



## Indicator LED Bus Revision 1.0

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### Introduction:

Thank you for purchasing the Indicator LED Bus. This will allow you to further enhance your development experience. This accessory will allow you to have visual indications of planned events such as a temperature warning, proximity reporting or a general indication that an event was present.

### This kit includes;

- 1 – Indicator LED Bus
- 3 – LED mounting hardware
- 1 – Cable
- 1 – Mounting overlay

## Indicator LED Bus

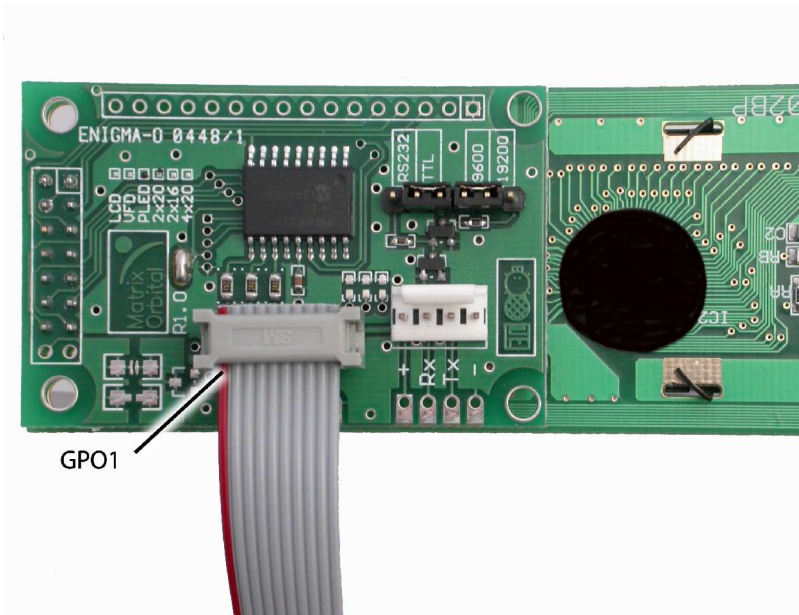
If you would like to mount the Indicator LED Bus, **you will require;**

- LK/VK/PK202-24USB (any MX Series) or any MOS Series display
- 8mm drill bit
- An appropriate mounting location
- Approximately 20 minutes of time.

### Installation:

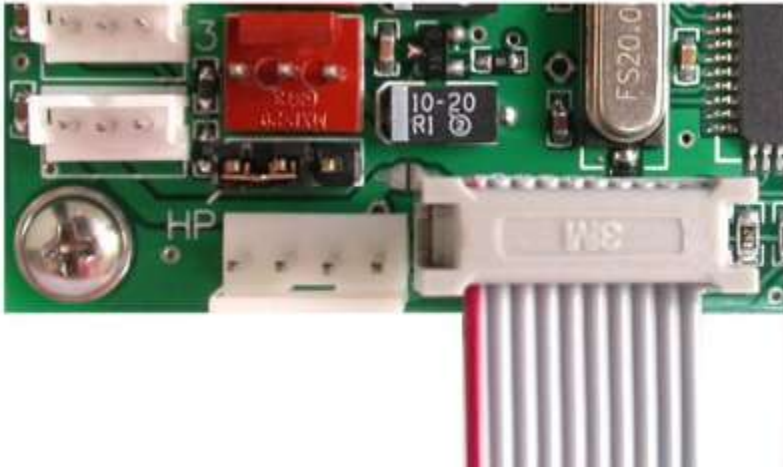
1. Find a location to mount the Indicator
2. Place down the overlay
3. Drill out the holes using a 8mm drill bit
4. Insert the LED mounting hardware in and snap the LEDs into place
5. Connection of the cable:

