FBD-MZ
Fire Detection System

Fire Detection System, Multi-Zone

Owner's Manual
&
Installation Instructions

Read and comply with all instructions, warnings and limitations before installing, servicing or removing this device.

Additional copies of this manual are available at no charge by contacting the manufacturer, distributor or dealer. Fireboy-Xintex reserves the right to change features without notice.

Part Number 18166, G, 01/11/2022

Specifications 3

Operation of the FBD-MZ Fire Detection System 3

Installation 4
- Installing the Display 4
- Installing Detectors and other Devices on Detection Circuits 5
- Field Wiring to Detectors 5
- Electrical Connections 5

Control Module Troubleshooting LEDs 10

Programming the Display 10
- Changing the Brightness and Contrast of the Display 10
- Changing the Number of Zones 11
- Enabling the Screensaver 13
- Changing the Zone Text 14

Mute Function 15

Reset Function 15

Testing the FBD-MZ Fire Detection System 16

Maintenance 16

In the Event of an Alarm 16

Repairing the FBD-MZ Fire Detection System 16

Returning the FBD-MZ Fire Detection System 16

1 Year Limited Warranty 17

Specifications

System Specifications
Operating Voltage: 9-32V DC
Quiescent Current Draw: 200mA @ 12V DC, 100mA @ 24V DC, 240mA @ 32V DC
Alarm Current Draw: 220mA @ 12V DC, 115mA @ 24V DC, 260mA @ 32V DC
Operating/Storage Temperature: 22°F (-6°C) to 158°F (70°C)
Relay Output: 500mA
Display Dimensions: 2.6” (67mm) x 2.6” (67mm) x 2.0” (51mm)
Control Module Dimensions: 7.29” (186mm) x 5.49” (140mm) x 1.39” (36mm)

NOTE

ABOVE CURRENT DRAWS PERTAIN ONLY TO THE DISPLAY AND MODULE UNIT. FULL SYSTEM CURRENT DRAWS MUST ALSO ACCOUNT FOR EACH DETECTOR USED IN THE SYSTEM.

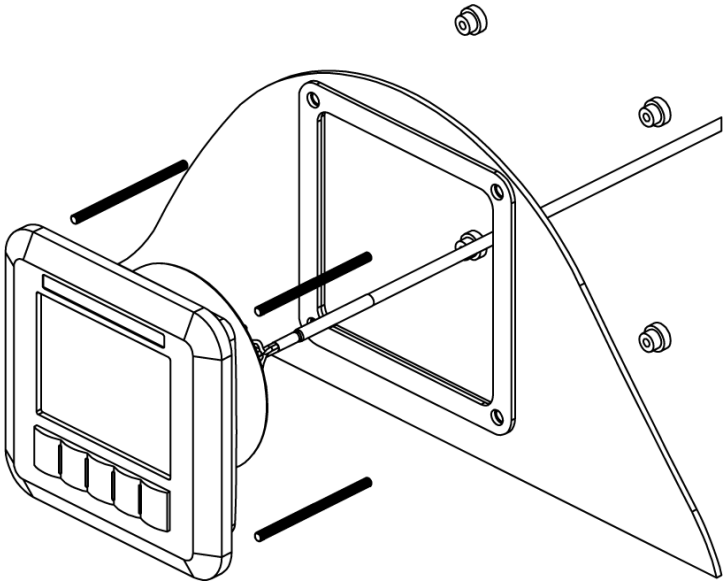
Operation of the FBD-MZ Fire Detection System

The FBD-MZ Detection System allows the monitoring of 4-12 zones of smoke and heat detectors. Eight (8) detectors may be installed on each zone of the system. The system will monitor and report an alarm both visually and audibly. The system also has 2 additional dry contact relay outputs that can be used for additional notification.

Installing the Display

Locate the Display so that it may be easily observed while the vessel is underway.

