
MODEL 528 SERIES

DIGITAL COMMUNICATIONS STATION

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Specifications are preliminary and subject to change

DESCRIPTION

The IED 528 Series Communications Station is a primary control device for IED Audio and Visual Paging Systems. It can be configured to control and initiate a wide range of paging system operations such as announcements, messaging and operational control.

The 528 consists of a color graphics display and an array of push buttons that include a full 12 button keypad in addition to soft keys providing navigation and menu-driven selection options. Depending on the style of station installed, a handheld or gooseneck microphone is provided for initiating live or recorded announcements. The 528 is designed to operate solely with an IED 500ACS Announcement Control System. All audio and control data is transported on a standard 100 Base TX Ethernet Network with remote power normally provided by an 802.11af POE Ethernet Switch.

The 528 Series is manufactured in several versions to provide the best possible mounting situation and orientation. The examples shown in this guide are based on the 528HFM-H which is a horizontally oriented station with a handheld microphone. Other 528 versions have precisely the same features and functions but may utilize a vertical layout.

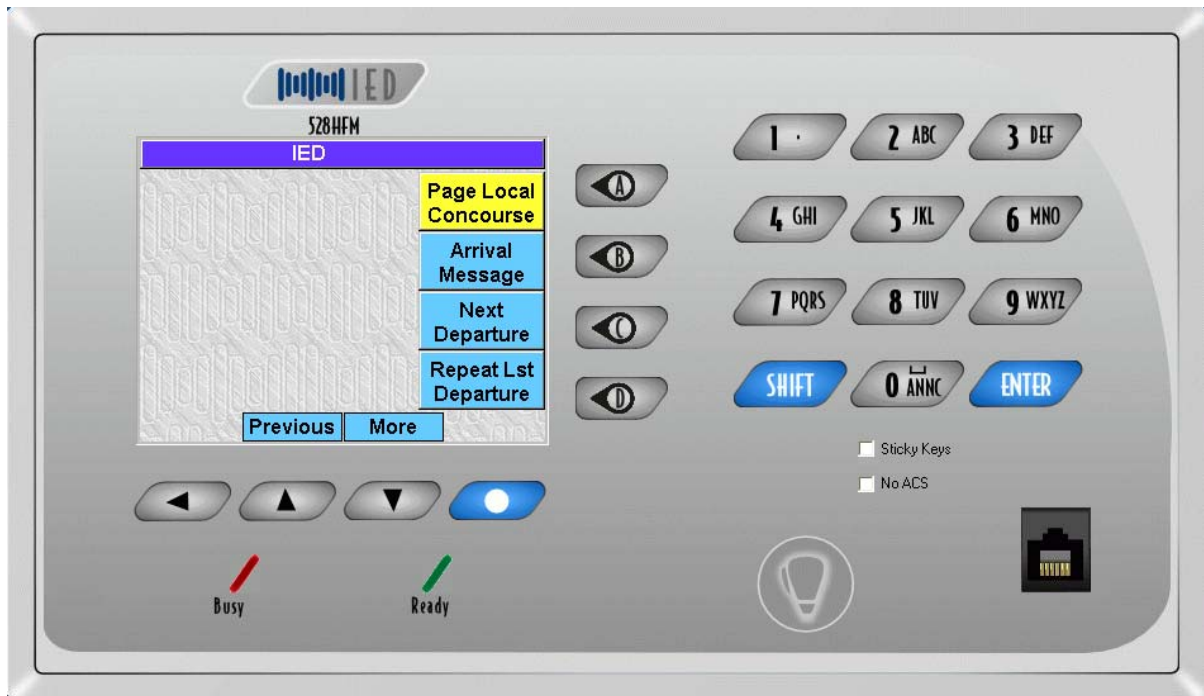


Figure 1 – IED 528H

Specifications are preliminary and subject to change

PANEL LAYOUT (REFER TO FIGURE 1)

Display – The display utilized in the 528 is a Graphical Full Color LCD Display. The principal use of the display is to provide status and prompting information for control of the system from this station. Dynamic button labels and drop down menus provide the user with an unlimited number of intuitive selections.

Note that the screen does not have a touch sensitive surface for control. All entry is done via the key push buttons. The screen surface is protected with a Lexan overlay to protect it from damage and excessive glare.

Keypad Buttons – A standard layout 12-keypad is included for direct entry of numbers and letters. To enter letters, hold the Shift Key down and select a letter. Press the key with the desired letter the number of times corresponding to its position on the key. For example, if the letter is in the second position, press the key twice in rapid succession for that letter then release the shift key.



The [0/Annc] Key will produce a space. You can delete characters by backspacing over them. To backspace, hold down the Shift Key and press "Enter".

Navigation Soft Keys – Four navigation soft keys are located beneath the graphics display. These soft keys are associated with the label boxes directly above them in the lower part of the display. The left arrow soft key normally provides a cancel or back function. The up and down soft keys normally scroll lines up and down in a pop-up menu. The blue with a white dot soft key normally provides a select or enter function for the highlighted area.



Only navigation soft keys that have an associated label are active and available for selection.

Soft Function Keys – Four soft function keys are located to the right of graphics display. These soft keys are labeled with the letters A through D and are associated with the label boxes directly to the left of them on the right side of the display. Pressing a soft function key will select or activate the function displayed in the label box.



Only function soft keys that have an associated label are active and available for selection.

Status Lights - Each 528 includes status lights for busy (red) and ready (green).

The red status light will flash and the audible alert will sound under two conditions. (1) A zone group has been selected for a live page and one or more of the zones are busy, so the announcement cannot be processed, or (2) the system has processed a request for an announcement or message and the system has found one of the requested parameters invalid, thus canceling the request.



The green status light will flash and the audible alert will sound when an announcement is active and the microphone is on.

Specifications are preliminary and subject to change

MICROPHONES

Microphones – IED paging stations normally come equipped with one of two types of microphones; handheld or gooseneck. The most common is a Model 500HH handheld microphone. This is a “communications style” with a push to talk switch on the left side of the shell.

The 500HH utilizes a magnetic mount rather a cumbersome clip or hanger. The microphone can be stored either on the face of the station over the microphone icon, or on any ferrous metal surface such as the equipment rack. While the magnet used is powerful, the microphone is easy to remove by simply tilting or rotating it away from the metal surface. Take care to keep any magnetic media way from the microphone.

