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## CCU/232-MXL Pager Interface Unit

### Install Instructions

**Part #: CCU/232-MXLPIU**

This equipment is designed to be installed and serviced by fully qualified field engineers. No user serviceable or installation parts inside.

### Not Suitable for Remote Station, Central Station, or Proprietary Use. Supplied:

- |   |   |   |
|---|---|---|
| 1 | x | CCU/232 board with firmware for MXLPIU        |
| 1 | x | Mounting Bracket                              |
| 1 | x | Power connector for CCU/232                   |
| 1 | x | Relay connector for CCU/232                   |
| 1 | x | External Modem with Power plugpack and cable. |

### You will need:

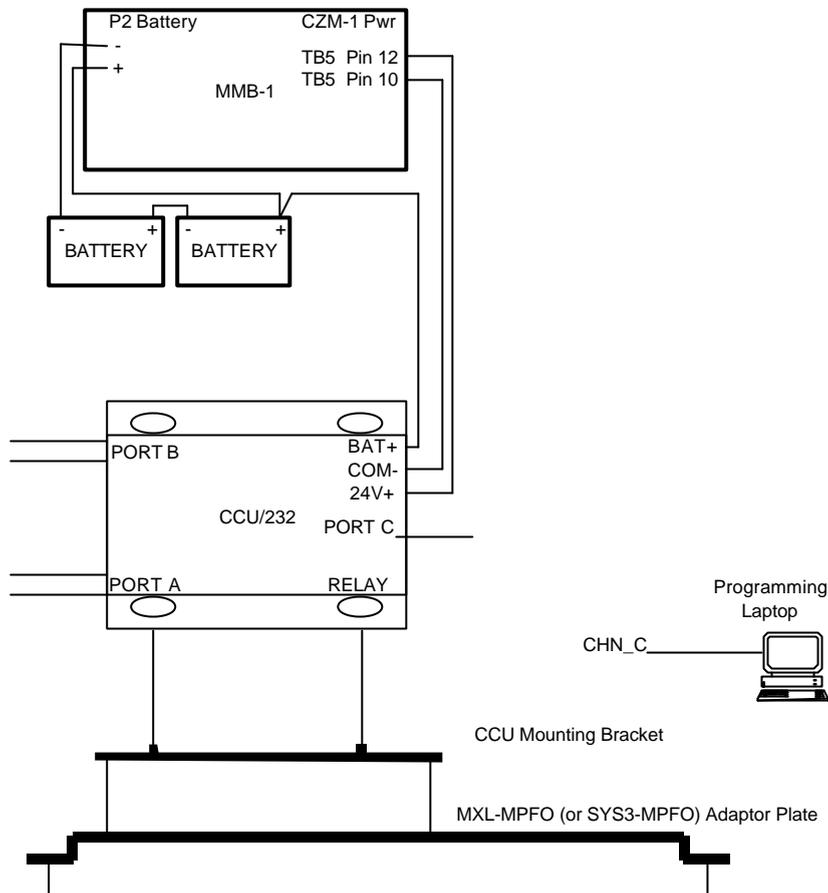
- |   |   |   |
|---|---|---|
| 1 | x | cable from MXL-CZM (24V) & Batt. to CCU/232. Connector supplied.                      |
| 1 | x | interface cable if VDT or XL Graphics is connected (see later for wiring information) |
| 1 | x | interface cable from PIM-1 to CCU/232 (see later for wiring information)              |
| 1 | x | FCC Part 68 compliant RJ11 telephone cord if telephone paging is required.            |
| 1 | x | MXL-MPFO Adaptor plate  |

### Power Requirements:

- |                  |                |
|------------------|----------------|
| Typical:         | 150mA at 24VDC |
| Voltage Input:   | 20-30 VDC      |
| Fault Condition: | 500mA Max      |

### General Configuration:

**Installation of CCU/232-MXLPIU ( on MXL Fire indicator Panel ):**



- The CCU/232 is designed to mount on the MXL-MPFO adaptor plate for the MOM-4 position, occupying one D2300CP position (MXL Only). CCU/232 can also mount to SYS3-MPFO adaptor plate for System 3 enclosure (EA-31, EA-32, EA-35) mounting.
- Connect Port B of CCU/232 to PIM-1 using the following connection diagram.