The Display may be mounted into a bulkhead, dash, or panel. Leave enough clearance behind the Display for the cable connections. A paper template is provided with the Display to locate the holes required to mount the Display. It is recommended to verify the measurements after marking the locations. Drill out the mounting holes and cut out the area needed to insert the Display. Thread the provided M4 studs into the rear of the Display. Install the Display and secure with the provided nuts from the back side of the bulkhead, dash, or panel.



Locate the Control Module somewhere near the Display. It is not necessary to mount the Control Module where it can be seen at all times, however, it must be protected from the elements. Use the provided #8 Screws to secure the Control Module once the mounting holes are drilled.

NOTE

DO NOT MAKE ELECTRICAL CONNECTIONS AT THIS TIME. THEY WILL BE ADDRESSED IN A LATER SECTION.

Installing Detectors and other Devices on Detection Circuits

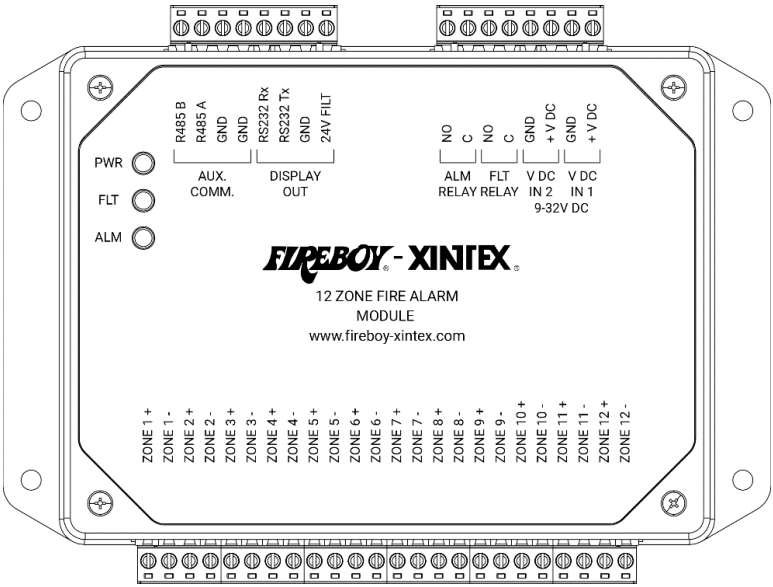
Locate and install the heat/smoke detectors or other devices by following the manufacturer's instructions.

Field Wiring

Suitable 12-18 AWG cable should be used for all field wiring, per the NFPA or other International standards. Secure the field wiring with the appropriate hardware for the application, per local codes. Take care not to pinch, break, or cut the field wiring while routing. The field wiring should be routed starting at the Module, then to the pre-determined location of the first Heat/Smoke Detector or Relay Operated Device on the circuit. Connect to the Control Module using the screw terminal connectors provided. Connect to each component by following the Manufacturer's instructions. Repeat the routing process to each additional component on the circuit. Connect the provided 4.7K ohm End of Line Resistor to the last component on the circuit by following the Manufacturer's instructions. Connect the provided 4.7K ohm End of Line Resistor to the Module whenever a Zone is not used.

Devices that utilize the dry contact relays must be installed using the Common (C) and Normally Open (NO) contacts.

Electrical Connections



Connect the main input voltage (9-32V DC) to the Control Module terminals labeled "V DC IN 1".

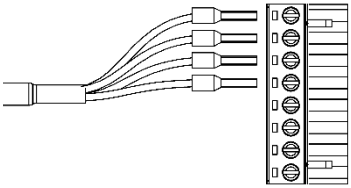
Connect the backup power source to the Control Module terminals labeled "V DC IN 2".

Electrical Connections Continued

Connect the Display to the Control Module terminals labeled “Display OUT”.

NOTE

IF THE HARNESS MUST BE DISASSEMBLED TO FEED THROUGH A HOLE IN A SURFACE, DISCONNECT THE GREEN CONNECTOR ONLY. RECONNECT THE HARNESS AS FOLLOWS.