Please note that while this microphone looks similar to other handheld microphones, it is not interchangeable. The 500HH utilizes a condenser element for wide band audio reproduction and a built-in line amplifier. Use of any other microphone will result in low volume and poor sound quality.

Proper use of the microphone is to speak in a normal tone of voice 1” away from the black grill.

Some paging stations may be equipped with a 500G Gooseneck microphone. The 500G provides identical performance to the 500HH and would typically be used on a desk top style station. When ready to make an announcement, the microphone is activated by depressing and holding the [0/Annc] button on the key pad while speaking.

POWERING UP

The 528 can be powered remotely from the Cat5e/6 network cable or from a local power supply. Normally the network cable method is used with power being provided from a POE enabled Ethernet switch or mid-span power device. The 528 is powered up by plugging in the network cable or the local power supply cable. In most systems the 528 will remain connected to the network switch with power supplied all times so “turning on” the 528 is not required.

When the station is initially connected to network power, the Waiting For Host screen will appear. At this point the station is contacting the 500ACS and the 500ACS is verifying the station has been configured for use. This configuration will be handled by the system administrator in the system setup software, IED Enterprise. If the Waiting For Host screen does clear within 60 seconds you should assume there is a network communications problem, the 500ACS is not on line, or this station has not been configured in Enterprise.



Specifications are preliminary and subject to change

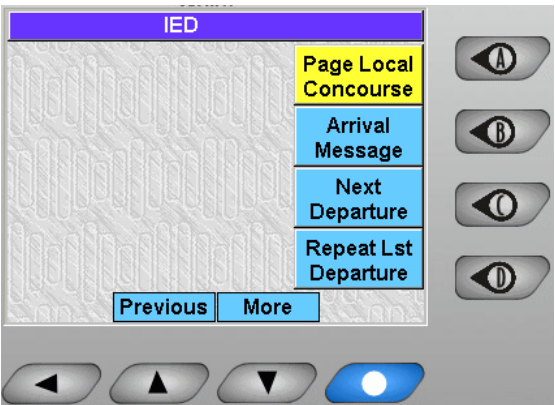
LOGGING IN

In the system setup, each 528 station has the option to be locked or unlocked to prevent unauthorized use. If the station is configured to be locked, it will require a User ID to be entered before it can be used. In that situation, the Station Locked screen will be the first screen you see. All buttons and functions on the station are disabled until a valid login is entered. To do so, press the soft key associated with the Log In text box on the display. This will open an Enter User ID drop down window.



Enter your assigned User ID by using the keypad and press enter. If valid, the display will confirm that the User ID is accepted and the default screen will appear.

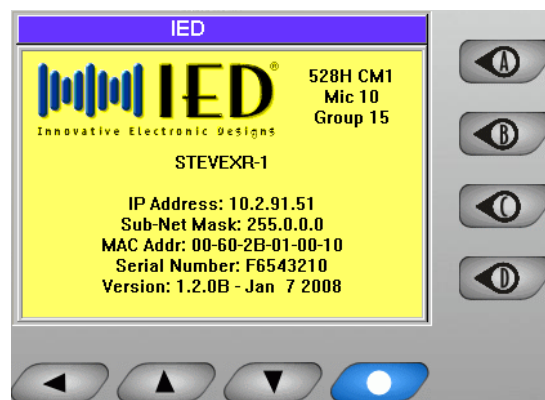
If another user name is listed at the top of the screen, Log Out and re-enter your User ID to obtain proper access to the system.



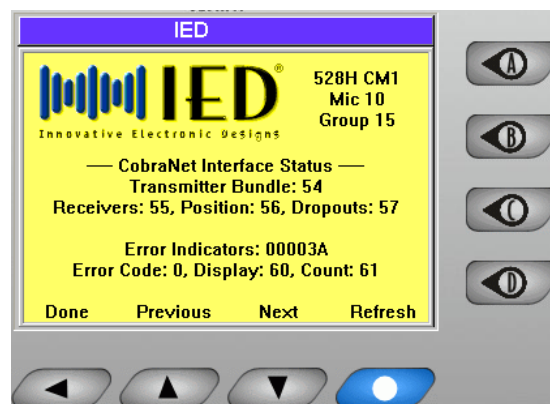
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THE ABOUT STATION SCENES

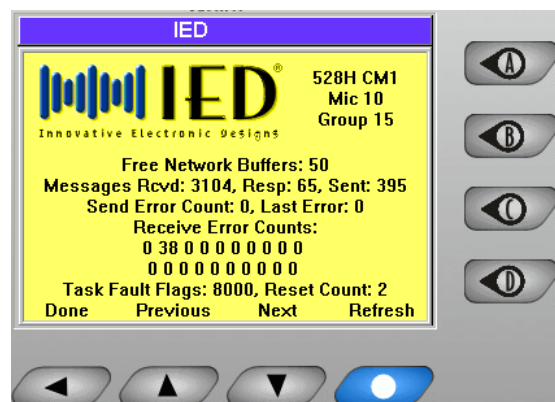
The soft key [About] takes you to the first Configuration Screen. This screen provides identification information required by the 500ACS such as the Station Model Number, Physical Location, Mic Number, and the Group Number. The Group Number is the 500ACS node the station is connected to. This screen also provides network identification information such as the IP Address, Sub-Net Mask, MAC Address, Serial number of the station and the installed version of firmware.



From the Configuration screen the [Next] soft key brings you to the CobraNet® Network Status Screen. This provides information on digital audio transportation on the network and would seldom be viewed by a normal user. A technician working on the system may use this data when resolving problems with the help of factory support.



From the Cobranet® screen the [Next] soft key brings you to the Network Statistics Screen. As with the screen above, no user information is provided here and its existence is to assist in diagnosing problems.



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ZONING

Before we begin making announcements it is important to understand the concept of zones and zone groups. A system zone is a discrete output of the system, typically assigned to a power amplifier which is powering a group of loudspeakers. It is normally the smallest addressable area that you may page or send a message to. A good example of a zone is a gate hold room. A system may have from a few to hundreds of zones. In order to page to a larger area than a single zone, the system can combine combinations of zones together to create zone groups. These “virtual” zone groups can combine zones based on physical location, such as an entire concourse, or by function, such as all of the areas controlled or used by a single airline.

