INSTALLATION AND MAINTENANCE INSTRUCTIONS

# MIX-4090 DEVICE PROGRAMMER

ABOUT THIS MANUAL

This manual is included as a quick reference for use of the device to set addresses on sensors and modules in the MIX-4000 series.

Note: This manual should be left with the owner/operator of this equipment

Description:

The MIX-4090 programmer is used to set or read addresses of MIX-4000 devices. It can also read devices' parameters such as device type, firmware version, condition and thermal settings. The programmer is small and lightweight and has a built-in base for heat and smoke detectors, see figure 2. A plug-in cable is supplied to program permanently wired devices, see figure 4. Basic functions are quickly accessible through four keys: Read, Write, Up and Down. A 2 x 8 characters LCD will display all required information without need for an external screen or PC, see figure 1.

FIGURE 1   PROGRAMMER FRONT:

UP — WRITE
DOWN — READ
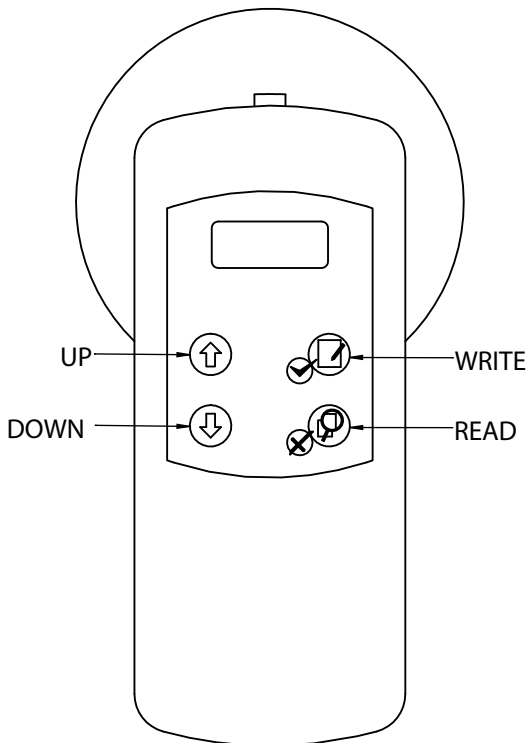
The unit uses an inexpensive 9V PP3 size (6LR61, 1604A) alkaline battery and will automatically shut down when the unit is unused for more than 30 seconds. Start-up time is only 5 seconds. Remaining battery capacity will be displayed each time the device is used. The battery is easily accessible through a sliding cover at the bottom of the unit, shown in figure 2.

FIGURE 2   PROGRAMMER BACK:

9V Battery cover
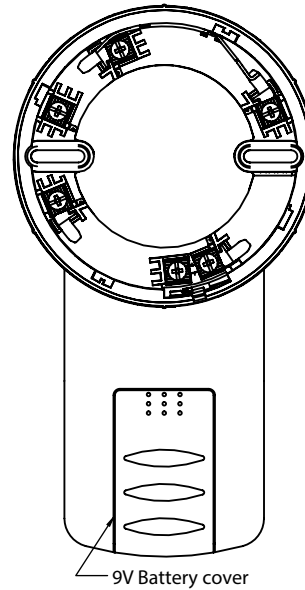
Address programming (Devices with bases):

Warning: Do not disconnect a device during address storing operation. This may damage the device.

Install the device in the programmer's base with the bar on the device about 3/8" (7mm) to the right of the bar on the base: The device should drop in the base without effort. Push on the device and turn it clockwise until the two bars are aligned, see figure 3.

FIGURE 3   ALIGN BARS:
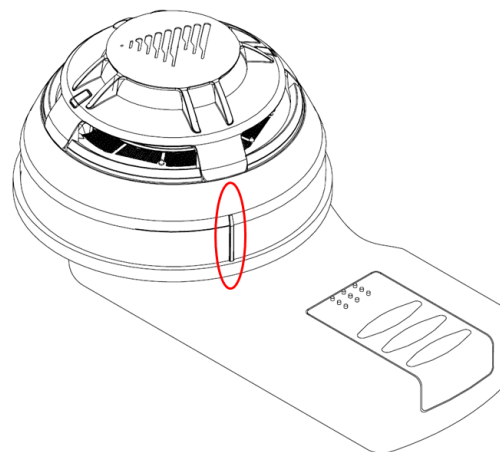
Press on any key to start the process (see figure 1 for key locations). The programmer will start up and will display the last address that was read or written. To read the current device address, press on the Read key (showing a magnifier and red X). If the address has to be modified, use the up and down keys at the left. To program the displayed address in the device, press on the Write key (showing a pen & paper symbol and a green check mark).

Once the address is programmed in the device, remove it from the programmer by twisting it counter clockwise. Most projects require that a device address must be visible for inspection: MIX-4000 bases have a breakable tab that can be inserted on the outside of the base to show the address. See MIX-40XX installation sheet for details.

Address programming (Permanently installed devices):

Warning: Do not disconnect a device during address storing operation. This may damage the device.

Plug the programming cable in the MIX-4090 using the connector on top, shown in figure 4. Locate the programming connector on the device, see figure 5. If the device is already installed, it may be necessary to remove the wall plate covering the device to access the connector.

