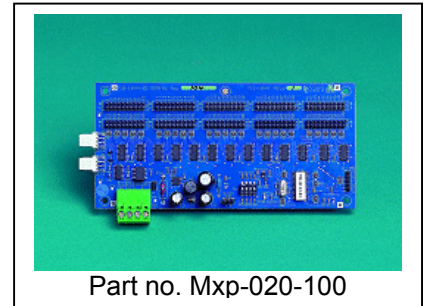


## Advanced Mimic Unit



### 1 Features

The Advanced Mimic Unit (*AMU*) provides a flexible, cost effective solution for any *Mx-4000* based fire detection system which requires supplementary graphical indication of the installation via LED technology. These units, unlike a panel mounted LED array, which to be meaningful must also have a printed lookup table or picture adjacent to the panel, give an unambiguous graphical representation of the actual zones in fire.

The unit can be mounted either internally in an *Mx-4000* multi loop control panel, or alternatively, in a bespoke remote enclosure. Each unit comprises a graphical representation of the installation together with a programmable mimic driver card and LED indicators. The mimic diagram is copied from a standard CAD drawing provided by the client and the finished unit is supplied pre-wired and ready to power-up.

The panel mounted mimic is ideal for smaller systems which simply require a graphical indication of the local zones in fire, whilst the remote unit is a fully programmable stand-alone device that can accommodate a larger diagram with a large number of zones or specific devices arranged on a custom site plan.

The remote mimic can be mounted adjacent to the control panel or remotely if connected to an *Ad-Net®* based network system and is supplied complete with an EN54-4 power supply and charger. The LED's can be configured to be steady or pulsing when operated and each indicator can be assigned to any input type from any panel connected to the network, enabling full support for the *MX-4000* systems *DynamiX* zoning facilities.

**Models, Sales Order Parts:**

**Part No:**

**Mxp-027-100F:** Internal panel mimic with up to 100 (MxS-026F) LED's mounted to an Mx-4200 / Mx-4400 control panel. (Artwork required i.e. Autocad, Freehand).

**Mxp-020-100-BX1:** Remote programmable mimic enclosure (type 1) c/w PSU and up to 100 (Mxs-026F) LED's fitted. (Artwork required).

**Mxp-020-100-BX2:** Remote programmable mimic enclosure (type 2) c/w PSU and up to 100 (Mxs-026F) LED's fitted. (Artwork required).

**Mxp-020-100:** 100-way programmable remote mimic driver card. (Un-boxed)

**Mxs-026F:** High Intensity LED fitted to an Mxp-027 or Mxp-020 mimic. (LED bezel diameter = 9mm)

**Spares:**

**Mxs-027:** Local 100 Zone mimic driver card

**Mxs-026:** High Intensity LED c/w 600mm lead for Mxp-027 or Mxp-020

**Applications / Limitations:**

The panel mimic will show zones in fire and incorporates a DIL switch to set the zone range from 1 – 1000. (E.g. 1 – 100, 101 – 200 ... 901 – 1000).

The remote mimic is a stand-alone unit complete with its own EN54-4 power supply and charger and each output on the driver card is fully programmable using a PC

**Compatibility:**

The Mxp-027-100F can only be fitted to Mx-4200 or Mx-4400 control panels.

The Mxp-020 remote mimic is compatible with all Mx-4000 control panels from software revision 16 using the Ad-Net peer-to-peer network. The Mxp-020 mimic driver is programmable using the Pc-NeT-03 Mx configuration tool from revision 3.1 onwards.

Item	Specification Details	
	Panel Mimic	Remote Mimic
Power supply	17-28V DC (e.g. Wired from panel 24V auxiliary supply)	220 – 240 V AC (+10 –15%) 50 – 60 Hz 1.6A. Support for up to 2 x 12V 7Ah batteries.
Supply current	30 mA quiescent + 1.2 mA per LED energised (typical at 24V DC).	
Temperature Range & Humidity	-5°C to 50°C 95% Humidity (non condensing)	
Dimensions (mm)	Mimic Drawing: 388mm W x 150mm H	Type 1: Mimic Drawing: 270 W x 205 H Enclosure: 320 H x 345 W x 85 D  Type 2: Mimic Drawing: 358 W x 295 H Enclosure: 450 H x 475 W x 115 D
As our policy is one of constant product improvement the right is therefore reserved to modify product specifications without prior notice		

# Mxp-020 Mimic Displays

## 1 Electrical Installation (Remote Mimic)

### 1.1 Power Input

The Mxp-020 remote mimic requires a 24V supply. The power supply used **MUST BE** designated a Safety Extra Low Voltage (SELV) supply. Connect the 24V DC supply feed to the terminals on the interface card marked +24V and 0V.

