LOS ANGELES COUNTY
DEPARTMENT OF PUBLIC WORKS
TRAFFIC AND LIGHTING DIVISION
TRAFFIC SIGNAL TIMING

LACO - 1R MV - TIME - BASED
TYPE 170 PROGRAM

Revised on 7-30-02 (Semmo) per Micheal Ortega KAA SDB TE

Intersection: BEVERLY BL. @ MONTEBELLO BL.

Date Requested: 7-23-02 PD **By:** PPB

T.S. No.: MTB 8930 **SYSTEM COMPLETED** **Date:** _____ **By:** _____

Date Completed: _____ **By:** _____

PHASE TIMING

Keystrokes: F + Phase + Interval

Phase #		1	2	3	4	5	6	7	8
Minimum Walk	0	0	7	0	7	0	67	0	7
Flashing Don't Walk	1	0	18	0	15	0	19	0	17
Minimum Green	2	4	6	4	6	4	6	4	6
Queue Maximum	3	0	25	0	25	0	25	0	25
Added Green/Actuation	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vehicle Extension	5	2.5	4.0	0.2	4.0	2.5	2.0	0.2	4.0
Maximum Gap	6	2.5	5.0	0.2	5.0	2.5	3.0	0.2	5.0
Minimum Gap	7	2.5	3.0	0.2	3.0	2.5	1.0	0.2	3.0
Max Extension 1 (Free)	8	20	50	20	50	20	50	20	50
Max Extension 2 (Coord)	9	20	110	20	50	20	110	20	50
Offset 1	A	Dial 1 30	Dial 2	Dial 3					
Offset 2	b		56						
Offset 3	C			24					
Reduce 0.1 Sec. Every...	d	0.0	1.2	0.0	1.2	0.0	1.2	0.0	1.2
Yellow	E	3.0	~~4.0~~	3.0	4.0	3.0	~~4.0~~	3.0	~~4.0~~
Red Clearance	F	0.0	~~0.0~~	0.0	~~0.0~~	0.0	~~0.0~~	0.0	~~0.0~~

Max Added Green	F-0-E	0
Red Revert	F-0-F	20

Remarks:

1.0 4.2 1.0 1.0 1.0 4.0 0.6 4.3

* LEADING GREEN AREON

PREEMPTION

Keystrokes: F + E + Function

RR Select (0, 1, 2)		0
Track Clearance		1
RR Red		2
RR2 Maximum (Minutes)		3
EV- A Delay		4
EV- A Clearance		5
EV- B Delay		6
EV- B Clearance		7
EV- C Delay		8
EV- C Clearance		9
EV- D Delay	0	A
EV- D Clearance	30	b
EV Maximum (Seconds)	35	C
Delay Timer		d
Clearance Timer		E
Maximum Timer		F

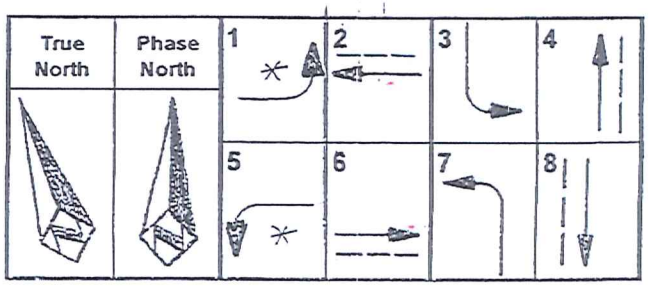
PHASE FUNCTION FLAGS

Keystrokes: F + F + Function

		1	2	3	4	5	6	7	8
Phases Permitted	0	X	X	X	X	X	X	X	X
Red Lock	1								
Red & Yellow Lock	2		X		X		X		X
Minimum Vehicle Recall	3								
Pedestrian Recall + Rest In Walk	4								
Pedestrian Phases	5		X		X		X		X
Rest in Red	6	X		X		X		X	
Semi Traffic Actuated Mode	7								
Double Entry	8								
Maximum Vehicle Recall	9								
Overlap A	A								
Overlap B	b								
Barrier Recall	C								
Rest In Green	d								
Yellow Start Up	E		X				X		
Protected / Permissive Left Turn	F	X				X			

LAG PHASE FLAGS

		1	2	3	4	5	6	7	8
Lag Free	d-F-0		X		X		X		X
Lag Dial 1	d-F-1		X		X		X		X
Lag Dial 2	d-F-2		X		X		X		X
Lag Dial 3	d-F-3		X		X		X		X



LACO-1R WWV DETECTOR ASSIGNMENTS

T.S.: MTB 8930 Intersection: BEVERLY BL. @ MONTEBELLO BL. Date Req: 10-1-96 By: SDS DPD

App	Lanes	Description	Phase File - Slot Channel	Delay Code	Delay Seconds	Extended Call Code	Extended Call Seconds	Remarks (Note: The four Programmable Detectors will default to normal phasing if not flagged.)	Yellow Disconnect Code	Yellow Disconnect Lite	Yellow Disconnect On	Queue Clearing Code	Queue Clearing Lite	Queue Clearing On
W	LT	Q-LENGTH	1I1U	d10	5	d30			dF4	1		dF8	1	
			1I1L											
E	1,2	ADVANCE	2I2U	d11		d31			dF4	2		dF8	2	
			2I2L	d12		d32			dF4	3		dF8	3	
			2I3U	d13		d33			dF4	4		dF8	4	
			2I3L	d14		d34			dF4	5		dF8	5	
E	1,2	QUEUE CL.	2I4U	d15		d35		Call Ø: 1 2 3 4 5 6 7 8 / dd8	dF4	6		dF8	6	X
			2I4L											
N	LT	6'X100'	3I5U	d16		d36			dF4	7		dF8	7	
			3I5L											
E	1	ADVANCE	4I6U	d17		d37			dF4	8		dF8	8	
S	2	ADVANCE	4I6L	d18	5	d38			dF5	1		dF9	1	
S	RT	QUEUE CL.	4I7U	d19	10	d39			dF5	2		dF9	2	X
S	RT	QUEUE CL.	4I7L	d1A	255	d3A			dF5	3		dF9	3	X
S	1,2	QUEUE CL.	4I8U	d1b		d3b		Call Ø: 1 2 3 4 5 6 7 8 / dd9	dF5	4		dF9	4	X
			4I8L											
			1I9U	d1C		d3C			dF5	5		dF9	5	
			3I9L	d1d		d3d			dF5	6		dF9	6	
W	LT	Q-LENGTH	5J1U	d20	5	d40			dF6	1		dFA	1	
			5J1L											
E	1,2	ADVANCE	6J2U	d21		d41	2.0		dF6	2		dFA	2	
			6J2L	d22		d42			dF6	3		dFA	3	
N	LT	6'X100'	6J3U	d23		d43			dF6	4	X	dFA	4	
E	LT	HOLDING	6J3L	d24		d44			dF6	5	X	dFA	5	
E	1,2	QUEUE CL.	6J4U	d25		d45		Call Ø: 1 2 3 4 5 6 7 8 / ddA	dF6	6		dFA	6	X
			6J4L											
S	LT	6'X100'	7J5U	d26		d46			dF6	7		dFA	7	
			7J5L											
N	1	ADVANCE	8J6U	d27		d47			dF6	8		dFA	8	
N	2	ADVANCE	8J6L	d28	5	d48			dF7	1		dFb	1	
N	RT	QUEUE CL.	8J7U	d29	10	d49			dF7	2		dFb	2	X
N	RT	QUEUE CL.	8J7L	d2A	255	d4A			dF7	3		dFb	3	X
N	1,2	QUEUE CL.	8J8U	d2b		d4b		Call Ø: 1 2 3 4 5 6 7 8 / ddb	dF7	4		dFb	4	X
			8J8L											
			5J9U	d2C		d4C			dF7	5		dFb	5	
			7J9L	d2d		d4d			dF7	6		dFb	6	

YELLOW DISCONNECT QUICK REFERENCE

Code	Call Lights 1	2	3	4	5	6	7	8
dF4								
dF5								
dF6				X	X			
dF7								

Remarks:

QUEUE CLEARING DETECTOR QUICK REFERENCE

Code	Call Lights 1	2	3	4	5	6	7	8
dF8						X		
dF9		X	X	X				
dFA						X		
dFb		X	X	X				

LACO - 1R WWV - TIME - BASED COORDINATION

T.S. No.: MTB 8390 Intersection: BEVERLY BL. @ MONTEBELLO BL.

System Limits: 3RD ST./WOODS AV/POMONA BL. TO ACACIA AV. ON BEVERLY BL. PARAMOUNT BL. TO BEVERLY BL. ON MONTEBELLO BL. PD PD

Remote Master: WWV Date Requested: 2-6-03 PD By: SDB

System No. : 45F & 46E Date Completed: By:

TIME OF DAY OPERATION SUMMARY

	Dial 1	Dial 2	Dial 3 / Offset Timing
Offset 1	ALL OTHER TIMES		
Offset 2		0600-0900 M-F	
Offset 3			1500-1900 M-F
Free	2200-0600 M-F / 2200-0800 S-S		
Special			

*Set Local Manual to 14 (free) before setting or changing dial intervals & functions. Setting either of the Manuals to 0 will release that Manual.

Offset Timing Mode:

A 12 at C-0-1 or by T.O.D. enables this mode and uses the Dial 3 Intervals and Functions.

Observe:

Call	d-F-C
Hold	d-F-d
Ped Restrict	d-F-E
Force - Off	d-F-F
Cycle with Field Calls	C-0-b
Master Sync Pulse Width	d-0-d

INTERCONNECT SELECT

d-0-0 [ ] 7 = Slave [✓] 170 = Master

d-0-E Set Maximum Width 4.0 Seconds

d-0-F Set Minimum Width 1.0 Seconds

Remarks:

Keystrokes: C + Column + Row

Coordination Parameters		INTERVALS (in seconds) Dial 1	Dial 2	Dial 3	FUNCTION FLAGS DIAL 1 Force Off	Hold	Ped Rstrict	Call	DIAL 2 Force Off	Hold	Ped Rstrict	Call	DIAL 3 / OFFSET TIMING Force Off	Hold	Ped Rstrict	Call	
0	Int	1	2	3	4	5	6	7	8	9	A	b	C	d	E	F	Int
System Manual*	0	90	100	100	2,6				2,6				2,6				0
Local Manual* 0	1	1	1	1	-,-				-,-				-,-				1
Master Dial	2	19	18	18	3,7				3,7				3,7				2
Current Dial	3	20	19	19	-,-				-,-				-,-				3
Offset Number	4	23	22	22			4,8				4,8				4,8		4
Time of Day Plan	5	36	35	35			4,8	2,6			4,8	2,6			4,8	2,6	5
Function 6 14	6	48 47	47 46	47 46	4,8		-,-	2,6	4,8		-,-	2,6	4,8		-,-	2,6	6
Current Table	7	49 48	48 47	48 47	-,-			2,6	-,-			2,6	-,-			2,6	7
Minimum Cycle 0	8	60	60	61	1,5			2,6	1,5			2,6	1,5			2,6	8
Maximum Cycle 255	9	61	61	62	-,-	2,6		-,-	-,-	2,6		-,-	-,-	2,6		-,-	9
Master Timer	A	64	74	74		2,6	2,6			2,6	2,6			2,6	2,6		A
Local Timer	b	67	82	86		-,-	2,6			-,-	2,6			-,-	2,6		b
New Offset	C	90	100	100			-,-				-,-				-,-		C
Current Offset	d																d
Last Master Cycle	E																E
Last Local Cycle	F																F

LACO-1R WWV TIME BASE UNIT

CLOCK AND EVENT TABLE SHEET

INTERSECTION: BEVERLY BL. @ MONTEBELLO BL. REQUESTED DATE: 12-20-94 BY: PPP

TS No: MTB 8930 COMPLETED DATE: _____ BY: _____

CLOCK

CONTROL CODE A-C

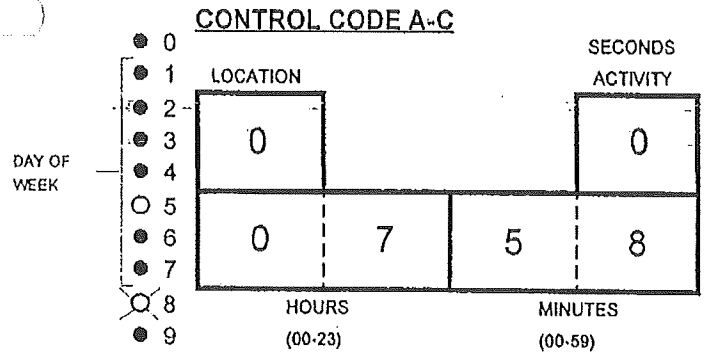


FIG. 1

CONTROL CODE A-D

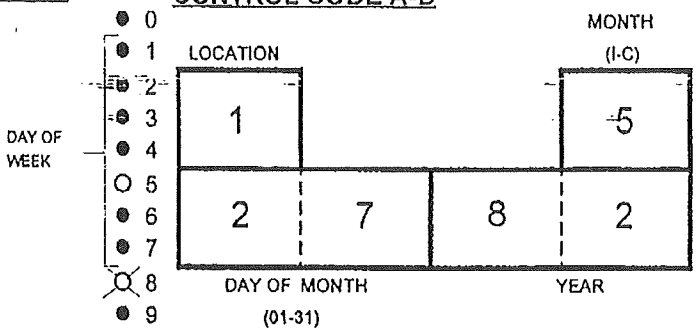


FIG. 2

ABOVE EXAMPLES

7:58 A.M. ON THURSDAY (FIG. 1)

MAY 27, 1982 (FIG. 2)

DAY OF WEEK

1	SUNDAY
2	MONDAY
3	TUESDAY
4	WEDNESDAY
5	THURSDAY
6	FRIDAY
7	SATURDAY

MONTH

1	JANUARY	7	JULY
2	FEBRUARY	8	AUGUST
3	MARCH	9	SEPTEMBER
4	APRIL	A	OCTOBER
5	MAY	B	NOVEMBER
6	JUNE	C	DECEMBER

DIRECTIONS

At control code A - C, key in hours and minutes, then key in 0 for seconds activity. Enter key E and turn on call light corresponding to day of the week. (NOTE: Seconds start at 0 seconds - for observation and correction use address D - 4 - F). Control code A - D, key in the day of the month, year, and month, then enter key E.

EVENT TABLE

CONTROL CODE 9-3

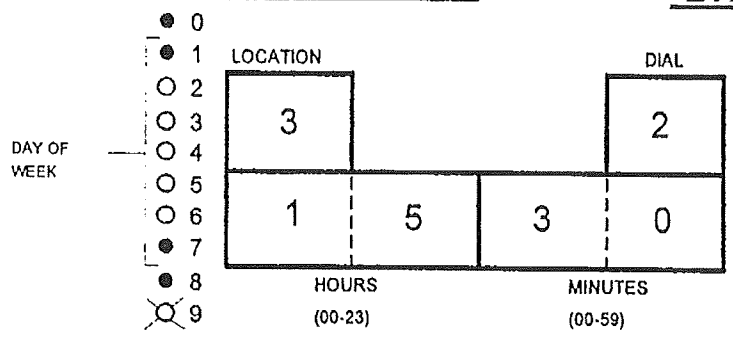


FIG. 3

ABOVE EXAMPLE

The example (FIG. 3), shows a time of day event at control code 9-3 with dial 2 to start at 3:30 P.M. each weekday from Monday through Friday.

DIRECTIONS

To set an event, key in 9 + the table location, key in hour, minute, and event, then enter key E. Set day(s) with call/active lights. To observe current event use address C - 0 - 5. (NOTE: These time of day events are local - not system events.)

