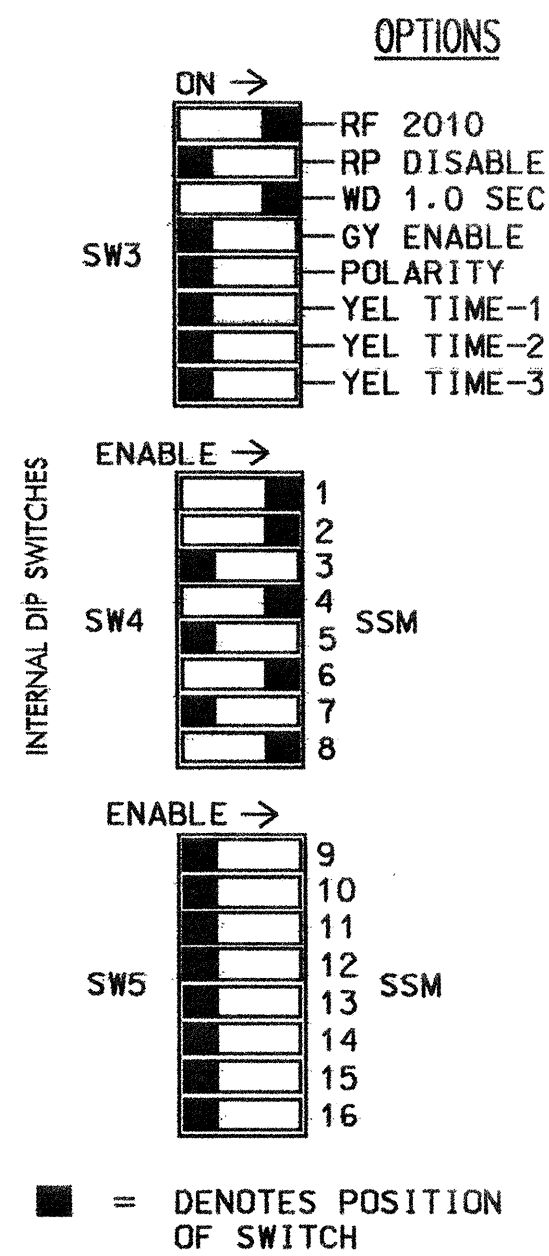
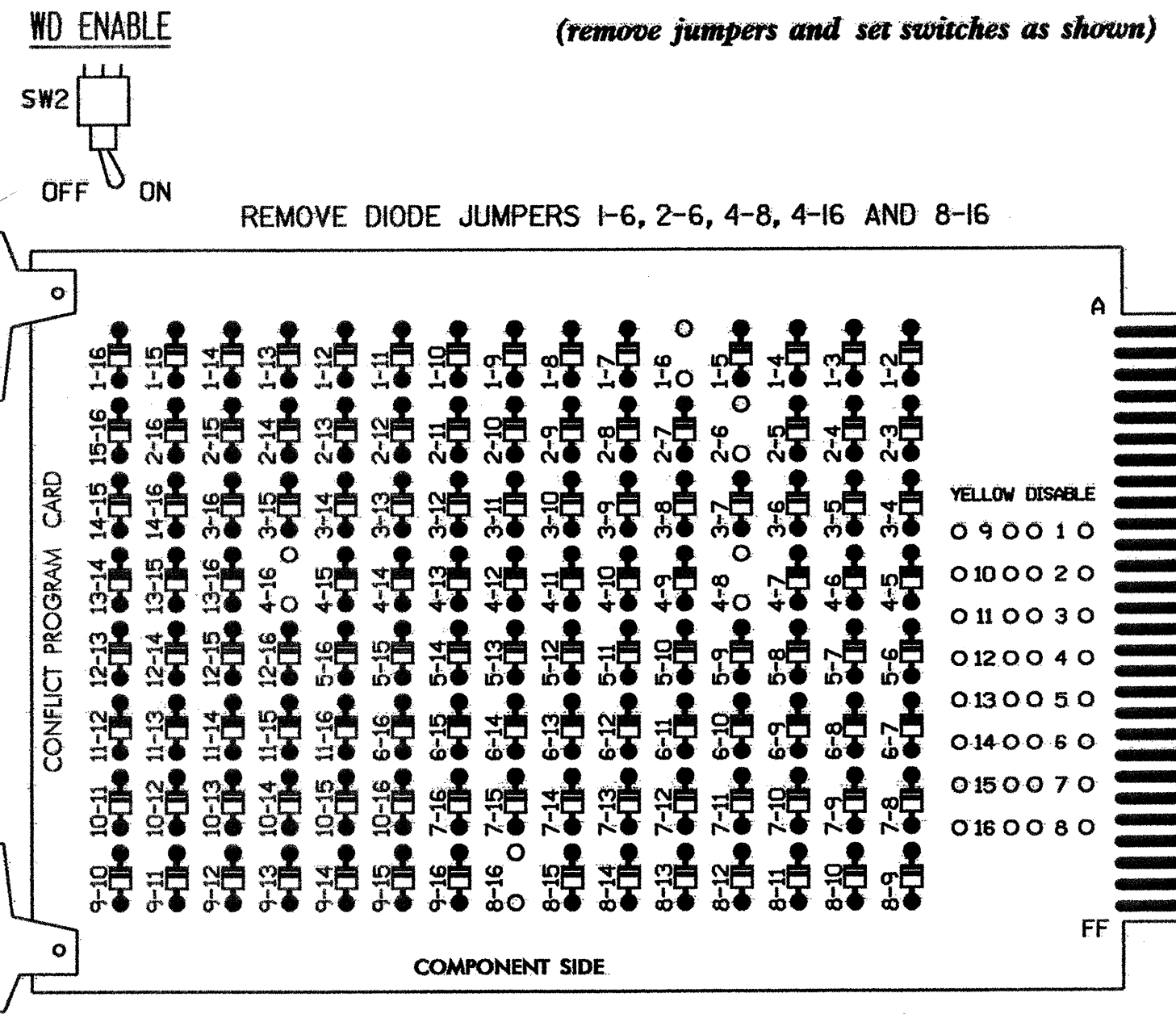


