



# DEVICE SUPPLEMENT



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## INTRODUCTION

As a company who invests heavily in the development of our products we made a decision in 2011 to design a brand new addressable protocol which we have named the Fyreye MKII Protocol.

### **Why change protocol?**

While the existing protocol has served Zeta Alarm Systems well for many years, it is a dated protocol, which has several limitations. The new Fyreye MKII Protocol has been designed to be flexible, with plenty of room for future expansion. This will allow us to continue developing innovative new products, without being restricted by protocol limitations imposed by the existing protocol.

A weak point of the existing protocol is error checking. We have taken the opportunity to increase the error checking capability eight fold. While this level of error protection could be considered overkill, we believe that the robustness this gives, will allow Fyreye MKII Protocol systems to function error free, even under extreme conditions.

### **Is the protocol backwards compatible?**

In order to achieve the extra protocol commands required to accommodate our future plans, the decision was taken to totally change the protocol structure. Unfortunately this means that the protocol is not backwardly compatible. However our helpful staff will be glad to clarify any product compatibility queries you may have. Of course, we will ensure that spare parts & replacement devices will be available for existing systems for many years to come.

### **What differences will I see?**

It is our intention for the first release of devices to keep “user interface” differences to a minimum, so to all intents & purposes, it will look the same as an existing protocol system. Over the next few years, we intend to add improved fault reporting from devices, notification of isolator operation, and configurable multi sensor operation, to name but a few of the future plans.

For MKII compatible devices see table below

Model Number	Description	MK-II Protocol
ZT-CP3/AD*	Manual Call Point	✓
MKII-AOP	Optical detector	✓
MK-II AOH	Opto/Heat detector	✓
MK-II AHF	Fixed Heat detector	✓
MK-II AHR	ROR Heat detector	✓
MKII-SSB	Sounder Base	✓
MK-II ARL/W	Wall mount Remote LED	✓
MK-II ARL/C	Ceiling mount Remote LED	✓
ZAI-MI*	Addressable Input Module	✓
ZAIO-MI*	Addressable Input/output Module	✓
ZASC-MI*	Addressable Sounder Control Module	✓
ZAZM-MI*	Addressable Zone Monitor Module	✓
MK-II AMT/R	Addressable Sounder	✓
MK-II AMTSF	Addressable Sounder/Flasher	✓
MK-II AMD/8R	Addressable Sounder	✓
MK-II AXT/R	Addressable Sounder	✓
MK-II AXTSF	Addressable Sounder/Flasher	✓
MK-II AXTF	Addressable Flasher	✓

\* All Interface modules and Manual call points, have built in isolator.

## SOFT AND HARD PROGRAMMING



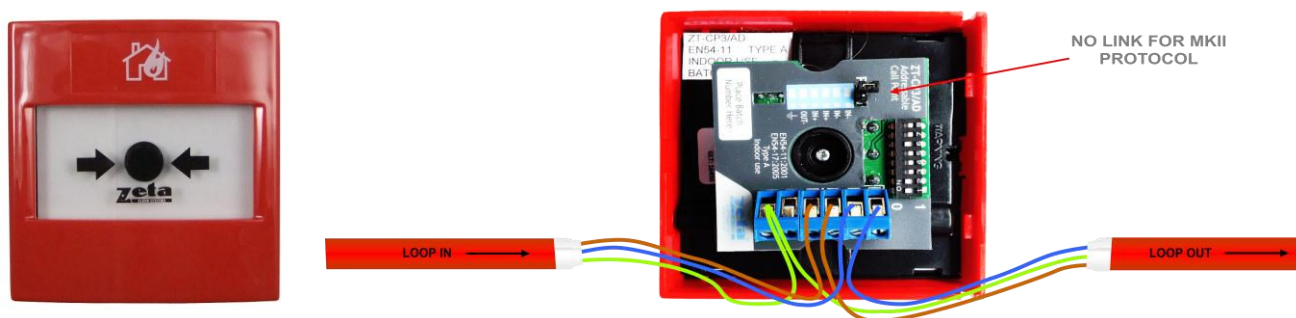
The MKII Handheld Programmer is designed to compliment all MKII devices and to assist the commissioning engineer on site. The unit will softly address all devices without using the incorporated dip-switch on the field devices.

