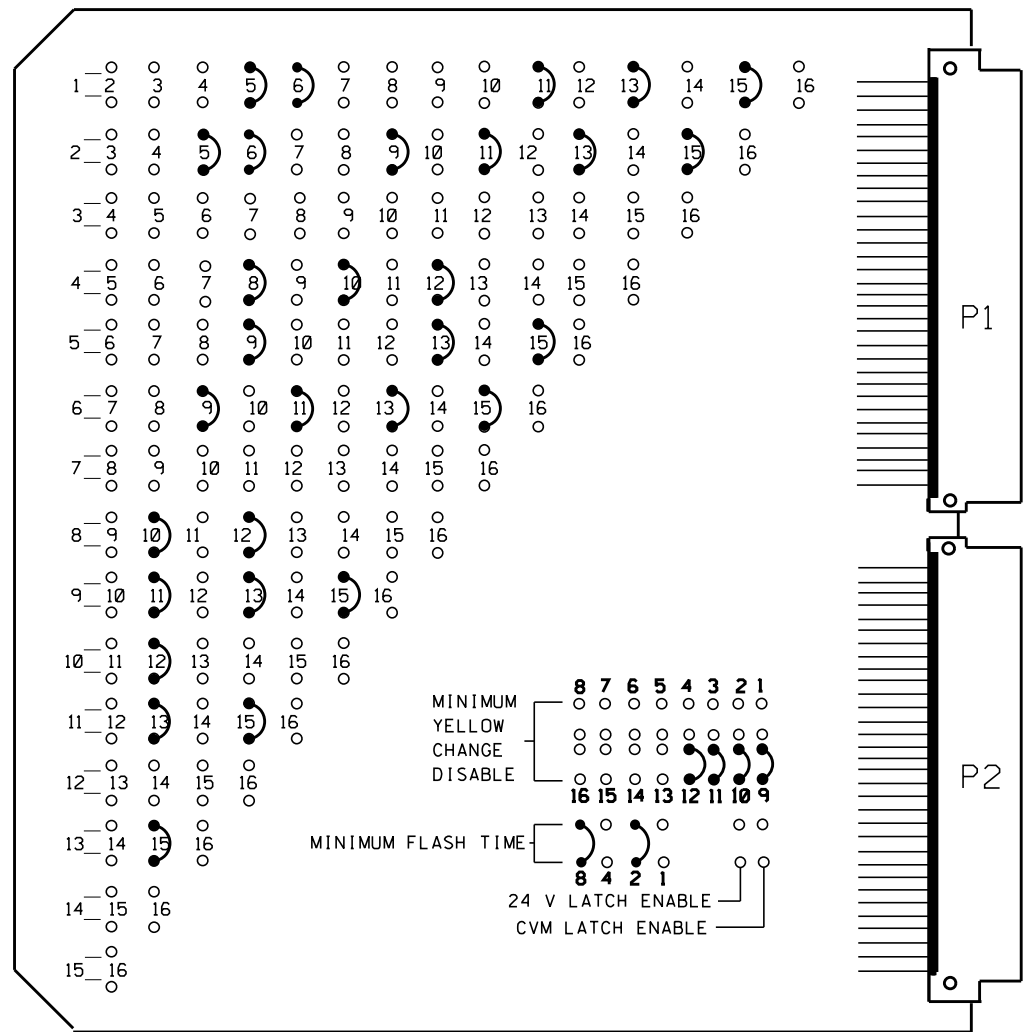


**EDI MODEL MMU2-16LE  
MALFUNCTION MANAGEMENT UNIT  
PROGRAMMING DETAIL**  
(program card and tables as shown below)



**FIELD CHECK ENABLE  
DUAL IND ENABLE  
RED FAIL ENABLE**

CHANNEL NUMBER	ENABLE/DISABLE
1	DISABLE
2	ENABLE
3	DISABLE
4	ENABLE
5	DISABLE
6	ENABLE
7	DISABLE
8	ENABLE
9	ENABLE
10	ENABLE
11	ENABLE
12	ENABLE
13	ENABLE
14	DISABLE
15	ENABLE
16	DISABLE

**UNIT OPTIONS**

OPTION	SETTING
RECURRENT PULSE	ON
WALK DISABLE	OFF
LOG CVM FAULTS	ON
EXTERN WATCHDOG	OFF
24V-2=12VDC	OFF
PGM CARD MEMORY	ON
LEDgeurd	ON
FORCE TYPE 16	OFF
TYPE12-SDLC	OFF
VM 3x/Day Latch	ON