REMARKS

FOR DIRECT INTERCONNECT ONLY. (D00=7)

			DAY AND LIGHT ←Set DAYusing call/active LIGHT→						
LOC. 9 + ↓	TIME	EVENT * DIAL	SUN 1	MON 2	TUE 3	WED 4	THU 5	FRI 6	SAT 7
0									
1									
2									
3									
4									
5									
6									
7									
8									
9									
A									
B									
C									
D									
E									
F									

* DIAL 1 = 1, 2 = 2, 3 = 3, FREE = E, OFF = 0.
(NOTE: At C - 0 - 5, FREE = 14)
OFFSET TIMING = C T.O.D. FLASH = F

LACO-1R WWV - TIME - BASED EVENT TABLES

Intersection: Beverly Bl @ Montebello Bl — Date Requested: 7-23-02 PD By: KAH

T.S. No.: MTS 8930 — Date Completed: ____ By: ____

TABLE 0 - DEFAULT			s	m	t	w	t	f	s
Code	Hour : Min	Plan	1	2	3	4	5	6	7
0-0	00 : 00	E	X	X	X	X	X	X	X
0-1	06 : 00	5		X	X	X	X	X	
0-2	08 : 00	1	X						X
0-3	09 : 00	1		X	X	X	X	X	
0-4	15 : 00	9		X	X	X	X	X	
0-5	19 : 00	1		X	X	X	X	X	
0-6	22 : 00	E	X	X	X	X	X	X	X
0-7	:								
0-8	:								
0-9	:								
0-A	:								
0-b	:								
0-C	:								
0-d	:								
0-E	:								
0-F	:								

TABLE 3			s	m	t	w	t	f	s
Code	Hour : Min	Plan	1	2	3	4	5	6	7
3-0	:								
3-1	:								
3-2	:								
3-3	:								
3-4	:								
3-5	:								
3-6	:								
3-7	:								
3-8	:								
3-9	:								
3-A	:								
3-b	:								
3-C	:								
3-d	:								
3-E	:								
3-F	:								

ANNUAL EVENTS			s	m	t	w	t	f	s
Code	Month / Day	Table	1	2	3	4	5	6	7
5-0	/								
5-1	/								
5-2	/								
5-3	/								
5-4	/								
5-5	/								
5-6	/								
5-7	/								
5-8	/								
5-9	/								
5-A	/								
5-b	/								
5-C	/								
5-d	/								
5-E	/								
5-F	/								

TABLE 1			s	m	t	w	t	f	s
Code	Hour : Min	Plan	1	2	3	4	5	6	7
1-0	:								
1-1	:								
1-2	:								
1-3	:								
1-4	:								
1-5	:								
1-6	:								
1-7	:								
1-8	:								
1-9	:								
1-A	:								
1-b	:								
1-C	:								
1-d	:								
1-E	:								
1-F	:								

Plan = Plan Number

	D1	D2	D3
O1 =	1	2	3
O2 =	4	5	6
O3 =	7	8	9

Plans:

A = Arrows On
d = Arrows Off
C = Offset Timing
E = Function 6
F = Flash

Keys:

0 = No Days
8 = All Days
9 = Weekdays

Table #4, Nth = The number of the occurence in the month (1-5). 99 = Always the last occurence in the month.

I.E. Thanksgiving = 11 / 04 [Table] and Thursday.

ANNUAL EVENTS			s	m	t	w	t	f	s
Code	Month / Day	Table	1	2	3	4	5	6	7
6-0	/								
6-1	/								
6-2	/								
6-3	/								
6-4	/								
6-5	/								
6-6	/								
6-7	/								
6-8	/								
6-9	/								
6-A	/								
6-b	/								
6-C	/								
6-d	/								
6-E	/								
6-F	/								

TABLE 2			s	m	t	w	t	f	s
Code	Hour : Min	Plan	1	2	3	4	5	6	7
2-0	:								
2-1	:								
2-2	:								
2-3	:								
2-4	:								
2-5	:								
2-6	:								
2-7	:								
2-8	:								
2-9	:								
2-A	:								
2-b	:								
2-C	:								
2-d	:								
2-E	:								
2-F	:								

FLOATING HOLIDAYS			s	m	t	w	t	f	s
Code	Month / Nth	Table	1	2	3	4	5	6	7
4-0	01 / 01			X					
4-1	02 / 03	1		X					
4-2	05 / 27	1		X					
4-3	09 / 01	1		X					
4-4	11 / 04	1					X		
4-5	/								
4-6	/								
4-7	/								
4-8	/								
4-9	/								
4-A	/								
4-b	/								
4-C	/								
4-d	/								
4-E	/								
4-F	/								

ANNUAL EVENTS			s	m	t	w	t	f	s
Code	Month / Day	Table	1	2	3	4	5	6	7
7-0	/								
7-1	/								
7-2	/								
7-3	/								
7-4	/								
7-5	/								
7-6	/								
7-7	/								
7-8	/								
7-9	/								
7-A	/								
7-b	/								
7-C	/								
7-d	/								
7-E	/								
7-F	/								

LACO-1R WWV-TIME-BASED ANNUAL TABLES

Intersection: Beverly Bl @ Montebello Bl

T.S. No.: MTB 3930

Date Requested: 7-23-02 PD By: KAA

Date Completed: _____ By: _____

EXCEPTION DAYS			s	m	t	w	t	f	s
Code	Month / Day	Flag	1	2	3	4	5	6	7
8-0	01 / 01	1		X	X	X	X	X	
8-1	01 / 02	1		X					
8-2	07 / 04	1		X	X	X	X	X	
8-3	07 / 05	1		X					
8-4	11 / 10	1						X	
8-5	11 / 11	1		X	X	X	X	X	
8-6	11 / 12	1		X					
8-7	12 / 24	1		X	X	X	X	X	
8-8	12 / 25	1		X	X	X	X	X	
8-9	12 / 26	1		X				X	
8-A	/								
8-b	/								
8-C	/								
8-d	/								
8-E	/								
8-F	/								

EXCEPTION TIMES			Table 8 Flags						
Code	Hour : Min	Plan	1	2	3	4	5	6	7
9-0	06:00	E	X						
9-1	09:00	1	X						
9-2	22:00	F	X						
9-3	:								
9-4	:								
9-5	:								
9-6	:								
9-7	:								
9-8	:								
9-9	:								
9-A	:								
9-b	:								
9-C	:								
9-d	:								
9-E	:								
9-F	:								

NOTES ON USING TABLES:

Starting from the base display [A/b], Table access is gained with a two digit Table Code. Access is verified by the flashing of both Call Light 9 and the Phase digit* of the display (* No Flash if Table # & Event # match).

Five keypresses will be required followed by [E] to enter the data and open the flag mode. Day of Week flags can now be set.

ADDITIONAL KEY CODES:

- d-0-3 = 1 Search Tables
- d-0-3 = 3 Repoll WWV Clock
- d-A-F = 1 Repoll WWV Clock
- d-0-3 = 071 Save Timing to Prom Module
- d-0-3 = 170 Download Timing into 170
- d-0-3 = 999 Clear All Tables
- F-0-0 = Phase / Dial Copy - Source
- F-0-1 = Phase / Dial Copy - Destination
- F-0-4 = Program Number (66)
- d-0-8,9,A = Mo,Day,Yr of Latest Revision
- E-E-0-0 = Reinitialization

SPECIAL FUNCTION TABLE Keystrokes: F + d + Function		Phase Flags							
		1	2	3	4	5	6	7	8
(Green) Calling Phases	0								
(Green) Call To Phases	1								
(Yellow) Calling Phases	2								
(Yellow) Call To Phases	3								
Auxiliary Ovlp A Output	4								
Mid-Block Ped Crossing	5								
Driveway Flash	6								
Green Extension	7								
Sequential Ped	8								
Not Used	9								
EV- A Clearance Phases	A								
EV- B Clearance Phases	b								
EV- C Clearance Phases	C								
EV- D Clearance Phases	d			X				X	
Track Clearance Phases	E								
Limited Service Phases	F								

When Any Flagged Phase Is Green - - -

- - - Place A Locked Call To These Phases.

When Any Flagged Phase Is Yellow - - -

- - - Place A Locked Call To These Phases.

"Three Color Single Phase Overlap" Outputs On Auxiliary File - Slot 1

Ø4P Only. Ø2 & Ø6 Reds Flash During Ø4P Clearance

Flashes The Green Outputs Of The Selected Phases

Staggered Termination At Barrier Crossing

Allows Ø1, Ø3 or Ø5 Ped to output on the Ø8P Load Switch

OVERLAP GREEN OMIT	Keys	1	2	3	4	5	6	7	8
Green Omit for Overlap A	F - C - 4								
Green Omit for Overlap B	F - C - 5								
Green Omit for Overlap C	F - C - 6								
Green Omit for Overlap D	F - C - 7								

F-9-7		Coordination Free Time (Seconds) After Railroad Preempt
F-9-d		Green Rest Delay Time (Seconds)
d-0-1		RAILROAD ROUTINE SELECT: 0 = Normal Railroad 1 = Special Two Input Railroad Routine
d-0-2		MANUAL CONTROL: 0 = Not Enabled 1 = No Recalls 2 = Vehicle Recalls 3 = Vehicle and Ped Recalls

PHASE OMIT	Keys	1	2	3	4	5	6	7	8
Phase Omit (Observe Only)	d - d - 4								
Phase Omit for Dial 1	d - d - 5								
Phase Omit for Dial 2	d - d - 6								
Phase Omit for Dial 3	d - d - 7								

PHASE OMIT is active when Coordination CALL function is active and the OMIT flag is set.

ADDITIONAL OVERLAPS	Keys	1	2	3	4	5	6	7	8
Aux File 2 Color Overlap C	d - d - C								
Aux File 2 Color Overlap D	d - d - d								
Ø7 Load Sw. 3 Color Ovrlp E	d - d - E								
Green Omit for Overlap E	d - d - F								

Overlap E will not function if the Railroad Preempt has been selected.

LOS ANGELES COUNTY
DEPARTMENT OF PUBLIC WORKS
TRAFFIC AND LIGHTING DIVISION
TRAFFIC SIGNAL TIMING

LACU - 3

TYPE 170 PROGRAM

01 changes 11-5-18 JH

Page 1 of 6

Intersection: MONTEBELLO BL. @ PARAMOUNT BL

T.S. No.: 8149 (MTB)

Date Requested: 1-12-00 MAA By: JSL

Date Completed: 1-12-00 By: DPH

PHASE TIMING

Keystrokes: F + Phase + Interval

Phase #		1	2	3	4	5	6	7	8
Minimum Walk	0	0	7	7	0		5		0
Flashing Don't Walk	1	0	21	18	0		3		0
Minimum Green	2	4	10	4	4		10		1
Queue Maximum	3	0	0	0	20		0		0
Added Green/Actuation	4	0.0	1.5	0.0	0.0		1.5		0.0
Vehicle Extension	5	3.0	4.0	3.0	4.0		4.0		0.0
Maximum Gap	6	3.0	5.0	3.0	5.0		5.0		0.0
Minimum Gap	7	3.0	1.0	3.0	3.0		3.0		0.0
Max Extension 1 (Free)	8	35	35	35	15		20		0
Max Extension 2 (Coord)	9	50	100	30	50		100		0
		OVLP A	OVLP B	OVLP C	OVLP D	OVLP E	OVLP F		
Ovlp Green Extension	A	0.0							
Ovlp Yellow Clearance	b	3.0							
Ovlp Red Clearance	C	0.0							
Reduce 0.1 Sec. Every...	d	0.0	1.5	0.0	1.5		1.5		0.0
Yellow Clearance	E	3.0	5.0	3.0	4.0		5.0		3.0
Red Clearance	F	1.0	1.0	1.0	1.0		1.0		0.0

Red Rest Delay	F-0-7	0
Green Rest Delay	F-0-8	0
Max Added Green	F-0-E	25
Red Revert	F-0-F	2.0

ON FREE

Remarks:

OL A = Ø1 + Ø4

MINIMUM 1.0 09

MINIMUM 1.0 2/12/03

PREEMPTION

Keystrokes: F + E + Function

RR Select (0, 1, 2)		0
RR Track Clearance		1
RR1 All Red		2
RR2 Maximum (Minutes)		3
Free Time After Preempt		4
EV- A Delay		5
EV- A Clearance		6
EV- B Delay		7
EV- B Clearance		8
EV- C Delay		9
EV- C Clearance		A
EV- D Delay		b
EV- D Clearance		C
EV Maximum (Seconds)		d
EV Delay/Clearance Timer		E
RR Delay/Clear/Mark Timer		F

PREEMPTION PHASES

Keystrokes: F + d + Function

		1	2	3	4	5	6	7	8
EV - A	0								
EV - B	1								
EV - C	2								
EV - D	3								
RR Track Clear	4								
RR2 Ltd Service	5								
RR1 Exit Phase	6								

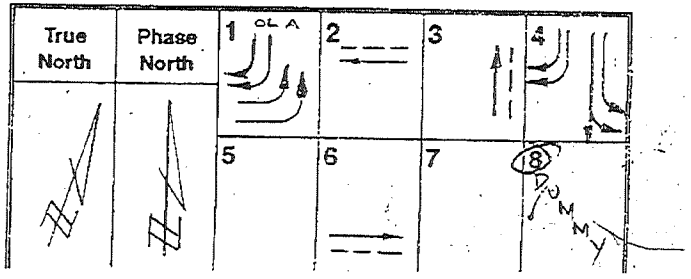
PHASE FUNCTION FLAGS

Keystrokes: F + F + Function

		1	2	3	4	5	6	7	8
Phases Permitted	0	X	X	X	X		X		X
Red Lock	1								
Red & Yellow Lock	2		X		X		X		
Minimum Vehicle Recall	3	X	X				X		
Pedestrian Recall & Rest In Walk	4						X		
Green Rest → (Set Delay F-0-8)	5								
Red Rest → (Set Delay F-0-7)	6								
Semi Traffic Actuated Mode	7								
Double Entry	8								
Maximum Vehicle Recall	9								
Restricted Phases	A								
Protected / Permissive Left Turn	b	X							
Barrier Recall	C								
First Phases After Start Up	d								
Yellow Start Up	E		X				X		
Overlap Yellow Start Up:	→	A	b	C	d	E	F		
(Parents *must* be Yellow Start Up)	F								

LAG PHASE FLAGS

		1	2	3	4	5	6	7	8
Lag Free	d-F-0		X		X		X		X
Lag Dial 1	d-F-1		X		X		X		X
Lag Dial 2	d-F-2		X		X		X		X
Lag Dial 3	d-F-3		X		X		X		X
PEDESTRIAN PHASES		1	2	3	4	5	6	7	8
2 Ped Load Switch	d-F-4		X						
4 Ped Load Switch	d-F-5			X					
6 Ped Load Switch	d-F-6						X		
8 Ped Load Switch	d-F-7								



LOS ANGELES COUNTY
DEPARTMENT OF PUBLIC WORKS
TRAFFIC AND LIGHTING DIVISION
TRAFFIC SIGNAL TIMING

LACO-3 DETECTOR ASSIGNMENTS

Intersection: MONTEBELLO BL. @ PARAMOUNT BL. Date Requested: 1-12-00 MAA By: WSL
T.S. No.: 0149 (MTB) Date Completed: 1-12-00 By: DPI

NOTE: Ensure ALL Blank Data Fields are set to ZERO or CLEARED.

