Product Change Notification

PCN No: 2007-07-11-01
Report Date: July 11, 2007
Subject: Alphanumeric and Graphic Displays New Firmware Version Release

List of New / Changed Products:
All the following displays (and their variants):

Alphanumeric Displays		
MOS / MOI Series	X-Board S / I Series	LCD0821
LCD2041	LK162-12	LK202-25
LK204-25	LK402-25	LK404-25
VK162-12	VK202-25	VK204-25
Graphic Displays		
GLK12232-25-SM PCB Rev 2.0	GLC24064	GLK24064-25
GLK240128-25	GLK24064-16-1U	
Variants:		
-V, -VPT, -E, and all colours		

Reason for Change:
A firmware upgrade has been implemented to fix some firmware issues on the displays. These issues include: a faulty command operation when locking the internal EEPROM, multiple key presses on some displays (GLK12232-25-SM and GLK24064-16-1U) cause for the wrong transmitted byte values, and in I2C, it has been found that the display modules reply with a NAK 1 byte too late.

Product Change:
The following list of firmware changes are all effective on all the variants of the alphanumeric and graphic displays as stated under 'List of New / Changed Products'.

Firmware Changes:

Display	New Firmware Version
Alphanumeric Displays	
MOS Series, MOI Series	v5.5
X-Board S, X-Board I	v5.5
LCD0821	v5.9
LCD2041	v5.9
VFD2041	v5.9
LK162-12	v5.5
VK162-12	v5.5
LK202-25	v6.0
VK202-25	v5.9
LK204-25	v5.9
VK204-25	v5.9
LK402-25	v5.4
LK404-25	v5.5
Graphic Displays	
GLK12232-25-SM PCB Rev 2.0	v5.6
GLC24064 / GLK24064-25	v5.6
GLK240128-25	v5.6
GLK24064-16-1U	v5.7

Schedule of Change:
July 24, 2007

New Released Firmware (to be released July 16, 2007):

1) The following Data Lock command sets and save the internal EEPROM (bit 4 of the Data Lock byte) lock:

/ 254 / 203 / 245 / 160 / 16 /

In the earlier firmware versions, this command only implements internal EEPROM lock within the same power cycle. In the upgraded firmware, this lock is saved and implemented power cycle after power cycle, unless otherwise changed again.

2) Multiple key presses on these displays: GLK12232-25-SM PCB Rev 2.0 and GLK24064-16-1U result to wrong transmitted values. If 2 keys that belong in the same row are pressed at the same time, instead of transmitting either of the values of those keys, a totally different byte value (such as if a different key was pressed) is transmitted. This has now been fixed.

3) In I2C implementation, hardware limited the speed of refreshing global variables within interrupt functions, making the module reply an ACK to a data byte that it can NOT process, hence it should have NAK'd the data byte. Changes have been made to truly reflect a NAK when the display module can not process a data byte anymore.

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Reference Documents/Attachments:

Location: http://www.matrixorbital.ca/manuals/

Approvals:

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