### MOS Series Connection:

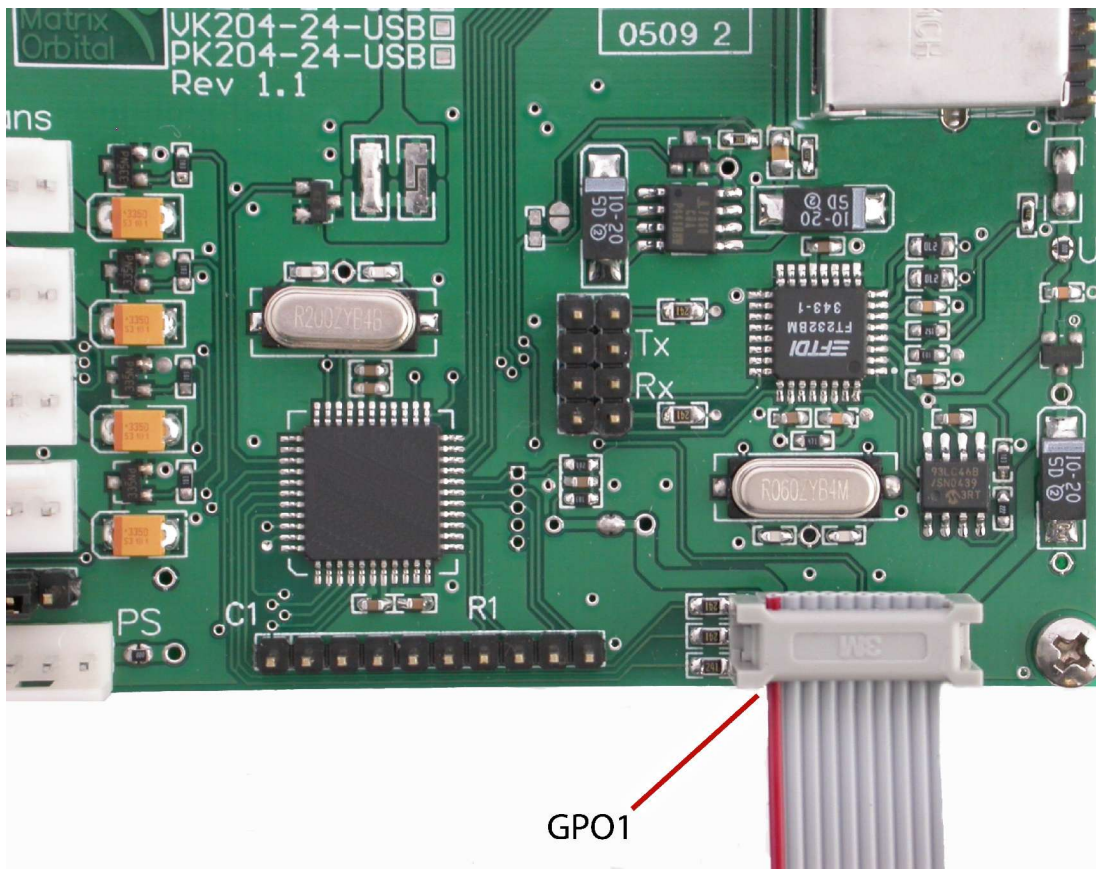


## Indicator LED Bus

### LK/VK/PK202-24-USB (MX Series) Connection:



### LK/VK204-24-USB (MX Series) Connection:



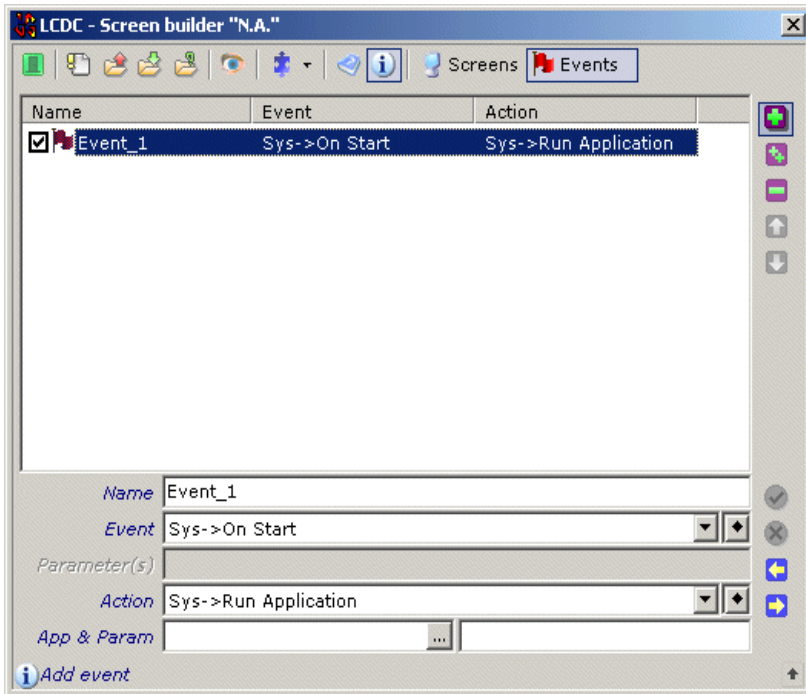
## Indicator LED Bus

### Indicator:

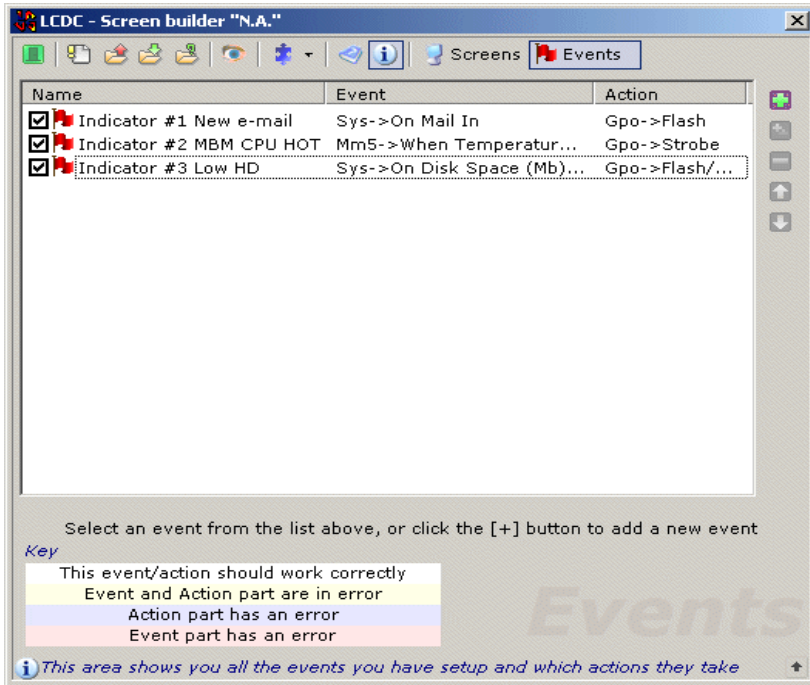
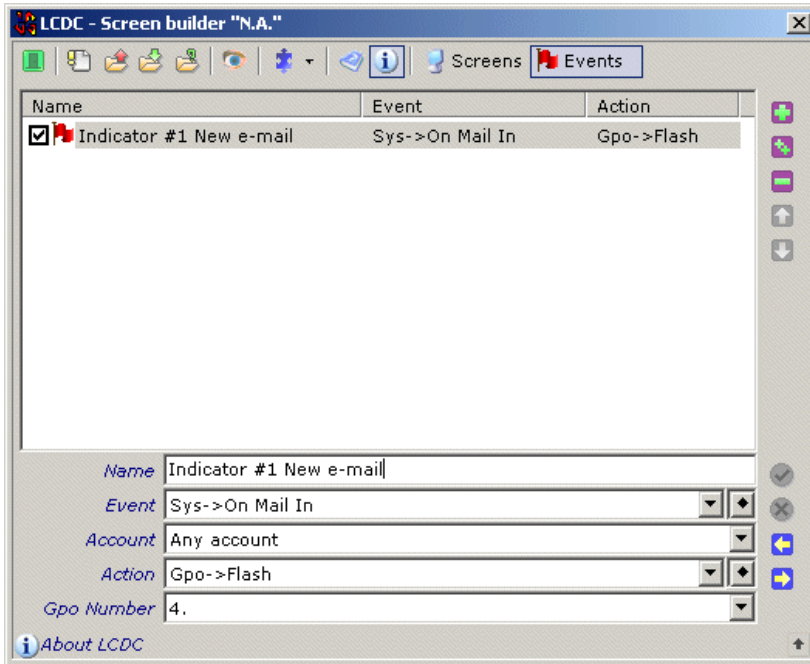


### Configuration of LCDC with the MX Series:

Now to configure LCDC to use the Indicator with the MX Series, all you have to do is create events by pressing the little plus button and then filling in the information. Just follow the three screen shots as an example and you can modify it how ever you see fit. If you have any questions please visit the forums!