App	Lanes	Description	Det-Slot-Channel	Delay Code	Delay Seconds	Extended Call Code	Extended Call Seconds	Phase Flags Code	1	2	3	4	5	6	7	8	Attribute Flags Code	1	2	3	4	5	6	7	8
W	LT-1	6' X 100'	I1U	d10		d30		db0	X							X	dd0								
W	LT-2	6' X 100'	I1L																						
E	1,2	ADVANCE	I2U	d11		d31	2.0	db1		X							dd1								
E	LT	HOLDING (2-6'X6')	I2L	d12		d32		db2		X							dd2								
N	RT-1	6' X 75' (REAR)	I3U	d13	255	d33		db3	X							X	dd3						X		
N	RT-2	6' X 75' (REAR)	I3L	d14	255	d34		db4	X							X	dd4						X		
			I4U	d15		d35		db5									dd5								
			I4L																						
S	ALL	1ST YELL.	I5U	d16	7	d36		db6			X						dd6								
			I5L																						
N	LT-1/LT-2	ADVANCE	I6U	d17		d37		db7				X					dd7								
			I6L	d18		d38		db8									dd8								
			I7U	d19		d39		db9									dd9								
			I7L	d1A		d3A		dbA									ddA								
N	LT-1	QUEUE	I8U	d1b		d3b		dbb				X					ddb				X				
N	LT-2	QUEUE	I8L																						
			I9U	d1C		d3C		dbC									ddC								
			I9L	d1d		d3d		dbd									ddd								
			J1U	d20		d40		dC0									dE0								
			J1L																						
W	ALL	ADVANCE	J2U	d21		d41		dC1						X			dE1								
			J2L	d22		d42		dC2									dE2								
			J3U	d23		d43		dC3									dE3								
			J3L	d24		d44		dC4									dE4								
			J4U	d25		d45		dC5									dE5								
			J4L																						
			J5U	d26		d46		dC6									dE6								
			J5L																						
			J6U	d27		d47		dC7									dE7								
			J6L	d28		d48		dC8									dE8								
			J7U	d29		d49		dC9									dE9								
			J7L	d2A		d4A		dCA									dEA								
			J8U	d2b		d4b		dCb									dEb								
			J8L																						
N	RT-1	2-6'X6' (FRONT)	J9U	d2C	7	d4C		dCC	X							X	dEC								
N	RT-2	2-6'X6' (FRONT)	J9L	d2d	7	d4d		dCd	X							X	dEd								

REMARKS:

DETECTOR ATTRIBUTES

FLAG 1 - Red Lock	FLAG 5 - Queue Clearing
FLAG 2 - Red & Yellow Lock	FLAG 6 - Non-Counting
FLAG 3 - Yellow Disconnect	FLAG 7 - Special Delay Option
FLAG 4 - Red Calling	FLAG 8 - Special Delay Option

SPECIAL DETECTOR DELAY ASSIGNMENTS

	Code	Phase 1	2	3	4	5	6	7	8
All options: Delay Timer resets during detector phase yellow.									
Special Delay Option 1 (Attribute Bit 7) - Bypasses delay while flagged phase(s) are timing.	d-d-E				X				
Special Delay Option 2 (Attribute Bit 8) - Bypasses delay while flagged phase(s) are timing.	d-d-F								
Special Delay Option 3 (Attribute Bits 7 & 8) - Bypasses delay when other phase in same quadrant IS NOT Green (1:2) (3:4) (5:6) (7:8).									
Example: Ø1 Detector delay will be overridden while Ø2 is Yellow or Red.									

LOS ANGELES COUNTY
DEPARTMENT OF PUBLIC WORKS
TRAFFIC AND LIGHTING DIVISION
TRAFFIC SIGNAL TIMING

LACO-3 COORDINATION

T.S. No.: 8149 Intersection: MONTEBELLO BL. @ PARAMOUNT BL.
System Limits: DIRECT I/C TO DWY. # 1, RCTB COORD. FROM PARAMOUNT BL. TO BEVERLY BL. ON MONTEBELLO BL.
Remote Master: WWV Date Requested: 1-12-00 MAA By: JSL
System No.: Date Completed: 1-12-00 By: DPH

TIME OF DAY OPERATION SUMMARY

	Dial 1	Dial 2	Dial 3 / Offset Timing
Offset 1	ALL OTHER TIMES		
Offset 2		0600 - 0830 M-F	
Offset 3			1500 - 1900 M-F
Free	2200 - 0600 M-F / 2200 - 0700 S-S		
Special			

SYNC PARAMETERS
d-0-d System Sync Width 2.0 Seconds
d-0-E Set Maximum Width 4.0 Seconds
d-0-F Set Minimum Width 1.0 Seconds

Remarks:

* Set Local Manual to 14 (free) before setting or changing dial intervals & functions. Setting either of the Manuals to 0 will release that Manual.

Local Manual C-0-1
11 = Slave Mode
12 = Offset Timing Mode
14 = Free Operation
Observe:
Calls d-F-C
Hold d-F-d
Ped Restrict d-F-E
Force Off d-F-F
Local Cycle Timer with Field Calls C-0-b

Keystrokes: C + Column + Row

Coordination Parameters		INTERVALS (in seconds)			FUNCTION FLAGS: DIAL 1				DIAL 2				DIAL 3 / OFFSET TIMING				
		Dial 1	Dial 2	Dial 3	Force Off	Hold	Ped Restrict	Call	Force Off	Hold	Ped Restrict	Call	Force Off	Hold	Ped Restrict	Call	
0	Int	1	2	3	4	5	6	7	8	9	A	b	C	d	E	F	Int
System Manual * 0	0	90	90	90	2,6				2,6				2,6				0
Local Manual * 0	1	1	1	1	-,-	2,6			-,-	2,6			-,-	2,6			1
Master Dial	2	7	7	7		-,-	3			-,-	3			-,-	3		2
Local Dial	3	19	19	19		2,6	3			2,6	3			2,6	3		3
Offset Number	4	32	32	32	3	2,6	-		3	2,6	-		3	2,6	-		4
Time of Day Plan	5	33	33	33	-	2,6			-	2,6			-	2,6			5
Function 6 14	6	43	43	43	4	2,6			4	2,6			4	2,6			6
Current Table	7	44	44	44	-	2,6			-	2,6			-	2,6			7
Minimum Cycle 0	8	57	57	57	1	2,6			1	2,6			1	2,6			8
Maximum Cycle 255	9	58	58	58	-	2,6			-	2,6			-	2,6			9
Master Timer	A	62	62	62		2,6	2			2,6	2			2,6	2		A
Local Timer	b	67	67	67		-,-	2			-,-	2			-,-	2		b
System Timer	C	82	82	82			2,6				2,6				2,6		C
Current Offset	d	90	90	90			-,-				-,-				-,-		d
Last Master Cycle	E																E
Last Local Cycle	F																F

LOS ANGELES COUNTY
DEPARTMENT OF PUBLIC WORKS
TRAFFIC AND LIGHTING DIVISION
TRAFFIC SIGNAL TIMING

LACO-3 SPECIAL FUNCTIONS

Intersection: MONTEBELLO BL. @ PARAMOUNT BL. **Date Requested:** 1-12-00 MAA **By:** [illegible]

T.S. No.: 8149 **Date Completed:** 1-12-00 **By:** DPH

OVERLAP PHASE FLAGS — 4 TEMP OFF

Phases →		1	2	3	4	5	6	7	8
Overlap A	F-A-A	X			X				
Overlap B	F-A-b								
Overlap C	F-A-C								
Overlap D	F-A-d								
Overlap E	F-A-E								
Overlap F	F-A-F								

OVERLAP GREEN OMIT FLAGS

Phases →		1	2	3	4	5	6	7	8
Overlap A	F-b-A								
Overlap B	F-b-b								
Overlap C	F-b-C								
Overlap D	F-b-d								
Overlap E	F-b-E								
Overlap F	F-b-F								

RAILROAD PREEMPT OVERLAP FLAGS

Phases →		1	2	3	4	5	6	7	8
Overlap A	F-C-A								
Overlap B	F-C-b								
Overlap C	F-C-C								
Overlap D	F-C-d								
Overlap E	F-C-E								
Overlap F	F-C-F								

EMERGENCY VEHICLE PREEMPT OVERLAP FLAGS

Phases →		1	2	3	4	5	6	7	8
Overlap A	F-d-A								
Overlap B	F-d-b								
Overlap C	F-d-C								
Overlap D	F-d-d								
Overlap E	F-d-E								
Overlap F	F-d-F								

LOAD SWITCH ASSIGNMENT

Ped A to Overlap A **	F-9-A	
Ped B to Overlap B **	F-9-b	
Send Overlap C Output to Phase	F-9-C	
Send Overlap D Output to Phase	F-9-d	
Send Overlap E Output to Phase	F-9-E	
Send Overlap F Output to Phase	F-9-F	

Overlap Notes:

2-Color Overlap (A - B) 3-Color Overlap (C - D)

Unused Right Turn Overlap outputs may be assigned as additional Peds.

PED A uses J11U for Ped Pushbutton Input.

PED B uses J11L for Ped Pushbutton Input.

** Set Vehicle Phases for Ped A/B to time with

USER FLAG OPTIONS

Keystrokes: d + E + F

True Maximum Extension	1	
EV Pedestrian Clearance NOT Protected	2	
	3	
Mid-Block Pedestrian Crossing	4	
Delay RR Track Clearance Phase Green	5	
Echo Remote Coordination Input to Output	6	
Enable Manual Control	7	
Delay EV Clearance Phase Green	8	

USER FLAG NOTES

The True Maximum Extension flag does NOT allow a maxed out Phase to exte

EV Clearance is NOT protected when this flag is set.

Unused.

Phases 2 & 6 Red Flash during Phase 4 Ped Protection.

Delays Track Clearance until Overlaps time out.

SUB-MASTER OPERATION: Echo Slave Data to Master Output.

Enables Manual Advance Operation. Requires MANUAL Switch.

Delays EV Clearance until Overlaps time out.

ASSOCIATED PHASE RECALL

A Locked Call is placed on the Flagged Phase when the Associated Recall Phase is Green.

Flagged Phase →		1	2	3	4	5	6	7	8
Phase 1	F-C-1								
Phase 2	F-C-2								
Phase 3	F-C-3								
Phase 4	F-C-4								
Phase 5	F-C-5								
Phase 6	F-C-6								
Phase 7	F-C-7								
Phase 8	F-C-8								

PHASE / OVERLAP REASSIGNMENTS

Phases →		1	2	3	4	5	6	7	8
Phase Driveway Flash	F-A-0								
Phase Yellow Ranging *	F-A-1								
Overlaps →		**A**	**B**	**C**	**D**	**E**	**F**		
Overlap Driveway Flash	F-A-2								
Overlap Yellow Ranging *	F-A-3								
Ped 2 Load Switch Overlap	F-A-4								
Ped 4 Load Switch Overlap	F-A-5								
Ped 6 Load Switch Overlap	F-A-6								
Ped 8 Load Switch Overlap	F-A-7								

Notes:

* Phase / Overlap Yellow Ranging - These Flags remove the minimum and maximum limits on the yellow settings.

Remarks:

LOS ANGELES COUNTY
DEPARTMENT OF PUBLIC WORKS
TRAFFIC AND LIGHTING DIVISION
TRAFFIC SIGNAL TIMING

LACO-3 ANNUAL TABLES

Intersection: MONTEBELLO BL. @ PARAMOUNT BL. **Date Requested:** 1-12-00 MAA **By:** tM

T.S. No.: 8149 **Date Completed:** 1-12-00 **By:** DPM

ANNUAL EVENTS			s	m	t	w	t	f	s
Code	Month / Day	Table	1	2	3	4	5	6	7
8-0	/								
8-1	/								
8-2	/								
8-3	/								
8-4	/								
8-5	/								
8-6	/								
8-7	/								
8-8	/								
8-9	/								
8-A	/								
8-b	/								
8-C	/								
8-d	/								
8-E	/								
8-F	/								

ANNUAL EVENTS			s	m	t	w	t	f	s
Code	Month / Day	Table	1	2	3	4	5	6	7
9-0	/								
9-1	/								
9-2	/								
9-3	/								
9-4	/								
9-5	/								
9-6	/								
9-7	/								
9-8	/								
9-9	/								
9-A	/								
9-b	/								
9-C	/								
9-d	/								
9-E	/								
9-F	/								

NOTES ON USING TABLES:

Starting from the base display [A/b], Table access is gained with a two digit Table Code. Access is verified by the flashing of Call Light 9.

Five keypresses will be required followed by [E] to enter the data and open the flag mode. Day of Week flags can now be set.

ADDITIONAL KEY CODES:

A-C = Clock Display
A-D = Date Display

d-0-0 = 1 Force Repoll of WWV Receiver
d-0-1 = Hour of Last Repoll
d-0-2 = Minute " "
d-0-3 = Second " "
d-0-4 = Month " "
d-0-5 = Day " "
d-0-6 = Year " "

OBSERVE ONLY:

E-3-0 = Ring A Max Timer
E-4-0 = Ring B Max Timer
E-6-3 = 4 T.O.D. Output
E-6-5 = 5 Offset Timing Mode
E-6-3 = 6 Slave Mode
E-6-3 = 7 Maximum Extension 2 (Coord)
E-6-3 = 8 Always Dimmed

F-0-0 = Phase / Dial Copy - Source Phase (1-8) Dial (11-13)
F-0-1 = Phase / Dial Copy - Destination Phase (1-8) Dial (11-13)
F-0-2 = Table/Dial Insert/Delete - Target Table (0-9) Table (1 = 10) Dial (11-13)
F-0-3 = Table/Dial Insert/Delete - Interval Insert 1-16 Delete 101-116
F-0-4 = Program Number.
F-0-5 = Version Number.

F-0-A = 1 Searches Annual Event Tables.
F-0-A = 071 Save Timing to Prom Module.
F-0-A = 170 Download Timing into 170.
F-0-A = 777 Reinitialization from NOVRAM.
F-0-A = 868 Reinitialization from EPROM.
F-0-A = 999 Clears All Tables and Loads Default Holiday Events.

OFFSETS			
Keystrokes: F + 9 + CODE			
OFFSET 1	Dial 1	1	51
	Dial 2	2	
	Dial 3	3	
OFFSET 2	Dial 1	4	
	Dial 2	5	22
	Dial 3	6	
OFFSET 3	Dial 1	7	
	Dial 2	8	
	Dial 3	9	64

COMMUNICATIONS ASSIGNMENTS		
Keystrokes: d + 3 + FUNCTION		
PORT 1	7	1
PORT 2	8	
PORT 3	9	
PORT 4	A	

0 = Off
1 = WWV Radio Receiver
2 = ML2 Protocol - Coord OUT only
4 = ML2 Protocol - Coord IN & OUT
7 = ML2 Protocol - Coord IN only
8 = Remote Monitoring (Future)
12 = Sends Time/Date String Out of Modem
17 = Receives Time/Date String from Modem

LOS ANGELES COUNTY
DEPARTMENT OF PUBLIC WORKS
TRAFFIC AND LIGHTING DIVISION
TRAFFIC SIGNAL TIMING

LACO - 3 EVENT TABLES

Intersection: MONTEBELLO BL. @ PARAMOUNT BL. **Date Requested:** 1-12-00 MAP **By:** TSL

T.S. No.: 8149 **Date Completed:** 1-12-00 **By:** DPM

TABLE 0 - DEFAULT			s	m	t	w	t	f	s
Code	Hour : Min	Plan	1	2	3	4	5	6	7
0-0	00 : 00	E	X	X	X	X	X	X	X
0-1	06 : 00	5		X	X	X	X	X	
0-2	07 : 00	1	X						X
0-3	08 : 30	1		X	X	X	X	X	
0-4	15 : 00	9		X	X	X	X	X	
0-5	19 : 00	1		X	X	X	X	X	
0-6	22 : 00	E	X	X	X	X	X	X	X
0-7	:								
0-8	:								
0-9	:								
0-A	:								
0-b	:								
0-C	:								
0-d	:								
0-E	:								
0-F	:								

TABLE 3			s	m	t	w	t	f	s
Code	Hour : Min	Plan	1	2	3	4	5	6	7
3-0	:								
3-1	:								
3-2	:								
3-3	:								
3-4	:								
3-5	:								
3-6	:								
3-7	:								
3-8	:								
3-9	:								
3-A	:								
3-b	:								
3-C	:								
3-d	:								
3-E	:								
3-F	:								

SLAVE MODE TABLE			s	m	t	w	t	f	s
Code	Hour : Min	Dial	1	2	3	4	5	6	7
5-0	:								
5-1	:								
5-2	:								
5-3	:								
5-4	:								
5-5	:								
5-6	:								
5-7	:								
5-8	:								
5-9	:								
5-A	:								
5-b	:								
5-C	:								
5-d	:								
5-E	:								
5-F	:								

TABLE 1			s	m	t	w	t	f	s
Code	Hour : Min	Plan	1	2	3	4	5	6	7
1-0	00 : 00	E		X	X	X	X	X	
1-1	07 : 00	1		X	X	X	X	X	
1-2	22 : 00	E		X	X	X	X	X	
1-3	:								
1-4	:								
1-5	:								
1-6	:								
1-7	:								
1-8	:								
1-9	:								
1-A	:								
1-b	:								
1-C	:								
1-d	:								
1-E	:								
1-F	:								

Plan = Plan Number

O/D	D1	D2	D3
O1 =	1	2	3
O2 =	4	5	6
O3 =	7	8	9

Keys:
0 = No Days
8 = All Days
9 = Week Days

Plans:
A = Protected/Permissive Arrows (F-F-b) Disabled.
b = Slave Mode (4 Wire / 7 Wire Input).
C = Offset Timing Mode
d = T.O.D. Output (Detector Reset Line) "ON".
E = Function 6
F = Reset Plans A & d.