For boxed versions supplied complete with a power supply, refer to the additional power supply technical data sheet supplied.

#### 1.1.1 PSU Fault Input

An EN54 power supply with clean-contact fault output contacts can be monitored for fault conditions. The “FLT-INPUT” connections on the left hand terminal block of the interface card should be connected to the power supplies fault relay contact terminals. Connect one of the “FLT” inputs to the “COM” terminal of the power supply and connect the other “FLT” input to the N/C terminal of the power supply. Now connect a 10K resistor across the “COM” and “N/C” terminals of the power supply (See block diagram below).

If fault monitoring is not required a 10K resistor should be fitted across both “FLT” inputs on the interface card.

### 1.2 Network Connections

Connect the 2 core twisted pair network data cable to the A and B terminals.

Connect the data cable screen to the network SCN terminals. Note that special screen termination circuits are included on the circuit card to prevent mains frequency earth-loop currents flowing between network nodes. The data cable screen **MUST NOT** be connected to any other earth point.

Please refer to document 680-027 for more detailed information on the Ad-Net network.

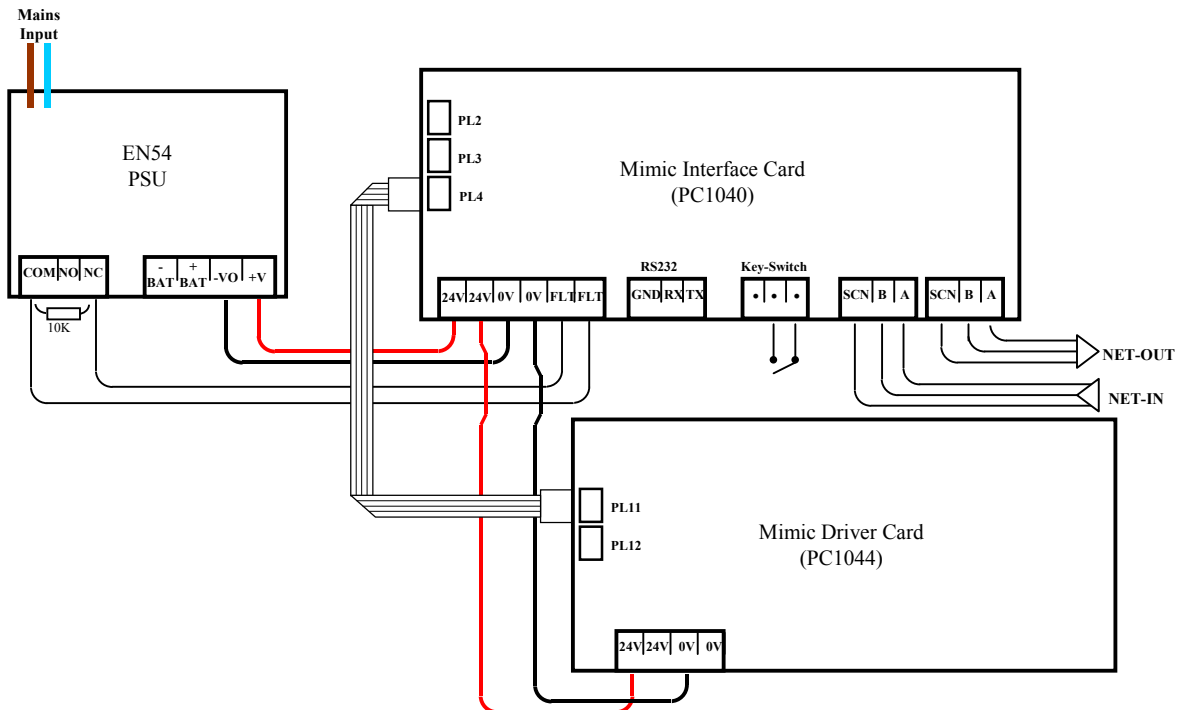


Fig 1. Block Diagram Showing “Remote Mimic” Interconnections

## 2 Driver Card Inter-connections

### 2.1.1 Remote Mimic

Connect a 4-way ribbon cable between PL11 (or PL12) on the driver card and PL3 (or PL4) on the interface card. Then connect the 24V and 0V terminals on the mimic driver card to the 24V and 0V terminals on the interface card.