The proper use of zone groups allows you to initiate a single announcement and have it play in all of the areas that are appropriate for that announcement. Zone groups will be set up by your system administrator for the most common combinations of zones.

ANNOUNCEMENTS AND MESSAGES

The IED definition of an Announcement is a real person speaking into a microphone, with the resulting audio playing once (or few times) through the overhead paging system. This audio could play live (in real time), or it could be delayed by the system as it manages announcement priorities and other announcements that are assigned to play in the same speaker zones. We call this process of recording and holding announcements DRP (Digital Record and Playback) or store and forward. In larger systems with many zone(s), this feature provides the benefit of not requiring a wait for paging access to a zone which is busy making another announcement. You can initiate your announcement immediately and the system will play it when it comes to the top of the queue. This feature also provides the benefit of prioritizing announcements and messages as configured by the system administrator.

Messages are recorded announcements that are created and stored for playback in the future. Messages may play on demand from a paging station or workstation, play based on the system clock, or be assembled into more complex messages such as those included in the Flight Announcement System.

This system manages the interaction between announcements and messages automatically so you can make announcements or start messages freely. The system will play them as soon as possible based on the business rules programming.

Specifications are preliminary and subject to change

MAKING ANNOUNCEMENTS

Announcements from a paging station may be initiated by one of two methods. The first is direct input of the zone (or zone group) access number on the keypad. Your system administrator should have provided you a sheet or guide that includes the valid access code numbers for the zones and zone groups your user group is authorized to use. The user group name that is logged into the station will appear on the top of the display. The second method for initiating announcements is by using the Soft Function Keys adjacent to the button labels on the display.

Procedure to Make a Direct Access Announcement

Enter the 1 to 4- digit access code on the key pad. When you enter the first digit, an Entry Code window will pop up displaying the digits you have entered. To correct digits, backspace using the [Up] soft key on the navigation keys and delete using the [Delete] soft key.



Press [Enter] and the Press Mic Switch pop-up screen will appear indicating the system is waiting for you to press the switch on the side of the handheld microphone, (or in the case of a gooseneck microphone, the [0/Annc] button on the keypad).

Press the mic switch and if you entered a valid access code, the display will show the Announcement is Active and the green ready light will illuminate. This confirms to you that the microphone is on and you may begin speaking.



Depending on the software set-up, your announcement may be heard live or it may be recorded. In either case, speak clearly and at a normal pace. After you have completed your announcement release the mic switch.

Depending on the software set-up, you will have approximately 50 seconds to make your announcement. When you have 5 seconds remaining, the green ready light will begin flashing. When the green light extinguishes the announcement is over.

If the announcement has been recorded, releasing the mic switch will move the announcement to the queue for play when the resources become available based on the announcement's priority level. Depending on system activity, it may take a minute or two for your announcement to play to the zone(s). Recording or DRP of announcements provides the added benefit of canceling the announcement if you mis-pronounce words or change your mind. To cancel an announcement, continue to hold down the mic switch without speaking, the announcement will be canceled after 5 seconds of silence.

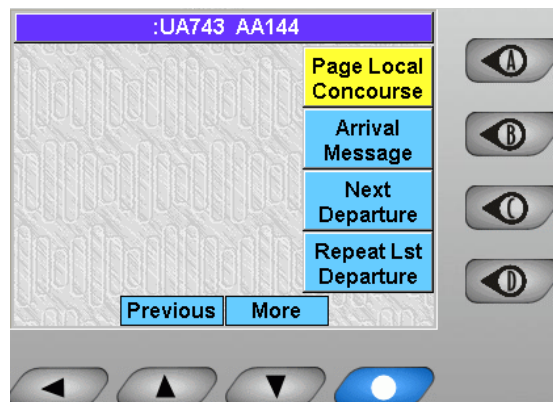
If you have not entered a valid access code, the Release Mic Switch pop-up screen will appear. Clear it by releasing the microphone switch.

Specifications are preliminary and subject to change

Procedure to Make Announcements from the Soft Function Keys.

Your system may be configured to allow announcement selections from the display by using the Soft Function Keys. In this example, there is a selection to Page Local Concourse. Pressing the Soft Function Key [A] will select this zone group and display the Press Mic Switch Screen.

Press the mic switch and the display will show the Announcement is Active and the green ready light will illuminate. This confirms to you that the microphone is on and you may begin speaking.



Depending on the software set-up, your announcement may be heard live or it may be recorded. In either case, speak clearly and at a normal pace. After you have completed your announcement release the mic switch.

Depending on the software set-up, you will have approximately 50 seconds to make your announcement. When you have 5 seconds remaining, the green ready light will begin flashing. When the green light extinguishes the announcement is over.

If the announcement has been recorded, releasing the mic switch will move the announcement to the queue for play when the resources become available based on the announcement's priority level. Depending on system activity, it may take a minute or two for your announcement to play to the zone's. Recording or DRP of announcements provides the added benefit of canceling the announcement if you mis-pronounce words or change your mind. To cancel an announcement, continue to hold down the mic switch without speaking, the announcement will be canceled after 5 seconds of silence.

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PLAYING GENERAL MESSAGES

As with Announcements, Messages may be initiated by one of two methods. The first is direct input of the message access number on the keypad. Your

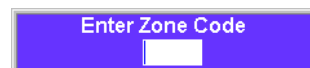
system administrator should have provided you a sheet or guide that includes the valid access code numbers for messages that your user group is authorized to use. The user group name that is logged into the station will appear on the top of the display. The second method for initiating messages is by using the Soft Function Keys adjacent to the button labels on the display.

Procedure to Play a Direct Access Message

Enter the 1 to 4- digit access code on the key pad. When you enter the first digit an Entry Code window will display the digits you have entered. To correct digits, backspace using the [Up] soft key on the navigation keys and delete using the [Delete] soft key.



