

LOGICAL I/O PROCESSOR PROGRAMMING DETAIL

FOR LVDS FAIL-SAFE FLASH CONTROL & CAPABILITY TO LOG MALFUNCTIONING HOLD INPUTS

(program controller as shown below)

- FROM MAIN MENU PRESS '2' (PHASE CONTROL), THEN '1' (PHASE CONTROL FUNCTIONS). SCROLL TO THE BOTTOM OF THE MENU AND ENABLE ACT LOGIC COMMANDS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 AND 14.
- FROM MAIN MENU PRESS '6' (OUTPUTS), THEN '3' (LOGICAL I/O PROCESSOR).

LOGICAL I/O COMMAND #1 (+/-COMMAND#)
IF INPUT ASSIGNMENT #21 IS ON

↓

SCROLL DOWN

THEN:
SET LOGIC FLAG #1 ON
DELAY FOR 120.0 SECONDS
SET INPUT ASSIGNMENT #51 ON

PRESS '+'

NOTE: LOGIC FOR PHASE 6 HOLD AND ALARM LOGGING.

LOGICAL I/O COMMAND #2 (+/-COMMAND#)
IF INPUT ASSIGNMENT #22 IS ON

↓

SCROLL DOWN

THEN:
SET LOGIC FLAG #2 ON
DELAY FOR 120.0 SECONDS
SET INPUT ASSIGNMENT #52 ON

PRESS '+'

NOTE: LOGIC FOR PHASE 2 HOLD AND ALARM LOGGING.

LOGICAL I/O COMMAND #3 (+/-COMMAND#)
IF INPUT ASSIGNMENT #23 IS ON

↓

SCROLL DOWN

THEN:
SET LOGIC FLAG #3 ON
DELAY FOR 120.0 SECONDS
SET INPUT ASSIGNMENT #53 ON

PRESS '+'

NOTE: LOGIC FOR PHASE 8 HOLD AND ALARM LOGGING.

LOGICAL I/O COMMAND #4 (+/-COMMAND#)
IF INPUT ASSIGNMENT #24 IS ON

↓

SCROLL DOWN

THEN:
SET LOGIC FLAG #4 ON
DELAY FOR 120.0 SECONDS
SET INPUT ASSIGNMENT #54 ON

PRESS '+'

NOTE: LOGIC FOR PHASE 4 HOLD AND ALARM LOGGING.

LOGICAL I/O COMMAND #5 (+/-COMMAND#)
IF INPUT ASSIGNMENT #21 IS OFF

↓

SCROLL DOWN

THEN:
SET LOGIC FLAG #1 OFF

PRESS '+'

NOTE: LOGIC TO RELEASE PHASE 6 HOLD.

LOGICAL I/O COMMAND #6 (+/-COMMAND#)
IF INPUT ASSIGNMENT #22 IS OFF

↓

SCROLL DOWN

THEN:
SET LOGIC FLAG #2 OFF

PRESS '+'

NOTE: LOGIC TO RELEASE PHASE 2 HOLD.

LOGICAL I/O COMMAND #7 (+/-COMMAND#)
IF INPUT ASSIGNMENT #23 IS OFF

↓

SCROLL DOWN

THEN:
SET LOGIC FLAG #3 OFF

PRESS '+'

NOTE: LOGIC TO RELEASE PHASE 8 HOLD.

LOGICAL I/O COMMAND #8 (+/-COMMAND#)
IF INPUT ASSIGNMENT #24 IS OFF

↓

SCROLL DOWN

THEN:
SET LOGIC FLAG #4 OFF

PRESS '+'

NOTE: LOGIC TO RELEASE PHASE 4 HOLD.

LOGICAL I/O COMMAND #9 (+/-COMMAND#)
IF LOGIC FLAG #1 IS ON
OR LOGIC FLAG #2 IS ON

↓

SCROLL DOWN

THEN:
DELAY FOR 240.0 SECONDS
SET LOGIC FLAG #5 ON

PRESS '+'

NOTE: LOGIC FOR PREEMPT FLASH IF PHASES 2 OR 6 HOLD INPUTS ARE ACTIVE FOR MORE THAN 4 MIN.

LOGICAL I/O COMMAND #10 (+/-COMMAND#)
IF LOGIC FLAG #3 IS ON
OR LOGIC FLAG #4 IS ON

↓

SCROLL DOWN

THEN:
DELAY FOR 240.0 SECONDS
SET LOGIC FLAG #6 ON

PRESS '+'

NOTE: LOGIC FOR PREEMPT FLASH IF PHASES 4 OR 8 HOLD INPUTS ARE ACTIVE FOR MORE THAN 4 MIN.

LOGICAL I/O COMMAND #11 (+/-COMMAND#)
IF LOGIC FLAG #5 IS ON

↓

SCROLL DOWN

THEN:
SET INPUT ASSIGNMENT #64 ON

PRESS '+'

NOTE: LOGIC TO ACTIVATE PREEMPT 7 (FAIL-SAFE FLASH).

LOGICAL I/O COMMAND #12 (+/-COMMAND#)
IF LOGIC FLAG #1 IS OFF
AND LOGIC FLAG #2 IS OFF

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SCROLL DOWN

THEN:
SET LOGIC FLAG #5 OFF

PRESS '+'

NOTE: LOGIC TO DE-ACTIVATE PREEMPT 7 (FAIL-SAFE FLASH) FOR 2+6 APPROACH.

