

EOS BASIC

Self Study

1. CONFIGURATION

 **ECONOLITE**

Saving Lives Through Improved Mobility

MM-1 Configuration Submenu

ASC3

CONFIGURATION SUBMENU	
1. CONTROLLER SEQ	5. COMMUNICATIONS
2. PHASE IN USE/PED	6. ENABLE LOGGING
3. LOAD SW ASSIGN	7. DISPLAY/ACCESS
4. PORT 1 (SDLC)	8. LOGIC PROCESSOR

EOS

CONFIGURATION SUBMENU	
1. CABINET	5. LOGIC PROCESSOR
2. COMMUNICATIONS	6. DATABASE
3. LOGGING	7. SECURITY ACCESS
4. DISPLAY OPTIONS	

- ❑ Some of the menu items have changed in EOS.

EOS Cabinet Settings

MM-1-1

 **ECONOLITE**

Saving Lives Through Improved Mobility

MM 1-1 Cabinet Settings

MM 1-1

```
CABINET SETTINGS SUBMENU
1. CABINET TYPE
2. LOAD SWITCH
3. COLOR CHECK ENABLE
4. MONITOR PROGRAMMING
5. CABINET MAPPING
6. SECONDARY STATION
```

MM 1-1-1

```
CABINET TYPE [TS2-1]
BIU TERMINAL & FACILITY 1234
BIU DETECTOR .....
ENABLE SDLC STOP TIME NO
LATCH 3 CRITICAL ERRORS NO
MMU TO CU SDLC EXTERNAL START YES
IGNORE SDLC FRAME ERRORS (DIAG) YES
```

CABINET TYPES

- TS1
- TS2-1
- TS2-2
- ATCC-16
- ATCC-32
- ITS-14/6
- 33x

*IGNORE SDLC FRAME ERRORS (DIAG) to run a controller without MMU; '0' for RFE at MM-7-7-2

MM 1-1-1 Cabinet Type

```
CABINET [TS1      ]
                1234
BIU DETECTOR 1...

IGNORE SDLC FRAME ERRORS (DIAG) YES
CONTROLLER PLATFORM TYPE      COBALT
I/O MODE                        0
```

```
CABINET [TS2-2    ]
                1234
BIU DETECTOR 1...

ENABLE SDLC STOP TIME          NO
LATCH 3 CRITICAL ERRORS        YES
MMU TO CU SDLC EXTERNAL START  YES
IGNORE SDLC FRAME ERRORS (DIAG) YES
CONTROLLER PLATFORM TYPE      COBALT
I/O MODE                        0
```

```
CABINET [TS2-1    ]
                1234
BIU TERMINAL & FACILITY 12..
BIU DETECTOR            1...
CRITICAL BIU            ....

ENABLE SDLC STOP TIME          NO
LATCH 3 CRITICAL ERRORS        YES
MMU TO CU SDLC EXTERNAL START  YES
IGNORE SDLC FRAME ERRORS (DIAG) YES
```

```
CABINET [ATCC-16  ]
                12345      1234
SIU DETECTOR 12... BIU DETECTOR 1...
CRITICAL SIU ..... CRITICAL BIU ....

ENABLE SDLC STOP TIME          NO
LATCH 3 CRITICAL ERRORS        YES
IGNORE SDLC FRAME ERRORS (DIAG) YES
EXTENDED COMMUNICATIONS        DEFAULT
```

```
CABINET [33x      ]
                1234
BIU DETECTOR 1...
CRITICAL BIU ....

IGNORE SDLC FRAME ERRORS (DIAG) YES
```

```
CABINET [ITS      ]
                SWITCH PACK LOADSWITCH      14x6

                12345      1234
SIU DETECTOR 12... BIU DETECTOR 1...
CRITICAL SIU ..... CRITICAL BIU ....

ENABLE SDLC STOP TIME          NO
LATCH 3 CRITICAL ERRORS        YES
IGNORE SDLC FRAME ERRORS (DIAG) YES
```

MM 1-1-1 Cabinet Type

HELP CONTENT



CABINET TYPE SELECTION

Select the type of cabinet environment in which EOS will be running. Changing this setting requires a power restart. CABINET MAPPING and LOAD SWITCH assignments will also need to be reconfigured in most cases.