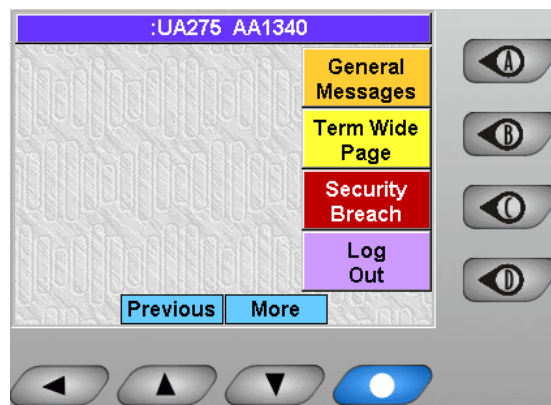
A second entry screen will appear for entering the Zone Code. This is the zone group number where you would like the message to play in. Most messages will have default zone groups assigned to them by the system administrator. If you wish to play the message to the default zone, simply press [Enter] to bypass this entry and the message will play. If you wish the message to play to a different zone group, enter the zone group access code and press [Enter] to play the message to the selected zone group. When accepted, the Start Message Active message will appear at the top of the display.



If you have not entered a valid access code, the Invalid Entry Screen will flash along with a flashing red busy light and beeping.

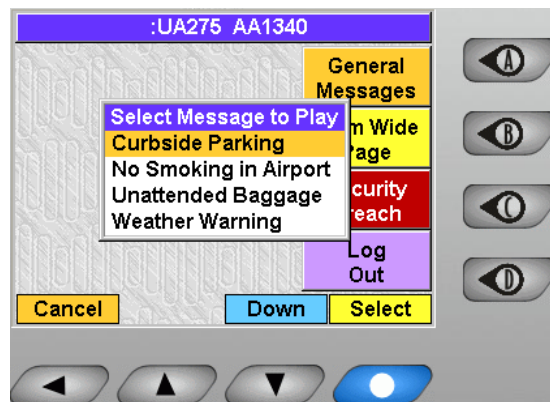
Procedure to Play Messages from the Soft Function Keys.

Your system may be configured to allow messages to be played from the display by using the Soft Function Keys. In this example, there is a selection for General Messages. Pressing the Soft Function Key [A] will display a pop-up window with message selections.

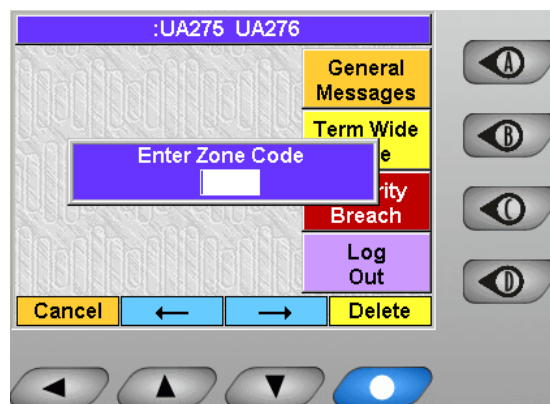


Specifications are preliminary and subject to change

Using the navigation soft keys, highlight the message you wish to play and press the [Select] soft key.



An entry screen will appear for entering the Zone Code. This is the zone group number where you would like the message to play in. Most messages will have default zone groups assigned to them by the system administrator. If you wish to play the message to the default zone, press [Enter] to bypass this entry and the message will play. If you wish the message to play to a different zone group, enter the zone group access code and press [Enter] to play the message to the selected zone group. When accepted, the Start Message Active message will appear at the top of the display.



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FLIGHT ANNOUNCEMENT SYSTEM (FAS®)

This section is applicable if your system includes the IED Flight Announcement System (FAS®) Module. The FAS is a server application that works in conjunction with the 500ACS® to produce dynamic messages useful for normal flight and gate operations. The FAS uses a sophisticated method of assembling message segments into standard messages using real time flight data from the IED database. It can provide multi-lingual flight announcements as well as synchronized visual announcements.

The FAS frees the gate agent from making time consuming and repetitive announcements for processing flights. It allows gate agents to efficiently direct non-English speaking passengers and can provide synchronized visual announcements to assist the hearing impaired.

The FAS depends on valid flight information to create accurate announcements. In most systems, this data will updated automatically from an FAA or similar data feed. There is, however some information that is necessary which is not available on the data feeds. Information such as short flight delays or gate changes must be entered locally. The system has the flexibility for any missing or incorrect data to be updated either from a user workstation, or from the 528 Communications Station. Additional, the users always have the option to pickup the microphone and make a normal announcement if the situation requires it. The FAS is designed to be as automatic as possible, yet still give the user full control over the process.

Each user that is associated with an airline will have their User ID included as a member of that airline's User Group. Each airline's User Group has exclusive access to their flight records in the IED database as well as their customized message templates. These templates combine the real time flight data with airline specific information such frequent flyer programs and aircraft loading sequences to provide messages that are unique to each airline. The FAS provides a great deal of flexibility in it's configuration for individual airlines. The messages and processes described below are typical and may not precisely match those configured for you airline.

To begin using the system, log-in to the 528 Communications Station. Your User Group will appear on the top line of the display. If this gate has a scheduled arrival or departure in the next hour, the airline and flight numbers will also be shown indicating that these flight sequences have been loaded into the system for use at this gate. This will normally correspond to the times that the Gate Information Displays begin showing the next arrival and departure information. These times may vary based on the system setup.

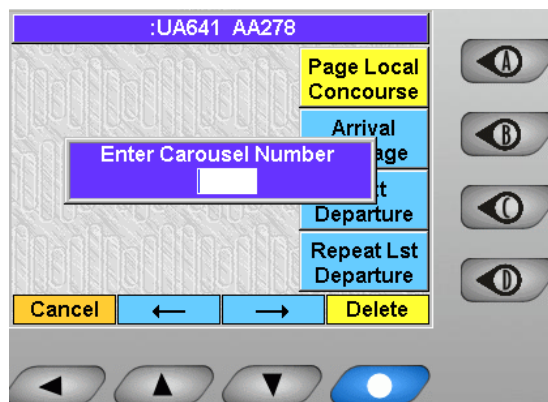
Your system administrator will provide you with a Flight Announcement Sequence Card that provides further information that is specific to your airline. This will include direct access numbers for the flight announcements as well as exact wording of all of your announcements.

