On-board Printer

Product Data Sheet

Features

The *Mxp-012* is an on-board thermal printer for use with the *Mx-4000* multi-loop panels. This state of the art unit has been designed to provide automatic, or on demand, hard copy listings of the event log and or status information. For automatic operation the printer allows the user to individually select the operation for fire, fault, test and alarm event types.

The unit is fast and silent during operation and has its own in-built battery backup to enable continuous un-interrupted operation even during a mains fail situation. The printer mechanism itself has an easy access, front-loading paper roll compartment and performs automatic paper feed and diagnostic every time a roll is replaced. The unit can be supplied pre-fitted or as a retro fit with a replacement chassis door and label.

Document Number: 680-033
Revision: 03

Models, Sales Order Parts:	

Part No:

    Mxp-012: On-board Printer c/w chassis door and label

    Mxp-012F: On-board Printer Fitted to an Mx-4200 / Mx-4400 or Mx-4800 control panel

Spares:

    Mxs-007: Re-chargeable battery pack

    Mxs-008: Thermal printer roll (pack of 10)

Applications / Limitations:

Can be used for printing the panel's event log or configured by the user to automatically print any of the following event types: - Fire, fault, alarm or test.

Note: If an on-board Printer is to be fitted to the panel along with a zone indicator module, use the Mxp-013-050 or Mxp-013-100 modules. The Mxp-025 20 zone LED card cannot also be used.

On networked systems if automatic printing of fires and alarms is selected these events will print from everywhere on the network, unless the local panel is programmed not to show these events. Automatic printing of faults is limited to the local panel chassis to which the printer is connected.

Compatibility:

The On-board Printer can be fitted to the following Fire Alarm Control Panels:

    Mx-4200, Mx-4400 & Mx-4800

The On-board printer is supported from panel software revision 16 onwards.

Additional print menu options are available from software revision 19-07 which allow manual on-demand printing of the following options:

INPUTS (including zone & device text, device type, state and analogue value), OUTPUTS, FAULTS and DISABLED. When printing any of these options the panel analyses the network and suggests the default ranges for printing.

The printer fully supports the complete Western European character set.

| Item	Specification Details
Printer Type	Thermal, Graphical
Printer Resolution	384 dots per line
Panel loading in Quiescent state	20mA
Panel loading, continuous printing	25mA
Maximum Working Temperature	50ºC
As our policy is one of constant product improvement the right is therefore reserved to modify product specifications without prior notice	

On-board Printer

Installation

The panel is normally supplied with the printer and all wiring installed. See Appendix 1 if you need to retrofit a printer to an existing panel.

Printer Power Supply

The printer has an integral rechargeable battery that is dedicated to the printer power supply. If the main panel power supply has been turned off for a long period (i.e. more than a month), the battery will need to recharge before printing. Under these conditions, allow 1 hour before performing a test print and 24 hours before normal printing.

Print Menu Options

The print menu (from V019-07) has been expanded to allow on-demand printing of a wide variety of items. These options allow the present state of the system to be printed – not just from the panel to which the printer is attached but also from anywhere on the network.

```
[Print Menu]


  INPUTS   OUTPUTS    FAULTS     DISABLED
  LOG      FEED-PAPER      SETUP-PRINTER


```
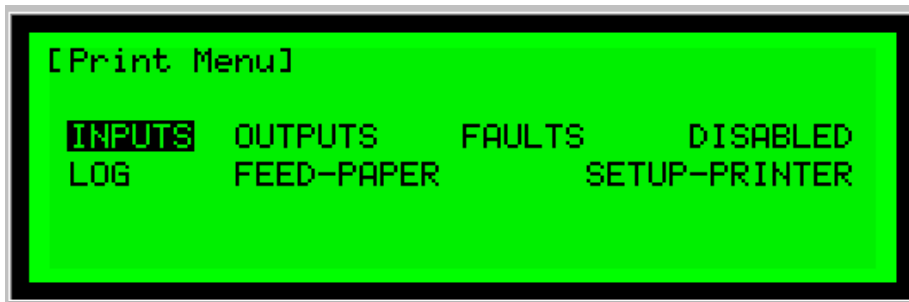
- INPUTS   - Prints device text, zone, device type, analogue value, device state
- OUTPUTS   - Prints device text, zone, device type, device state
- FAULTS   - Prints location and state of all devices in a fault condition
- DISABLED – Prints location and state of all disabled devices

