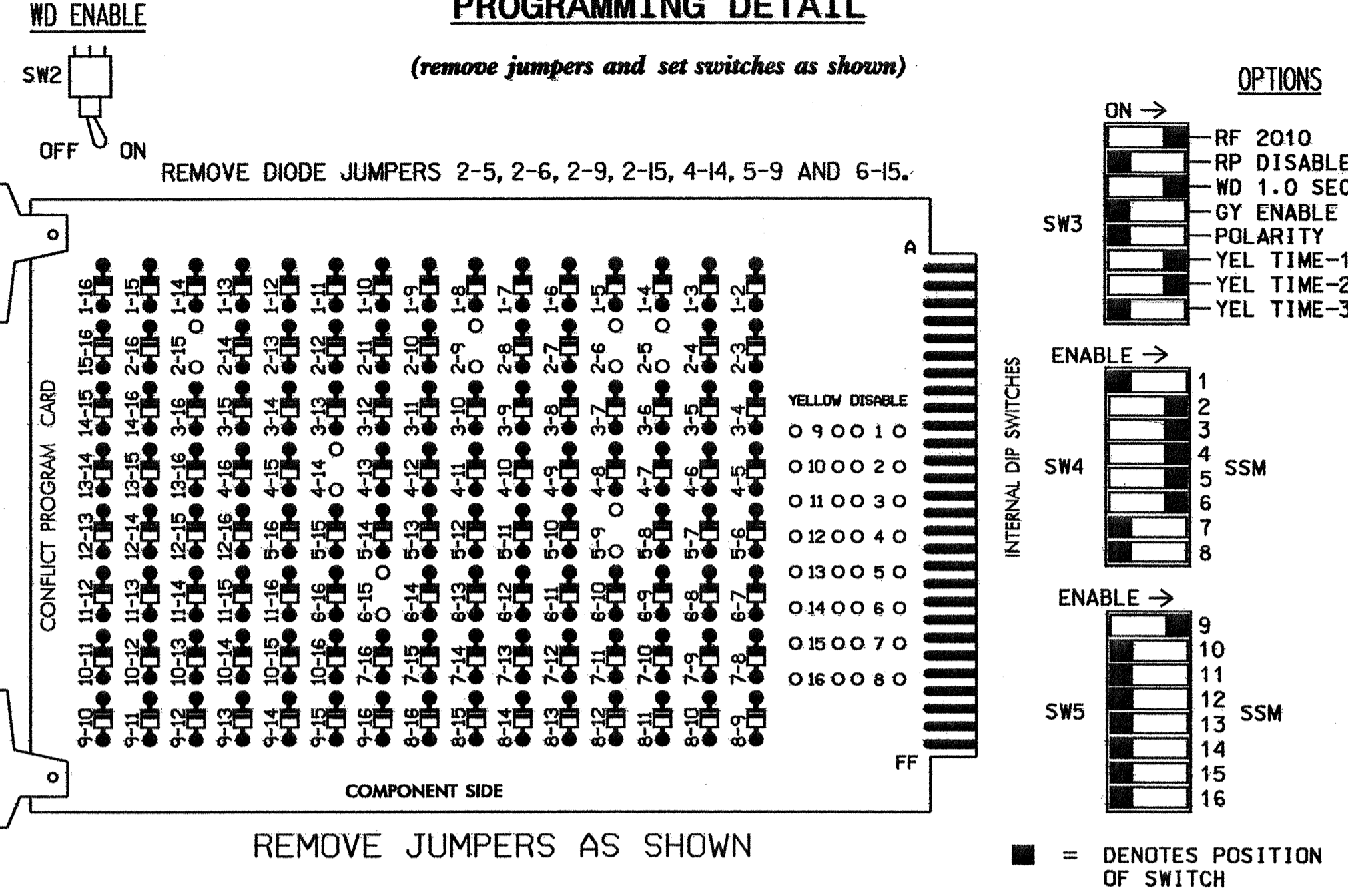


EDI MODEL 2010ECL CONFLICT MONITOR

PROGRAMMING DETAIL



NOTES

- TO PREVENT "FLASH-CONFLICT" PROBLEMS, INSERT RED FLASH PROGRAM BLOCKS FOR ALL UNUSED VEHICLE LOAD SWITCHES IN OUTPUT FILE. VERIFY THAT SIGNAL HEADS FLASH IN ACCORDANCE WITH THE SIGNAL PLANS.
- TO PREVENT RED FAILURES ON UNUSED MONITOR CHANNELS 1,7,8, 10,11, 12, 13, 14, 15 & 16, TIE UNUSED LOAD SWITCH RED OUTPUTS TO LOAD SWITCH AC+ PER CABINET MANUFACTURER'S INSTRUCTIONS.
- PROGRAM THE CONTROLLER TO START UP IN PHASES 2 AND 6 GREEN.
- SET POWER-UP FLASH TIME TO 10 SECONDS AND IMPLEMENT WITHIN THE CONTROLLER PROGRAMMING.
- ENABLE SIMULTANEOUS GAP-OUT FEATURE, ON CONTROLLER UNIT, FOR ALL PHASES.
- THE CABINET AND CONTROLLER ARE A PART OF THE DURHAM SIGNAL SYSTEM.

POWER-UP / RESTART PROGRAMMING NOTE

IN ORDER FOR PHASES USED ONLY IN NORMAL OPERATION TO BE SERVED AFTER A POWER-UP OR RESTART, PROGRAM "START VEHICLE CALL" AND "START PED CALL" ON 170E CONTROLLER AS FOLLOWS:

VEH - F/2+F+E=Ø2, 4, 5, 6
 PED - F/2+F+F= 4 PED, 6 PED

PEDESTRIAN PHASE PROGRAMMING

PROGRAM PEDESTRIAN 4P OUTPUT AT KEYPAD INPUT E/125+F+7= Ø4.