Specifications are preliminary and subject to change

Arriving Flights

When a flight arrives at the gate, you can play an arrival message at the gate and schedule a baggage claim message to play in the assigned baggage claim area. To do so, press the soft function key associated with the Arrival Message box on the display. A pop-up window will appear for entering the Baggage Carousel Number. This entry is required only if the Carousel assignment is different from that shown on the Baggage Information Display System, or if the FAS is not interfaced to receive data your airline or airport database.

When you press the [Enter] button, the display will show if the entry was valid and the messages will begin playing in an expanded area around the arrival gate. The separate baggage claim area message also plays to an expanded zone group around the baggage carousel and advises people waiting for passengers where they can be met.



Departing Flights

The departure sequence includes a series of announcements as approved by your airline. Each airline uses a slightly different procedure or wording so these examples may not precisely match those of your airline. Typical announcements would include:

Check-In Announcement

Pre-Boarding Announcement

1st Class Boarding

Boarding by Groups

Boarding all Groups

Final Boarding Call (expanded zone group)

To start the sequence, press the soft function key [B] associated with the Next Departure text box on the display. The display should indicate a Valid Entry and the Check-In Announcement will be playing in the gate. If Visual Paging Displays are included with your system, large text messages will scroll in synchronization with the audio. If Gate Information Displays are included with your system, boarding status will be updated and displayed with each message.

To play the next message in the departure sequence, press the soft function key [C] associated with the Next Departure text box on the display. Continue pressing the next message key as required until the flight has completed boarding.

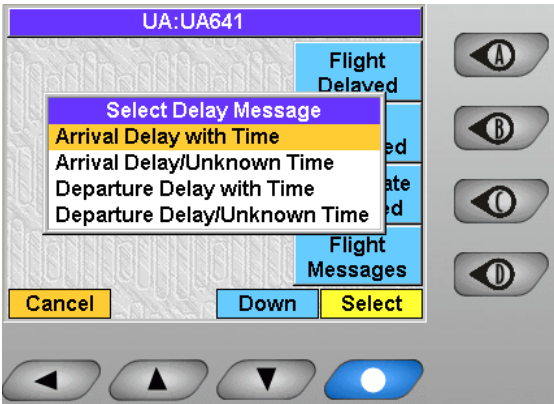


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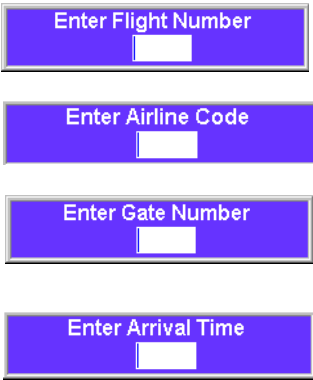
To repeat the last message played, press the soft function key [D] associated with the Repeat Lst Departure text box on the display.

Delayed Flights

Flight delays can be for either arrival or departing flights. To delay a flight, press the soft function key [A] associated with the Flight Delayed text box on the display. A pop-up window will appear that provides options for arrival or departure flights, as well as new times if you know them. Scroll using the navigation soft keys to select the appropriate option and press the [Select key].



Several entry boxes will appear in sequence. If the flight you are delaying is the one scheduled for the gate you are in, (confirm the flight number shown in the title bar of the display), you may press the [Enter] key repeatedly to skip through these until you arrive at the Enter Arrival Time window. Here you may enter the new arrival time if you know it. Enter the time using digits only and press [Enter]. If you are delaying a different flight from this station, enter the appropriate information.



A Delay Reason pop-up window will appear on the screen. Scroll down using the navigation soft keys to highlight the appropriate reason and press the [Select] soft key. The message will play to the default zone group.

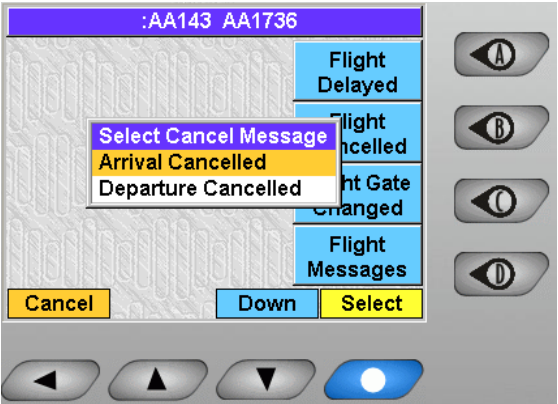
Note: These are the only official delay reasons recognized by the FAA.



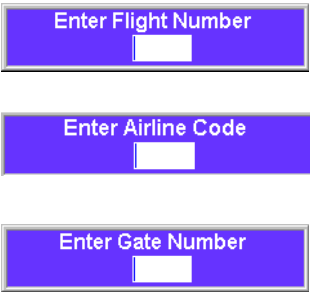
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Cancelled Flight

Flight cancellations can be for either arrival or departing flights. To cancel a flight, press the soft function key [B] associated with the Flight Cancelled text box on the display. A pop-up window will appear that allows selection of the arrival or departure flight. Scroll using the navigation soft keys to select the appropriate option and press the [Select key].



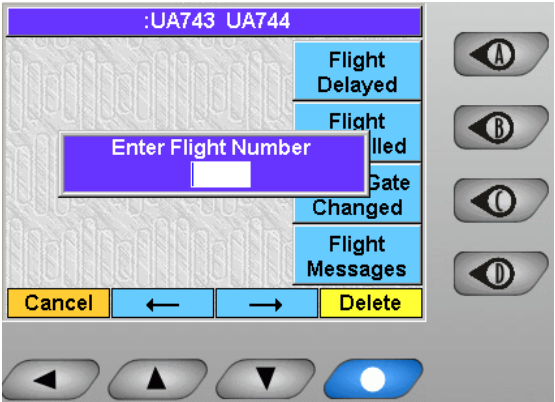
Several entry boxes will appear in sequence. If the flight you are canceling is the one scheduled for the gate you are in, (confirm the flight number shown in the title bar of the display), you may press the [Enter] key repeatedly to skip through these. If you are canceling a different flight from this station, enter the appropriate information.



Flight Gate Changes

Flight Gate Changes can be for either arrival or departing flights. To change a gate, press the soft function key [C] associated with the Flight Gate Change text box on the display. Enter the Flight Number in the text box and press [Enter].