LOGICAL I/O COMMAND #13 (+/-COMMAND#)
IF LOGIC FLAG #3 IS OFF
AND LOGIC FLAG #4 IS OFF

↓

SCROLL DOWN

THEN:
SET LOGIC FLAG #6 OFF

PRESS '+'

NOTE: LOGIC TO DE-ACTIVATE PREEMPT 7 (FAIL-SAFE FLASH) FOR 4+8 APPROACH.

LOGICAL I/O COMMAND #14 (+/-COMMAND#)
IF LOGIC FLAG #6 IS ON

↓

SCROLL DOWN

THEN:
SET INPUT ASSIGNMENT #63 ON

PRESS '+'

NOTE: LOGIC TO ACTIVATE PREEMPT 8 (FAIL-SAFE FLASH).

LOGIC I/O PROCESSOR PROGRAMMING COMPLETE

INPUT REFERENCE SCHEDULE

USE TO INTERPRET LOGIC PROCESSOR

INPUT 21 = PHASE 6 HOLD (J9U)
INPUT 22 = PHASE 2 HOLD (I9U)
INPUT 23 = PHASE 8 HOLD (J9L)
INPUT 24 = PHASE 4 HOLD (I9L)
INPUT 51 = SPECIAL ALARM 1
INPUT 52 = SPECIAL ALARM 2
INPUT 53 = SPECIAL ALARM 3
INPUT 54 = SPECIAL ALARM 4
INPUT 64 = PREEMPT 7
INPUT 63 = PREEMPT 8

NOTE: ALL INPUTS LISTED ABOVE REQUIRE REMAPPING. SEE INPUT ASSIGNMENT PROGRAMMING DETAIL ON SHEET 2.

THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 03-0159
DESIGNED: March 2017
SEALED: 05-04-17
REVISED: N/A

OVERLAP PROGRAMMING DETAIL

(program controller as shown below)

From Main Menu press '8' (OVERLAPS), then '1' (VEHICLE OVERLAP SETTINGS).

PAGE 1: VEHICLE OVERLAP 'A' SETTINGS
PHASE: 12345678910111213141516
VEH OVL PARENTS: X
VEH OVL NOT VEH:
VEH OVL NOT PED:
VEH OVL GRN EXT:
STARTUP COLOR: - RED - YELLOW - GREEN
FLASH COLORS: - RED - YELLOW X GREEN
SELECT VEHICLE OVERLAP OPTIONS: (Y/N)
FLASH YELLOW IN CONTROLLER FLASH?...Y
GREEN EXTENSION (0-255 SEC)...0
YELLOW CLEAR (0=PARENT,3-25.5 SEC)...0
RED CLEAR (0=PARENT,0.1-25.5 SEC)...0
OUTPUT AS PHASE # (0=NONE, 1-16)...0

← NOTICE GREEN FLASH

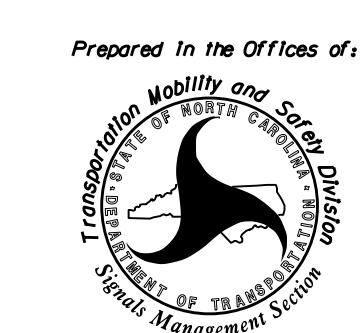
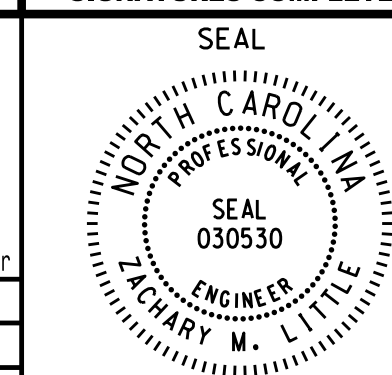
PRESS '+' TWICE

PAGE 1: VEHICLE OVERLAP 'C' SETTINGS
PHASE: 12345678910111213141516
VEH OVL PARENTS: X
VEH OVL NOT VEH:
VEH OVL NOT PED:
VEH OVL GRN EXT:
STARTUP COLOR: - RED - YELLOW - GREEN
FLASH COLORS: - RED - YELLOW X GREEN
SELECT VEHICLE OVERLAP OPTIONS: (Y/N)
FLASH YELLOW IN CONTROLLER FLASH?...Y
GREEN EXTENSION (0-255 SEC)...0
YELLOW CLEAR (0=PARENT,3-25.5 SEC)...0
RED CLEAR (0=PARENT,0.1-25.5 SEC)...0
OUTPUT AS PHASE # (0=NONE, 1-16)...0

← NOTICE GREEN FLASH

OVERLAP PROGRAMMING COMPLETE

Electrical Detail Sheet 3 of 8

<p>Electrical and Programming Details for:</p> <p>Prepared in the Offices of:</p>  <p>750 N. Greenfield Pkwy, Garner, NC 27529</p>	<p>US 421/NC 242 at US 13</p> <p>Division 3 Sampson County Spivey's Corner</p> <p>PLAN DATE: January 2017 REVIEWED BY:</p> <p>PREPARED BY: B. Simmons REVIEWED BY:</p> <p>REVISIONS</p> <p>1. No change to electrical detail. (JJP)</p> <p>DATE: 5/12/2017</p>	<p style="text-align: center;">DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p> <p style="text-align: center;">SEAL</p>  <p style="text-align: center;">SEAL 030530</p> <p style="text-align: center;">ENGINEER GREGORY M. LITTLE</p> <p>DocuSigned by: Gregory M. Little 031EFD8F8341F</p> <p>1-31-17 DATE</p> <p>SIG. INVENTORY NO. 03-0159</p>
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