Terminal	Wire Color
1	Red
2	Black
3	Green
4	White
5	N/A
6	N/A
7	N/A
8	N/A

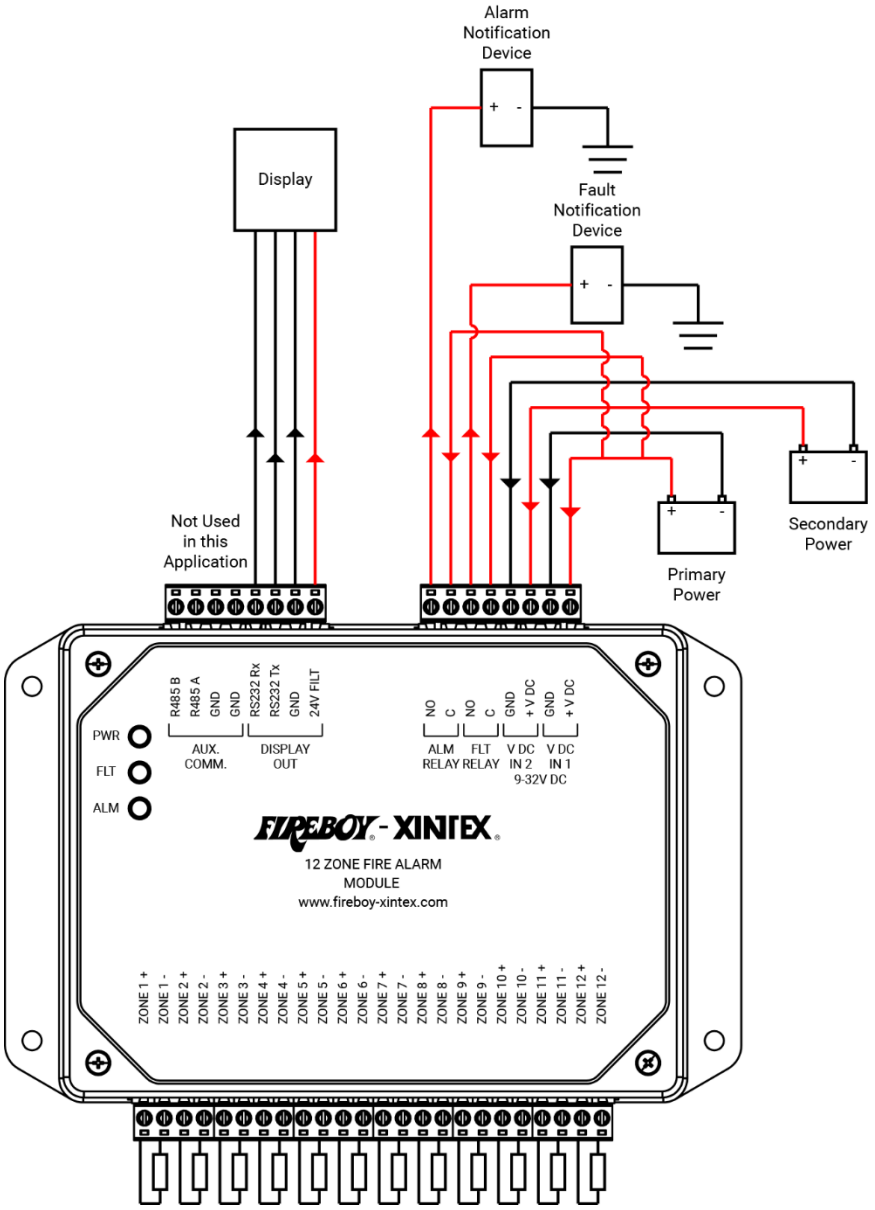
Connect Notification Devices to the Control Module terminals labeled “ALM RELAY” for notification when the system in an alarm state.

Connect Notification Devices to the Control Module terminals labeled “FLT RELAY” for notification when the system in a fault state.

“AUX. COMM.” connections are not used in this application.

