control card will illuminate solid while the microphone is active.

Units with Selective Paging (Audio Control Cards)

1. Select the paging source by pressing either the microphone or fire-phone switch on the paging control card. The corresponding switch LED will illuminate steady to indicate the connected status of the selected paging source.
2. Select the areas (zones) you wish to address by pressing the corresponding switch on the audio control cards. The switch LED will flash until the system amplifier(s) is captured and ready to broadcast the live page; then the LED will illuminate steady.
Press the PAGE ALL switch (if provided) to issue a page to all zones.
Press the PAGE TO EVAC switch (if provided) to issue a page to all zones currently in EVAC mode.
Press the PAGE TO ALERT switch (if provided) to issue a page to all zones currently in Alert mode.
3. Press the microphone key and deliver your message. If using the firefighter's phone, simply deliver your message. The On-Line LED on the paging control card will illuminate solid while the microphone or firefighter's phone is active.
4. Press the active audio control card switch again to restore the selected amplifier(s) to automatic operation.

Units with Selective Paging (Record and Repeat)

1. Select the microphone as the paging source by pressing the microphone switch on the paging control card.
2. Select the areas (zones) you wish to address by pressing the corresponding switch on the audio control cards. Wait for the live LED to illuminate solid; then press the page switch again to initiate the Record and Repeat function. The repeat LED will flash until the system is ready for you to record your message; at which time the repeat LED will illuminate solid.
3. Press the microphone key and deliver your message. The On-Line LED on the paging control card will illuminate solid while the microphone is active. Once the microphone key is released, the custom message will be broadcast by the selected amplifiers.
4. Press the active audio control card switch again to restore the selected amplifier(s) to automatic operation.

FIREFIGHTER'S PHONE USE


Follow these steps to use the firefighter's phone:

Units with Basic Fire-Phone Operation

1. While holding the fire-phone to your mouth, speak clearly to deliver your message.

Addressable Firefighter's Phone Operation

1. Using the fire-phone card, select the fire-phone(s) that you want to connect to the phone riser by pressing the associated switch. The switches red LED will flash until the phone is connected; then it will illuminate solid.
2. While holding the fire-phone to your mouth, speak clearly to deliver your message.
3. Press the switch again to disconnect the fire-phone(s) from the phone riser.

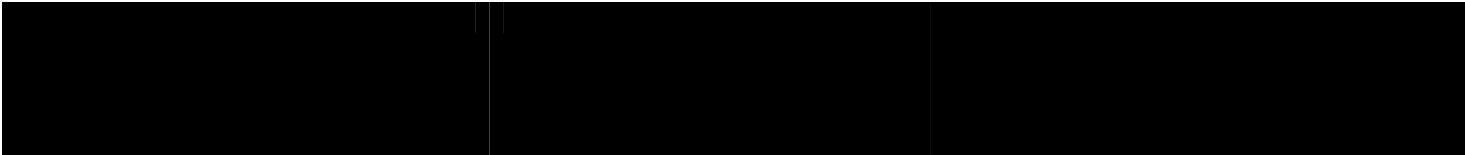
 **CAUTION:** Remove AC and battery power before servicing equipment. AC and battery fuses must be replaced with 15A mini automotive, fast acting fuses.

In case of Trouble contact: _____ or

Phone #: _____

Customer Service Department
Fike Protection Systems
A Division of Fike Corporation
(800) 979-FIKE (3453) or
(816) 229-3405

Refer to Fike's Amplifier Card Product Manual P/N 06-576.



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