33X: TEES 332 Cabinet with 16 output channels and one BIU.

TS1: NEMA TS1 Cabinet with 12 output channels.

TS2-1: NEMA TS2 Type 1 Cabinet with 16 output channels and two BIUs.

TS2-2: NEMA TS2 Type 2 Cabinet with 16 output channels and two BIUs.



output channels and one BIU.

ATCC-16: ATC Cabinet with one output SIU providing a total of 16 output channels.

ATCC-32: ATC Cabinet with two output SIUs providing a total of 32 output channels.

ITS 14/6: ITSv1 Cabinet with a variable set of output channels based on the SWITCH PACK LOAD SWITCH configuration.

2/2

MM 1-1-2 Load Switch

The ASC3 LS Assignment is at MM 1-3

LD SWITCH ASSIGN									
	PHASE		DIMMING			---FLASH---			
	/OVL	P	R	Y	G	D	PWR	AUT	TGR
1	1	V	.	.	.	+	A	R	.
2	2	V	.	.	.	+	A	R	X
3	3	V	.	.	.	+	A	R	.
4	4	V	.	.	.	+	A	R	X
5	5	V	.	.	.	-	A	R	.
6	6	V	.	.	.	-	A	R	X
7	7	V	.	.	.	-	A	R	.
8	8	V	.	.	.	-	A	R	X

EOS MM 1-1-2

LOAD SWITCH CONFIGURATION								
CHANNELS	1	2	3	4	5	6	7	8
CHANNEL TYPE	V	V	V	V	V	V	V	V
PHASE / OVL	1	2	3	4	5	6	7	8
CHANNELS	9	10	11	12	13	14	15	16
CHANNEL TYPE	P	P	P	P	0	0	0	0
PHASE / OVL	2	4	6	8	1	2	3	4

- In ASC3 [LD SWITCH ASSIGN PHASE] is at MM 1-3
- In EOS [Load Switch Configuration] is at MM 1-1-2

MM 1-1-2 Load Switch

HELP CONTENT

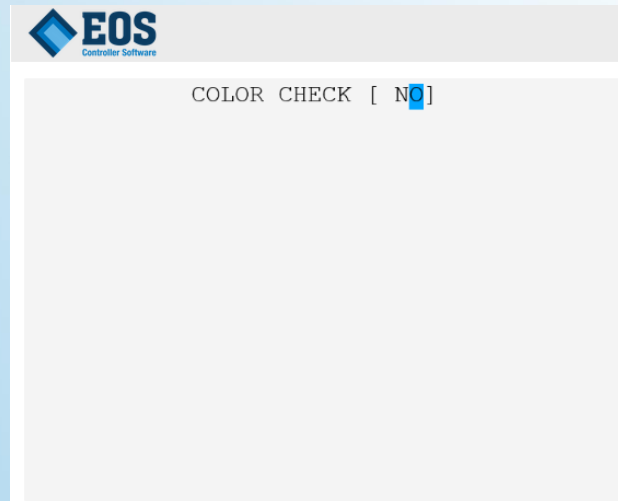


CHANNEL TYPE
V/P/O

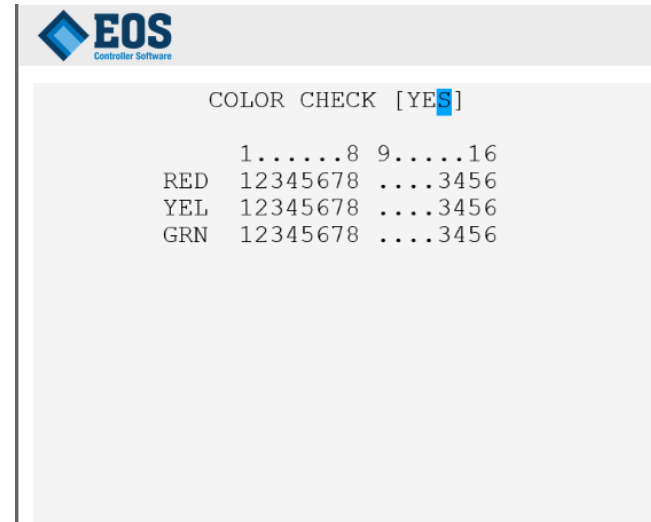
Toggle the list between Vehicle (V), Pedestrian (P), and Overlap (O) to map this corresponding output load switch to the phase or overlap 3-state output function.