 PROGRAM PEDESTRIAN 6P OUTPUT AT KEYPAD INPUT E/125+F+6= Ø6.

FIELD CONNECTION HOOK-UP CHART

LOAD SWITCH NO.	S1	S2	S2P	S3	S4	S4P	S5	S6	S6P	S7	S8	S8P	S9	S10	S11	S12	S13	S14
PHASE	1	2	2 PED	3	4	4 PED	5	6	6 PED	7	8	8 PED	OL1	OL2	SPARE	OL3	OL4	SPARE
SIGNAL HEAD NO.	NU	21,22	NU	41	41,42	P41, P42	21	61,62	P61, P62	NU	NU	NU	42	NU	NU	NU	NU	NU
GREEN		130			103			136										
YELLOW		129			102			135										
RED		128		*	101		*	134					*					
RED ARROW																		
YELLOW ARROW					117			132										A122
GREEN ARROW					118			133										A123
PEDESTRIAN								106										
PEDESTRIAN								104										

NU = NOT USED
 *DENOTES INSTALL LOAD RESISTOR. SEE LOAD RESISTOR INSTALLATION DETAIL THIS PAGE.

HEAD 42 ARROW (OL1)

OPERATION DURING PREEMPTION

IN ORDER FOR RR PREEMPTION TO OPERATE AS PHASES 2 AND 5 WITHOUT SIGNAL HEAD 42 RIGHT-TURN ARROWS (OVERLAP 'OLI'), THE FOLLOWING PROGRAMMING MUST BE IN PLACE:

ASSIGN RR PREEMPT RR2 OUTPUT AT E/127+D+D= 200
 ASSIGN O/L VEH. SET 2 INPUT AT E/126+D+C=200
 200 = ASSIGNABLE PSEUDO-PIN (SOFTWARE)

INPUT FILE POSITION LAYOUT

(front view)