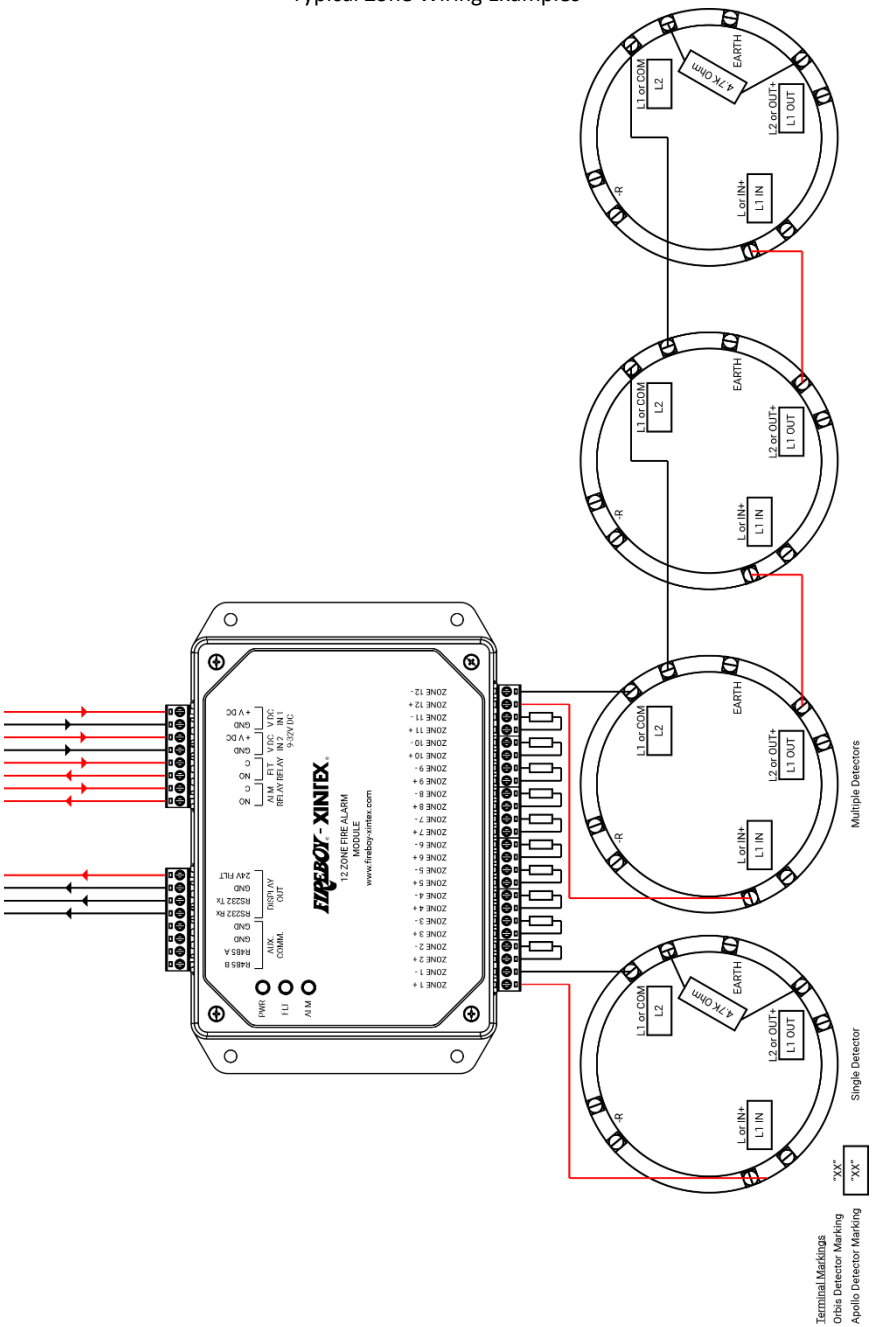
Connect the Heat/Smoke Detectors and other input devices to the Control Module terminals labeled “ZONE # +” and “ZONE # –“.