When any of these options are selected, the panel analyses the network and suggests default ranges for printing (e.g. if DISABLED is selected, the display will suggest the first through to the last zone on the network containing disabled devices). For example:

```
[  2 Zone(s)with Inputs Disabled]

  First Zone  : 340
  Last Zone   : 373

(Press → to Start Print )
```
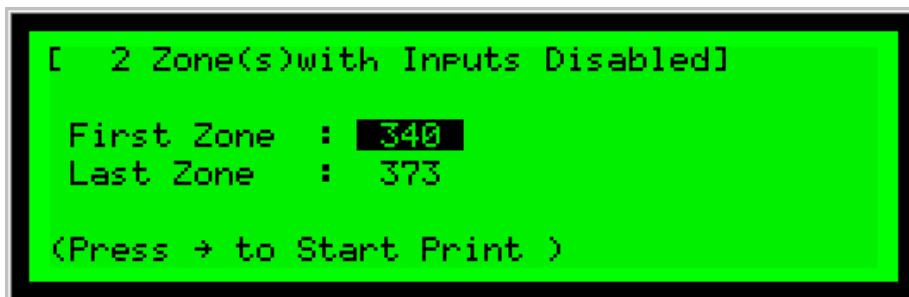
These defaults can be changed as required. Use the arrow and number keys to select and enter the required zone numbers.

Further information on the print displays is contained in the 'MX4000 User manual' - 680-015.

Printer Configuration

This printer is supported from MX panel software, version 016 onwards. To configure and test the printer: -

1. Enter the "Print – Set-up" option and tick the "Internal" option. (If required the panel will support simultaneous printing to an external printer too, but the "wide" option should not be ticked when an internal printer is in use).

```
[FIRES] [ALARMS]  [FAULTS] [TESTS]
   -        -         -        -

(Printer: Internal External/Wide)
                ✔        -        -
```

2. On the top line tick any events that should be automatically printed as soon as they occur.

   FIRES   any device entering a fire condition

   ALARMS   any device entering a pre-alarm or plant alarm condition

   FAULTS   any fault detected by this panel

   TESTS   any device that is activated during a fire-test

On networked systems the fires, alarms and tests, if selected, print events occurring on other panels in the network (The network configuration software will allow this to be restricted to just certain parts of the building if required).

3. Escape from the printer set-up and move to the test menu. Perform a "Test – Print" and check that the printer is functioning correctly.

Further information on the print displays is contained in the 'MX4000 User manual' - 680-015.

Printer Diagnostics

In normal operation a red LED on the back of the printer circuit card will flash steadily. If after installation and configuration the printer will not perform a test, check the state of the LED as follows.

LED state	Description
Steady Flash (once per second)	Normal operation
Off	No power. Check that the ribbon cable connecting the printer to the display has been fitted.
Rapid Flash (Four times per sec)	Printer not ready. Check: - Paper roll inserted Paper holder door fully closed Battery pack not connected Battery flat (see notes on power supply)