If the flight you are changing is the one scheduled for the gate you are in, (confirm the flight number shown in the title bar of the display), you may press the [Enter] key to skip this step. If you are changing a different flight from that at this station, enter the appropriate information.

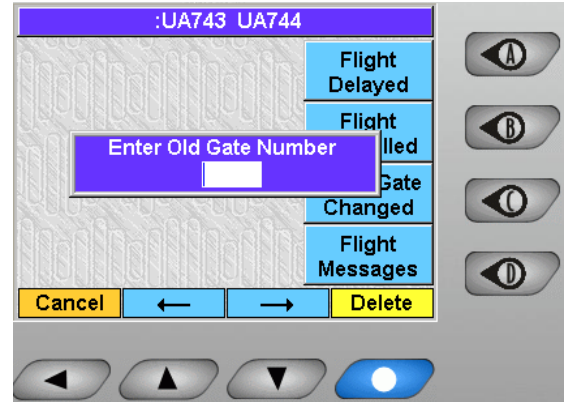


You will then see a pop-up window for entering the airline code. If you are logged in as the user group for this airline, you may press [Enter] to skip past this entry. If not, enter the appropriate Airline Code for the affected flight.



Specifications are preliminary and subject to change

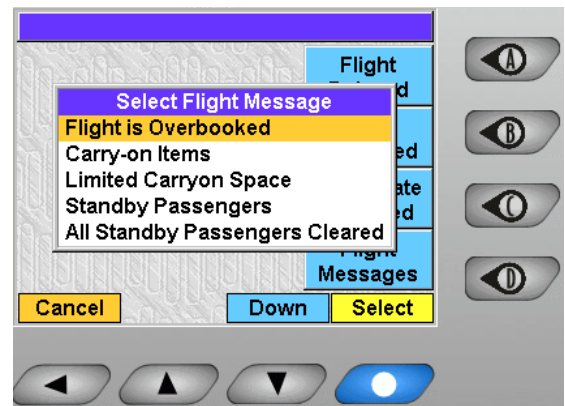
A pop-up window will appear for entering the Old Gate Number. Enter the number for the old gate and press [Enter]. You will then be prompted to enter a New Gate Number. Enter the number for the new gate and press [Enter]. The gate change message will play in the old gate zone and in the new gate zone.



Flight Messages

Flight messages are informational messages that generally played at the gate. Since they are not part of a normal flight sequence, they are played on demand from the 528 Station when requested.

To play a flight message, press the soft function key [D] associated with the Flight Message text box on the display. A pop-up window will appear that allows selection of flight messages. Scroll using the navigation soft keys to select the appropriate message and press the [Select] key.



Several entry boxes will appear in sequence. If the message is associated with the flight scheduled for the gate you are in, (confirm the flight number shown in the title bar of the display), you may press the [Enter] key repeatedly to skip through these. If you wish to change any information, enter it and continue to press [Enter] until you reach the end of the pop-up windows and the message plays.

Enter Flight Number

Enter Airline Code

Enter Gate Number

SECURITY BREACH MESSAGES

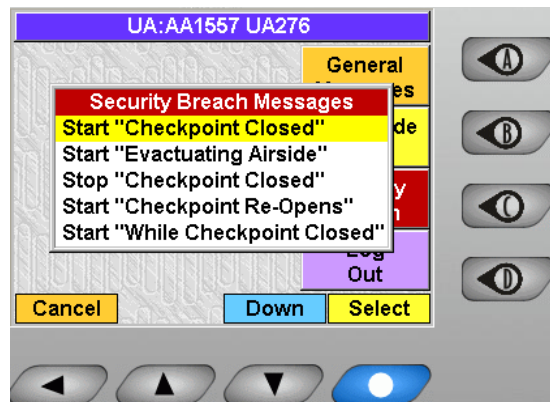
Security Breach Messages are available for use when a security breach has occurred airside and the security check point must be closed. It provides messages that will repeat automatically in assigned zone groups to inform the public what they should do when the checkpoint is closing or reopening. Note the number and time of automatic repeats may be different for your airport depending upon setting made by your system administrator.

Specifications are preliminary and subject to change

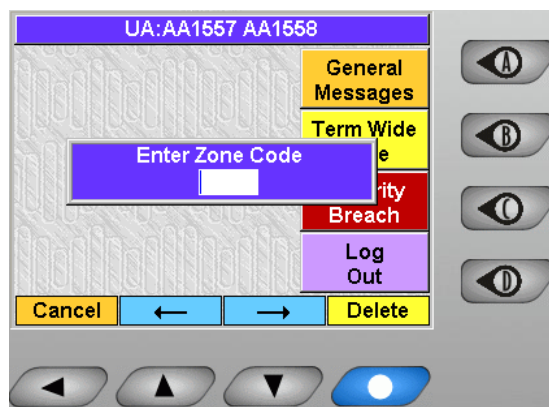
Procedure to Play Security Breach Messages.

To initiate a message, press the soft function key associated with the Security Breach text box on the display. A pop-up window will appear with selections for messages.

Using the navigation soft keys, highlight the "**Checkpoint Closed**" message and press [Select]. This message plays to zone groups landside of the checkpoint and advises that the checkpoint is closed due to a potential security breach. After selecting the message, a pop-up window for entering the zone code will appear. If you wish to send the message to the default zone group (recommended), leave this blank and press [Enter] to play the message. The message will repeat automatically ever 5 minutes until manually stopped by using the Stop "**Checkpoint Closed**" message command on this screen.



The "**Evacuating Airside**" message is played to begin the evacuation of airside. This message plays to zone groups airside of the checkpoint and advises passengers to evacuate past the checkpoint. After selecting the message, a pop-up window for entering the zone code will appear. If you wish to send the message to the default zone group (recommended), leave this blank and press [Enter] to play the message. The message will repeat automatically every minute for 15 minutes.