Typical Wiring Example

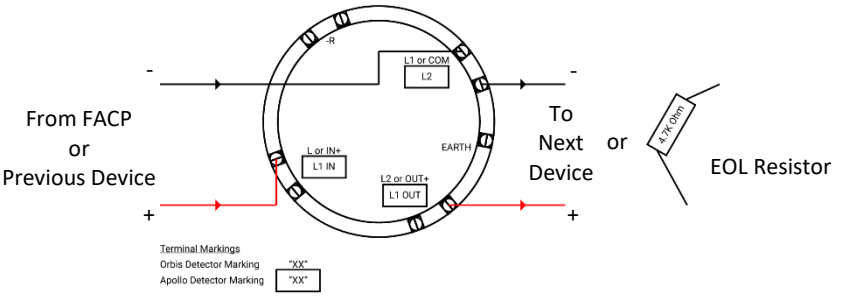


Electrical Connections Continued

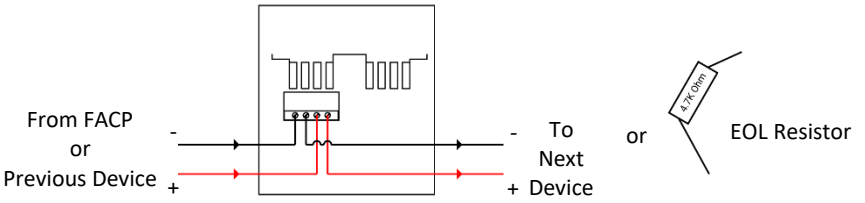
Typical Zone Wiring Examples



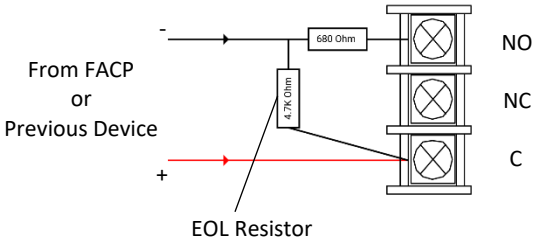
Smoke/Heat Detector



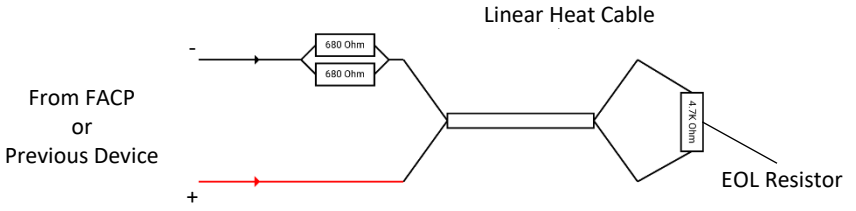
Pull Station/Call Point



Relay Connection



Linear Heat Cable



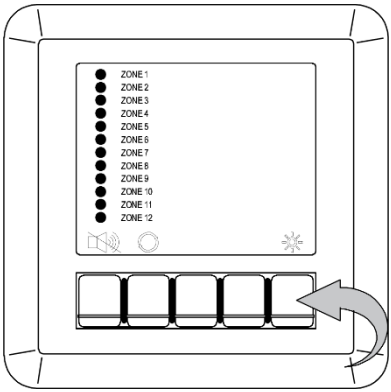
Control Module Troubleshooting LEDs

When powered, the upper Control Module LED will flash Green. In the event of a Fault, the center Control Module LED will illuminate an Amber color until the issue is corrected. In the event of an Alarm, the lower Control Module LED will illuminate a Red color until the alarm condition is over and the system is reset.

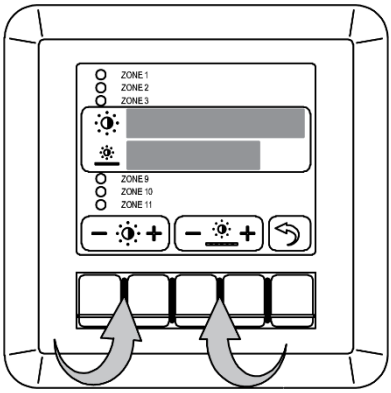
Programming the Display

Changing the Brightness and Contrast of the Display

Press the “ ” button.