Smoke and heat detectors can be tested when plugged on the programmer and alarm LED's can be verified prior to installation.

The MKII Programmer can also re-program the opto-heat detectors to either heat or smoke detector.

## CONNECTIONS

### CP3/AD Manual Call Point



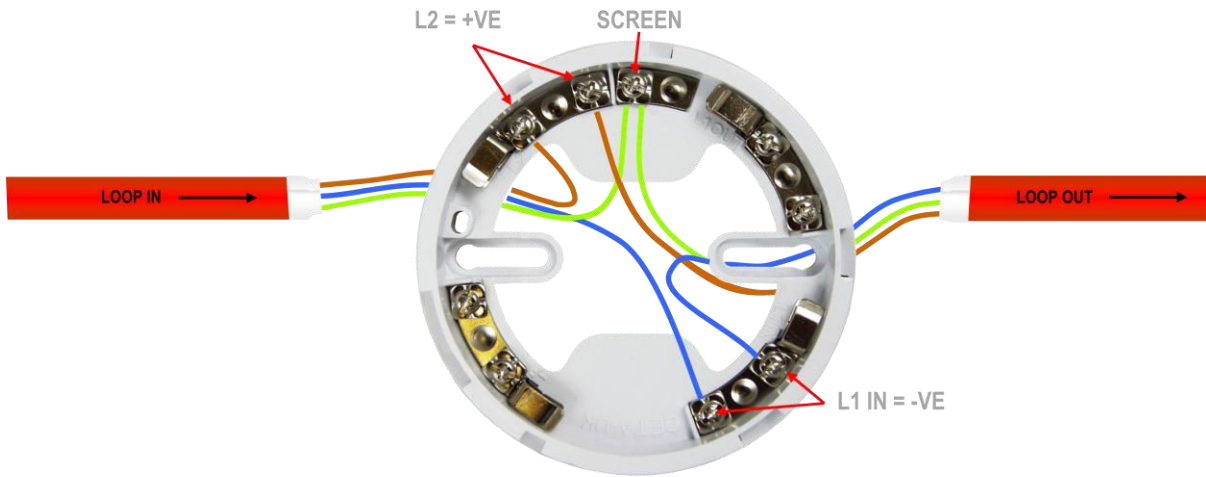
The CP3/AD call point has a built in isolator which can be wired in circuit or not used. This is done by means of not wiring to the negative out terminal on the call point. The following terminals are used for connecting the call point.

- 2 x Negative in terminals (note if you only connect to the negative in terminals then the isolator is bypassed)
- 1 x Positive in terminal
- 1 x Positive out terminal
- 1 x Negative out terminal (note if used puts the isolator in circuit)
- 1 x Earth terminal used to connect the cable screen



## MKII detectors (All types)

### Base connection



The connection for the detectors bases is made as follows:

Terminal L1IN is –ve (Blue)

Terminal L2 is +ve (Brown)

These are the only two connections required.