Appendix 1- Replacement Printer Conversion

The printer assembly replaces the existing 'Display mounting plate' in the multi-loop fire panel to accommodate a plate carrying both the display card and the internal printer.
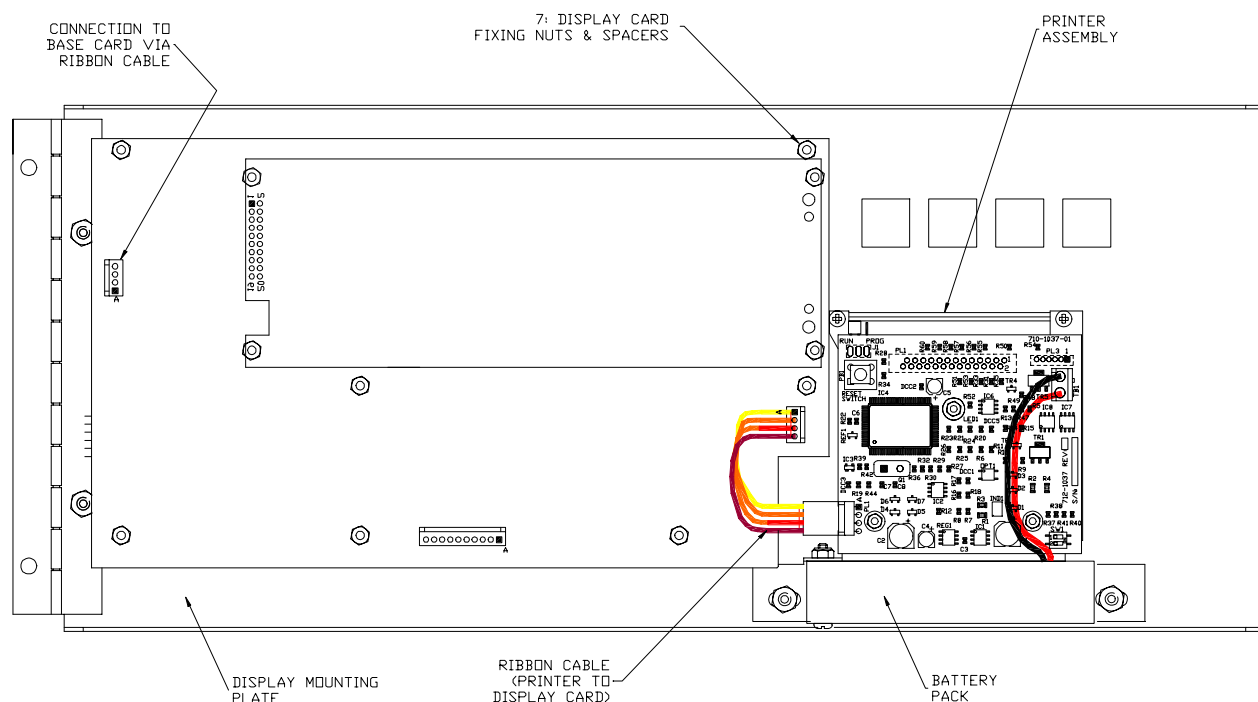
Panel Printer Mounting Arrangement

1   First of all, isolate the mains supply and disconnect the battery supply to the fire panel. Open the Fire Panel door and the 'display mounting plate' to expose the hinge mounting points.

2   Disconnect the ribbon cable, connecting the display card to the base card.

3   Remove the 'display mounting plate' assembly from the panel by removing the two M4 nuts and washers from the hinge-fixing studs. (Keep these in a safe place for use later)

4   Remove the 7: M3 Nylock nuts securing the display card to the plate and remove the card and nylon spacers. Transfer these parts to the new 'printer/display mounting plate'. Observe precautions for static-sensitive devices.

5   Place the 7: nylon spacers over the mounting studs and mount the display card. Secure using the 7: M3 Nylock nuts. Ensure that the nuts are not over tightened, checking the push-button feel from the front to help attain correct adjustment. Check that the pushbuttons are not proud of the mounting plate or too far back to operate.

6   Connect the ribbon cable from the printer card to the display card.

7   Mount the 'printer/display mounting plate' assembly to the panel and secure using the M4 nuts and washers.

8   Re-connect the ribbon cable from the base card to the display card, then power up the panel.

9   Check the operation of all pushbuttons by accessing the 'Test - Display' menu on the panel and check each key operation.

10   Check the thermal printer roll is inserted, the paper holder door fully closed and the battery pack power feed connector is inserted into its socket on the printer PCB card.