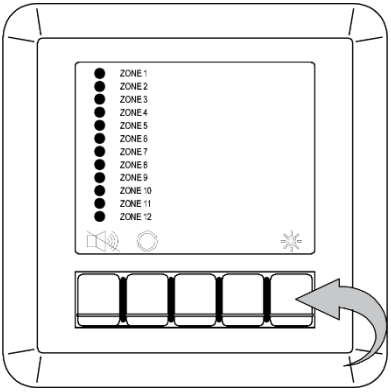
The Brightness and Contrast settings will be displayed over the current screen. Use the buttons beneath each setting to adjust the corresponding setting.



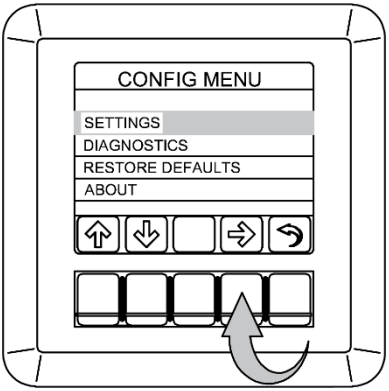
Press the “ ” button to exit the menu once you have finished to exit.

Changing the Number of Zones

Press and hold the “ ” button to access the “CONFIG MENU”.

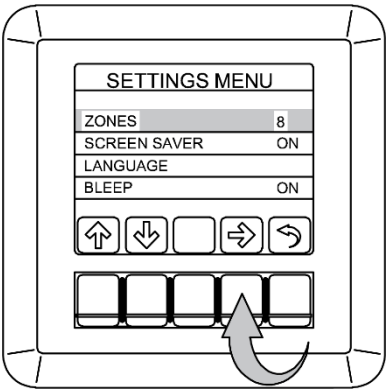


Use the “ ” button to select the “SETTINGS MENU”.

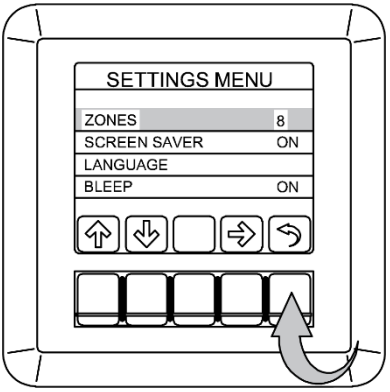


Changing the Number of Zones Continued

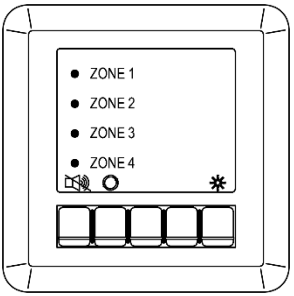
Use the “ ” button to cycle through the available number of zones to display.

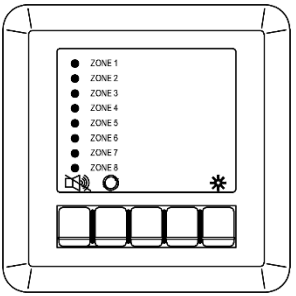


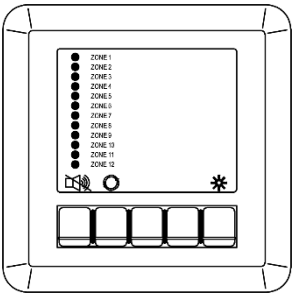
Press the “ ” button twice to exit the menus once you have chosen the number of zones.



The text size will be scaled to best fit the Display depending on the number of zones.