## Indicator LED Bus



## Indicator LED Bus

**In this last screen shot we have three events created. You can create multiple event's for each GPO, like have one e-mail account flash, and another one strobe.**

### **Configuration of MOS Series with a Parallax Development Board:**

Once you have correctly connected the MOS Series to a parallax development board using the quick install guide and confirmed that you are communicating, please see the following code for reference regarding the LED Indicator Bus.

### **Example Code:**

```
'{$STAMP BS2}
'{$PBASIC 2.0}
'{$PORT COM1}

Digit      VAR      Byte
Column     VAR      Byte

Digit = 0
Column = 1

Main:

GPO:
GOSUB LCD_GPO1_ON
  PAUSE 50
GOSUB LCD_GPO2_ON
  PAUSE 50
GOSUB LCD_GPO3_ON
  PAUSE 50
GOSUB LCD_GPO3_OFF
  PAUSE 50
GOSUB LCD_GPO2_OFF
  PAUSE 50
GOSUB LCD_GPO1_OFF
  PAUSE 50

RETURN

GOTO Main

LCD_GPO1_ON:
  SEROUT 1, 84, [254]
  SEROUT 1, 84, [87]
  SEROUT 1, 84, [1]
RETURN
```

## Indicator LED Bus

```
LCD_GPO2_ON:  
  SEROUT 1, 84, [254]  
  SEROUT 1, 84, [87]  
  SEROUT 1, 84, [2]  
RETURN
```

```
LCD_GPO3_ON:  
  SEROUT 1, 84, [254]  
  SEROUT 1, 84, [87]  
  SEROUT 1, 84, [3]  
RETURN
```

```
LCD_GPO1_OFF:  
  SEROUT 1, 84, [254]  
  SEROUT 1, 84, [86]  
  SEROUT 1, 84, [1]  
RETURN
```

```
LCD_GPO2_OFF:  
  SEROUT 1, 84, [254]  
  SEROUT 1, 84, [86]  
  SEROUT 1, 84, [2]  
RETURN
```

```
LCD_GPO3_OFF:  
  SEROUT 1, 84, [254]  
  SEROUT 1, 84, [86]  
  SEROUT 1, 84, [3]  
RETURN
```

```
LCD_ClearDisplay:  
  SEROUT 1, 84, [254]  
  SEROUT 1, 84, [88]  
RETURN
```

```
LCD_Backlight_ON  
  SEROUT 1, 84, [254]  
  SEROUT 1, 84, [66]  
  SEROUT 1, 84, [0]  
RETURN
```

```
LCD_Backlight_OFF  
  SEROUT 1, 84, [254]  
  SEROUT 1, 84, [70]  
RETURN
```

## Indicator LED Bus

### Frequently Asked Questions:

**Q1:** Can I add more LEDs to the Indicator?

**A1:** No.

**Q2:** Can I change the LEDs to different colors?

**A2:** Yes you can but this would be DIY type of job.

**Q3:** Can I use the Indicator on other displays?

**A3:** Yes and no. All of the MX series will be able to use the Indicator as is. In addition, any display ending in -USB and the MOS Series inclusively. To use the Indicator with non MX, -USB, or MOS models, you will have to make your own cable to interface to the Indicator.

**Q4:** How bright are the LEDs and what is the viewing angle?

**A4:** They are 2000-3000 mcd and a 15degree viewing angle.

**Q5:** Can I make them brighter?

**A5:** If you replace them, and see Q2.

**Q6:** Can I sue you if I blind myself with the Indicator?

**A6:** Nope, you're on your own. We recommend wearing sun glasses around the Indicato.

**Please consult your owners manual for further information or feel free to visit our forums at [www.lcdforums.com/forums](http://www.lcdforums.com/forums) for further reference. Programming examples are also available and our technical support staff is more than happy to help with an questions or concerns you may have with this product.**