FILE	1	2	3	4	5	6	7	8	9	10	11	12	13	14
U	S	Ø2	S	S	S	Ø4	S	S	S	S	S	NOT USED	Ø6 PED	FS
L	2A,2B	NOT USED	4A	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	DC ISOLATOR	DC ISOLATOR
U	S	Ø2,5	Ø5	S	S	S	S	S	S	S	S	S	S	NOT USED
L	5A	5C	6A,6B	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	RR2
U	S	Ø2,5	Ø6	S	S	S	S	S	S	S	S	S	S	AC ISOLATOR
L	5B	6A,6B	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	AC ISOLATOR

EX.: 1A, 2A, ETC. = LOOP NO.'S
 FS = FLASH SENSE
 ST = STOP TIME
 RR = RAILROAD PREEMPT

INPUT FILE CONNECTION & PROGRAMMING CHART

LOOP NO.	LOOP TERMINAL	INPUT FILE POS.	DETECTOR NO.	PIN NO.	ATTRIBUTES	NEMA PHASE
2A,2B	TB2-5,6	I2U	1	39	5 7 2	2
4A	TB4-9,10	I6U	2	41	5 7 4	4
5A	TB3-5,6	J2U	3	40	1 5 7 2	2
			4	40	5 7 5	5
5B	TB3-7,8	J2L	5	44	1 5 7 2	2
			6	44	5 7 5	5
5C	TB3-9,10	J3U	7	64	5 7 5	5
6A,6B	TB3-11,12	J3L	8	77	5 7 6	6
PED PUSH BUTTONS						
P41,P42	TB8-5,6	I12L	9	69	2	4 PED
P61,P62	TB8-7,9	I13U	10	68	2	6 PED

NOTE: INSTALL DC ISOLATORS IN INPUT FILE SLOTS 112 AND 113.

NOTE: PROGRAM DETECTOR DELAY AND CARRYOVER TIMES AS SPECIFIED ON SIGNAL DESIGN PLANS.

INPUT FILE POSITION LEGEND: J2L DETECTOR ATTRIBUTES LEGEND:

- FILE J ———— 1-FULL TIME DELAY
 SLOT 2 ———— 2-PED CALL
 LOWER ———— 3-RESERVED
 4-COUNTING
 5-EXTENSION
 6-TYPE 3
 7-CALLING
 8-ALTERNATE