### 2.1.2 Internal Panel Mimic

Connect a 4-way ribbon cable between PL11 (or PL12) on the driver card and PL1 (ZONE EXT) on the panel base card (located bottom left). Then connect the 24V and 0V terminals on the mimic driver card to the AUX 24V and 0V terminals on the panel base card.

## 3 Test Input

A “TEST” input is provided to check that all display LED’s are working. The test switch input is wired to PL1 (Marked as “Key-switch” on the interface PCB. (See Fig 1). Closing the test contacts with either a pushbutton or key-switch will exercise all LED’s connected to the mimic card.

Any faults detected by the interface card (e.g. power supply fault) are reported back over the Ad-Net network. Power and normal operation of the interface card is indicated by the ‘heartbeat’ LED flashing at a rate of 1Hz.

## 4 Driver Card Configuration

### 4.1 Simple Zone Indication

The DIL switch (SW1) determines how the Led driver card will operate. If only simple zonal indication is required (i.e. each fire zone is represented by a single LED), then the DIP switch settings in Table 1 can be used, without any further programming.

DIL switch (SW1) settings	Zone Range
4 3 2 1	
○ ○ ○ ○	1 - 100
○ ○ ○ ●	101 - 200
○ ○ ● ○	201 - 300
○ ○ ● ●	301 - 400
○ ● ○ ○	401 - 500
○ ● ○ ●	501 - 600
○ ● ● ○	601 - 700
○ ● ● ●	701 - 800
● ○ ○ ○	801 - 900
● ○ ○ ●	901 - 1000

Table 1 – Fixed Zone Settings

● switch ON      ○ switch OFF

When a zone changes state to a fire condition, the corresponding LED will illuminate. Upon the zone state returning to normal, the corresponding LED will be turned off.

Normally only the first of these settings (Outputs 1-100) is required. However, if more than 100 LED’s are needed, additional LED driver cards can be connected to the first through daisy chain wiring. Connect PL11/PL12 on one driver card to PL11/PL12 on the next driver card, etc. The DIL switch on the cards should then be set to outputs 101-200, 201-300, etc.

## 4.2 Programmed Indication

If more complex indication is required, then one of the “Programmed” settings should be selected as in table 2. The PC Configuration Tool must then be used to program the mimic (e.g. the LED connected to Output 1 can then be programmed to represent an individual detector, or a range of zones, etc., as required, using the output group programming rules).

If the output group is active, the corresponding LED will illuminate. Upon the output returning to normal the corresponding LED will be turned off.

DIL switch (SW1) settings				Programmed Output Group Number
4	3	2	1	
●	○	●	○	1 - 100
●	○	●	●	101 - 200
●	●	●	●	Test Mode

Table 2 – Programmed Settings

Normally only the first of these settings (Outputs 1-100) is required. However, if more than 100 LED's are needed, a second LED driver card can be connected to the first through daisy chain wiring. Connect PL11/PL12 on one driver card to PL11/PL12 on the next driver card. The DIL switch on the second card should then be set to outputs 101-200.

## 4.3 Steady/Flashing Indication

All LED's can be set to illuminate constantly or to flash at a rate of 1Hz when the relative output is active.

- To illuminate the LED's constantly, set the “output mode” jumper (J1) to position ‘B’.
- To flash the LED's at a rate of 1Hz, set the “output mode” jumper (J1) to position ‘A’.

NOTE: The driver card and mimic interface do not support output group programming where the "Output Group Style" is set to pulsing. The output will turn ON irrespective of the setting. Alter the jumper setting to obtain pulsing if this is required.