Table 6:
C = Continue the Floating Holiday by C (0-9) days.
N^{th} = The number of the occurence in the month (1-5, 9 = Always the last occurence in the

I.e. Thanksgiving = 11/1/4 [table] flag Thursday continues 1 extra day.

FLOATING HOLIDAYS			s	m	t	w	t	f	s
Code	Month / C / N^{th}	Table	1	2	3	4	5	6	7
6-0	01 / 0 / 3	1		X					
6-1	02 / 0 / 3	1		X					
6-2	05 / 0 / 9	1		X					
6-3	09 / 0 / 1	1		X					
6-4	11 / 1 / 4	1					X		
6-5	/ /								
6-6	/ /								
6-7	/ /								
6-8	/ /								
6-9	/ /								
6-A	/ /								
6-b	/ /								
6-C	/ /								
6-d	/ /								
6-E	/ /								
6-F	/ /								

TABLE 2			s	m	t	w	t	f	s
Code	Hour : Min	Plan	1	2	3	4	5	6	7
2-0	:								
2-1	:								
2-2	:								
2-3	:								
2-4	:								
2-5	:								
2-6	:								
2-7	:								
2-8	:								
2-9	:								
2-A	:								
2-b	:								
2-C	:								
2-d	:								
2-E	:								
2-F	:								

TABLE 4			s	m	t	w	t	f	s
Code	Hour : min	Plan	1	2	3	4	5	6	7
4-0	:								
4-1	:								
4-2	:								
4-3	:								
4-4	:								
4-5	:								
4-6	:								
4-7	:								
4-8	:								
4-9	:								
4-A	:								
4-b	:								
4-C	:								
4-d	:								
4-E	:								
4-F	:								

EXCEPTION DAYS			s	m	t	w	t	f	s
Code	Month / Day	Table	1	2	3	4	5	6	7
7-0	01 / 01	1		X	X	X	X	X	
7-1	01 / 02	1		X					
7-2	07 / 04	1		X	X	X	X	X	
7-3	07 / 05	1		X					
7-4	11 / 10	1						X	
7-5	11 / 11	1		X	X	X	X	X	
7-6	11 / 12	1		X					
7-7	12 / 24	1		X	X	X	X	X	
7-8	12 / 25	1		X	X	X	X	X	
7-9	12 / 26	1		X					
7-A	/								
7-b	/								
7-C	/								
7-d	/								
7-E	/								
7-F	/								

LOS ANGELES COUNTY
DEPARTMENT OF PUBLIC WORKS
TRAFFIC & LIGHTING DIVISION
TRAFFIC SIGNAL TIMING

LACO - 1HC

TYPE 170 PROGRAM

OK SDH

Intersection: WHITTIER BLVD @ MONTEBELLO BLVD

Date Prepared: 4/17/12 By: MC

T.S. No.: 8452

Date Implemented: By:

PHASE TIMING

Keystrokes: F + Phase + Interval

Phase #		1	2	3	4	5	6	7	8
Minimum Walk	0	0	7	0	7	0	7	0	7
Flashing Don't Walk	1	0	19	0	17	0	20	0	15
Minimum Green	2	4	6	4	6	4	6	4	6
Queue Maximum	3	0	25	0	25	0	25	0	25
Added Green/Actuation	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vehicle Extension	5	1.5	4.5	1.5	4.5	1.5	4.5	1.5	4.5
Maximum Gap	6	1.5	5.0	1.5	5.0	1.5	5.0	1.5	5.0
Minimum Gap	7	1.5	3.0	1.5	3.0	1.5	3.0	1.5	3.0
Max Extension 1 (Free)	8	20	50	20	50	20	50	20	50
Max Extension 2 (Coord)	9	20	110	20	110	20	110	20	110
Offset 1	A	20: 9	Dial 2: 43	Dial 3: 51					
Offset 2	b								
Offset 3	C								
Reduce 0.1 Sec. Every...	d	0.0	1.5	0.0	1.5	0.0	1.5	0.0	1.5
Yellow	E	3.0	4.0	3.0	4.0	3.0	4.0	4.0	4.0
Red Clearance	F	0.5	1.0	0.5	1.0	0.5	1.0	0.5	1.0

Max Added Green	F-0-E	0
Red Revert	F-0-F	2.0

Remarks:

PREEMPTION

Keystrokes: F+E+Function

RR Select (0, 1, 2)		0
Track Clearance		1
RR Red		2
RR2 Maximum(Minutes)		3
EV-A Delay		4
EV-A Clearance		5
EV-B Delay		6
EV-B Clearance		7
EV-C Delay		8
EV-C Clearance		9
EV-D Delay		A
EV-D Clearance		b
EV Maximum (Seconds)		C
Delay Timer		d
Clearance Timer		E
Maximum Timer		F

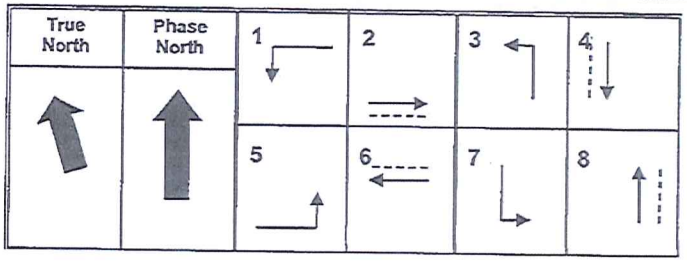
PHASE FUNCTION FLAGS

Keystokes: F+F+Function

		1	2	3	4	5	6	7	8
Phases Permitted	0	X	X	X	X	X	X	X	X
Red Lock	1								
Red & Yellow Lock	2		X		X		X		X
Minimum Vehicle Recall	3								
Pedestrian Recall + Rest in Walk	4								
Pedestrian Phases	5		X		X		X		X
Rest in Red	6								
Semi Traffic Actuated Mode	7								
Double Entry	8								
Maximum Vehicle Recall	9								
Overlap A	A								
Overlap B	b								
Barrier Recall	C								
Rest in Green	d								
Yellow Start Up	E		X				X		
Protected/Permissive Left Turn	F								

LAG PHASE FLAGS

		1	2	3	4	5	6	7	8
Lag Free	d-F-0		X		X		X		X
Lag Dial 1	d-F-1		X		X		X		X
Lag Dial 2	d-F-2		X		X		X		X
Lag Dial 3	d-F-3		X		X		X		X



LACO-1HC - DETECTOR ASSIGNMENTS

T.S.: 8452 Intersection: WHITTIER BLVD @ MONTEBELLO BLVD Date Prepared: 4/17/12 By: MC

App	Lanes	Description	Phase File - Slot Channel	Delay Code	Delay Seconds	Extended Call Code	Extended Call Seconds	Remarks	Yellow Disconnect Code	Yellow Disconnect Lite	Yellow Disconnect On	Queue Clearing Code	Queue Clearing Lite	Queue Clearing On
E	LT	1ST VEH 4-6'X6'	1I1U	d10		d30		Note: The four Programmable Detectors will default to normal phasing if not flagged.	dF4	1		dF8	1	
			1I1L											
W	1	ADVANCE	2I2U	d11		d31			dF4	2		dF8	2	
W	2	ADVANCE	2I2L	d12		d32			dF4	3		dF8	3	
			2I3U	d13		d33			dF4	4		dF8	4	
			2I3L	d14		d34			dF4	5		dF8	5	
W	1	QUEUE 2-6'X6'	2I4U	d15		d35	2.0	Call Ø 1 2 3 4 5 6 7 8	dF4	6		dF8	6	X
W	2	QUEUE 2-6'X6'	2I4L					dd8	dF4			dF8		
S	LT	1ST VEH 4-6'X6'	3I5U	d16		d36			dF4	7		dF8	7	
			3I5L						dF4			dF8		
N	1	ADVANCE	4I6U	d17		d37			dF4	8		dF8	8	
N	2	ADVANCE	4I6L	d18		d38			dF5	1		dF9	1	
N	1	QUEUE 2-6'X6'	4I7U	d19		d39	2.0		dF5	2		dF9	2	X
N	2-1, 2-2	QUEUE 2-6'X6'	4I7L	d1A		d3A	2.0		dF5	3		dF9	3	X
			4I8U	d1b		d3b		Call Ø 1 2 3 4 5 6 7 8	dF5	4		dF9	4	
			4I8L					dd9	dF5			dF9		
			1I9U	d1C		d3c			dF5	5		dF9	5	
			3I9L	d1d		d3d			dF5	6		dF9	6	
W	LT	1ST VEH 4-6'X6'	5J1U	d20		d40			dF6	1		dFA	1	
			5J1L						dF6			dFA		
E	1	ADVANCE	6J2U	d21		d41			dF6	2		dFA	2	
E	2	ADVANCE	6J2L	d22		d42			dF6	3		dFA	3	
E	LT	1ST VEH 4-6'X6'	6J3U	d23		d43			dF6	4		dFA	4	
			6J3L	d24		d44			dF6	5		dFA	5	
E	1	QUEUE 2-6'X6'	6J4U	d25		d45	2.0	Call Ø 1 2 3 4 5 6 7 8	dF6	6		dFA	6	X
E	2	QUEUE 2-6'X6'	6J4L					ddA	dF6			dFA		
N	LT	1ST VEH 4-6'X6'	7J5U	d26		d46		Disconnected 2 Rear Loops	dF6	7		dFA	7	
			7J5L						dF6			dFA		
S	1	ADVANCE	8J6U	d27		d47			dF6	8		dFA	8	
S	2	ADVANCE	8J6L	d28		d48			dF7	1		dFb	1	
S	1	QUEUE 2-6'X6'	8J7U	d29		d49	2.0		dF7	2		dFb	2	X
S	2-1, 2-2	QUEUE 2-6'X6'	8J7L	d2A		d4A	2.0		dF7	3		dFb	3	X
			8J8U	d2b		d4b		Call Ø 1 2 3 4 5 6 7 8	dF7	4		dFb	4	
			8J8L					ddb	dF7			dFb		
			5J9U	d2C		d4C			dF7	5		dFb	5	
			7J9L	d2d		d4d			dF7	6		dFb	6	

YELLOW DISCONNECT QUICK REFERENCE

	Call Lights							
Code	1	2	3	4	5	6	7	8
dF4								
dF5								
dF6								
dF7								

Remarks:

QUEUE CLEARING DETECTOR QUICK REFERENCE

	Call Lights							
Code	1	2	3	4	5	6	7	8
dF8						X		
dF9		X	X					
dFA						X		
dFb		X	X					

LACO-1HC - COORDINATION

T.S. No.: 8452 Intersection: WHITTIER BLVD @ MONTEBELLO BLVD

System Limits: Garfield Ave to First St/Bluff Rd on Whittier Blvd; Paramount Blvd to Union St on Montebello Blvd.

Remote Master: WWV Date Prepared: 4/17/12 By: MC

Date Implemented: By:

TIME OF DAY OPERATION SUMMARY			
	Dial 1	Dial 2	Dial 3 / Offset Timing
Offset 1	ALLL OTHER TIMES	0600-0900 M-F	1500-1900 M-F
Offset 2			
Offset 3			
Free	2100-0600 M-F; 2100-0900 S-S		
Special			

* Set Local Manual to 14 (free) before setting or changing dial intervals & functions. Setting either of the Manuals to 0 will release that Manual.

Offset Timing Mode:
A 12 at C-0-1 or by T.O.D enables this mode and uses the Dial 3 Intervals and Functions.

INTERCONNECT SELECT

d-0-0 [ ] 7 = Slave [X] 170 = Master

d-0-E Set Maximum Width 4.0 Seconds

d-0-F Set Minimum Width 1.0 Seconds

Remarks:

Observe:

Call	d-F-C
Hold	d-F-d
Ped Restrict	d-F-E
Force - Off	d-F-F
Cycle with Field Calls	C-0-b
Master Sync Pulse Width	d-0-d

Keystrokes:
C + Column + Row

Coordination Parameters		INTERVALS (In seconds)			FUNCTION FLAGS												
					DIAL 1				DIAL 2				DIAL 3 / OFFSET TIMING				
		Dial 1	Dial 2	Dial 3	Force Off	Hold	Ped Rstrict	Call	Force Off	Hold	Ped Rstrict	Call	Force Off	Hold	Ped Rstrict	Call	
0	Int	1	2	3	4	5	6	7	8	9	A	b	C	d	E	F	Int
System Manual* 0	0	90	100	100	2,6				2,6				2,6				0
Local Manual* 0	1	1	1	1	-,-				-,-				-,-				1
Master Dial	2	15	15	15	3,7				3,7				3,7				2
Current Dial	3	16	16	16	-,-				-,-				-,-				3
Offset Number	4	21	26	26			4,8				4,8				4,8		4
Time of Day Plan	5	33	38	38		2,6	4,8			2,6	4,8			2,6	4,8		5
Function 6 14	6	45	50	50	4,8	2,6	-,-		4,8	2,6	-,-		4,8	2,6	-,-		6
Current Table	7	46	51	51	-,-	2,6			-,-	2,6			-,-	2,6			7
Minimum Cycle 0	8	60	65	65	1,5	2,6			1,5	2,6			1,5	2,6			8
Maximum Cycle 255	9	61	66	66	-,-	2,6			-,-	2,6			-,-	2,6			9
Master Timer	A	64	74	74		2,6	2,6			2,6	2,6			2,6	2,6		A
Local Timer	b	78	85	77		-,-	2,6			-,-	2,6			-,-	2,6		b
New Offset	C	90	100	100			-,-				-,-				-,-		C
Current Offset	d																d
Last Master Cycle	E																E
Last Local Cycle	F																F

LACO-1HC - CLOCK & EVENT TABLE

Intersection: WHITTIER BLVD @ MONTEBELLO BLVD
T.S. No.: 8452

Date Prepared: 4/17/12 By: MC
Date Implemented: ____ By: ____

CLOCK

CONTROL CODE A-C

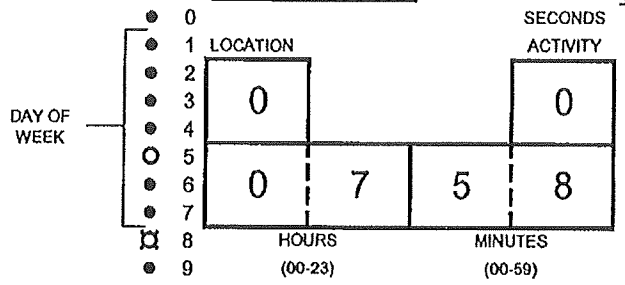


FIG. 1

CONTROL CODE A-D

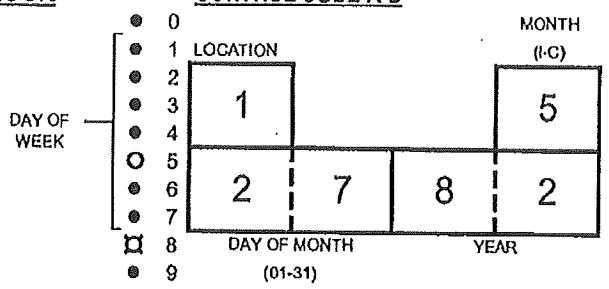


FIG. 2

ABOVE EXAMPLES
7:58 A.M. ON THURSDAY (FIG. 1)
MAY 27, 1982 (FIG. 2)

DAY OF WEEK

1	SUNDAY
2	MONDAY
3	TUESDAY
4	WEDNESDAY
5	THURSDAY
6	FRIDAY
7	SATURDAY

MONTH

1	JANUARY	7	JULY
2	FEBRUARY	8	AUGUST
3	MARCH	9	SEPTEMBER
4	APRIL	A	OCTOBER
5	MAY	B	NOVEMBER
6	JUNE	C	DECEMBER

DIRECTIONS
At control code A - C, key in hours and minutes, then key in 0 for seconds activity. Enter key E and turn on call light corresponding to day of the week. (NOTE: Seconds start at 0 seconds - for observation and correction use address D - 4 - F).
At cibtrik cide A - D, key in the day of the month, year and month, then enter key E.