MM-1-1-3 COLOR CHECK ENABLE

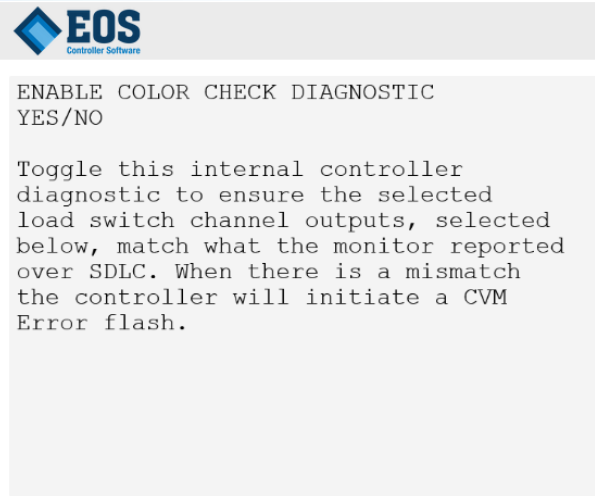
Color Check is set to NO (disabled) by default



Color check is set by number toggle vs. 'x' to enable



Help Content



MM-1-1-4 MMU PROGRAM

```
EOS  
Controller Software  
MMU PROGRAM [  MANUAL ] v  
CH 16.....9 8.....2  
1 .....  
2 .....  
3 .....  
4 .....  
5 .....  
6 .....  
7 .....  
8 .....  
9 .....  
10 .....  
11 .....  
12 .....  
13 .....  
14 ..
```

MANUAL
= You can
choose the
channels

```
EOS  
Controller Software  
MMU PROGRAM [  CLEAR ] v  
CH 16.....9 8.....2  
1 .....  
2 .....  
3 .....  
4 .....  
5 .....  
6 .....  
7 .....  
8 .....  
9 .....  
10 .....  
11 .....  
12 .....  
13 .....  
14 ..
```

CLEAR =
Clears all
channels

```
EOS  
Controller Software  
MMU PROGRAM [  AUTO ] v  
CH 16.....9 8.....2  
1 .....1.. ..65...  
2 .....1.9 ..65..  
3 .....2... 87...  
4 .....2.0. 87..  
5 .....9 ...  
6 .....1.9 ..  
7 .....0. .  
8 .....2.0. .  
9 .....1. .  
10 .....2. .  
11 .....  
12 .....  
13 .....  
14 ..
```

AUTO = Looks
at
programming
and LDSW
Assign and
Auto assigns
channels for
programming

```
EOS  
Controller Software  
MMU PROGRAM [  COPY MON ] v  
CH 16.....9 8.....2  
1 65432109 8765432  
2 65432109 876543  
3 65432109 87654  
4 65432109 8765  
5 65432109 876  
6 65432109 87  
7 65432109 8  
8 65432109  
9 6543210  
10 654321  
11 65432  
12 6543  
13 654  
14 65
```

COPY MON =
Copies the
permissive
channels
programmed on
the Program
Card

IF you do a COPY MON during normal operation it will put the intersection into flash

MM-1-1-4 MMU PROGRAM

HELP CONTENT



MMU COMPATIBILITY Econolite Feature
Range: MANUAL, AUTO, CLEAR, COPY MON

Toggle to select MANUAL, AUTO, CLEAR, COPY MON. The selection is acted on when you press ENTER, provided the MMU/CMU is enabled. The compatibility array will be referred to as "array" in the text that follows.

**** CAUTION ****

The first data entry in MANUAL mode will likely place the cabinet in CVM FLASH. Programming of this feature should NOT be done in a live intersection. If ..1/3



must make field changes, place the cabinet in LOCAL FLASH first.