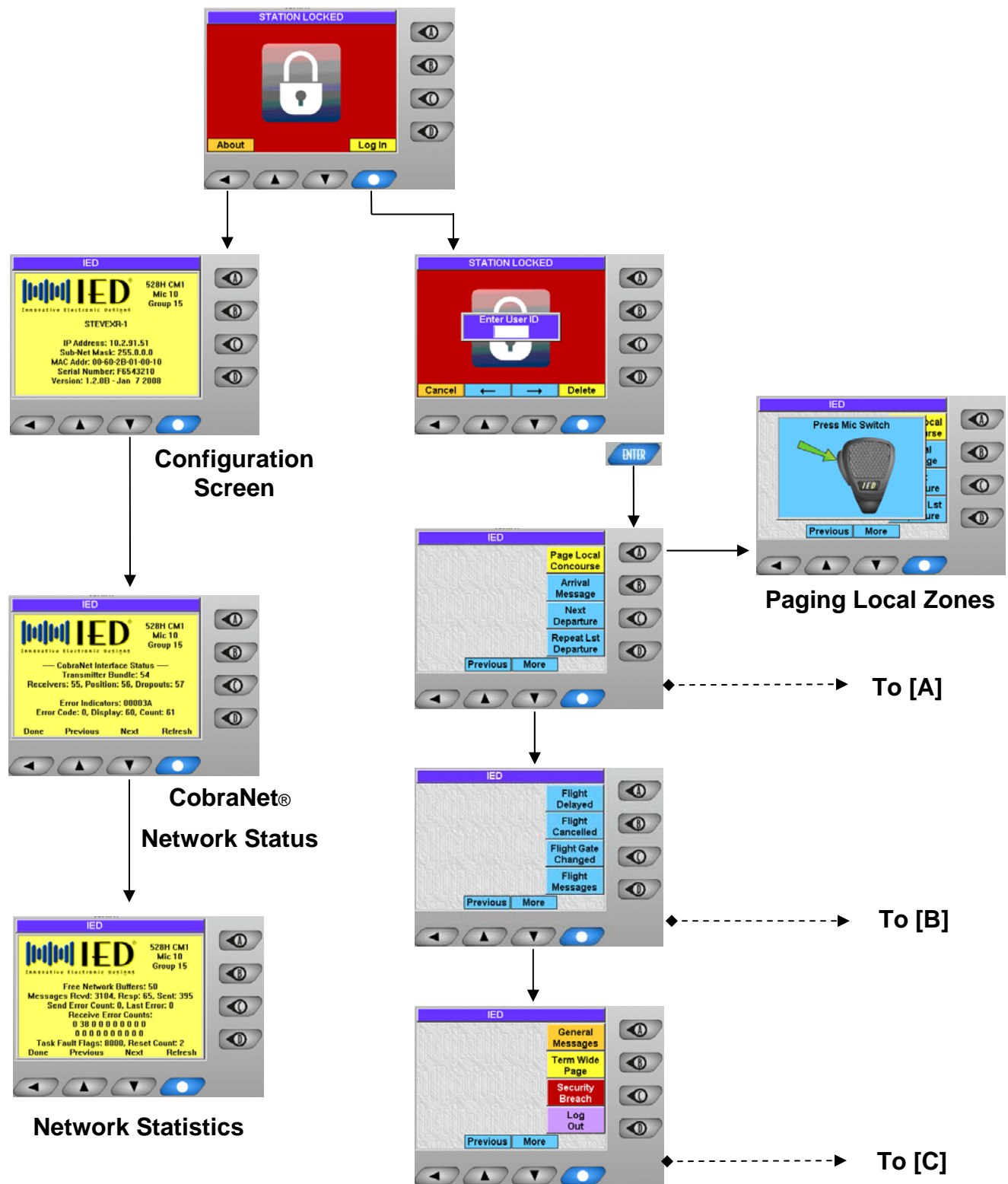
To stop the "**Checkpoint Closed**" message, select the "**Stop Checkpoint Closed**" message and press the [Select] button. This message should be stopped before the "**Checkpoint Re-Opens**" message is started.

The Start "**Checkpoint Re-Opens**" message should be played after the security breach has been cleared and passengers may once again pass through the checkpoint to airside. After selecting the message, a pop-up window for entering the zone code will appear. If you wish to send the message to the default zone group (recommended), leave this blank and press [Enter] to play the message. This message plays to zone groups landside of the checkpoint and will repeat every 5 minutes for 15 minutes.