CONTROL CODE 9-3

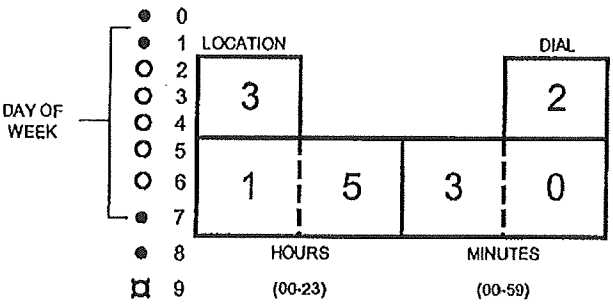


FIG. 3

ABOVE EXAMPLE
The example (FIG. 3), shows a time of day event at control code 9-3 with dial 2 to start at 3:30 P.M. each weekday from Monday through Friday.

DIRECTIONS
To set an event, key in 9 + the table location, key in hour, minute, and event, then enter key E. Set day(s) with call/active lights. To observe current event use address C - 0 - 5. (NOTE: These time of day events are local - not system events.)

REMARKS:

EVENT TABLE

FOR DIRECT INTERCONNECT ONLY. (D00=7)

LOC. 9+ ↓	TIME	EVENT *DIAL	DAY AND LIGHT ← Set DAY using call/active LIGHT → SUN 1	MON 2	TUE 3	WED 4	THUR 5	FRI 6	SAT 7
0									
1									
2									
3									
4									
5									
6									
7									
8									
9									
A									
B									
C									
D									
E									
F									

* DIAL 1 = 1, 2 = 2, 3 = 3, FREE = E, OFF = 0.
(NOTE: At C - 0 - 5, Free = 14)
OFFSET TIMING =C T.O.D. FLASH=F

LACO-1HC - EVENT TABLES

Intersection: WHITTIER BLVD @ MONTEBELLO BLVD Date Prepared: 4/17/12 By: MC

T.S. No.: 8452 Date Implemented: By:

TABLE 0 - DEFAULT				s	m	t	w	t	f	s
Code	Hour : Min		Plan	1	2	3	4	5	6	7
0 -0	00 : 00		E	X	X	X	X	X	X	X
0 -1	06 : 00		2		X	X	X	X	X	
0 -2	09 : 00		1	X	X	X	X	X	X	X
0 -3	15 : 00		3		X	X	X	X	X	
0 -4	19 : 00		1		X	X	X	X	X	
0 -5	21 : 00		E	X	X	X	X	X	X	X
0 -6	:									
0 -7	:									
0 -8	:									
0 -9	:									
0 -A	:									
0 -b	:									
0 -C	:									
0 -d	:									
0 -E	:									
0 -F	:									

TABLE 3					m	t	w	t	f	s
Code	Hour : Min		Plan	1	2	3	4	5	6	7
3 -0	:									
3 -1	:									
3 -2	:									
3 -3	:									
3 -4	:									
3 -5	:									
3 -6	:									
3 -7	:									
3 -8	:									
3 -9	:									
3 -A	:									
3 -b	:									
3 -C	:									
3 -d	:									
3 -E	:									
3 -F	:									

ANNUAL EVENTS			s	m	t	w	t	f	s
Code	Month / Nth	Table	1	2	3	4	5	6	7
5 -0	/								
5 -1	/								
5 -2	/								
5 -3	/								
5 -4	/								
5 -5	/								
5 -6	/								
5 -7	/								
5 -8	/								
5 -9	/								
5 -A	/								
5 -b	/								
5 -C	/								
5 -d	/								
5 -E	/								
5 -F	/								

TABLE 1				s	m	t	w	t	f	s
Code	Hour : Min		Plan	1	2	3	4	5	6	7
1 -0	00 : 00		E		X	X	X	X	X	
1 -1	09 : 00		1		X	X	X	X	X	
1 -2	21 : 00		E		X	X	X	X	X	
1 -3	:									
1 -4	:									
1 -5	:									
1 -6	:									
1 -7	:									
1 -8	:									
1 -9	:									
1 -A	:									
1 -b	:									
1 -C	:									
1 -d	:									
1 -E	:									
1 -F	:									

Plan = Plan Number

	D1	D2	D3
O1 =	1	2	3
O2 =	4	5	6
O3 =	7	8	9

Plans:
A = Arrows On
d = Arrows Off
C = Offset Timing
E = Function 6
F = Flash

Keys:
0 = No Days
8 = All Days
9 = Weekdays

Table #4, Nth = The number of the occurrence in the month (1-5). 99 = Always the last occurrence in the month.

I.E. Thanksgiving = 11/04 [Table] and Thursday.

ANNUAL EVENTS			s	m	t	w	t	f	s
Code	Month / Nth	Table	1	2	3	4	5	6	7
6 -0	/								
6 -1	/								
6 -2	/								
6 -3	/								
6 -4	/								
6 -5	/								
6 -6	/								
6 -7	/								
6 -8	/								
6 -9	/								
6 -A	/								
6 -b	/								
6 -C	/								
6 -d	/								
6 -E	/								
6 -F	/								

TABLE 2				s	m	t	w	t	f	s
Code	Hour : Min		Plan	1	2	3	4	5	6	7
2 -0	:									
2 -1	:									
2 -2	:									
2 -3	:									
2 -4	:									
2 -5	:									
2 -6	:									
2 -7	:									
2 -8	:									
2 -9	:									
2 -A	:									
2 -b	:									
2 -C	:									
2 -d	:									
2 -E	:									
2 -F	:									

FLOATING HOLIDAYS			s	m	t	w	t	f	s
Code	Month / Nth	Table	1	2	3	4	5	6	7
4 -0	/								
4 -1	/								
4 -2	/								
4 -3	/								
4 -4	/								
4 -5	/								
4 -6	/								
4 -7	/								
4 -8	/								
4 -9	/								
4 -A	/								
4 -b	/								
4 -C	/								
4 -d	/								
4 -E	/								
4 -F	/								

ANNUAL EVENTS			s	m	t	w	t	f	s
Code	Month / Nth	Table	1	2	3	4	5	6	7
7 -0	/								
7 -1	/								
7 -2	/								
7 -3	/								
7 -4	/								
7 -5	/								
7 -6	/								
7 -7	/								
7 -8	/								
7 -9	/								
7 -A	/								
7 -b	/								
7 -C	/								
7 -d	/								
7 -E	/								
7 -F	/								

LACO-1HC - ANNUAL TABLES

Intersection: WHITTIER BLVD @ MONTEBELLO BLVD Date Prepared: 4/17/12 By: MC

T.S. No.: 8452 Date Implemented: By:

EXCEPTION DAYS			s	m	t	w	t	f	s
Code	Month / Day	Flag	1	2	3	4	5	6	7
8-0	01 / 01	1		X	X	X	X	X	
8-1	01 / 02	1		X					
8-2	07 / 04	1		X	X	X	X	X	
8-3	07 / 05	1		X					
8-4	11 / 10	1						X	
8-5	11 / 11	1		X	X	X	X	X	
8-6	11 / 12	1		X					
8-7	12 / 24	1		X	X	X	X	X	
8-8	12 / 25	1		X	X	X	X	X	
8-9	12 / 26	1		X				X	
8-A	/								
8-b	/								
8-C	/								
8-d	/								
8-E	/								
8-F	/								

EXCEPTION TIMES			Table 8 Flags						
Code	Hour : Min	Plan	1	2	3	4	5	6	7
9-0	00 : 00	E	X						
9-1	:								
9-2	:								
9-3	:								
9-4	:								
9-5	:								
9-6	:								
9-7	:								
9-8	:								
9-9	:								
9-A	:								
9-b	:								
9-C	:								
9-d	:								
9-E	:								
9-F	:								

NOTES ON USING TABLES:

Starting from the base display [A/b], Table access is gained with a two digit Table Code. Access is verified by the flashing of both Call Light 9 and the Phase digit* of the display (* No Flash if Table # & Event # match).

Five keypresses will be required followed by [E] to either the date and open the flag mode. Day of Week flags can now be set.

ADDITIONAL KEY CODES:
- d-0-3=1 Search Tables
- d-0-3=3 Repoll WWV Clock
- d-A-F=1 Repoll WWV Clock
- d-0-3=071 Save Timing to Prom Module
- d-0-3=170 Download Timing into 170
- d-0-3=999 Clear All Tables
- F-0-0=Phase/Dial Copy - Source
- F-0-1=Phase/Dial Copy - Destination
- F-0-4=Program Number (66)
- d-0-8,9,A=Mo,Day,Yr of Latest Revision
- E-E-0-0= Reinitialization

SPECIAL FUNCTION TABLE Keystrokes: F + d + Function		Phase Flags							
		1	2	3	4	5	6	7	8
(Green) Calling Phases	0								
(Green) Call To Phases	1								
(Yellow) Calling Phases	2								
(Yellow) Call To Phases	3								
Auxiliary Ovlp A Output	4								
Mid-Block Ped Crossing	5								
Driveway Flash	6								
Green Extension	7								
Sequential Ped	8								
Not Used	9								
EV- A Clearance Phases	A								
EV- B Clearance Phases	b								
EV- C Clearance Phases	C								
EV- D Clearance Phases	d								
Track Clerance Phases	E								
Limited Services Phases	F								

When Any Flagged Phase Is Green —
— Place A Locked Call To These Phases.
When Any Flagged Phase Is Yellow —
— Place A Locked Call To These Phases.
"Three Color single Phase Overlap" Outputs On Auxiliary File - Slot 1
Ø4P Only. Ø2 & Ø6 Reds Flash During Ø4P Clearance
Flashes The Green Outputs of The Selected Phases
Staggered Termination At Barrier Crossing
Allows Ø1, Ø3 or Ø5 Ped to output on the Ø8P Load Switch

OVERLAP GREEN OMIT	Keys	1	2	3	4	5	6	7	8
Green Omit for Overlap A	F-C-4								
Green Omit for Overlap B	F-C-5								
Green Omit for Overlap C	F-C-6								
Green Omit for Overlap D	F-C-7								

F-9-7		Coordination Free Time (Seconds) After railroad preempt
F-9-d		Green Rest Delay Time (Seconds)
d-0-1		RAILROAD ROUTINE SELECT: 0=Normal Railroad 1=Special Two Input Railroad Routine
d-0-2		MANUAL CONTROL: 0=Not Enabled 1=No Recalls 2=Vehicle recalls 3=Vehicle and Ped Recalls

PHASE OMIT	Keys	1	2	3	4	5	6	7	8
Phase Omit (Observe Only)	d-d-4								
Phase Omit for Dial 1	d-d-5								
Phase Omit for Dial 2	d-d-6								
Phase Omit for Dial 3	d-d-7								

ADDITIONAL OVERLAPS	Keys	1	2	3	4	5	6	7	8
Aux File 2 Color Overlap C	d-d-C								
Aux File 2 Color Overlap D	d-d-d								
Ø7 Load Sw. 3 Color Ovlp E	d-d-E								
Green Omit for Overlap E	d-d-F								

PHASE OMIT Is active when Coordination CALL function is active and the OMIT flag is set.

Overlap E will not function if the Railroad Preempt has been selected.

AAE, Inc.
1858 E. Helm Avenue, Suite 100
Orange, CA 92865
(714) 940-0100, (714) 940-0700-fax

LACO - 3

TYPE 170 PROGRAM

Revised on 7/30/10 per Micheal Ortega checked 4/20/10 (Siemens)

Intersection: Garfield Avenue @ Via Campo
T.S. No.: 9511 R-1 c/o MTB

Date Prepared: 4/5/2010 By: jth
Date Implemented: ____ By: ____

PHASE TIMING		Keystrokes: F + Phase + Interval							
Phase #		1	2	3	4	5	6	7	8
Minimum Walk	0	7	7		7				0
Flashing Don't Walk	1	8	14		22				0
Minimum Green	2	6	6		6				6
Queue Maximum	3	20	25		30				0
Added Green/Actuation	4	0.0	0.0		0.0				0.0
Vehicle Extension	5	4.0	4.0		4.0				3.0
Maximum Gap	6	5.0	5.0		5.0				3.0
Minimum Gap	7	3.0	3.0		3.0				3.0
Max Extension 1 (Free)	8	30	30		14				14
Max Extension 2 (Coord)	9	30	130		30				30
		OVLP A	OVLP B	OVLP C	OVLP D	OVLP E	OVLP F		
Ovlp Green Extension	A								
Ovlp Yellow Clearance	b	4.0	4.0						
Ovlp Red Clearance	C	0.5	0.5						
Reduce 0.1 Sec. Every...	d	1.5	1.5		1.5				0.0
Yellow Clearance	E	4.0	~~4.0~~ 4.3		~~4.0~~ 4.3			~~4.3~~ 4.0	~~4.0~~
Red Clearance	F	0.5	0.5		0.5				~~0.5~~

Red Rest Delay	F-0-7	0
Green Rest Delay	F-0-8	0
Max Added Green	F-0-E	0
Red Revert	F-0-F	2.0

Remarks:

0.7 0.7

* OL-A=Ø1
** OL-B=Ø2

PREEMPTION		
Keystrokes: F + E + Function		
RxR Select (0, 1, 2)		0
RxR Track Clearance		1
RxR1 All Red		2
RxR2 Maximum (Minutes)		3
Free Time After Preempt		4
EV - A Delay		5
EV - A Clearance		6
EV - B Delay		7
EV - B Clearance		8
EV - C Delay		9
EV - C Clearance		A
EV - D Delay		b
EV - D Clearance		C
EV Maximum (Seconds)		d
EV Delay/Clearance Timer		E
RxR Delay/Clear/Mark Timer		F
EV AFTER RxR PREEMPTION		
EV Type Select	F-C-0	

Select : EV - A Enter 16
EV - B Enter 32
EV - C Enter 64
EV - D Enter 128

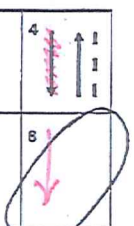
Keystrokes: F + d + Function		
EV After RxR Delay		7
EV After RxR Clearance		8
EV After RxR Maximum		9

PREEMPTION PHASES									
Keystrokes: F + d + Function									
		1	2	3	4	5	6	7	8
EV- A	0								
EV- B	1								
EV- C	2								
EV- D	3								
RR Track Clear	4								
RR2 Ltd Service	5								
RR1 Exit Phase	6								