MANUAL - The array is manually programmed by the user.

AUTO - The array is automatically programmed based on phases in use, phase concurrency, valid pedestrian movements, vehicle and pedestrian overlaps, and pedestrian carryover programming. Users cannot update the compatibility array.

CLEAR - The array is cleared to zero. This field is then set to MANUAL, which disables the feature. 2/3



COPY MON - The contents of the MMU/CMU Program Card is copied to the array. This field is then set to MANUAL. This feature is disabled if the MMU/CMU Program card is unprogrammed.

3/3

MM 1-1-5 Cabinet Mapping

TS1

INPUT OUTPUT REMAPPING							v
DEVICE	SELECTION	[	A	CONNECTOR]			
PIN	I/O	DESCRIPTION	NUM	DFLT			
OUTPUT 01	OUT LS	RED DW	1	YES			
OUTPUT 02	OUT LS	YELLOW PC	1	YES			
OUTPUT 03	OUT LS	GREEN WALK	1	YES			
OUTPUT 04	OUT LS	RED DW	2	YES			
OUTPUT 05	OUT LS	YELLOW PC	2	YES			

33x

INPUT OUTPUT REMAPPING							v
DEVICE	SELECTION	[	C1/C11	INPUT]			
PIN	I/O	DESCRIPTION	NUM	DFLT			
OUTPUT 01	OUT LS	RED DW	1	YES			
OUTPUT 02	OUT LS	YELLOW PC	1	YES			
OUTPUT 03	OUT LS	GREEN WALK	1	YES			
OUTPUT 04	OUT LS	RED DW	2	YES			
OUTPUT 05	OUT LS	YELLOW PC	2	YES			

TS2-1

INPUT OUTPUT REMAPPING							v
DEVICE	SELECTION	[	TF	BIU	1]		
PIN	I/O	DESCRIPTION	NUM	DFLT			
OUTPUT 01	OUT LS	RED DW	1	YES			
OUTPUT 02	OUT LS	YELLOW PC	1	YES			
OUTPUT 03	OUT LS	GREEN WALK	1	YES			
OUTPUT 04	OUT LS	RED DW	2	YES			
OUTPUT 05	OUT LS	YELLOW PC	2	YES			

ATCC-16/32

INPUT OUTPUT REMAPPING							v
DEVICE	SELECTION	[	SIU	1-OUTPUT]			
PIN	I/O	DESCRIPTION	NUM	DFLT			
OUTPUT 01	OUT LS	RED DW	1	YES			
OUTPUT 02	OUT LS	YELLOW PC	1	YES			
OUTPUT 03	OUT LS	GREEN WALK	1	YES			
OUTPUT 04	OUT LS	RED DW	2	YES			
OUTPUT 05	OUT LS	YELLOW PC	2	YES			

MM 1-1-5 Cabinet Mapping

INPUT OUTPUT REMAPPING					
DEVICE	SELECTION	[C1/C11	INPUT]		
PIN	I/O	DESCRIPTION	NUM	DFLT	
OUTPUT 01	OUT	LS RED DW	1	YES	
OUTPUT 02	OUT	LS YELLOW PC	1	YES	
OUTPUT 03	OUT	LS GREEN WALK	1	YES	
OUTPUT 04	OUT	LS RED DW	2	YES	
OUTPUT 05	OUT	LS YELLOW PC	2	YES	
OUTPUT 06	OUT	LS GREEN WALK	2	YES	
OUTPUT 07	OUT	LS RED DW	3	YES	

SELECT OUTPUT PIN CATEGORY	
PHASE GREEN	PHASE YELLOW
PHASE RED	PHASE WALK
PHASE PED CLEAR	PHASE DW
OVERLAP GREEN	OVERLAP YELLOW
OVERLAP RED	LS GREEN WALK
LS YELLOW PC	LS RED DW
PHASE TIMING	PHASE NEXT
PHASE VEH CHK	PHASE PED CHK
R* STATUS BIT A	R* STATUS BIT B