EDI MODEL 2010ECL CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches as shown)



NOTES:

- CARD IS PROVIDED WITH ALL DIODE JUMPERS IN PLACE. REMOVAL OF ANY JUMPER ALLOWS ITS CHANNELS TO RUN CONCURRENTLY.
- MAKE SURE JUMPERS SEL1-SEL5 ARE PRESENT ON THE MONITOR BOARD.

INPUT FILE POSITION LAYOUT

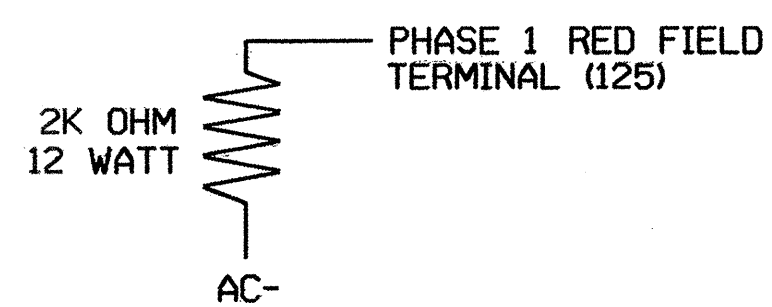
(front view)

| | | | | | | | | | | | | | | |
|----------|-----------------------|-----------|---------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| FILE "I" | U S T I S | ∅ 2 2A | ∅ 1,4,6 1A | ∅ 1 1A | ∅ 1 1A | ∅ 4 4A | ∅ 4 4C | ∅ 1 1A | ∅ 1 1A | ∅ 1 1A | ∅ 1 1A | ∅ 1 1A | ∅ 1 1A | ∅ 1 1A |
| FILE "J" | U S T I S | ∅ 2 2B | NOT USED | ∅ 1 1A | ∅ 1 1A | ∅ 4 4B | NOT USED | ∅ 1 1A | ∅ 1 1A | ∅ 1 1A | ∅ 1 1A | ∅ 1 1A | ∅ 1 1A | ∅ 1 1A |
| | | | | | | | | | | | | | | |