PHASE FUNCTION FLAGS									
Keystrokes: F + F + Function									
		1	2	3	4	5	6	7	8
Phases Permitted	0	X	X		X				X
Red Lock	1								
Red & Yellow Lock	2	X	X						
Minimum Vehicle Recall	3								
Pedestrian Recall + Rest in Walk	4								
Green Rest (Set Delay F-0-8)	5	X							
Red Rest (Set Delay F-0-7)	6								
Semi Traffic Actuated Mode	7								
Double Entry	8				X				X
Maximum Vehicle Recall	9								
Restricted Phases	A								
Protected/Permissive Left Turn	b								
Barrier Recall	C								
First Phases After Start Up	d								
Yellow Start Up	E		X						
Overlap Yellow Start Up: →		A	b	C	d	E	F		
(Parents must be Yellow Start Up)	F		X						

LAG PHASE FLAGS		1	2	3	4	5	6	7	8
Lag Free	d-F-0		X		X		X		X
Lag Dial 1	d-F-1		X		X		X		X
Lag Dial 2	d-F-2		X		X		X		X
Lag Dial 3	d-F-3		X		X		X		X
PEDESTRIAN PHASES		1	2	3	4	5	6	7	8
2 Ped Load Switch	d-F-4		X						
4 Ped Load Switch	d-F-5				X				
6 Ped Load Switch	d-F-6								
8 Ped Load Switch	d-F-7	X							

True North	Phase North	1	2	3	4
~~47~~	~~47~~	5	6	7	8



NOT CLEAR

AAE, Inc.
1858 E. Helm Avenue, Suite 100
Orange, CA 92865
(714) 940-0100, (714) 940-0700-fax

LACO-3 DETECTOR ASSIGNMENTS

Intersection: Garfield Avenue @ Via Campo **Date Prepared:** 4/5/10 **By:**

T.S. No.: 9511 R-1 c/o MTB **Date Implemented:** **By:**

NOTE: Ensure ALL Blank Data Fields are set to ZERO or CLEARED.			Detector Timing				Detector Assignments																			
			File-Slot-Channel	Delay		Extended Call		Phase Flags									Attribute Flags									
App	Lanes	Description		Code	Seconds	Code	Seconds	Code	1	2	3	4	5	6	7	8	Code	1	2	3	4	5	6	7	8
N	1	ADVANCE	1 I1U	d10		d30	2.0	db0	X								dd0								
			I1L																						
S	1	ADVANCE	I2U	d11		d31	2.0	db1		X							dd1								
S	2	ADVANCE	I2L	d12	5	d32	2.0	db2		X							dd2								
S	RT	FIRST VEH 6'X25'*	2 I3U	d13	10	d33		db3		X							dd3								
			I3L	d14		d34		db4									dd4								
S	1	QUEUE CL 6'X25'*	2 I4U	d15		d35	2.0	db5		X							dd5					X			
S	2,3	QUEUE CL 6'X25'*	2 I4L																						
			I5U	d16		d36		db6									dd6								
			I5L																						
W	1	ADVANCE	4 I6U	d17		d37	2.0	db7				X					dd7								
W	2	ADVANCE	4 I6L	d18		d38	2.0	db8				X					dd8								
W	1,2	QUEUE CL 6'X25'*	4 I7U	d19		d39	2.0	db9				X					dd9					X			
W	RT	FIRST VEH 6'X25'*	8 I7L	d1A	10	d3A		dbA								X	ddA								
W	LT	6'X50'*	8 I8U	d1b		d3b		dbb								X	ddb								
			I8L																						
N	2	ADVANCE	1 I9U	d1C		d3C	2.0	dbC	X								ddC								
			I9L	d1d		d3d		dbd									ddd								
			J1U	d20		d40		dC0									dE0								
			J1L																						
			J2U	d21		d41		dC1									dE1								
			J2L	d22		d42		dC2									dE2								
			J3U	d23		d43		dC3									dE3								
			J3L	d24		d44		dC4									dE4								
N	LT-1	QUEUE CL 6'X25'*	1 J4U	d25		d45	2.0	dC5	X								dE5					X			
N	LT-2/1,2	QUEUE CL 6'X25'*	1 J4L																						
			J5U	d26		d46		dC6									dE6								
			J5L																						
E	LT	6'X25'*	8 J6U	d27		d47		dC7								X	dE7								
E	RT	FIRST VEH 6'X25'*	8 J6L	d28	10	d48		dC8								X	dE8								
			J7U	d29		d49		dC9									dE9								
			J7L	d2A		d4A		dCA									dEA								
			J8U	d2b		d4b		dCb									dEb								
			J8L																						
			J9U	d2C		d4C		dCC									dEC								
			J9L	d2d		d4d		dCd									dEd								

Remarks: * = VIDEO DETECTION

DETECTOR ATTRIBUTES	
FLAG 1 - Red Lock	FLAG 5 - Queue Clearing
FLAG 2 - Red & Yellow Lock	FLAG 6 - Non-Counting
FLAG 3 - Yellow Disconnect	FLAG 7 - Special Delay Option
FLAG 4 - Red Calling	FLAG 8 - Special Delay Option

SPECIAL DETECTOR DELAY ASSIGNMENTS		Phase							
All options: Delay Timer resets during detector phase yellow.	Code	1	2	3	4	5	6	7	8
Special Delay Option 1 (Attribute Bit 7) - Bypasses delay while flagged phase(s) are timing.	d-d-E								
Special Delay Option 2 (Attribute Bit 8) - Bypasses delay while flagged phase(s) are timing.	d-d-F								

Special Delay Option 3 (Attribute Bits 7 & 8) - Bypasses delay when other phase in same quadrant IS NOT Green (1:2) (3:4) (5:6) (7:8).
Example: Phase 1 Detector delay will be overridden while Phase 2 is Yellow or Red.

AAE, Inc.
1858 E. Helm Avenue, Suite 100
Orange, CA 92865
(714) 940-0100, (714) 940-0700-fax

LACO-3 COORDINATION

Intersection: Garfield Avenue @ Via Campo T.S. No.: 9511R-1e9MTB

System Limits: Pomona Boulevard to Via Campo

Remote Master: WWV Date Prepared: 4/5/10 By: jth

System No.: Date Implemented: By:

TIME OF DAY OPERATION SUMMARY			
	Dial 1	Dial 2	Dial 3 / Offset Timing
Offset 1	ALL OTHER TIMES	0600-0900 M-F	1600-1900 M-F
Offset 2			
Offset 3			
Free	2100-0600 M-F, 1930-0800 M-F		
Special			

- Set Local Manual to 14 (Free) before setting or changing dial intervals or functions. Setting either of the manuals to zero will release that Manual.

Local Manual C-0-1
11 = Slave Mode
12 = Offset Timing Mode
14 = Free Operation
Observe Locations:
Calls d-F-C
Hold d-F-d
Ped Restrict d-F-E
Force Off d-F-F
Local Cycle Timer w/Field Calls C-0-b

SYNC PARAMETERS
d - 0 - d System Sync Width 2.0 Seconds
d - 0 - E Set Maximum Width 4.0 Seconds
d - 0 - F Set Minimum Width 1.0 Seconds

REMARKS:

Keystrokes: C + Column + Row

Coordination Parameters		INTERVALS (In Seconds)			FUNCTION FLAGS DIAL 1				DIAL 2				DIAL 3				
		Dial 1	Dial 2	Dial 3	Force Off	Hold	Ped Restrict	Call	Force Off	Hold	Ped Restrict	Call	Force Off	Hold	Ped Restrict	Call	
0	Int	1	2	3	4	5	6	7	8	9	A	b	C	d	E	F	Int
System Manual * 0	0	90	120	120	2				2				2				0
Local Manual * 0	1	1	1	1	-				-				-				1
Master Dial	2	6	6	6			4				4				4		2
Local Dial	3	35	35	35	4,8		-		4,8		-		4,8		-		3
Offset Number	4	36	36	36	-,-				-,-				-,-				4
Time of Day Plan	5	47	47	49			1				1				1		5
Function 6 14	6	62	62	64	1		-		1		-		1		-		6
Current Table	7	63	63	65	-				-				-				7
Minimum Cycle 0	8	69	99	99			2				2				2		8
Maximum Cycle 255	9	90	120	120			-				-				-		9
Master Timer	A																A
Local Timer	b																b
System Timer	C																C
Current Offset	d																d
Last Master Cycle	E																E
Last Local Cycle	F																F

AAE, Inc.
1858 E. Helm Avenue, Suite 100
Orange, CA 92865
(714) 940-0100, (714) 940-0700-fax

LACO-3 SPECIAL FUNCTIONS

Intersection: Garfield Avenue @ Via Campo Date Prepared: 4/5/10 By: jth

T.S. No.: 9511 R-1 c/o MTB Date Implemented: _____ By: _____

OVERLAP PHASE FLAGS

Phases →		1	2	3	4	5	6	7	8
Overlap A	F-A-A	X							
Overlap B	F-A-b		X						
Overlap C	F-A-C								
Overlap D	F-A-d								
Overlap E	F-A-E								
Overlap F	F-A-F								

OVERLAP GREEN OMIT PHASES

Phases		1	2	3	4	5	6	7	8
Overlap A	F-b-A								
Overlap B	F-b-b								
Overlap C	F-b-C								
Overlap D	F-b-d								
Overlap E	F-b-E								
Overlap F	F-b-F								

RAILROAD PREEMPT OVERLAP FLAGS

Phases		1	2	3	4	5	6	7	8
Overlap A	F-C-A								
Overlap B	F-C-b								
Overlap C	F-C-C								
Overlap D	F-C-d								
Overlap E	F-C-E								
Overlap F	F-C-F								

EMERGENCY VEHICLE PREEMPT OVERLAP FLAGS

Phases →		1	2	3	4	5	6	7	8
Overlap A	F-d-A								
Overlap B	F-d-b								
Overlap C	F-d-C								
Overlap D	F-d-d								
Overlap E	F-d-E								
Overlap F	F-d-F								

LOAD SWITCH ASSIGNMENT

Ped A to Overlap A **	F-9-A	
Ped B to Overlap B **	F-9-b	
Send Overlap C Output to Phase	F-9-C	
Send Overlap D Output to Phase	F-9-d	
Send Overlap E Output to Phase	F-9-E	
Send Overlap F Output to Phase	F-9-F	

Overlap Notes
2-Color Overlaps (A-B) 3-Color Overlaps (C-F)

Unused Right Turn Overlap outputs may be assigned as additional Peds.

PED A uses J11U for Ped Push Button Input.
PED B uses J11L for Ped Push Button Input.

** Set Vehicle Phases for Ped A/B to time with.

USER FLAG OPTIONS

Keystrokes: d + E + F

			USER FLAG NOTES
True Maximum Extension	1		The True Maximum Extension flag does NOT allow a maxed out phase to extend.
EV Pedestrian Clearance NOT Protected	2		EV Clearance is NOT protected when this flag is set.
	3		Unused.
Mid-Block Pedestrian Crossing	4		Phases 2 & 6 Red Flash during Phase 4 Ped Protection.
Delay RR Track Clearance Phase Green	5		Delays Track Clearance until Overlaps time out.
Echo Remote Coordination Input to Output	6		SUB-MASTER OPERATION: Echo Slave Data to Master Output.
Enable Manual Control	7		Enables Manual Advance Operation. Requires MANUAL switch.
Delay EV Clearance Phase Green	8		Delays EV Clearance until Overlaps time out.

ASSOCIATED PHASE RECALL

A Locked Call is placed on the Flagged Phase when the Associated Recall Phase is Green.

Flagged Phases		1	2	3	4	5	6	7	8
Phase 1	F-C-1								
Phase 2	F-C-2								
Phase 3	F-C-3								
Phase 4	F-C-4								
Phase 5	F-C-5								
Phase 6	F-C-6								
Phase 7	F-C-7								
Phase 8	F-C-8								

PHASE / OVERLAP REASSIGNMENTS

Phases		1	2	3	4	5	6	7	8
Phase Driveway Flash	F-A-0								
Phase Yellow Ranging *	F-A-1								
Overlaps →		A	B	C	D	E	F		
Overlap Driveway Flash	F-A-2								
Overlap Yellow Ranging *	F-A-3								
Ped 2 Load Switch Overlap	F-A-4								
Ped 4 Load Switch Overlap	F-A-5								
Ped 6 Load Switch Overlap	F-A-6								
Ped 8 Load Switch Overlap	F-A-7								

Notes:
*Phase/Overlap Yellow Ranging - These Flags remove the minimum and maximum limits on the yellow settings.

Remarks:

AAE, Inc.
1858 E. Helm Avenue, Suite 100
Orange, CA 92865
(714) 940-0100, (714) 940-0700-fa

LACO-3 EVENT TABLES

Intersection: Garfield Avenue @ Via Campo Date Prepared: 4/5/10 By: jth

T.S. No.: 9511 R-1 c/o MTB Date Implemented: By:

TABLE 0 - DEFAULT				s	m	t	w	t	f	s
Code	Hour :	Min	Plan	1	2	3	4	5	6	7
0-0	00 :	00	E	X	X	X	X	X	X	X
0-1	06 :	00	2		X	X	X	X	X	
0-2	08 :	00	1	X						X
0-3	09 :	00	1		X	X	X	X	X	
0-4	16 :	00	3		X	X	X	X	X	
0-5	19 :	00	1		X	X	X	X	X	
0-6	21 :	00	E	X	X	X	X	X	X	X
0-7	:									
0-8	:									
0-9	:									
0-A	:									
0-b	:									
0-C	:									
0-d	:									
0-E	:									
0-F	:									

TABLE 3			s	m	t	w	t	f	s
Code	Hour : Min	Plan	1	2	3	4	5	6	7
3-0	:								
3-1	:								
3-2	:								
3-3	:								
3-4	:								
3-5	:								
3-6	:								
3-7	:								
3-8	:								
3-9	:								
3-A	:								
3-b	:								
3-C	:								
3-d	:								
3-E	:								
3-F	:								

SLAVE MODE TABLE			s	m	t	w	t	f	s
Code	Hour : Min	Dial	1	2	3	4	5	6	7
5-0	:								
5-1	:								
5-2	:								
5-3	:								
5-4	:								
5-5	:								
5-6	:								
5-7	:								
5-8	:								
5-9	:								
5-A	:								
5-b	:								
5-C	:								
5-d	:								
5-E	:								
5-F	:								

TABLE 1				s	m	t	w	t	f	s
Code	Hour :	Min	Plan	1	2	3	4	5	6	7
1-0	00 :	00	E		X	X	X	X	X	
1-1	08 :	00	1		X	X	X	X	X	
1-2	21 :	00	E		X	X	X	X	X	
1-3	:									
1-4	:									
1-5	:									
1-6	:									
1-7	:									
1-8	:									
1-9	:									
1-A	:									
1-b	:									
1-C	:									
1-d	:									
1-E	:									
1-F	:									

Plan = Plan Number

O/D	D1	D2	D3
01 =	1	2	3
02 =	4	5	6
03 =	7	8	9

Keys:
0 = No Days
8 = All Days
9 = Week Days

Plans:
A = Protected/Permissive Arrows (F-F-b) Disabled.
b = Slave Mode (4 Wire / 7 Wire Input)
C = Offset Timing Mode
d = T.O.D. Output (Detector Reset Line) "ON".
E = Function 6
F = Reset Plans A & d.

Table 6:
C = Continue the Floating Holiday by C (0-9) days.
N^{th} = The number of the occurrence in the month.
(1-5, 9 = Always the last occurrence in the month.)
i. e. Thanksgiving = 11/1/4 [table] flag Thursday continues one extra day.