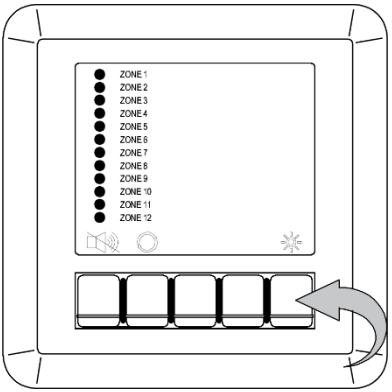






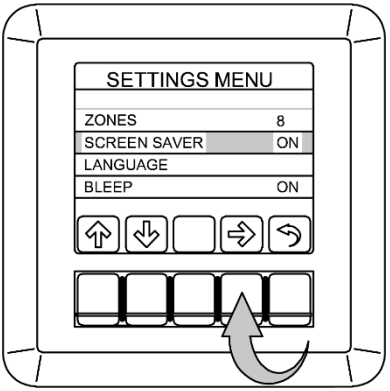
Enabling the Screensaver

Press and hold the “ ” button to access the “CONFIG MENU”.



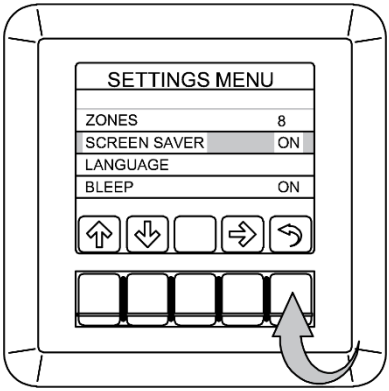
Use the “ ” buttons to scroll to the “SCREENSAVER” option.

Use the “ ” button to toggle the Screensaver ON or OFF.



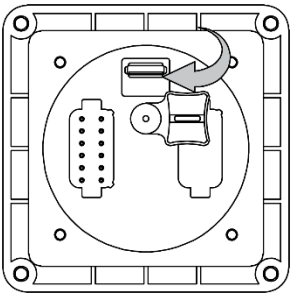
Enabling the Screensaver Continued

Press the " " button twice to exit the menus once you have chosen the number of zones



Changing the Zone Text

1. Backup the files stored on the provided USB drive to your computer.
   "usbstick_zones_update.ars"
   "zones.txt"
2. Open the file named "zones.txt" and edit each of the lines that are required to be changed. Keep the zone names as short as possible to be sure that they will fit on the Display.
3. Save the file, both on the USB drive and in the backup location.
4. With the Display powered, insert the USB drive into the port on the back of the Display.



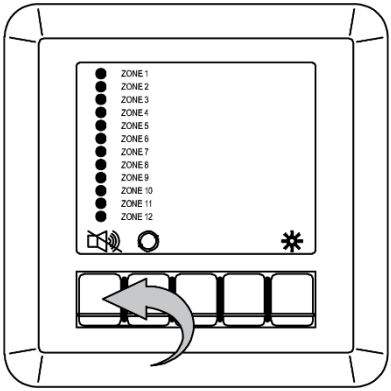
5. The Display will reboot once it has been updated.
6. Remove the USB drive.

NOTE

IF THE PROVIDED USB IS NO LONGER AVAILABLE TO YOU, A USB DRIVE FORMATTED TO FAT32 (SANDISK WORKS BEST) CAN BE USED WITH YOUR BACKED-UP FILES.

Mute Function

The “ “ button may be used to mute a fault or alarm status.



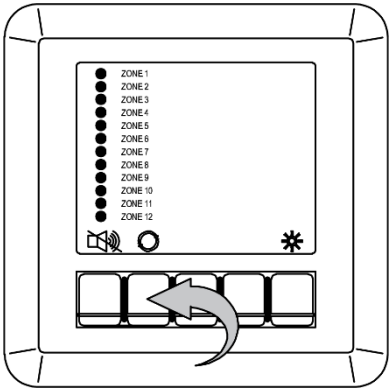
If an alarm condition is present, it will turn the “Alarm Relay” off. The internal buzzer of the display will remain active until the alarm condition is resolved. It is not possible to silence the internal buzzer during an alarm condition.

If a fault condition is present, it will silence the internal buzzer of the display and turn the “Fault Relay” off.

Reset Function

The “ “ button may be used to reset the system once an alarm condition has been

resolved. The system cannot be reset unless the alarm condition of the device has been cleared. If the system is reset when a device is still in alarm, the system will re-enter the alarm status.