INPUT OUTPUT REMAPPING					
DEVICE	SELECTION	[C1/C11	INPUT]		
PIN	I/O	DESCRIPTION	NUM	DFLT	
OUTPUT 01	OUT	OVERLAP RED	C	NO	
OUTPUT 02	OUT	LS YELLOW PC	1	YES	
OUTPUT 03	OUT	LS GREEN WALK	1	YES	
OUTPUT 04	OUT	LS RED DW	2	YES	
OUTPUT 05	OUT	LS YELLOW PC	2	YES	
OUTPUT 06	OUT	LS GREEN WALK	2	YES	
OUTPUT 07	OUT	LS RED DW	3	YES	

MM 1-1-5 Cabinet Mapping

HELP CONTENT



DEVICE SELECTION Econolite Feature

Select the device on which to remap input/output pins.

Device selection depends on the cabinet type selected.

NOTE: If using a solid SCP detector configuration, both a SCP check-in input pin and a SCP check-out input pin must be mapped. If only the check-in is mapped, the SCP detector won't be activated, even though the physical input pin

1/3



is recognized.

Selections include:

- A Connector (TS1, TS2-2)
- B Connector (TS1, TS2-2)
- C Connector (TS1, TS2-2)
- D Connector (TS1, TS2-2)
- DET BIU 1 (All Cabinet Types)
- DET BIU 2 (All Cabinet Types)
- DET BIU 3 (All Cabinet Types)
- DET BIU 4 (All Cabinet Types)
- SIU 1-INPUT (ATCC-16, ATCC-32, ITS-16/4)
- SIU 2-INPUT (ATCC-16, ATCC-32, ITS-16/4)
- SIU 3-INPUT (ATCC-16, ATCC-32,

2/3



- ITS-16/4)
- SIU 4-INPUT (ATCC-16, ATCC-32, ITS-16/4)
- SIU 5-INPUT (ATCC-16, ATCC-32, ITS-16/4)
- SIU 1-OUTPUT (ATCC-16, ATCC-32, ITS-16/4)
- SIU 2-OUTPUT (ATCC-32)
- SIU 3-OUTPUT (ITS-16/4)
- C1/C11 INPUT (33x)
- C1/C11 OUTPUT (33x)

3/3

MM-7-8-3 Cabinet I/O Status

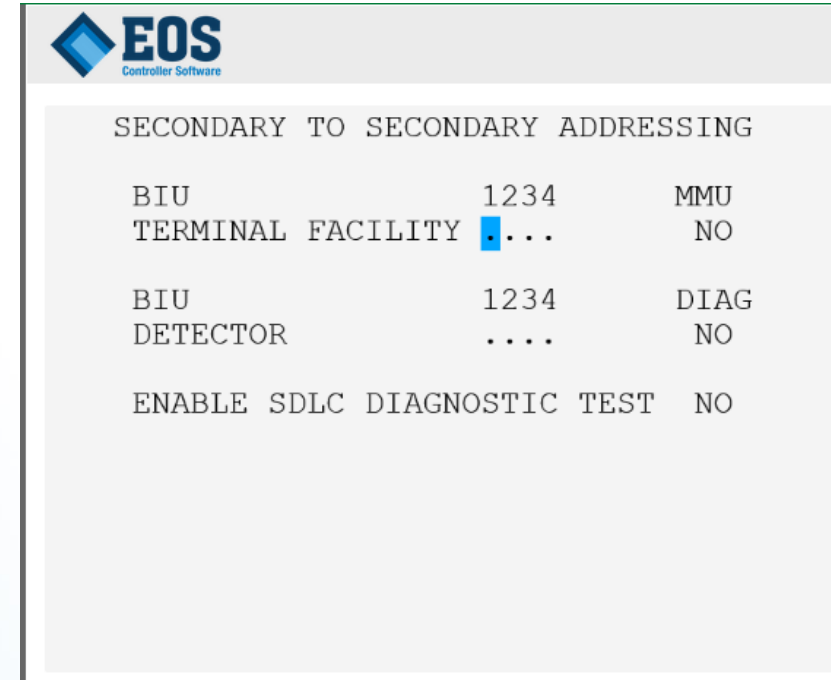
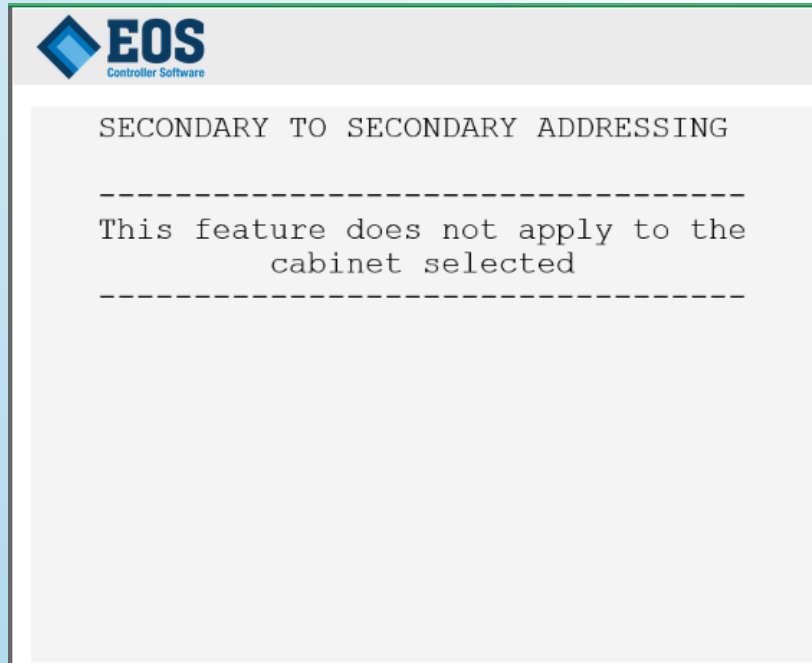
- Dynamic list showing current status of inputs and outputs
- Toggle Device Selection to show a different set of input/output mapping with its corresponding status