CCU/232 Port B 9PIN (DTE)	MXL (TB1 of PIM-1) 9PIN
2	5
3	4
4	9
5	2

- A PC can be temporarily connected to Port C of CCU/232 for programming of CCU/232. Note that this is a straight through standard RS232 cable for laptops.

CCU/232 Port A 9PIN (DCE)	MXL VDT-132 25PIN	PC/LAPTOP 25PIN	PC/LAPTOP 9PIN
2	3	3	2
3	2	2	3
5	7	7	5

- If a direct paging connection is to be used, then connect this to Port A of the CCU/232-MXLPIU instead. Port A is configured as a DTE and in most cases will require a standard straight through RS232 cable for connection to the paging equipment (paging equipment is normally DCE).

CCU/232 Port A Pin	Function
2 (INPUT)	RX Data
3 (OUTPUT)	TX Data
4 (OUTPUT)	DTR
5	GND

- If hardware supervision is required connect the relay output from the CCU/232 to a suitable input on the MXL (software supervision does not require this). There are two relay sockets located next to the RJ11

connector - these are IDENTICAL and either can be used. The relays will Energise when Supervision failure is detected.

- If paging on relay inputs is required, then connect up to 8 relays to input pins SW25 pins 1 to 8. If enabled in MXLPIU configuration, relay input 8 can optionally be used to inhibit paging.
- Connect the 24V DC power source (CZM or plug pack) to the supplied connector. The power connector is next to Port C. Pin connections are:

PWR (+24VDC)

RETURN/COM(0V)

BATTERY(24V)

These connections are written on the board. On an MXL,

MXL	CCU/232
TB5 (CZM) Pin 12	24V
TB5 (CZM) Pin 10	COM
Battery 24V	BAT

### Connecting to the telephone network:

- The CCU/232 connects to the telephone network through an external modem.
- The external modem should be plugged into Port A of the CCU/232. A male to male gender changer may be required for this.
- Set up the modem as in its instruction manual.

## Operation of LEDs:

Each port has a Green and a Yellow LED. Green means the port is operating OK. Yellow means that the port is not operating OK, or there has been supervision failure on this port. If both LEDs are off, then this port has been disabled/not in use (Example: Programming port).

Port C (programming terminal port) and Port B (connection to MXL):

- If either LED is on - indicates supervision.
- Green LED indicates Supervision is OK.
- Yellow LED indicates Supervision failure.

Port A (connection to modem):

- If either LED is on - indicates supervision.
- Green LED indicates port is OK.

## Configuration of CCU/232-MXLPIU:

- Power up the CCU. After approximately 3 seconds, all LEDs on the CCU will turn on, allowing programming of the MXLPIU using the default configuration. Default configuration requires that a laptop or PC be connected to Port C using a straight through RS232 cable. A terminal program (such as Procom/Telix or Windows Terminal using VT100 emulation) can be used with communication parameters set to 9600,N,8,1.
- Type **MENU** to invoke the MXLPIU menu. There is no need to press <Enter>
- Follow the menu options (detailed instructions follow) and set the:
  - SITE NAME** - the name which will be displayed on the pager.
  - SUPERVISION** - If the supervision relay is not connected, then SOFTWARE supervision can be selected. This will allow the MXL to announce a supervision failure.
  - MXL COMMUNICATIONS SETUP** - Make sure that this is set the same as the PIM settings in CSGM. Also note that PIM should be set for MXL VDT-132.
  - PAGER COMMUNICATIONS SETUP** - You will need to enter the Telephone number of the paging company, and the ID to use for this paging company.
  - PAGER Identification Numbers** - up to 8 different pagers can be sent events.
  - PAGED EVENTS** - select which pagers should receive which events (Example: Send Alarms to one pager, troubles to a different pager).
  - CUSTOM EVENTS** - select specific custom events to be sent. This allows custom programming of CCU/M for event types. Example: The custom device message for status inputs can have the words NURSE CALL. If the CCU/M sees these words it can send this event to a specific pager. This means that a Nurse on duty will only get relevant messages, not ALL status messages.

