

TYPE 170 PROGRAM

Intersection: Lennox Boulevard @ Freeman Avenue

Date Prepared: 2-1-17 SDD By: MRR

T.S. No.: 0683

Date Implemented: 2-15-17 By: WCS

PHASE TIMING		Keystrokes: F + Phase + Interval							
Phase #		1	2	3	4	5	6	7	8
Minimum Walk	0		7		9		7		
Flashing Don't Walk	1		9		15		9		
Minimum Green	2		10		8		10		
Queue Maximum	3		0		0		0		
Added Green/Actuation	4		2.2		0.0		2.2		
Vehicle Extension	5		4.0		3.0		4.0		
Maximum Gap	6		5.0		3.0		5.0		
Minimum Gap	7		3.0		3.0		3.0		
Max Extension 1 (Free)	8		50		30		50		
Max Extension 2 (Coord)	9		0		0		0		
Offset 1	A	Dial 1	Dial 2	Dial 3					
Offset 2	b								
Offset 3	C								
Reduce 0.1 Sec. Every...	d		1.5		0.0		1.5		
Yellow	E		4.0		4.0		4.0		
Red Clearance	F		0.5		0.5		0.5		

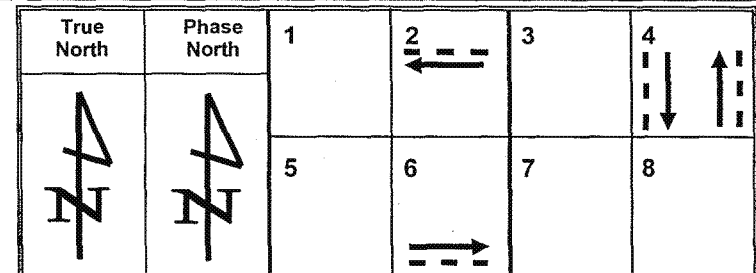
PREEMPTION		Keystrokes: F+E+Function	
RR Select (0, 1, 2)			0
Track Clearance			1
RR Red			2
RR2 Maximum(Minutes)			3
EV-A Delay			4
EV-A Clearance			5
EV-B Delay			6
EV-B Clearance			7
EV-C Delay			8
EV-C Clearance			9
EV-D Delay		A	A
EV-D Clearance		b	b
EV Maximum (Seconds)		C	C
Delay Timer		d	d
Clarence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

PHASE FUNCTION FLAGS		Keystrokes: F+F+Function								
			1	2	3	4	5	6	7	8
Phases Permitted	0		X		X		X			
Red Lock	1									
Red & Yellow Lock	2		X					X		
Minimum Vehicle Recall	3		X					X		
Pedestrian Recall + Rest in Walk	4		X					X		
Pedestrian Phases	5		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	X	X	X	X
Lag Dial 1	d-F-1	X	X	X	X	X	X	X	X
Lag Dial 2	d-F-2	X	X	X	X	X	X	X	X
Lag Dial 3	d-F-3	X	X	X	X	X	X	X	X

Max Added Green	F-0-E	20
Red Revert	F-0-F	2.0

Remarks:



LACO-1R WWV DETECTOR ASSIGNMENTS

T.S.: **0683**

Intersection: **Lennox Boulevard @ Freeman Avenue**

Date Prepared: **2-1-17 SDD** By: **MRR**

App	Lanes	Description	Phase File - Slot Channel	Delay		Extended Call		Remarks Note: The four Programmable Detectors will default to normal phasing if not flagged.	Yellow Disconnect			Queue Clearing		
				Code	Seconds	Code	Seconds		Code	Lite	On	Code	Lite	On
			1H1U	d10		d30			dF4	1		dF8	1	
			1H1L											
E	1	ADVANCE**	2I2U	d11		d31			dF4	2		dF8	2	
E	2	ADVANCE**	2I2L	d12		d32			dF4	3		dF8	3	
			2I3U	d13		d33			dF4	4		dF8	4	
			2I3L	d14		d34			dF4	5		dF8	5	
			2I4U	d15		d35			dF4	6		dF8	6	
			2I4L						dd8					
			3I5U	d16		d36			dF4	7		dF8	7	
			3I5L						dF4			dF8		
N	1	1ST VEH (2-6'X6')*	4I6U	d17		d37			dF4	8		dF8	8	
S	1-1, 1-2	1ST VEH (2-6'X6')*	4I6L	d18		d38			dF5	1		dF9	1	
			4I7U	d19		d39			dF5	2		dF9	2	
			4I7L	d1A		d3A			dF5	3		dF9	3	
			4I8U	d1b		d3b			dF5	4		dF9	4	
			4I8L						dd9					
			1I9U	d1C		d3c			dF5	5		dF9	5	
			3I9L	d1d		d3d			dF5	6		dF9	6	
			5J1U	d20		d40			dF6	1		dFA	1	
			5J1L						dF6			dFA		
W	1	ADVANCE**	6J2U	d21		d41			dF6	2		dFA	2	
W	2	ADVANCE**	6J2L	d22		d42			dF6	3		dFA	3	
			6J3U	d23		d43			dF6	4		dFA	4	
			6J3L	d24		d44			dF6	5		dFA	5	
			6J4U	d25		d45			dF6	6		dFA	6	
			6J4L						ddA					
			7J5U	d26		d46			dF6	7		dFA	7	
			7J5L						dF6			dFA		
			8J6U	d27		d47			dF6	8		dFA	8	
			8J6L	d28		d48			dF7	1		dFb	1	
			8J7U	d29		d49			dF7	2		dFb	2	
			8J7L	d2A		d4A			dF7	3		dFb	3	
			8J8U	d2b		d4b			dF7	4		dFb	4	
			8J8L						ddb					
			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:
 * BICYCLE DETECTION
 ** VIDEO DETECTION

