



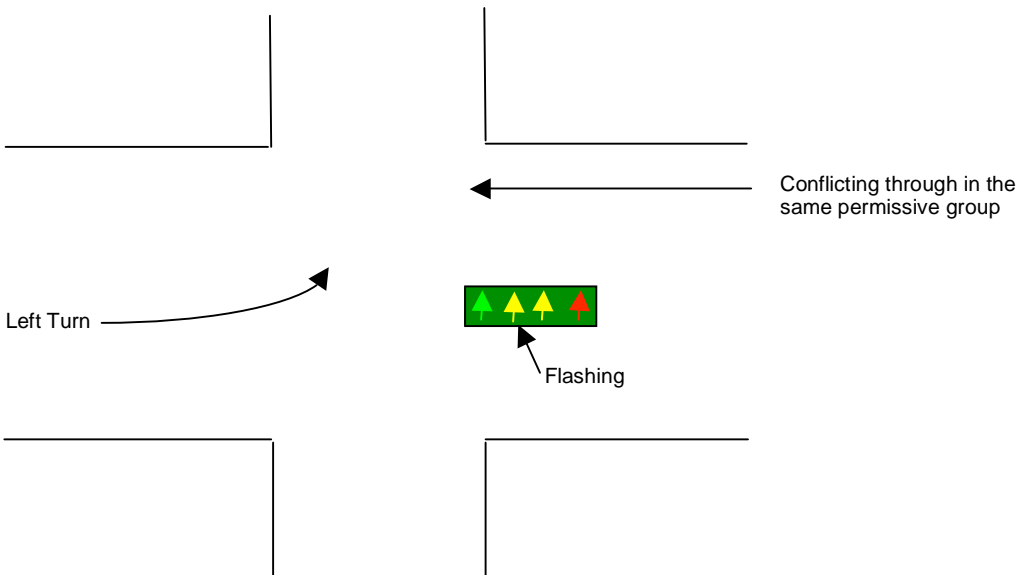
Product Type: Controllers MUCTD Four Section PPLT Arrow Signal

Reference: AN2074
Date: May 9, 2007

This application note shows how to use the ASC/3 Logic Processor to control a four section protected-permissive left turn (PPLT) signal.

Left Turn Signal Configuration

- Red Arrow in on top and is illuminated any time the Green, Yellow or Flashing Yellow is not.
- Yellow arrow is second from the top and is illuminated whenever the left turn or the conflicting through in the same permissive group is yellow.
- Flashing yellow arrow is third from the top and flashed whenever
 - The left turn next and the conflicting through in the same permissive group is timing.
 - The conflicting through in the same permissive group is green.
- Green arrow is on the bottom and is illuminated when ever the left turn is green





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Program the Windows Application controller as follows:

Normal 8 phase quad sequence

Enable phase 1-8 (MM-1-2)

Program Overlaps A – D (MM-2-2)

Overlap A (OLA) = (Not programmed) The Yellow out will be the flashing yellow for phase 1

Overlap B (OLB) = (Not programmed) The Yellow out will be the flashing yellow for phase 3

Overlap C (OLC) = (Not programmed) The Yellow out will be the flashing yellow for phase 5

Overlap D (OLD) = (Not programmed) The Yellow out will be the flashing yellow for phase 7

Logic Processor Statements

MM-1-8-2 Program LP steps 101 - 112 as follows:

LP 101 (Phase 1 Flashing Yellow Arrow)

```
IF GREEN ON PHASE 2 IS ON
OR PHASE NEXT ON PHS 1 IS ON
AND PHASE TIMING 2 IS ON
AND COB CODE ON 546
```

THEN SET OVLP YELLOW 1 ON

LP 102 (Phase 1 Solid Yellow Arrow)

```
IF YELLOW ON PHASE 2 IS ON
AND PHASE NEXT ON PHS 1 IS OFF
```

```
THEN SET PHASE YELLOW 1 ON
SET PHASE RED 1 OFF
```

LP 103 (Phase 1 Red Arrow)

```
IF GREEN ON PHASE 2 IS ON
OR PHASE NEXT ON PHS 1 IS ON
AND PHASE TIMING 2 IS ON
```

THEN SET PHASE RED 1 OFF

LP 104 (Phase 3 Flashing Yellow Arrow)

```
IF GREEN ON PHASE 4 IS ON
OR PHASE NEXT ON PHS 3 IS ON
AND PHASE TIMING 4 IS ON
AND COB CODE ON 546
```

THEN SET OVLP YELLOW 2 ON

LP 105 (Phase 3 Solid Yellow Arrow)

```
IF YELLOW ON PHASE 4 IS ON
```



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AND PHASE NEXT ON PHS 3 IS OFF

THEN SET PHASE YELLOW 3 ON
SET PHASE RED 3 OFF

LP 106 (Phase 3 Red Arrow)

IF GREEN ON PHASE 4 IS ON
OR PHASE NEXT ON PHS 3 IS ON
AND PHASE TIMING 4 IS ON

THEN SET PHASE RED 3 OFF

LP 107 (Phase 5 Flashing Yellow Arrow)

IF GREEN ON PHASE 6 IS ON
OR PHASE NEXT ON PHS 5 IS ON
AND PHASE TIMING 6 IS ON
AND COB CODE ON 546

THEN SET OVLP YELLOW 3 ON

LP 108 (Phase 5 Solid Yellow Arrow)

IF YELLOW ON PHASE 6 IS ON
AND PHASE NEXT ON PHS 5 IS OFF

THEN SET PHASE YELLOW 5 ON
SET PHASE RED 5 OFF

LP 109 (Phase 5 Red Arrow)

IF GREEN ON PHASE 6 IS ON
OR PHASE NEXT ON PHS 5 IS ON
AND PHASE TIMING 6 IS ON

THEN SET PHASE RED 5 OFF

LP 110 (Phase 7 Flashing Yellow Arrow)

IF GREEN ON PHASE 8 IS ON
OR PHASE NEXT ON PHS 7 IS ON
AND PHASE TIMING 8 IS ON
AND COB CODE ON 546

THEN SET OVLP YELLOW 4 ON

LP 111 (Phase 7 Solid Yellow Arrow)



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MUCTD Four Section PPLT Arrow Signal

IF YELLOW ON PHASE 8 IS ON
AND PHASE NEXT ON PHS 7 IS OFF

THEN SET PHASE YELLOW 7 ON
SET PHASE RED 7 OFF

LP 112 (Phase 7 Red Arrow)

IF GREEN ON PHASE 8 IS ON
OR PHASE NEXT ON PHS 7 IS ON
AND PHASE TIMING 8 IS ON

THEN SET PHASE RED 7 OFF

Note: 546 is 1PPS 548 is 5 PPS
547 is 2.5 PPS 549 in 6.25 PPS

Program the Extended Option Enables (ASC.ext file) as follows:

```
CONFIG=DEMO
0,101,103,PHASE 1 FOUR SECTION PPLT CONTROLL
0,104,106,PHASE 3 FOUR SECTION PPLT CONTROLL
0,107,109,PHASE 5 FOUR SECTION PPLT CONTROLL
0,110,112,PHASE 7 FOUR SECTION PPLT CONTROLL
```

Transfer the ASC.db and ASC.EXT file to the ASC/3 controller.

Enable the extended options required in MM-2-6-2.