FLOATING HOLIDAYS				s	m	t	w	t	f	s
Code	Month / C / N^{th}	Table		1	2	3	4	5	6	7
6-0	01 / 0 / 3	1			X					
6-1	02 / 0 / 3	1			X					
6-2	05 / 0 / 9	1			X					
6-3	09 / 0 / 1	1			X					
6-4	11 / 1 / 4	1						X		
6-5	/									
6-6	/									
6-7	/									
6-8	/									
6-9	/									
6-A	/									
6-b	/									
6-C	/									
6-d	/									
6-E	/									
6-F	/									

TABLE 2			s	m	t	w	t	f	s
Code	Hour : Min	Plan	1	2	3	4	5	6	7
2-0	:								
2-1	:								
2-2	:								
2-3	:								
2-4	:								
2-5	:								
2-6	:								
2-7	:								
2-8	:								
2-9	:								
2-A	:								
2-b	:								
2-C	:								
2-d	:								
2-E	:								
2-F	:								

TABLE 4			s	m	t	w	t	f	s
Code	Hour : Min	Plan	1	2	3	4	5	6	7
4-0	:								
4-1	:								
4-2	:								
4-3	:								
4-4	:								
4-5	:								
4-6	:								
4-7	:								
4-8	:								
4-9	:								
4-A	:								
4-b	:								
4-C	:								
4-d	:								
4-E	:								
4-F	:								

EXCEPTION DAYS				s	m	t	w	t	f	s
Code	Month / Day	Table		1	2	3	4	5	6	7
7-0	01 / 01	1			X	X	X	X	X	
7-1	01 / 02	1			X					
7-2	07 / 04	1			X	X	X	X	X	
7-3	07 / 05	1			X					
7-4	11 / 10	1							X	
7-5	11 / 11	1			X	X	X	X	X	
7-6	11 / 12	1			X					
7-7	12 / 24	1			X	X	X	X	X	
7-8	12 / 25	1			X	X	X	X	X	
7-9	12 / 26	1			X				X	
7-A	/									
7-b	/									
7-C	/									
7-d	/									
7-E	/									
7-F	/									

AAE, Inc.
1858 E. Heim Avenue, Suite 100
Orange, CA 92865
(714) 940-0100, (714) 940-0700-fax

LACO-3 ANNUAL TABLES

Intersection: Garfield Avenue @ Via Campo

Date Prepared: 4/5/10 By: jth

T.S. No.: 9511 R-1 c/o MTB

Date Implemented: By:

ANNUAL EVENTS			s	m	t	w	t	f	s
Code	Month / Day	Table	1	2	3	4	5	6	7
8-0	/								
8-1	/								
8-2	/								
8-3	/								
8-4	/								
8-5	/								
8-6	/								
8-7	/								
8-8	/								
8-9	/								
8-A	/								
8-b	/								
8-C	/								
REMARKS:									
8-E	/								
8-F	/								

ANNUAL EVENTS			s	m	t	w	t	f	s
Code	Month / Day	Table	1	2	3	4	5	6	7
9-0	/								
9-1	/								
9-2	/								
9-3	/								
9-4	/								
9-5	/								
9-6	/								
9-7	/								
9-8	/								
9-9	/								
9-A	/								
9-b	/								
9-C	/								
9-d	/								
9-E	/								
9-F	/								

NOTES ON USING TABLES:
Starting from the base display [A/b], Table access is gained with two digit Table Code. Access is verified by the flashing of Call Light 9.

Five key presses will be required followed by [E] to enter the data and open the flag mode. Day of Week flags can now be set.

ADDITIONAL KEY CODES:
A-C = Clock Display
A-D = Date Display

d-0-0 = 1 Force Repoll of WWV Receiver
d-0-1 = Hour of Last Repoll
d-0-2 = Minute of Last Repoll
d-0-3 = Second of Last Repoll
d-0-4 = Month of Last Repoll
d-0-5 = Day of Last Repoll
d-0-6 = Year of Last Repoll

OBSERVE ONLY:
E-3-8 = Ring A Max Timer
E-4-8 = Ring B Max Timer
E-6-3 = 4 T.O.D. Output
E-6-3 = 5 Offset Timing Mode
E-6-3 = 6 Slave Mode
E-6-3 = 7 Maximum Extension 2 (Coord)
E-6-3 = 8 Arrows Disabled

F-0-0 = Phase / Dial Copy - Source
Phase (1-8) Dial (11-13)
F-0-1 = Phase / Dial Copy - Destination
Phase (1-8) Dial (11-13)
F-0-2 = Table/Dial Insert/Delete - Target
Table (0-9) Table (1=10) Dial (11-13)
F-0-3 = Table/Dial Insert/Delete - Interval
Insert 1-16 Delete 101-116
F-0-4 = Program Number
F-0-5 = Version Number

F-0-A = 1 Searches Annual Event Tables.
F-0-A = 071 Save Timing to Prom Module.
F-0-A = 170 Download Timing into 170.
F-0-A = 777 Reinitialization from NOVRAM.
F-0-A = 888 Reinitialization from EPROM.
F-0-A = 999 Clears All Tables and Loads Default Holiday Events.

OFFSETS			
Keystrokes: F + 9 + CODE			
OFFSET 1	Dial 1	1	87
	Dial 2	2	0
	Dial 3	3	0
OFFSET 2	Dial 1	4	
	Dial 2	5	
	Dial 3	6	
OFFSET 3	Dial 1	7	
	Dial 2	8	
	Dial 3	9	

COMMUNICATIONS ASSIGNMENTS		
Keystrokes: d + 0 + FUNCTION		
PORT 1	7	1
PORT 2	8	
PORT 3	9	
PORT 4	A	

0 = Off
1 = WWV Radio Receiver
2 = ML2 Protocol - Coord OUT Only
4 = ML2 Protocol - Coord IN & OUT
7 = ML2 Protocol - Coord IN Only
8 = Remote Monitoring (Future)
12 = Sends Time/Date String Out of Modem
17 = Receives Time/Date String from Modem

LOS ANGELES COUNTY
DEPARTMENT OF PUBLIC WORKS
TRAFFIC & LIGHTING DIVISION
TRAFFIC SIGNAL TIMING

LACO - 1R WWV - TIME - BASED

TYPE 170 PROGRAM

OK SDH 5-8-13

Revised on 7-30-13 per Michael Ortega (Siemens)

Intersection: Garfield Avenue @ Beverly Boulevard

Date Prepared: 5-2-13 HcH By: HA

T.S. No.: 8561 (c/o Montebello)

Date Implemented: By:

PHASE TIMING		Keystrokes: F + Phase + Interval							
Phase #		1	2	3	4	5	6	7	8
Minimum Walk	0		13	0	12		13	0	13
Flashing Don't Walk	1		19	0	28		23	0	23
Minimum Green	2		8	4	9		8	4	9
Queue Maximum	3		25	0	25		25	0	25
Added Green/Actuation	4		0.0	0.0	0.0		0.0	0.0	0.0
Vehicle Extension	5		3.0	2.5	3.0		3.0	2.5	3.0
Maximum Gap	6		4.0	2.5	4.0		4.0	2.5	4.0
Minimum Gap	7		2.0	2.5	2.0		2.0	2.5	2.0
Max Extension 1 (Free)	8		50	20	50		50	20	50
Max Extension 2 (Coord)	9		50	20	110		50	20	110
Offset 1	A	Dial 1	Dial 2 89	Dial 3 9					
Offset 2	b								
Offset 3	C								
Reduce 0.1 Sec. Every...	d		1.0	0.0	1.0		1.0	0.0	1.0
Yellow	E	4.3	4.0	3.0	4.5	4.3	4.0	3.0	4.5
Red Clearance	F		1.0	1.0	1.0		1.0	1.0	1.0

Max Added Green	F-0-E	0
Red Revert	F-0-F	2.0

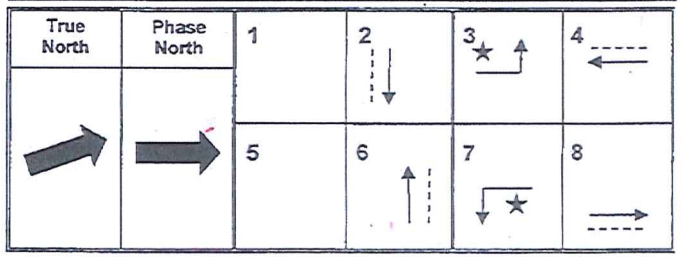
Remarks:

★ = PROTECTED/PERMISSIVE LEFT TURN

PREEMPTION		
Keystrokes: F+E+Function		
RR Select (0, 1, 2)		0
Track Clearance		1
RR Red		2
RR2 Maximum(Minutes)		3
EV-A Delay		4
EV-A Clearance		5
EV-B Delay		6
EV-B Clearance		7
EV-C Delay		8
EV-C Clearance		9
EV-D Delay		A
EV-D Clearance		b
EV Maximum (Seconds)		C
Delay Timer		d
Clearance Timer		E
Maximum Timer		F

PHASE FUNCTION FLAGS									
Keystokes: F+F+Function									
		1	2	3	4	5	6	7	8
Phases Permitted	0		X	X	X		X	X	X
Red Lock	1								
Red & Yellow Lock	2		X		X		X		X
Minimum Vehicle Recall	3				X				X
Pedestrian Recall + Rest in Walk	4								
Pedestrian Phases	5		X		X		X		X
Rest in Red	6								
Semi Traffic Actuated Mode	7								
Double Entry	8		X				X		
Maximum Vehicle Recall	9								
Overlap A	A								
Overlap B	b								
Barrier Recall	C								
Rest in Green	d								
Yellow Start Up	E		X				X		
Protected/Permissive Left Turn	F			X				X	

LAG PHASE FLAGS		1	2	3	4	5	6	7	8
Lag Free	d-F-0		X		X		X		X
Lag Dial 1	d-F-1		X		X		X		X
Lag Dial 2	d-F-2		X		X		X		X
Lag Dial 3	d-F-3		X		X		X		X



LACO-1R WWV DETECTOR ASSIGNMENTS

T.S.: 8561 (c/o Montebello) Intersection: Garfield Avenue @ Beverly Boulevard Date Prepared: 5-2-13 HCH By: HA

App	Lanes	Description	Phase File - Slot Channel	Delay Code	Delay Seconds	Extended Call Code	Extended Call Seconds	Remarks (Note: The four Programmable Detectors will default to normal phasing if not flagged.)	Yellow Disconnect Code	Yellow Disconnect Lite	Yellow Disconnect On	Queue Clearing Code	Queue Clearing Lite	Queue Clearing On
			1I1U	d10		d30			dF4	1		dF8	1	
			1I1L											
W	1	ADVANCE	2I2U	d11		d31	1.0		dF4	2		dF8	2	
W	2	ADVANCE	2I2L	d12		d32	1.0		dF4	3		dF8	3	
W	1,2	QUEUE CL	2I3U	d13		d33	2.0		dF4	4		dF8	4	X
W	RT	FIRST VEHICLE	2I3L	d14	10	d34			dF4	5		dF8	5	
W	LT	HOLDING 3-6'X6'	2I4U	d15		d35		Call Ø: 1 2 3 4 5 6 7 8 / dd8: X	dF4	6	X	dF8	6	
			2I4L						dF4			dF8		
S	LT	QUEUE LENGTH	3I5U	d16	5	d36		6'X25'	dF4	7		dF8	7	
			3I5L						dF4			dF8		
N	1	ADVANCE	4I6U	d17		d37	1.5		dF4	8		dF8	8	
N	2	ADVANCE	4I6L	d18		d38	1.5		dF5	1		dF9	1	
N	LT	2-6'X6'	4I7U	d19		d39			dF5	2		dF9	2	
			4I7L	d1A		d3A			dF5	3		dF9	3	
N	1	QUEUE CL 2-6'X6'	4I8U	d1b		d3b	2.0	Call Ø: 1 2 3 4 5 6 7 8 / dd9: X	dF5	4		dF9	4	X
N	2	QUEUE CL (2) 2-6'X6'	4I8L						dF5			dF9		
			1I9U	d1C		d3c			dF5	5		dF9	5	
			3I9L	d1d		d3d			dF5	6		dF9	6	
			5J1U	d20		d40			dF6	1		dFA	1	
			5J1L						dF6			dFA		
E	1	ADVANCE	6J2U	d21		d41	1.0		dF6	2		dFA	2	
E	2	ADVANCE	6J2L	d22		d42	1.0		dF6	3		dFA	3	
E	1,2	QUEUE CL	6J3U	d23		d43	2.0		dF6	4		dFA	4	X
E	RT	FIRST VEHICLE	6J3L	d24	10	d44			dF6	5		dFA	5	
E	LT	HOLDING 3-6'X6'	6J4U	d25		d45		Call Ø: 1 2 3 4 5 6 7 8 / ddA: X	dF6	6	X	dFA	6	
			6J4L						dF6			dFA		
N	LT	QUEUE LENGTH	7J5U	d26	5	d46		6'X25'	dF6	7		dFA	7	
			7J5L						dF6			dFA		
S	1	ADVANCE	8J6U	d27		d47	1.5		dF6	8		dFA	8	
S	2	ADVANCE	8J6L	d28		d48	1.5		dF7	1		dFb	1	
S	LT	2-6'X6'	8J7U	d29		d49			dF7	2		dFb	2	
			8J7L	d2A		d4A			dF7	3		dFb	3	
S	1	QUEUE CL 2-6'X6'	8J8U	d2b		d4b	2.0	Call Ø: 1 2 3 4 5 6 7 8 / ddb: X	dF7	4		dFb	4	X
S	2	QUEUE CL 2-6'X6'	8J8L						dF7			dFb		
			5J9U	d2C		d4C			dF7	5		dFb	5	
			7J9L	d2d		d4d			dF7	6		dFb	6	

YELLOW DISCONNECT QUICK REFERENCE

	Call Lights							
Code	1	2	3	4	5	6	7	8
dF4						X		
dF5								
dF6						X		
dF7								

Remarks:

QUEUE CLEARING DETECTOR QUICK REFERENCE

	Call Lights							
Code	1	2	3	4	5	6	7	8
dF8				X				
dF9				X				
dFA				X				
dFb				X				

LACO-1R WWV - TIME - BASED COORDINATION

T.S. No.: 8541 (c/o Montebello) Intersection: Garfield Avenue @ Beverly Boulevard

System Limits: VIA ACOSTA TO OLYMPIC BOULEVARD

Remote Master: WWV Date Prepared: 5-2-13 Hcl By: HA

Date Implemented: By:

TIME OF DAY OPERATION SUMMARY			
	Dial 1	Dial 2	Dial 3 / Offset Timing
Offset 1		0600-0900 M-F	1500-2000 M-F
Offset 2			
Offset 3			
Free	ALL OTHER TIMES		
Special			

INTERCONNECT SELECT

d-0-0 [ ] 7 = Slave [X] 170 = Master

d-0-E Set Maximum Width 4.0 Seconds

d-0-F Set Minimum Width 1.0 Seconds

Remarks:

* Set Local Manual to 14 (free) before setting or changing dial intervals & functions. Setting either of the Manuals to 0 will release that Manual.

Offset Timing Mode:
A 12 at C-0-1 or by T.O.D enables this mode and uses the Dial 3 Intervals and Functions.