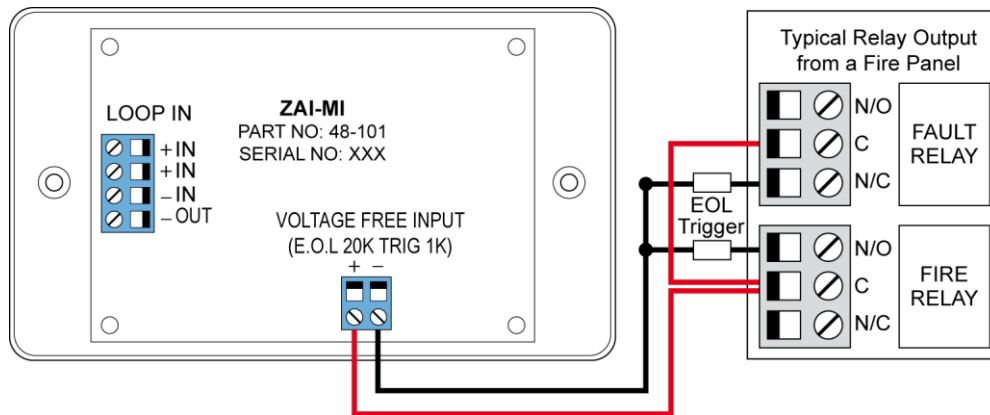


Deep Base MKII-CB/D



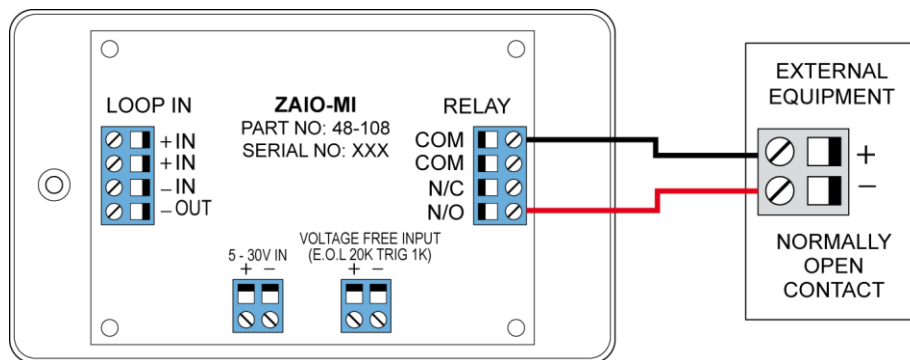
Common Base MKII-CB

## ZAI - MI Input Module



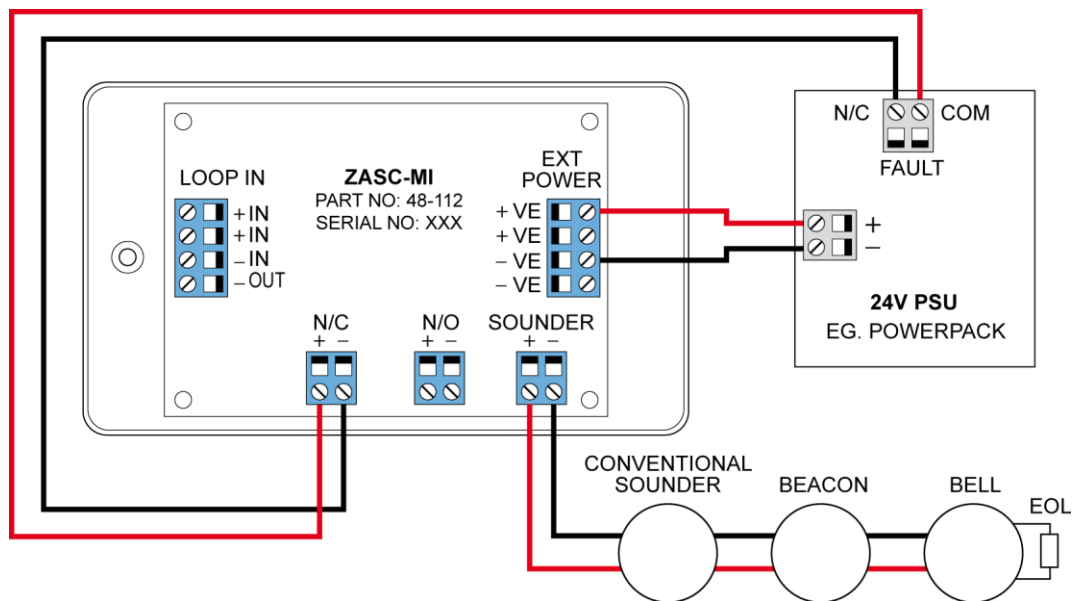
The end of line resistor value is 20K $\Omega$  and the trigger resistor value i.

## ZAIO – MI Input/output Module



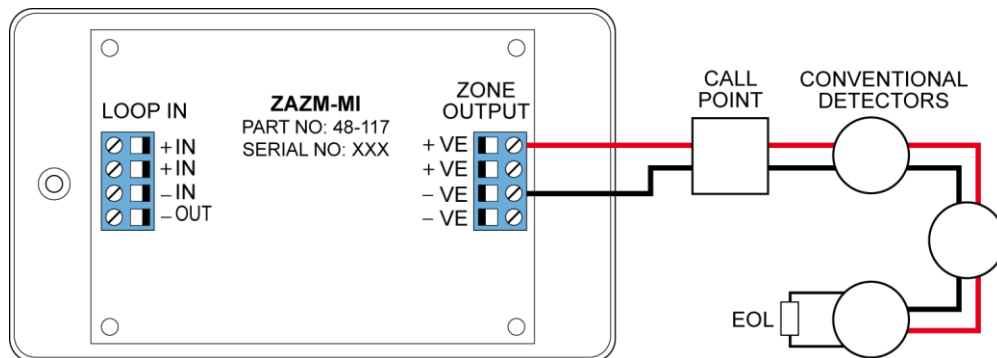
The end of line resistor value is 20K $\Omega$  and the trigger resistor value is 1K