**FLASHING YELLOW ARROW**

CONFIG MODE	A
ENABLE CHANNEL PAIR, FYA	
CH 1-9	ON
CH 3-10	OFF
CH 5-11	ON
CH 7-12	OFF
RED/YEL INPUT ENABLE	
CH 1-9	OFF
CH 3-10	OFF
CH 5-11	OFF
CH 7-12	OFF
FLASH RATE FAULT	OFF
FYA TRAP DETECT	ON

**MMU PROGRAMMING CARD**

**MMU PROGRAMMING NOTE**  
ENSURE YELLOW CHANGE PLUS RED CLEARANCE MONITORING IS ENABLED FOR ALL CHANNELS.

**DETECTOR RACK SET-UP DETAIL**

INSERT DETECTOR CARDS IN RACK ACCORDING TO THE DETAIL SHOWN BELOW. PARTICULAR DETECTOR CHANNELS WILL CALL PHASES INDICATED.

BIU	CH1	CH1	CH1	CH1	CH1	CH1	SLOT	SLOT	SLOT	SLOT	SLOT
	L3 ø 2	L1 ø 1	L7 ø 5	L5 ø 4	L11 ø 8	L9 ø 6					
	CH2	CH2	CH2	CH2	CH2	CH2	EMPTY	EMPTY	EMPTY	EMPTY	EMPTY
	L4 NOT USED	L2 ø 6	L8 ø 2	L6 ø 4	L12 ø 8	L10 NOT USED					

WIRE LOOPS TO TERMINALS ON LOOP PANEL AS SHOWN IN THE CHART BELOW

LOOP NO.	LOOP PANEL TERMINALS
1A	L1A, L1B L2A, L2B
2A, 2B	L3A, L3B L4A, L4B
4A	L5A, L5B
4B	L6A, L6B
5A	L7A, L7B L8A, L8B
6A, 6B	L9A, L9B
NU	L10A, L10B
8A	L11A, L11B
8B	L12A, L12B
NU	L13A, L13B
NU	L14A, L14B
NU	L15A, L15B
NU	L16A, L16B
NU	L17A, L17B
NU	L18A, L18B
NU	L19A, L19B
NU	L20A, L20B
NU	L21A, L21B
NU	L22A, L22B
NU	L23A, L23B
NU	L24A, L24B

**NOTE**  
BE SURE TO PROGRAM DETECTOR TYPES AND TIMERS (EXTEND AND DELAY) AS SHOWN ON THE SIGNAL PLANS.

PROGRAM CONTROLLER DETECTORS ACCORDING TO THE SCHEDULE SHOWN IN THE CHART BELOW

CONTROLLER DETECTOR NO.	FUNCTION	TIMING	
		FEATURE	TIME(SEC)
1	ø 1	DELAY	15
2	ø 6	-	-
3	ø 2	-	-
4	-	-	-
5	ø 4	DELAY	3
6	ø 4	DELAY	10
7	ø 5	DELAY	15
8	ø 2	-	-
9	ø 6	-	-
10	-	-	-
11	ø 8	-	-
12	ø 8	DELAY	10
13	-	-	-
14	-	-	-
15	-	-	-
16	-	-	-
17	-	-	-
18	-	-	-
19	-	-	-
20	-	-	-
21	-	-	-
22	-	-	-
23	-	-	-
24	-	-	-

**NOTES**

- TO PREVENT "FLASH-CONFLICT" PROBLEMS, WIRE ALL UNUSED LOAD SWITCHES TO FLASH RED. VERIFY THAT SIGNAL HEADS FLASH IN ACCORDANCE WITH THE SIGNAL PLANS.
- TO PREVENT RED FAILURES ON UNUSED MONITOR CHANNELS, TIE UNUSED LOAD SWITCH RED OUTPUTS 3, 7, 14 & 16 TO LOAD SWITCH AC+ BY INSERTING A JUMPER PLUG IN THE UNUSED LOAD SWITCH SOCKET FROM PIN 1 (LS AC+) TO PIN 3 (RED OUT). MAKE SURE ALL FLASH TRANSFER RELAYS ARE IN PLACE.
- PROGRAM CONTROLLER TO START UP IN PHASES 2 AND 6 GREEN.
- SET POWER-UP FLASH TIME TO 10 SECONDS AND IMPLEMENT ON THE MALFUNCTION MANAGEMENT UNIT. SET CONTROLLER POWER-UP FLASH TIME TO 0 SECONDS.
- ENABLE SIMULTANEOUS GAP-OUT FEATURE, ON CONTROLLER UNIT, FOR ALL PHASES.
- PROGRAM DETECTORS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS TO ACCOMPLISH THE DETECTION SCHEMES SHOWN ON THE SIGNAL DESIGN PLANS.
- PROGRAM DETECTOR CALL DELAY AND EXTENSION TIMING ON THE CONTROLLER, UNLESS OTHERWISE SPECIFIED.
- SET ALL DETECTOR CARD UNIT CHANNELS TO "PRESENCE" MODE.
- PROGRAM PHASES 4 AND 8, ON CONTROLLER UNIT, FOR DUAL ENTRY.
- THE CABINET AND CONTROLLER ARE PART OF THE GREENVILLE CITY SYSTEM.