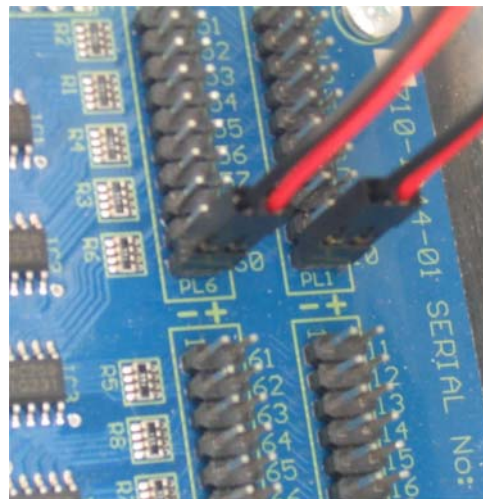
## 4.4 Connecting LED's to the driver card

Each output is capable of sinking approximately 4mA.

It is recommended that ‘High Efficiency’ LED's are used. High visibility, high viewing angle LED's, with colour-coded leads, are available with sockets ready-made to connect to the driver card (Part code MXS-026).

Correct polarity must be observed as shown below. Note the “+” and “-” markings on the PCB and that the red lead, of the MXS-026 LED assembly, is connected to the “+” terminal.

Loom and tie in the LED leads so that no strain is applied at the LED or the connector as the hinged display plate is opened or closed (Mimics tend to be unique, but it is often easier to fit the LED's and plug them all into the appropriate sockets before starting to form the loom).



## 5 Network Configuration

### 5.1 Default Settings

The following factory default settings are used, but these can be changed as required.

Network Node	50
Next Node	1
Interface Zone	200

Note that if multiple mimics, or other network interfaces, with the same default settings, are installed, it is essential that the defaults are changed to give unique parameters for each interface.

### 5.2 Changing the Interface Settings

The above defaults can be changed as required after moving switch SW1 over to the “Commissioning” position (i.e. move switch to left).

Use any of the following: -

- Connect a PC to the interface cards RS232 connector and run the “Virtual Terminal” display and select “Setup” from the virtual display
- Connect a standard panel display via a 4-way ribbon cable to PL2 on the interface card and select “Setup” from the display.
- Connect a PC to the interface cards RS232 connector and using the MX config software, transfer a file from the PC to the Interface.

“Zone Text” should also be entered so that any fault information from this mimic (e.g. power supply fault) can be readily identified from other displays on the network.

### 5.3 Normal Operation

If a display has been used to configure the interface, then check that all commissioning operations are complete, with the display showing “[Commission]” in the top left corner of the display.

Move Switch SW1 out of “Commissioning” (i.e. move switch from left to right).

### 5.4 Programming the Mimic using the PC Configuration Tool (Upload)

Connect the PC Lead to the RS232 connector and move the switch (SW1) to the commissioning position. Refer to the picture opposite.

**Step 1:** Enable PC CONFIG mode on the mimic Interface.



On the PC Configuration Tool, activate the Mx Terminal function.



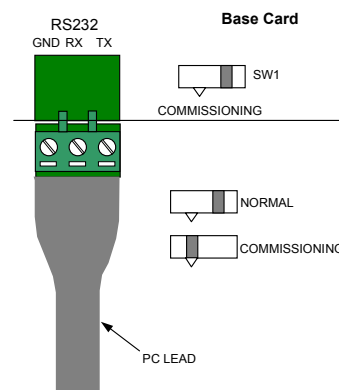
Click on the communications button to establish a link.



Display the Mx Terminal display and use the arrow buttons and the return button to select PC CONFIG mode. Close the display



Break the communications connection.





**Step 2:** Transfer the data from the PC to the Mimic



On the PC Configuration Tool, click on the "Communications" option to establish a link.



Click on the "Send from PC to Panel" option to update the information in the Mimic Interface Driver.

The PC will prompt for confirmation and then transfer the data showing the transfer progress.

**Step 3:** Completion of transfer.



On the PC Configuration Tool, break the communications link.

**Step 4:** Exit the PC CONFIG Mode



Activate the Mx Terminal function again.



Click on the communications button to establish a link



Display the Mx Terminal display. Press ESC to return the display to normal commission menu functions display.

Exit the Mx Terminal display



Break the communications link.

**Step 5:** Return the Mimic Interface to Level 2 Operation

On completion, return the switch (SW1) to the normal position.