**ZASC – MI Sounder Control Module**

The ZASC requires a external 24vdc power supply (as shown in the above diagram). The EOL for the sounder circuit is 10K $\Omega$ . When using the ZASC make sure the PSU being used has a fault output relay, so that in the event of a power supply fault it is reported to the control panel.

**Note: All Power Supplies used on fire alarm systems MUST comply with EN54 part 4**

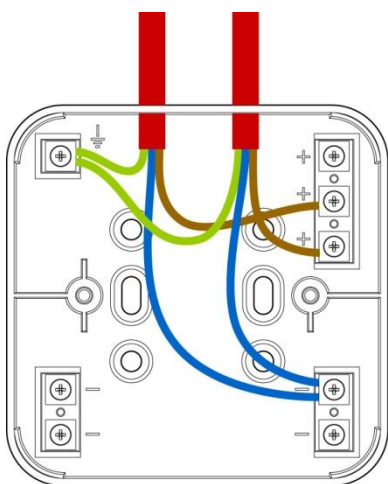
**ZAZM – MI Conventional Zone Module**

The ZAZM powers the conventional zone from the addressable systems loop, so no external power supply is required. The EOL for the zone is 6.2K $\Omega$ .

### Xtratone Sounder/Sounder Flasher

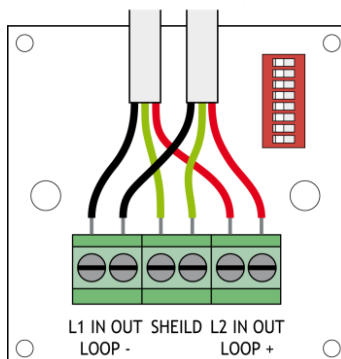


The Xtratone sounder or sounder flasher is a wall mount sounder. The programming of the sounder is done via the D.I.L switch mounted on the inside (front). It may also be programmed via the handheld programming tool.



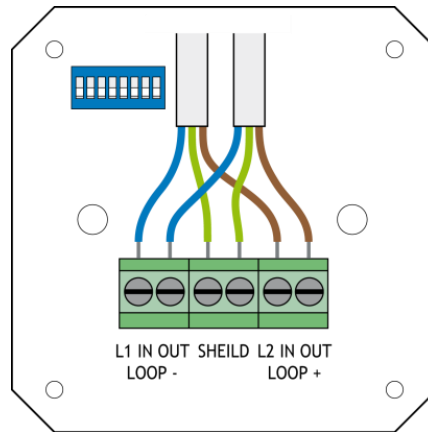
Connecting the sounder is done using the terminals in the back box of the device. Please refer to the above diagram.

### Miditone Sounder/Sounder Flasher



The loop +, loop -, and loop screen cables connect to terminals on the sounder PCB.

### Maxitone Sounder/Sounder Flasher



The loop +, loop -, and loop screen cables connect to terminals on the sounder PCB.

### Sandwich Sounder



The sandwich sounder has no wiring to connect as it just clips straight on to a standard base. It will run as a platform sounder using no address, it is controlled by the detector fitted to it. It can also be given an address via the handheld programming tool making it an addressable sounder.

## Remote LED Indicator



Ceiling Mount (MKII-ARL/C)



Wall Mount (MKII-ARL/W)

There are two versions of the remote LED, Wall mounted and Ceiling mounted. The ceiling mounted version requires a standard detector base.

Each version of the remote LED can monitor 1 or up to 12 devices. The way in which the LED is programmed is either via the D.I.L switches on the device or soft addressing via the handheld programmer.