## PAGERMENU OPTIONS

Press the key in brackets to select a particular menu option (example: Press <1> to select option 1). When entering in letters (example Sitename or Pager name) the <Enter> key should be pressed when finished. Most other options use the <SPACE BAR> to step through each available setting for that option (Example: Baud Rate 1200, 2400, 4800, 9600, 19200 ). To back out of a menu (and return to the Main Menu) press the <Esc> key or the (q) key.

All Menu options show the factory default for each setting.

## MAIN MENU

### MXL Pager Interface Setup - V1.04

- |                         |            |
|-------------------------|------------|
| (1) Sitename            | SITENAME   |
| (2) Supervsn Trouble    | Relay Only |
| (3) MXL comms setup     |            |
| (4) Pager comms setup   |            |
| (5) Pager Ids           |            |
| (6) Paged Events        |            |
| (7) Inputs 1-4 Messages |            |
| (8) Inputs 5-8 Messages |            |
| (9) Custom Events       |            |
| (s) Save and Exit       |            |
| (x) Exit without saving |            |

#### (1) Sitename

This will be displayed on the pager to identify the source of the page.

#### (2) Supervision Trouble

- **Do not change factory default setting**

The relays are not set to fail-safe mode. Both relays will energise when supervision failure is detected.

#### (3) MXL Comms Setup

- |                        |                  |
|------------------------|------------------|
| (1) MXL protocol       | PIM (MXL VDT132) |
| (2) MXL baud rate      | 9600             |
| (3) MXL data bits      | 8                |
| (4) MXL stop bits      | 1                |
| (5) MXL parity         | None             |
| (6) Terminal protocol  | No Device        |
| (7) Terminal baud rate | 9600             |
| (8) Terminal data bits | 8                |
| (9) Terminal stop bits | 1                |
| (A) Terminal parity    | None             |
| (q) Main menu          |                  |

#### NOTE: CHECK THE TERMINAL PROTOCOL SETTING

The MXL protocol should be set for MXL VDT132. This must also be set in CSGM for the PIM-1 port. The MXL communication parameters (options 2 to 5) should be set the same as the CSGM settings for the PIM-1 module.

The Terminal settings can be left to the factory defaults (indicated above) to allow for connection of a VDT Terminal or PC for programming purposes.

Please Note: in the **MXL Comms Setup** section above items 1-5 refer to the CCU/M port C while items 6-A refer to port A. Item 1's default setting of **PIM (MXL VDT132)** is the proper setting. This should not be changed to **No Device** . If No Device is selected there is no supervision of the CCU/M by MXL.



#### (4) Pager Comms Setup

(1) Paging Protocol	Type A
(2) Pager Connection	Modem
(3) Login string	123456
(4) Setup String	ATL3^m~ATM2^m
(5) Phone number	18001234567
(6) Dialling	Tone
(7) Baud rate	2400
(8) Data bits	8
(9) Stop bits	1
(A) Parity	None
(B) Show Diagnostics	No
(q) Main menu	

- (1) The paging protocol should be left as Type A.
- (2) Pager Connection. This can either be set to **MODEM** or **DIRECT CONNECT**. Modem is used to dial up a paging company, whereas Direct Connect allows the CCU/232 to be connected via Port A directly to a pager base.
- (3) The login string will be supplied by the paging company. It is a password for the pager base.
- (4) The Setup String is for Modem Paging and it should not normally have to be changed from the factory default (indicated above).
- (5) If Modem Paging is used, the phone number of the Paging Company's computer should be obtained and entered.
- (6) Dialling is normally set to TONE, but PULSE dialling can be set if required by the telephone exchange.
- (7)-(A) The communications parameters for Modem Paging will not normally need to be changed unless explicitly required by the paging company. For Direct Paging, they should be set the same as the Pager Base port.
- (B) Show diagnostics is a special mode which should normally only be activated by technicians in order to resolve communications problems at installation.