Testing the FBD-MZ Fire Detection System

Remove at least one device in each zone to verify that the Status Dot changes to Yellow on the corresponding zone.

Test each device in the system according to the Manufacturer's instructions. Typically, this is done with canned test smoke or by applying heat. At least once per zone, press the " " Button, while the system is in alarm to verify that the alarm relay turns off.

Press the Reset Button after testing each device to reset the system.

Testing should be performed annually, per the NFPA or other International standards.

Maintenance

Clean the surface of the Display with a damp cloth. Do not use detergents of solvents.

Clean the heat/smoke detectors or other devices by following the manufacturer's instructions.

In the Event of an Alarm

Investigate the source of the alarm.

If necessary…
Evacuate to a pre-determined location.
Verify that everyone is accounted for.
Call Emergency Services.

Repairing the FBD-MZ Detection System

Fire Detection System Components are not field serviceable. Components must be returned to the factory for any repairs.

Returning the FBD-MZ Fire Detection System

No product may be returned for credit or repair without a written "Returned Material Authorization" (RMA) form. Purchaser must call or email Fireboy-Xintex 616-735-9380 or fireboy@fireboy-xintex.com for an RMA. For international customers, call or email Fireboy-Xintex UK Operations Limited +44 (0) 845 389 9462 or fireboyeu@fireboy-xintex.com. If due to extenuating circumstances a product is to be returned, after approval it must be received in 100% new/resalable condition. Products stored by the buyer for more than 26 weeks may not be returned for any reason. Maintaining fresh and current inventory is the responsibility of the buyer.

1 Year Limited Warranty

This Warranty is in lieu of all other expressed or implied Warranties

Seller warrants title, materials, and workmanship on equipment, except components manufactured by others for which the Seller assigns, as permitted, the original manufacturer's warranty. Seller's warranty shall be for a period of (1) one year from the date of sale to the ORIGINAL CONSUMER PURCHASER, during which non-conforming equipment returned to the Seller at Buyer's expense and risk, be repaired or replaced at the Seller's option. Fireboy-Xintex will repair or replace products found to be defective in materials or workmanship within the period set forth above, provided that: (a) the product has not been subjected to abuse, contamination, neglect, accident, incorrect wiring not our own, improper installation or servicing, or used in violation of instructions furnished by Fireboy-Xintex and (b) as to any prior defects in materials or workmanship covered by this warranty, the product has not been repaired or altered by anyone except Fireboy-Xintex and (c) the serial number has not been removed, defaced or otherwise changed, and (d) examination discloses, in the judgment of Fireboy-Xintex, does not assume the costs of removal and/or installation of the product or any other incidental costs of removal and/or installation of the product or any other incidental costs which may arise as a result of any defect in material or workmanship, and (e) upon discovery of defect, Buyer shall immediately cease use of and notify Fireboy-Xintex.

Any warranty implied by law, including warranties of merchantability or fitness, is in effect only for the duration of the expressed warranties set forth above, no person is authorized to give any other warranty, or to assume for Fireboy-Xintex any other liability in connection with the sale of its products; Fireboy-Xintex shall not be liable for the loss of use, revenue, or profit or for any injury, or for any other consequential or incidental damages, buyer is not relying on seller's judgment regarding his or her particular requirements, and has had an opportunity to inspect the product to his or her satisfaction.

This warranty gives you specific legal rights, and you may also have other rights, which vary, from location to location.

Contact information listed below. For US customers, contact Fireboy-Xintex. For international customers, contact Fireboy-Xintex UK Operations Limited.

www.fireboy-xintex.com

United Safety Acquisitions Corporation
(d/b/a Fireboy-Xintex)
O-379 Lake Michigan Dr. NW
Grand Rapids, MI 49534
fireboy@fireboy-xintex.com
Phone (616) 735 9380

Fireboy-Xintex UK Operations Limited
10 Holton Road, Holton Heath Trading Park
Poole Dorset BH16 6LT UK
fireboyeu@fireboy-xintex.com
Phone +44 (0) 845 389 9462