## Connection to an Addressable Detector

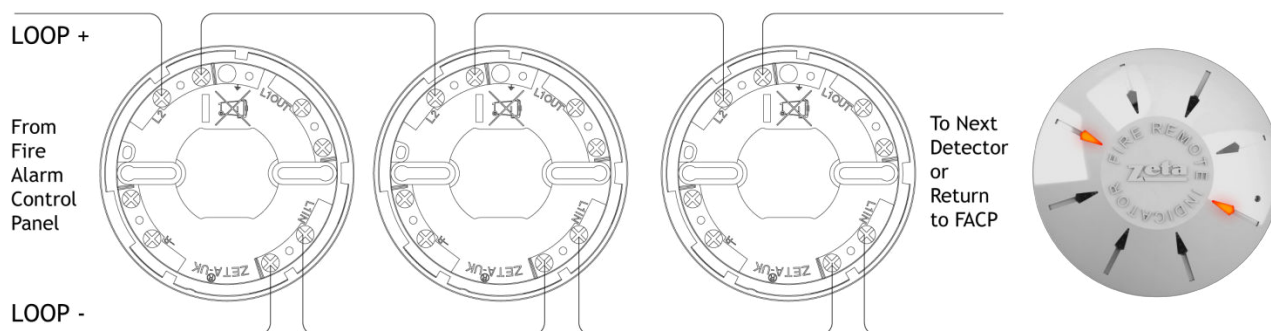


Fig 1

Fig 1 shows the connections for a ceiling mount version remote LED

## Connection to an Addressable Detector

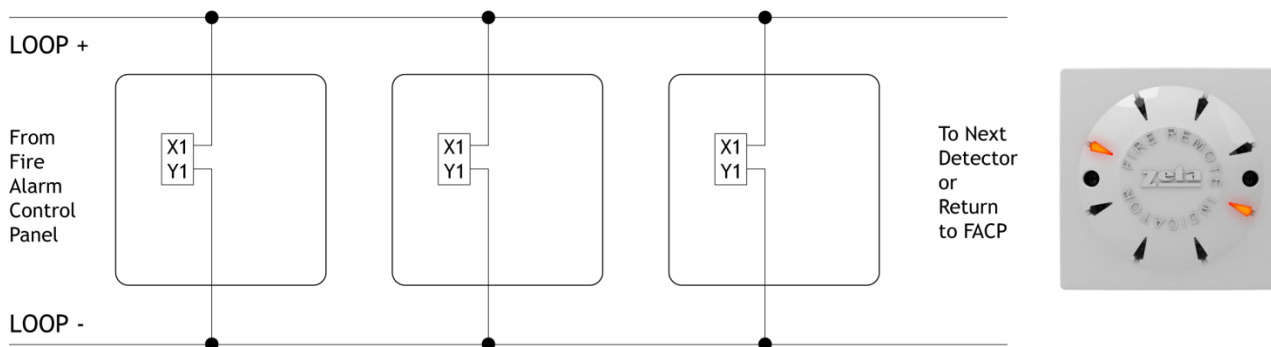


Fig 2

Fig 1 shows the connections for a wall mount version remote LED

## LOAD &amp; LOOP CALCULATIONS

DEVICE	PRODUCT CODE	I Q (MA)	I FLT (MA)	I ALM (MA)	MAX PER LOOP	MAX PER PANEL
<b>Panels</b>						
Premier Quatro 1 Loop Analogue Addr Fire Alarm Panel	QT/1	140	140	190	N/A	N/A
Premier Quatro 2 Loop Analogue Addr Fire Alarm Panel	QT/2	190	190	240	N/A	N/A
Premier Quatro 3 Loop Analogue addr Fire Alarm Panel	QT/3	240	240	300	N/A	N/A
Premier Quatro 4 Loop Analogue addr Fire Alarm Panel	QT/4	300	300	360	N/A	N/A
<b>Detectors</b>						
Fyreye MKII Addressable Optical Smoke Detector	MKII-AOP	0.5	N/A	5	250	512
Fyreye MKII Addressable Heat Detector	MKII-AHR	0.5	N/A	5	250	512
Fyreye MKII Fixed Temperature Heat Detector	MKII-AHF	0.5	N/A	5	250	512
Fyreye MKII Addressable Opto-Heat Detector	MKII-AOH	0.5	N/A	5	250	512
<b>Call Points</b>						
Zeta Addressable Manual Call Point	ZT-CP3/AD	0.6	N/A	2.5	250	512
Zeta Addressable Weatherproof Manual Call Point	ZT-CP3/AD/WP	0.6	N/A	2.5	250	512
<b>Sounders &amp; Flashers</b>						
Fyreye MKII Addressable Maxitone Sounder	MKII-AMT	0.65	N/A	7	32	128
Fyreye MKII Addressable Maxitone Sounder Flasher	MKII-AMTF	0.7	N/A	10.6	32	128
Fyreye MKII Addressable Maxitone Flasher	MKII-AMF	0.6	N/A	5.5	32	128
Fyreye MKII Addressable Miditytone Sounder	MKII-AMD	0.65	N/A	4.5	64	256
Fyreye MKII Addressable Miditytone Sounder Flasher	MKII-AMDSF	0.7	N/A	7.5	48	192
Fyreye MKII Addressable Miditytone Flasher	MKII-AMDF	0.65	N/A	5.5	48	192
Fyreye MKII Addressable Xtratone Sounder	MKII-AXT	0.6	N/A	4.5	64	256
Fyreye MKII Addressable Xtratone Sounder Flasher	MKII-AXTF	0.65	N/A	7.4	48	192
Fyreye MKII Addressable Xtratone Flasher	MKII-AXF	0.6	N/A	5.5	48	192