QUEUE CLEARING DETECTOR QUICK REFERENCE								
Call Lights								
Code	1	2	3	4	5	6	7	8
dF8								
dF9								
dFA								
dFb								

LACO-1R WWV TIME BASE UNIT CLOCK AND EVENT TABLE SHEET

Intersection: Lennox Boulevard @ Freeman Avenue
 T.S. No.: 0683

Date Prepared: 2-1-77 By: MRR
 Date Implemented: _____ By: _____

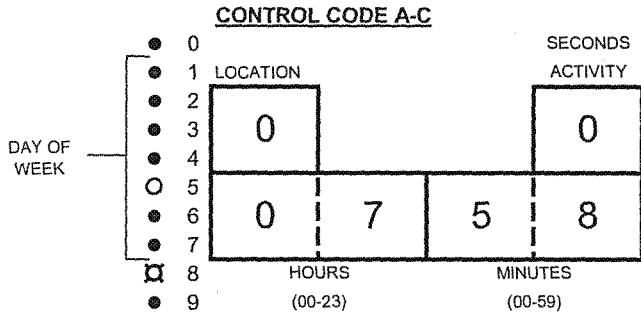


FIG. 1

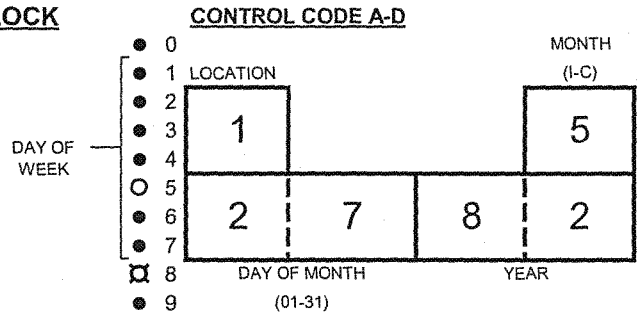


FIG. 2

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 control code A - D, key in the day of the month, year and month, then enter key E.

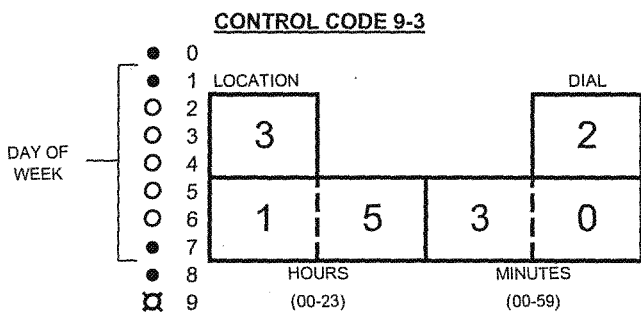


FIG. 3

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.)

EVENT TABLE

FOR DIRECT INTERCONNECT ONLY. (D00=7)

		DAY AND LIGHT						
		← Set DAY using call/active LIGHT →						
LOC.	EVENT	SUN	MON	TUE	WED	THUR	FRI	SAT
9+ ↓	TIME *DIAL	1	2	3	4	5	6	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

REMARKS:

Intersection: Lennox Boulevard @ Freeman Avenue

Date Prepared: SDD By: MRR

T.S. No.: 0683

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	/									
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	/									

EXCEPTION TIMES		Table 8 Flags							
Code	Hour : Min	Plan	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 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 Clearance 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 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								

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 Ovrtp 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.

**LACO-1R WWV TIME BASED
COMMUNICATIONS & SPECIAL OPTIONS**

Intersection: Lennox Boulevard @ Freeman Avenue

Date Prepared: SDD By: MRR

T.S. No.: 0683

Date Implemented: _____ By: _____

SPECIAL OPTIONS	Keys								
Comm 3 Options	F-9-3								
		1	2	3	4	5	6	7	8
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 Protocol AB3418 Time & Date
8. Receive & Respond to State Protocol 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