Observe:

Call	d-F-C
Hold	d-F-d
Ped Restrict	d-F-E
Force - Off	d-F-F
Cycle with Field Calls	C-0-b
Master Sync Pulse Width	d-0-d

Keystrokes:
C + Column + Row

Coordination Parameters		INTERVALS (In seconds)			FUNCTION FLAGS DIAL 1				DIAL 2				DIAL 3 / OFFSET TIMING				
		Dial 1	Dial 2	Dial 3	Force Off	Hold	Ped Rstrict	Call	Force Off	Hold	Ped Rstrict	Call	Force Off	Hold	Ped Rstrict	Call	
0	Int	1	2	3	4	5	6	7	8	9	A	b	C	d	E	F	Int
System Manual* 0	0		100	100					4,8				4,8				0
Local Manual* 0	1		1	1					-,-				-,-				1
Master Plan	2		6	6							2,6				2,6		2
Current Dial	3		28	28						4,8	2,6			4,8	2,6		3
Offset Number	4		42	42					2,6	4,8	-,-		2,6	4,8	-,-		4
Time of Day Plan	5		43	43					-,-	4,8			-,-	4,8			5
Function 6 14	6		55	55					3,7	4,8			3,7	4,8			6
Current Time	7		56	56					-,-	4,8			-,-	4,8			7
Minimum Cycle 0	8		60	60						4,8	4			4,8	4		8
Maximum Cycle 255	9		64	64						4,8	4,8			4,8	4,8		9
Yellow Times	A		78	68						-,-	4,8			-,-	4,8		A
Local Timer	b		100	100							-,-				-,-		b
New Cycle	C																C
Current Offset	d																d
Last Master Cycle	E																E
Last Local Cycle	F																F

LACO-1R WWV TIME BASE UNIT

CLOCK AND EVENT TABLE SHEET

Intersection: Garfield Avenue @ Beverly Boulevard Date Prepared: 5-2-13/cH By: HA

T.S. No.: 8561 (c/o Montebello) Date Implemented: _____ By: _____

CONTROL CODE A-C — CLOCK — CONTROL CODE A-D

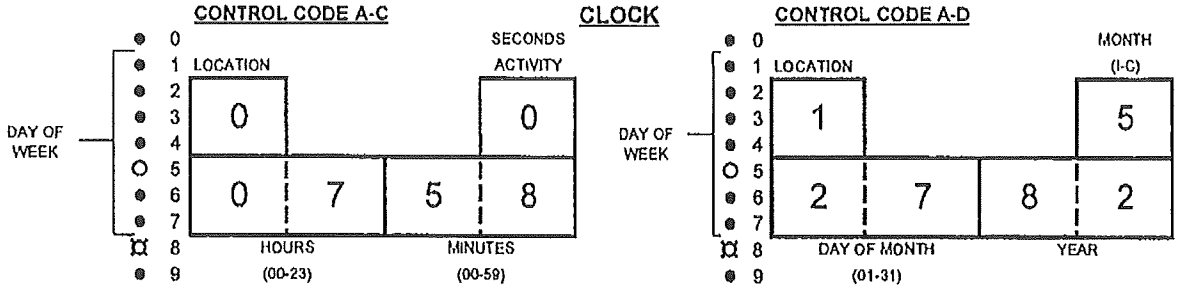


FIG. 1 FIG. 2

ABOVE EXAMPLES
7:58 A.M. ON THRUSDAY (FIG. 1)
MAY 27, 1982 (FIG. 2)

DAY OF WEEK

1	SUNDAY
2	MONDAY
3	TUESDAY
4	WEDNESDAY
5	THRUSDAY
6	FRIDAY
7	SATURDAY

MONTH

1	JANUARY	7	JULY
2	FEBRUARY	8	AUGUST
3	MARCH	9	SEPTEMBER
4	APRIL	A	OCTOBER
5	MAY	B	NOVEMBER
6	JUNE	C	DECEMBER

DIRECTIONS

At control code A - C, key in hours and minutes, then key in 0 for seconds activity. Enter key E and turn on call light corresponding to day of the week. (NOTE: Seconds start at 0 seconds - for observation and correction use address D - 4 - F). At cibtrik cide A - D, key in the day of the month, year and month, then enter key E.

CONTROL CODE 9-3 — EVENT TABLE

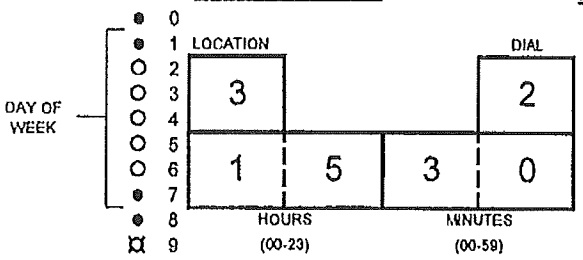


FIG. 3

ABOVE EXAMPLE

The example (FIG. 3), shows a time of day event at control code 9-3 with dial 2 to start at 3:30 P.M. each weekday from Monday through Friday.

DIRECTIONS

To set an event, key in 9 + the table location, key in hour, minute, and event, then enter key E. Set day(s) with call/active lights. To observe current event use address C - 0 - 5. (NOTE: These time of day events are local - not system events.)

REMARKS:

FOR DIRECT INTERCONNECT ONLY. (D00=7)

LOC. 9+ ↓	TIME	EVENT *DIAL	DAY AND LIGHT ← Set DAY using call/active LIGHT → SUN 1	MON 2	TUE 3	WED 4	THUR 5	FRI 6	SAT 7
0									
1									
2									
3									
4									
5									
6									
7									
8									
9									
A									
B									
C									
D									
E									
F									

* DIAL 1 = 1, 2 = 2, 3 = 3, FREE = E, OFF = 0.
(NOTE: At C - 0 - 5, Free = 14)
OFFSET TIMING =C T.O.D. FLASH=F

LACO-1R WWV - TIME - BASED EVENT TABLES

Intersection: Garfield Avenue @ Beverly Boulevard

Date Prepared: 5-2-13 HCH By: HA

T.S. No.: 8561 (c/o Montebello)

Date Implemented: By:

TABLE 0 - DEFAULT			s	m	t	w	t	f	s
Code	Hour : Min	Plan	1	2	3	4	5	6	7
0 -0	00 : 00	E	X	X	X	X	X	X	X
0 -1	06 : 00	2		X	X	X	X	X	
0 -2	09 : 00	E		X	X	X	X	X	
0 -3	15 : 00	3		X	X	X	X	X	
0 -4	20 : 00	E		X	X	X	X	X	
0 -5	:								
0 -6	:								
0 -7	:								
0 -8	:								
0 -9	:								
0 -A	:								
0 -b	:								
0 -C	:								
0 -d	:								
0 -E	:								
0 -F	:								

TABLE 3			s	m	t	w	t	f	s
Code	Hour : Min	Plan	1	2	3	4	5	6	7
3 -0	:								
3 -1	:								
3 -2	:								
3 -3	:								
3 -4	:								
3 -5	:								
3 -6	:								
3 -7	:								
3 -8	:								
3 -9	:								
3 -A	:								
3 -b	:								
3 -C	:								
3 -d	:								
3 -E	:								
3 -F	:								

ANNUAL EVENTS			s	m	t	w	t	f	s
Code	Month / N^{th}	Table	1	2	3	4	5	6	7
5 -0	/								
5 -1	/								
5 -2	/								
5 -3	/								
5 -4	/								
5 -5	/								
5 -6	/								
5 -7	/								
5 -8	/								
5 -9	/								
5 -A	/								
5 -b	/								
5 -C	/								
5 -d	/								
5 -E	/								
5 -F	/								

TABLE 1			s	m	t	w	t	f	s
Code	Hour : Min	Plan	1	2	3	4	5	6	7
1 -0	00 : 00	E		X	X	X	X	X	
1 -1	:								
1 -2	:								
1 -3	:								
1 -4	:								
1 -5	:								
1 -6	:								
1 -7	:								
1 -8	:								
1 -9	:								
1 -A	:								
1 -b	:								
1 -C	:								
1 -d	:								
1 -E	:								
1 -F	:								

Plan = Plan Number

	D1	D2	D3
O1 =	1	2	3
O2 =	4	5	6
O3 =	7	8	9

Plans:
A = Arrows On
d = Arrows Off
C = Offset Timing
E = Function 6
F = Flash

Keys:
0 = No Days
8 = All Days
9 = Weekdays

Table #4, N^{th} = The number of the occurrence in the month (1-5). 99 = Always the last occurance in the month.

I.E. Thanksgiving = 11/04 [Table] and Thursday.

ANNUAL EVENTS			s	m	t	w	t	f	s
Code	Month / N^{th}	Table	1	2	3	4	5	6	7
6 -0	/								
6 -1	/								
6 -2	/								
6 -3	/								
6 -4	/								
6 -5	/								
6 -6	/								
6 -7	/								
6 -8	/								
6 -9	/								
6 -A	/								
6 -b	/								
6 -C	/								
6 -d	/								
6 -E	/								
6 -F	/								

TABLE 2			s	m	t	w	t	f	s
Code	Hour : Min	Plan	1	2	3	4	5	6	7
2 -0	:								
2 -1	:								
2 -2	:								
2 -3	:								
2 -4	:								
2 -5	:								
2 -6	:								
2 -7	:								
2 -8	:								
2 -9	:								
2 -A	:								
2 -b	:								
2 -C	:								
2 -d	:								
2 -E	:								
2 -F	:								

FLOATING HOLIDAYS			s	m	t	w	t	f	s
Code	Month / N^{th}	Table	1	2	3	4	5	6	7
4 -0	01 / 03	1		X					
4 -1	02 / 03	1		X					
4 -2	05 / 99	1		X					
4 -3	09 / 01	1		X					
4 -4	11 / 04	1					X		
4 -5	/								
4 -6	/								
4 -7	/								
4 -8	/								
4 -9	/								
4 -A	/								
4 -b	/								
4 -C	/								
4 -d	/								
4 -E	/								
4 -F	/								

ANNUAL EVENTS			s	m	t	w	t	f	s
Code	Month / N^{th}	Table	1	2	3	4	5	6	7
7 -0	/								
7 -1	/								
7 -2	/								
7 -3	/								
7 -4	/								
7 -5	/								
7 -6	/								
7 -7	/								
7 -8	/								
7 -9	/								
7 -A	/								
7 -b	/								
7 -C	/								
7 -d	/								
7 -E	/								
7 -F	/								

LACO-1R WWV-TIME-BASED ANNUAL TABLES

Intersection: Garfield Avenue @ Beverly Boulevard Date Prepared: 5-2-13 HCH By: HH

T.S. No.: 8561 (c/o Montebello) Date Implemented: _____ By: _____

EXCEPTION DAYS			s	m	t	w	t	f	s
Code	Month / Day	Flag	1	2	3	4	5	6	7
8-0	01 / 01	1		X	X	X	X	X	
8-1	01 / 02	1		X					
8-2	07 / 04	1		X	X	X	X	X	
8-3	07 / 05	1		X					
8-4	11 / 10	1						X	
8-5	11 / 11	1		X	X	X	X	X	
8-6	11 / 12	1		X					
8-7	12 / 24	1		X	X	X	X	X	
8-8	12 / 25	1		X	X	X	X	X	
8-9	12 / 26	1		X				X	
8-A	/								
8-b	/								
8-C	/								
8-d	/								
8-E	/								
8-F	/								

EXCEPTION TIMES			Table 8 Flags						
Code	Hour : Min	Plan	1	2	3	4	5	6	7
9-0	00 : 00	E	X						
9-1	:								
9-2	:								
9-3	:								
9-4	:								
9-5	:								
9-6	:								
9-7	:								
9-8	:								
9-9	:								
9-A	:								
9-b	:								
9-C	:								
9-d	:								
9-E	:								
9-F	:								

NOTES ON USING TABLES:

Starting from the base display [A/b], Table access is gained with a two digit Table Code. Access is verified by the flashing of both Call Light 9 and the Phase digit* of the display (* No Flash if Table # & Event # match).

Five keypresses will be required followed by [E] to either the data and open the flag mode. Day of Week flags can now be set.

ADDITIONAL KEY CODES:

d-0-3=1 Search Tables
d-0-3=3 Repoll WWV Clock
d-A-F=1 Repoll WWV Clock
d-0-3=071 Save Timing to Prom Module
d-0-3=170 Download Timing into 170
d-0-3=999 Clear All Tables
F-0-0=Phase/Dial Copy - Source
F-0-1=Phase/Dial Copy - Destination
F-0-4=Program Number (66)
d-0-8,9,A=Mo,Day,Yr of Latest Revision
E-E-0-0= Reinitialization

SPECIAL FUNCTION TABLE Keystrokes: F + d + Function		Phase Flags							
		1	2	3	4	5	6	7	8
(Green) Calling Phases	0								
(Green) Call To Phases	1								
(Yellow) Calling Phases	2								
(Yellow) Call To Phases	3								
Auxiliary Ovlp A Output	4								
Mid-Block Ped Crossing	5								
Driveway Flash	6								
Green Extension	7								
Sequential Ped	8								
Not Used	9								
EV- A Clearance Phases	A								
EV- B Clearance Phases	b								
EV- C Clearance Phases	C								
EV- D Clearance Phases	d								
Track Clerance Phases	E								
Limited Servces Phases	F								

When Any Flagged Phase Is Green ---
--- Place A Locked Call To These Phases.
When Any Flagged Phase Is Yellow ---
--- Place A Locked Call To These Phases.
"Three Color single Phase Overlap" Outputs On Auxiliary File - Slot 1
Ø4P Only. Ø2 & Ø6 Reds Flash During Ø4P Clearance
Flashes The Green Outputs of The Selected Phases
Staggered Termination At Barrier Crossing
Allows Ø1, Ø3 or Ø5 Ped to output on the Ø8P Load Switch

OVERLAP GREEN OMIT	Keys	1	2	3	4	5	6	7	8
Green Omit for Overlap A	F-C-4								
Green Omit for Overlap B	F-C-5								
Green Omit for Overlap C	F-C-6								
Green Omit for Overlap D	F-C-7								

F-9-7		Coordination Free Time (Seconds) After railroad preempt
F-9-d		Green Rest Delay Time (Seconds)
d-0-1		RAILROAD ROUTINE SELECT: 0=Normal Railroad 1=Special Two Input Railroad Routine
d-0-2		MANUAL CONTROL: 0=Not Enabled 1=No Rcalls 2=Vehicle recalls 3=Vehicle and Ped Recalls

PHASE OMIT	Keys	1	2	3	4	5	6	7	8
Phase Omit (Observe Only)	d-d-4								
Phase Omit for Dial 1	d-d-5								
Phase Omit for Dial 2	d-d-6								
Phase Omit for Dial 3	d-d-7								

PHASE OMIT is active when Coordination CALL function is active and the OMIT flag is set.

ADDITIONAL OVERLAPS	Keys	1	2	3	4	5	6	7	8
Aux File 2 Color Overlap C	d-d-C								
Aux File 2 Color Overlap D	d-d-d								
Ø7 Load Sw. 3 Color Ovlp E	d-d-E								
Green Omit for Overlap E	d-d-F								

Overlap E will not function if the Railroad Preempt has been selected.

LACO-1R WWV TIME BASED
COMMUNICATIONS & SPECIAL OPTIONS

Intersection: Garfield Avenue @ Beverly Boulevard

Date Prepared: 5-2-13 HCH By: HA

T.S. No.: 8561 (c/o Montebello)

Date Implemented: _____ By: _____

SPECIAL OPTIONS	Keys	
Comm 3 Options	F-9-3	
User Flag Options	F-C-2	
AB3418 Slave Number (1-62)	F-9-0	

Comm 3 Options (F-9-3)

1. Unused
2. Transmit 7-Wire
3. Unused
4. Transmit Time & Day
5. Unused
6. Transmit Plan
7. Transmit State Protocal AB3418 Time & Date
8. Receive & Respond to State Protocal AB3418

Note: A Slave Number must be entered at F-9-0 (1-62) when using Option # 8.

User Flag Options (F-C-2)

1. Send out the "System Sync Pulse" on Phase 4 Ped Yellow
2. Send out the "Time of Day Output" on Phase 4 Ped Yellow
3. Send out the "Midnight Sync Pulse" on Phase 4 Ped Yellow
4. Reserved
5. Enable AB3418 to set the Time & Date
6. Enable AB3418 to set the Coordination Free
7. Enable the Special Time of Day Overlap B
8. Enable the Freeway Ramp Release Logic Routine