Sandwich Sounder Base	MKII-SSB	0.6	N/A	4	64	256
Sandwich Sounder Flasher Base	MKII-SSFB	0.65	N/A	7.5	48	192
<b>Remote Indicator LEDs</b>						
MKII Addressable Remote LED Indicator (Wall)	MKII-ARL/W	0.45	N/A	2.1	32	128
MKII Addressable Remote LED Indicator (Ceiling)	MKII-ARL/C	0.45	N/A	2.1	32	128

MKII Conventional Remote LED Indicator (Wall)	MKII-RL/W	0	N/A	15	16	64
MKII Conventional Remote LED Indicator (Ceiling)	MKII-RL/C	0	N/A	15	16	64
<b>Interfaces</b>						
Zeta Fyreye MKII Input Unit	ZAI-MI	1.0	1.25	3.6	125	500
Zeta Fyreye MKII Input Output Unit	ZAIO-MI	1.0	1.25	3.6	32	128
Zeta Fyreye MKII Input Output Unit – mains switching	ZAIO-MI /230	1.3	2.9	2.9	32	128
Zeta Fyreye MKII Sounder Control Module	ZASC-MI	0.6	0.6	0.8	16	64
Zone Fyreye MKII Zone Monitor Unit	ZAZM-MI	3.5	1.0	19	16	64
Wireless Transponder with LCD	WF-TRA-LCD	12	12	12	4	16
Wireless Transponder without LCD	WF-TRA-BFP	12	12	12	4	16
<b>Conventional Sounders Via 2 Sounder Circuits (450mA per Conv Circuit)</b>						
Zeta Conventional Maxitone Sounder	ZMT/8	0	N/A	15	N/A	60
Zeta Conventional Miditytone Sounder	ZMD/8	0	N/A	15	N/A	60
Zeta Conventional Securetone Sounder	ZST/8	0	N/A	15	N/A	60
Zeta Conventional Megatone Sounder	ZIDC	0	N/A	200	N/A	4
Zeta Conventional Flasher	ZFL2RR	0	N/A	90	N/A	10
Zeta Conventional Sounder Flasher	ZLT/8RR	0	N/A	110	N/A	8
Zeta Conventional 6" Bells	ZTB6B/24	0	N/A	25	N/A	36
Zeta Conventional 8" Bells	ZTB8B	0	N/A	35	N/A	25
<b>Conventional Detectors (via a Zone Monitor)</b>						
Fyreye Conventional Optical Detector	FEO2000	0.06	N/A	25	N/A	N/A
Fyreye Conventional Heat Detector (A1R)	FEHR2000	0.04	N/A	25	N/A	N/A
Fyreye Conventional Heat Detector (CS)	FEFH2000	0.04	N/A	25	N/A	N/A
<b>Misc Items</b>						
GSM COMMUNICATOR	GSM-COM	200	500	500	N/A	1

The Maximum per loop values given above are a guideline, based on the assumption that other devices on the loop do not cause the total loop current to exceed the loop limit of 500mA