EX.: 1A, 2A, ETC. = LOOP NO.'S

FS = FLASH SENSE
ST = STOP TIME

LOAD RESISTOR INSTALLATION DETAIL



NOTE: THE PURPOSE OF THIS RESISTOR IS TO LOAD THE CHANNEL RED MONITOR INPUT IN ORDER FOR THE SIGNAL SEQUENCE MONITOR TO USE THE FULL SIGNAL SEQUENCE MONITORING CAPABILITY ON THIS CHANNEL, WHICH DOES NOT USE THE RED DISPLAY IN THE FIELD.

NOTES

- TO PREVENT "FLASH-CONFLICT" PROBLEMS, INSERT RED FLASH PROGRAM BLOCKS FOR ALL UNUSED VEHICLE LOAD SWITCHES IN THE OUTPUT FILE. VERIFY THAT SIGNAL HEADS FLASH IN ACCORDANCE WITH THE SIGNAL PLANS.
- ENSURE THAT RED ENABLE IS ACTIVE AT ALL TIMES DURING NORMAL OPERATION. TO PREVENT RED FAILURES ON UNUSED MONITOR CHANNELS, TIE UNUSED RED MONITOR INPUTS: 3,5,7, 9,10,11,12,13,14,15 AND 16 TO LOAD SWITCH AC+ PER CABINET MANUFACTURER'S INSTRUCTIONS.
- PROGRAM 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.
- PROGRAM PHASES 4 AND 8, ON CONTROLLER UNIT, FOR DOUBLE ENTRY.
- PROGRAM PHASES 2 AND 6, ON CONTROLLER UNIT, FOR VOLUME DENSITY OPERATION.
- THIS SIGNAL IS WITHIN THE CITY OF DURHAM SIGNAL SYSTEM.

EQUIPMENT INFORMATION

*CONTROLLER.....McCAIN TRAFFIC TYPE 170E
 *CABINETMcCAIN TRAFFIC MODEL 332
 *SOFTWAREBI TRANS 233NC2
 CABINET MOUNT.....BASE
 OUTPUT FILE POSITIONS...12
 LOAD SWITCHES USED.....S1,S2,S4,S6,S8,S8P
 PHASES USED.....1,2,4,6,8,8PED
 OVERLAPS.....NONE

EXISTING TO REMAIN IN USE*

PEDESTRIAN PHASE PROGRAMMING

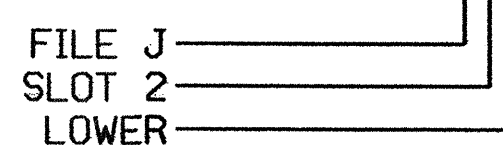
PROGRAM PEDESTRIAN 8P OUTPUT AT KEYPAD INPUT E/I25+F+8=∅8.

INPUT FILE CONNECTION & PROGRAMMING CHART

| LOOP NO. | LOOP TERMINAL | INPUT FILE POS. | DETECTOR NO. | PIN NO. | ATTRIBUTES | NEMA PHASE |
|------------------|---------------|-----------------|--------------|---------|------------|------------|
| 2A | TB2-5,6 | I2U | 1 | 39 | 4 5 7 | 2 |
| 2B | TB2-7,8 | I2L | 2 | 43 | 1 5 7 | 2 |
| 1A | TB2-9,10 | I3U | 3 | 63 | 5 7 | 1 |
| | | | 4 | 63 | 7 | 4 |
| | | | 5 | 63 | 1 5 7 | 6 |
| 4A | TB4-9,10 | I6U | 6 | 41 | 5 7 | 4 |
| 4B | TB4-11,12 | I6L | 7 | 45 | 5 7 | 4 |
| 4C | TB6-1,2 | I7U | 8 | 65 | 5 7 | 4 |
| 6A | TB3-5,6 | J2U | 9 | 40 | 4 5 7 | 6 |
| 8A | TB5-9,10 | J6U | 10 | 42 | 5 7 | 8 |
| 8B | TB5-11,12 | J6L | 11 | 46 | 5 7 | 8 |
| PED PUSH BUTTONS | | | | | | |
| P81, P82 | TB8-8,9 | I13L | 12 | 70 | 2 | 8 |