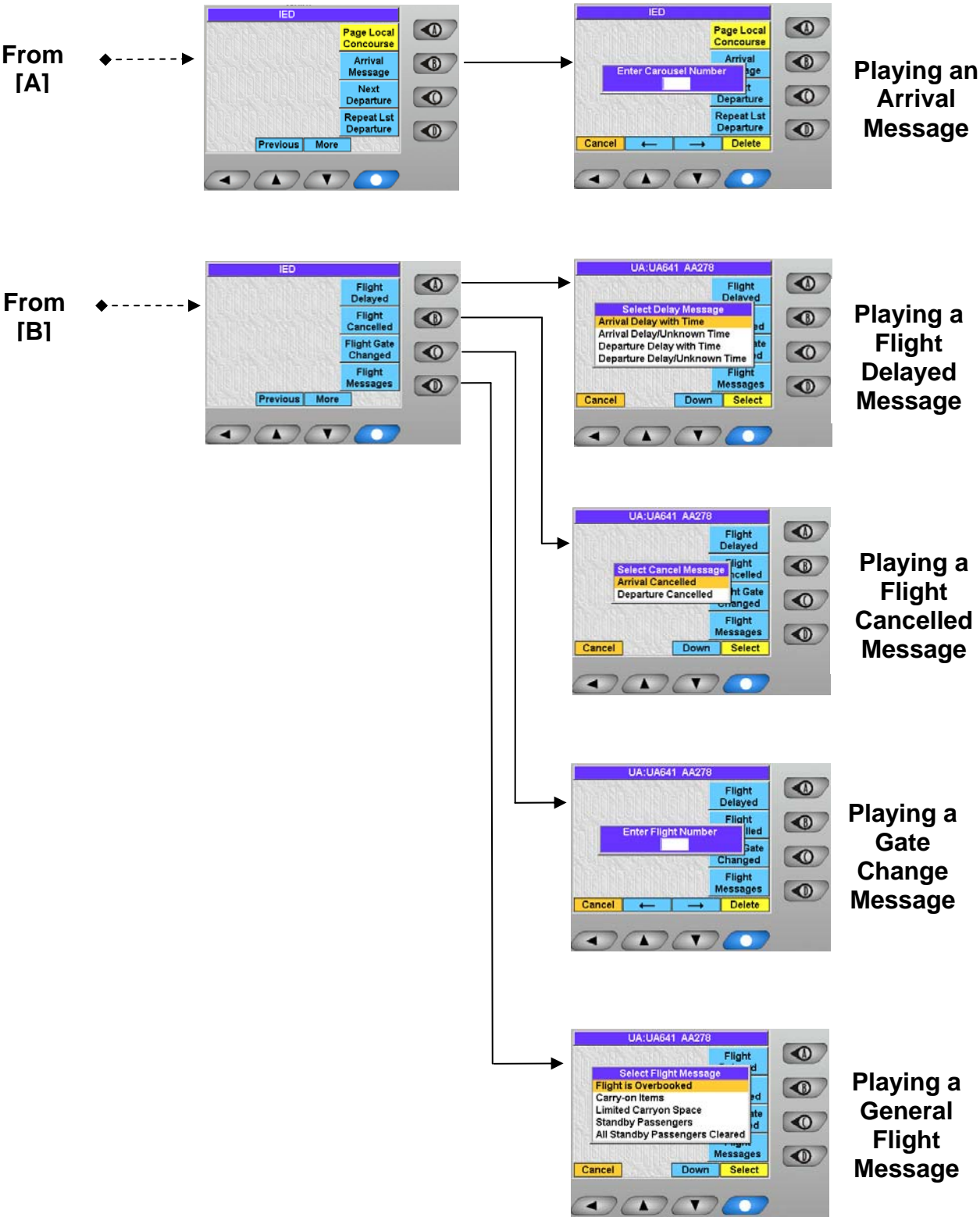
While the checkpoint is closed and a search is conducted airside, you may play the "**While Checkpoint Closed**" message to keep passengers informed. After selecting the message, a pop-up window for entering the zone code will appear. If you wish to send the message to the default zone group (recommended), leave this blank and press [Enter] to play the message. The message plays only once. To play the message again repeat this step.

Specifications are preliminary and subject to change

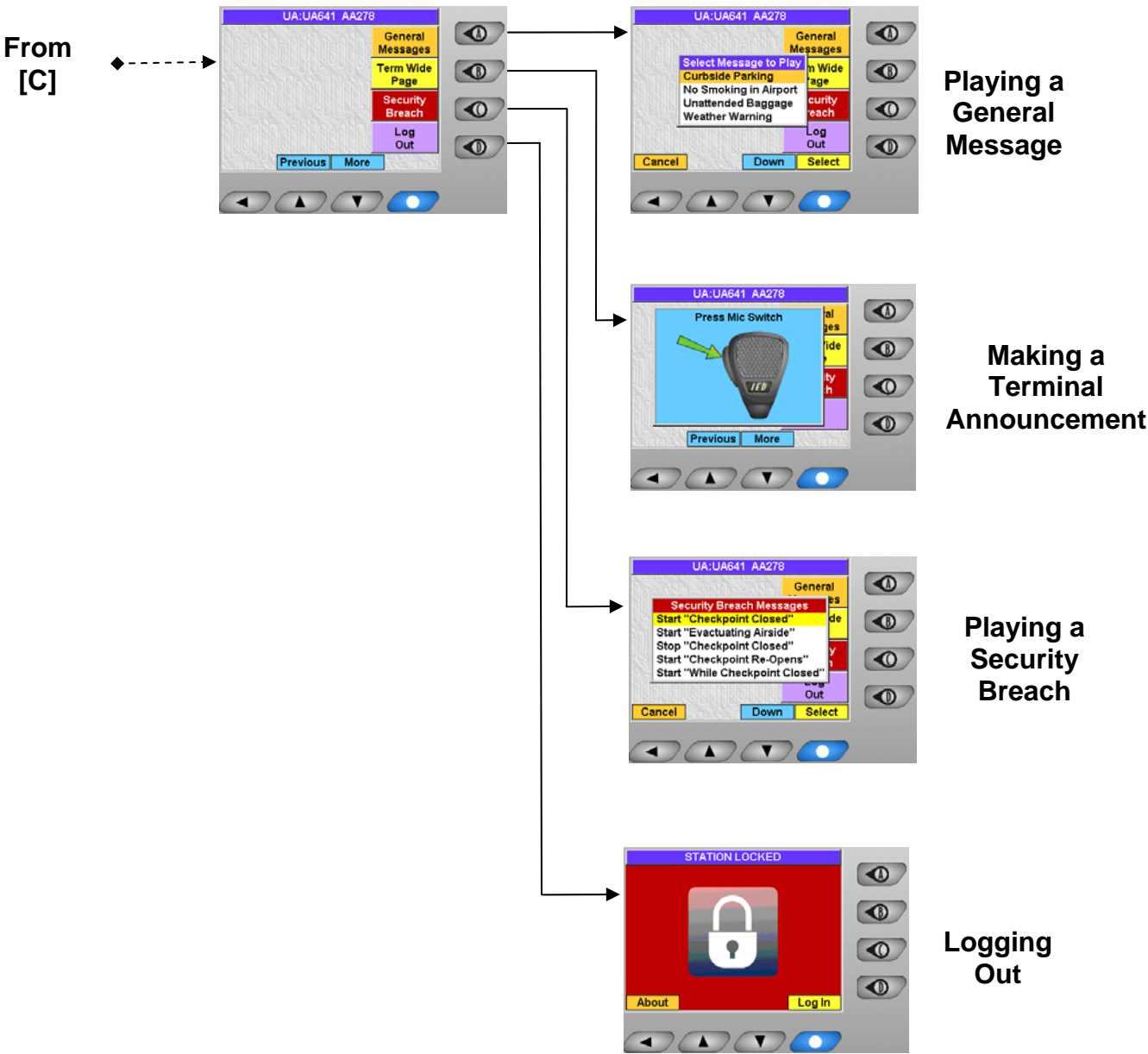
528 SCREEN NAVIGATION



Specifications are preliminary and subject to change



Specifications are preliminary and subject to change



END

Specifications are preliminary and subject to change