FIGURE 4   PROGRAMMER CABLE ATTACHMENT
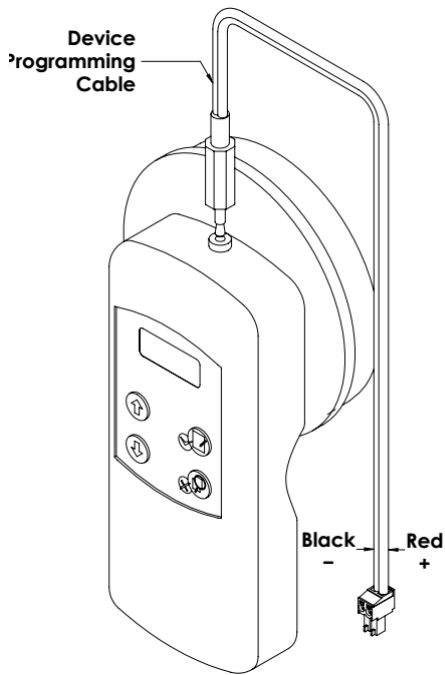
Unless the device has to be replaced, there is no need to disconnect wires from it. However the whole SLC line should be disconnected from the loop driver when devices are programmed while in place. If the SLC line is powered, the programmer may be unable to read or write the device data.

Connect the cable to the device (see figure 5): Please note that the programming plug is polarized to ensure that it is inserted in the correct position. Then proceed as above to read and set addresses. When done, use a pen or labels to indicate the device address as required by the project.

FIGURE 5   CABLE ATTACHMENT TO DEVICE
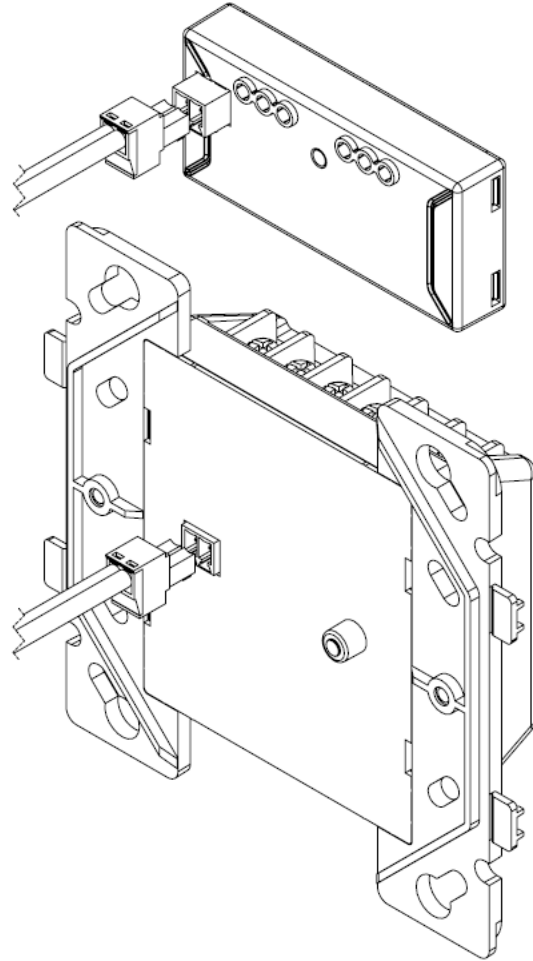
Reading device parameters:

Several device parameters can be read though the MIX-4090 programmer. First the device must be connected to the programmer as described for address setting. After the programmer is turned on and is showing the address screen, press on the "Read" key for about five seconds. The message "Family ↕ Analog" should appear. If "Family ↕ Conv" is shown, use the up-down keys to get to "Family ↕ Analog" . When done, press on the "Write" key to enter the sub-menus.

The following parameters can then be accessed using the up and down keys:

· Device type: "DevType" followed by device type. See table 1 for a full list of devices.

· Series: Mircom should be displayed.

· Customer: This parameter is not used.

· Battery: remaining battery capacity

· Test Date: "TstDate" followed by date of device testing in production

· Production Date: "PrdDate" followed by date of device fabrication

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· Dirty: Significant for Photo detectors only. Brand new detectors should be around 000%. A value near 100% means that device must be cleaned or replaced.

· Standard value: "StdValue" followed by a number. Significant for detectors only, normal value is around 32. Value 0 or a value over 192 (alarm threshold) may indicate a defective or dirty device.

· Firmware version: "FrmVer" followed by number.

· Operation mode: "Op Mode" followed by Enter. Pressing on the "Read" key will display a number showing the operational mode of the device. This parameter should only be accessed when requested by a Mircom Tech Support operator. Modifying this parameter may make the device unusable.

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Programmer messages:

The programmer can display the following messages during operation:

· "Fatal Error": Device or programmer has failed and may need replacement.

· "Storing": A parameter is written into the device.

· **Do not disconnect a device during this operation!**

· "Address Stored": Address has been successfully stored on device.

· "Failed": Current operation (first line of display) has failed.

· "Miss Dev": The device has not responded to current operation. Check connections or replace device.

· "No Addr": No address is programmed. This may happen for brand new devices address is read without prior address write.

· "Low Batt": Battery should be replaced.

Table 1: Device type returned by MIX-4090 programmer.

Display	Device
Photo	Photo Electric smoke detector
Thermal	Heat detector
PhtTherm	Photo Electric smoke and heat detector
I Module	Input module
O Module	Relay output module
OModSup	Supervised output module
Conv Zon	Conventional zone module
Multiple	Multiple I/O device
CallPnt	Call point
Sounder	Wall or ceiling audible NAC
Beacon	Strobe
Sound B	Combined audible NAC and strobe
Remote L	Remote visible indicator
Special	This message can be returned for newer devices not yet in the programmer's list

Table 2: Compatible devices

Device	Model number
Photoelectric smoke detector	MIX-4010(-ISO)
Photo smoke/Heat Multi-sensor	MIX-4020(-ISO)
Heat detector	MIX-4030(-ISO)
Multi-use output module	MIX-4046
Dual input module	MIX-4040
Dual input mini-module	MIX-4041
Conventional zone module and 4-20mA interface	MIX-4042
Dual relay module	MIX-4045