**SIGNAL HEAD HOOK-UP CHART**

PHASE	1	2	3	4	5	6	7	8	2 PED	4 PED	6 PED	8 PED	OLA	OLB	OLC	OLD
SIGNAL HEAD NO.	11★	21,22	NU	41,42 43	51★	61,62	NU	81,82 83	P21, P22	P41, P42	P61, P62	P81, P82	11★	NU	51★	NU
RED	*	2R		4R	*	6R		8R								
YELLOW	*	2Y		4Y	*	6Y		8Y								
GREEN		2G		4G		6G		8G								
RED ARROW													13R		15R	
YELLOW ARROW													13Y		15Y	
FLASHING YELLOW ARROW													13G		15G	
GREEN ARROW	1G					5G										
Hand									9R	10R	11R	12R				
Walking Person									9G	10G	11G	12G				

NU = NOT USED  
\* DENOTES INSTALL LOAD RESISTOR, SEE LOAD RESISTOR INSTALLATION DETAIL SHEET 2 OF 2.  
★ SEE PICTORIAL OF HEAD WIRING DETAIL SHEET 2 OF 2.

**EQUIPMENT INFORMATION**

LOCAL CONTROLLER.....ECONOLITE ASC/3  
CABINET .....NC-8A [TS-2]  
CABINET MOUNT.....BASE  
LOADBAY POSITIONS.....16  
LOAD SWITCHES USED.....1,2,4,5,6,8,9,10,11,12,13,15  
PHASES USED.....1,2,2PED,4,4PED,5,6,6PED,8,8PED  
OLA.....\*  
OLB.....NOT USED  
OLC.....\*  
OLD.....NOT USED  
\*See Sheet 2 of 2 Econolite ASC/3 Overlap Programming Detail.

**LOAD SWITCH ASSIGNMENT DETAIL**  
(program controller according to schedule in chart below)

LOAD SWITCH NUMBER	FUNCTION
1	ø 1
2	ø 2
3	ø 3
4	ø 4
5	ø 5
6	ø 6
7	ø 7
8	ø 8
9	ø 2 PED
10	ø 4 PED
11	ø 6 PED
12	ø 8 PED
13	OLA
14	OLB
15	OLC
16	OLD

**DETECTOR RACK NO. 2 SET-UP DETAIL**

INSERT DETECTOR CARDS IN RACK ACCORDING TO THE DETAIL SHOWN BELOW. PARTICULAR DETECTOR CHANNELS WILL CALL PHASES INDICATED.

BIU	SLOT	SLOT	SLOT	SLOT
		EMPTY	EMPTY	EMPTY

**COUNTDOWN PEDESTRIAN SIGNAL OPERATION**

Countdown Ped Signals are required to display timing only during Ped Clearance Interval. Consult Ped Signal Module user's manual for instructions on selecting this feature.

THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 02-0892  
DESIGNED: JUNE 2014  
SEALED: 9/2/2014  
REVISED: N/A

FINAL DESIGN SHEET 1 OF 2

 PLANS PREPARED IN THE OFFICE OF: <b>Kimley-Horn</b> NC License #F-0102 P.O. Box 33068 Raleigh, NC 27636 (919) 677-2000	10th STREET AT BANCROFT AVENUE/ LINE AVENUE	SEAL  NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 032607 STACIE L. PHILLIPS
	DIVISION 2 PITT COUNTY GREENVILLE PLAN DATE: JUNE 2014 REVIEWED BY: SL PHILLIPS PREPARED BY: SP PENNINGTON REVIEWED BY:	DocuSigned by: Stacie Phillips 9/2/2014 DATE

8/29/2014 1:18:56 PM susan.pennington K:\RAL\_Roadway\01036175 (U-3315)\R\Office\Sig\sig1sk4 - Signal Design\G-091 Bancroft\2.9 020892-1\0829e-1.dgn