#### (5) Pager Ids

(1) 12345	(a) John Doe
(2)	(b)
(3)	(c)
(4)	(d)
(5)	(e)
(6)	(f)
(7)	(g)
(8)	(h)
(q) Main menu	

Options (1) to (8) allow for up to 8 pager id's to be configured. The pager ID is the actual number on the pager as used by the paging company.

Options (a) to (h) allow a name to be associated with each pager id to make configuration of Paged Events easier and for reconfiguration at a later date (it is an optional, but useful field).

**(6) Paged Events**

	12345678
(1) Alarms	P_____
(2) Troubles	_____
(3) Security	_____
(4) Supervisory	_____
(5) Arm/Disarm	_____
(6) Status	_____
(7) Audible	_____
(8) Reset	_____
(q) Main menu	
(1) John Doe	(5) Not available
(2) Not available	(6) Not available
(3) Not available	(7) Not available
(4) Not available	(8) Not available

This allows customisation of events for each pager. First select the event required (1) to (8). Once the required event is hi-lighted, the numbers (1) to (8) can be used to toggle paging of this event ON and OFF for each pager. A <P> indicates that a particular pager (1 to 8) will be paged on an event. The pager names are indicated below to assist with configuration of paged events. Example: Using the above screen, if the letters <2> <1> were pressed, then Trouble Events will be sent to John Doe.

NOTE: If all systems troubles are to be transmitted to the pager, then TROUBLES and ARM/DISARM must BOTH be selected.

**(7) Inputs 1-4**

**(8) Inputs 5-8**

These should not be used.

**(9) Custom Events**

	12345678
<u>(1) Search String 1 - NURSE CALL</u>	<u>(a) P_____</u>
<u>(2) Message 1 - _____</u>	
<u>(3) Search String 2 - 001-002</u>	<u>(b) P_____</u>
<u>(4) Message 2 - PANIC BUTTON</u>	
<u>(5) Search String 3 - _____</u>	<u>(c) _____</u>
<u>(6) Message 3 - _____</u>	
<u>(7) Search String 4 - _____</u>	<u>(d) _____</u>
<u>(8) Message 4 - _____</u>	
<u>(q) Main menu</u>	
<u>(1) Duty Nurse</u>	<u>(5) Not available</u>
<u>(2) Security</u>	<u>(6) Not available</u>
<u>(3) Not available</u>	<u>(7) Not available</u>
<u>(4) Not available</u>	<u>(8) Not available</u>

Custom events allow creation of unique event groups. This means that almost any event type can be created and sent to a pager. Up to four custom events can be created.

This is best illustrated by example. In a Nurse Call system, each status input connected to a Nurse Call button can be programmed using CSGM with something like:

NURSE CALL ROOM 3

NURSE CALL ROOM 7

etc

By entering NURSE CALL as the search string in the CCU/232-MXLPIU, then only events which match to this string will be sent out. This means that other STATUS events will not be sent to the Nurse on duty.

Similarly, a receptionist may need an emergency/panic button under the desk. This can be connected to an input on the MXL, say at address 001-002.

Whenever ANY event occurs at this address, it will be sent to security. If a message has been programmed into the CCU/232-MXLPIU (Example: PANIC BUTTON) then it will also be sent with the event details.

# PAGER MESSAGE FORMAT

All paged events have the following format:

SITE NAME - as programmed into the CCU/232-MXLPIU above

PAGER EVENT NUMBER - This number increments every time an event from this MXL is sent to you.

EVENT - as printed on an MXL VDT or printer.

Normally you will have additional information inserted by the pager itself. This could include:

Message Number - As received by your pager.

Date and Time - when the event was received by your pager

Examples:

**09:SITENAME (001) ALARM 2-1 10:16:23 Feb 01,1995 #1 Level 3 Room 301, Manual Station 10:17AM 02/01/95**

**10:SITENAME (002) ACK Alarm 10:30:12 Feb 01,1995 All Alarms are now Acknowledged. 10:31AM 02/01/95**

In the first example, the fields are as follows:

**09** - Your Pager Message Number

**SITENAME** - The Site Name as programmed into the CCU/232-MXL

**(001)** - The message number sent to your pager from this MXL.

**ALARM 2-1 ....** - The Event from the MXL

**10:17:AM 02/01/96** - The time this message was received by your pager.