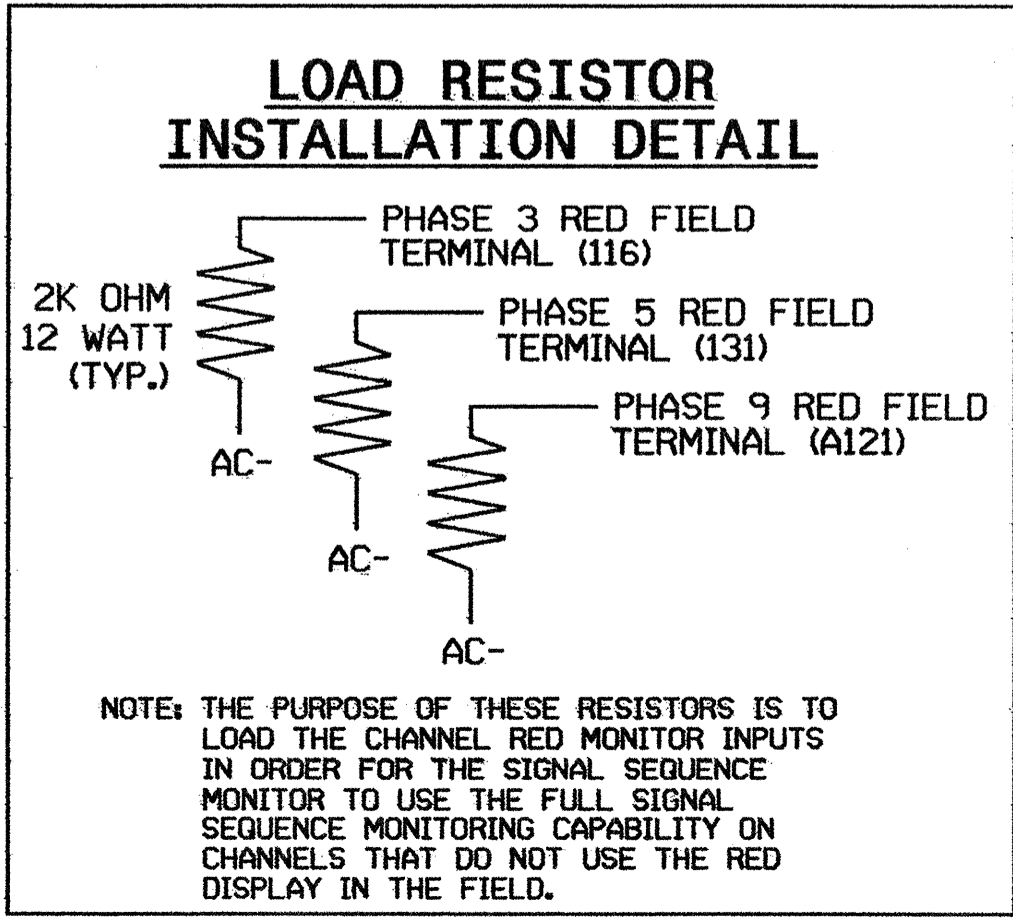
OVERLAP PROGRAMMING NOTES

TO ASSURE THAT LOADSWITCH S9 IS ASSIGNED AS OVERLAP 1, PROGRAM CONTROLLER AT KEYPAD INPUT E/29+1+0=9
 TO SET THE PARENT PHASE FOR OVERLAP 1 (VEH. SET 1) AS PHASE 5, PROGRAM CONTROLLER AT KEYPAD INPUT E/29+1+1= Ø5
 TO SET THE PARENT PHASE FOR OVERLAP 1 (VEH. SET 2) AS NONE, NO PROGRAMMING IS REQUIRED.
 PROGRAM TIMING FOR OVERLAP 1 AS FOLLOWS:
 YELLOW CHANGE INTERVAL - E/29+1+E=4.0 (SEC.)
 RED CLEARANCE - E/29+1+F=1.0 (SEC.)

EQUIPMENT INFORMATION

CONTROLLER.....CONTRACTOR SUPPLIED 170E
 CABINETCONTRACTOR SUPPLIED 332
 SOFTWAREBI TRANS 233NC2
 CABINET MOUNT.....BASE
 OUTPUT FILE POSITIONS...18 (12 -STD, 6-AUX)
 LOAD SWITCHES USED.....S2,S3,S4,S5,S6,S9,S4P,S6P
 PHASES USED.....2,*3,4,5,6,4 PED,6 PED
 OVERLAP 1:.....5

*USED DURING RR PREEMPTION ONLY.



THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 05-0138
 DESIGNED: JANUARY 2004
 SEALED: 02-17-04
 REVISED:

SIGNAL UPGRADE - FINAL DESIGN

ELECTRICAL AND PROGRAMMING DETAILS FOR:

Prepared in the Office of:
 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
 Signal Management Section
 122 N. McDowell St., Raleigh, NC 27603

NC 98 (HOLLOWAY STREET) AT SR 1838 (JUNCTION ROAD)
 DURHAM COUNTY

PLAN DATE: JANUARY 2004 REVIEWED BY:
 PREPARED BY: JAMES PETERSON REVIEWED BY:

REVISIONS: INIT. DATE

SEAL
 NORTH CAROLINA PROFESSIONAL ENGINEER
 SEAL 022013
 GEORGE C. BROWN
 SIGNATURE DATE

SIG. INVENTORY NO. 05-0138