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

INPUT FILE POSITION LEGEND: J2L



DETECTOR ATTRIBUTES LEGEND:

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

FIELD CONNECTION HOOK-UP CHART

| LOAD SWITCH NO. | S1 | S2 | S2P | S3 | S4 | S4P | S5 | S6 | S6P | S7 | S8 | S8P |
|-----------------|-------|-------|-------|----|-------|-------|----|-------|-------|----|-------|----------|
| PHASE | 1 | 2 | 2 PED | 3 | 4 | 4 PED | 5 | 6 | 6 PED | 7 | 8 | 8 PED |
| SIGNAL HEAD NO. | 61,83 | 21,22 | NU | NU | 41,42 | NU | NU | 61,62 | NU | NU | 81,83 | P81, P82 |
| GREEN | | 130 | | | 103 | | | 136 | | | 109 | |
| YELLOW | | 129 | | | 102 | | | 135 | | | 108 | |
| RED | * | 128 | | | 101 | | | 134 | | | 107 | |
| RED ARROW | | | | | | | | | | | | |
| YELLOW ARROW | 126 | | | | | | | | | | | |
| GREEN ARROW | 127 | | | | | | | | | | | |
| | | | | | | | | | | | | 112 |
| | | | | | | | | | | | | 110 |

NU = NOT USED

**

* DENOTES INSTALL LOAD RESISTOR. SEE LOAD RESISTOR INSTALLATION DETAIL THIS SHEET.

** SEE 'COUNTDOWN PEDESTRIAN SIGNAL OPERATION' NOTE BELOW.

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.

BACK-UP PROTECTION NOTES

TO ENSURE THAT THE CONTROLLER WILL NOT SEQUENCE FROM PHASE 2+6 DIRECTLY TO PHASE 1+6, SPECIAL PROGRAMMING HAS TO BE ENABLED IN THE BI TRANS 233NC2 SOFTWARE. PROGRAM 170E CONTROLLER AS FOLLOWS:

- PROGRAM PHASE 1 AS PROTECTED/PERMITTED AT KEYPAD INPUT E/I25+E+4=∅1.
- LOOP 1A WILL HAVE TO BE PROGRAMMED TO CALL PHASE 4 (WITH APPROPRIATE DELAY TIME) TO ALLOW CONTROLLER TO SEQUENCE THRU PHASE 4+8 BEFORE PROCEEDING TO PHASE 1+6. (SEE INPUT FILE PROGRAMMING ON THIS SHEET).

THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 05-1073
 DESIGNED: JANUARY 2005
 SEALED: 3/2/05
 REVISED: N/A

TYPE 170 CONTROLLER & 332 CABINET

SIGNAL UPGRADE

ELECTRICAL AND PROGRAMMING DETAILS FOR:
 Prepared in the Office of:

 122 N. McDowell St., Raleigh, NC 27603

SR 1121 (CORNWALLIS ROAD)
 at
 GlaxoSmithKline ENTRANCES

| | | |
|------------------------|-------------------------|------|
| DIVISION 05 | DURHAM COUNTY | RTP |
| PLAN DATE: MARCH 2005 | REVIEWED BY: T. J. Judd | |
| PREPARED BY: F.E. RUSS | REVIEWED BY: | |
| REVISIONS | INIT. | DATE |
| | | |

SEAL

 SIGNATURE: *George C. Brown*
 DATE: 4/6/05
 SIG. INVENTORY NO. 05-1073