DEVICE SELECTION		TF BIU 1	
PIN	IO	DESCRIPTION	STATUS
OUTPUT 01	OUT LS	1 RED DW	ON
OUTPUT 02	OUT LS	1 YELLOW PC	OFF
OUTPUT 03	OUT LS	1 GREEN WALK	OFF
OUTPUT 04	OUT LS	2 RED DW	ON
OUTPUT 05	OUT LS	2 YELLOW PC	OFF
OUTPUT 06	OUT LS	2 GREEN WALK	OFF
OUTPUT 07	OUT LS	3 RED DW	ON
OUTPUT 08	OUT LS	3 YELLOW PC	OFF
OUTPUT 09	OUT LS	3 GREEN WALK	OFF
OUTPUT 10	OUT LS	4 RED DW	ON
OUTPUT 11	OUT LS	4 YELLOW PC	OFF
OUTPUT 12	OUT LS	4 GREEN WALK	OFF
OUTPUT 13	OUT LS	5 RED DW	ON

MM-1-1-6 SECONDARY TO SECONDARY ADDRESSING

Secondary to Secondary Addressing is only for ATCC and ITS cabinets only

Feature does not apply for TS1, TS2, 33x cabinets



MM-1-1-6 SECONDARY TO SECONDARY ADDRESSING

HELP CONTENT



ENABLE SECONDARY TO SECONDARY
Range: X, . NEMA TS2 3.3.1.3-6b
 NEMA TS2 3.3.1.4.3

The controller will act as the SDLC gateway for the enabled Secondary to Secondary devices. Be sure the device is preconfigured for secondary communication.

X = Enable secondary to secondary
. = Disable secondary to secondary



DIAGNOSTIC (TEST FIXTURE)
Range: YES, NO Econolite Feature

YES = Enable
NO = Disable

An error is logged if enabled when not connected to test fixture.

EOS COMMUNICATIONS

MM-1-2

 ***ECONOLITE***

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MM-1-2 COMMUNICATIONS



COMMUNICATIONS SUBMENU

- | | |
|-----------------|-----------------|
| 1. ETHERNET | 5. NTCIP |
| 2. PORT 2/C50S | 6. PEER TO PEER |
| 3. PORT 3A/C21S | 7. V2I |
| 4. PORT 3B/C22S | 8. TRANSIT |

MM-2-1-1 ETHERNET

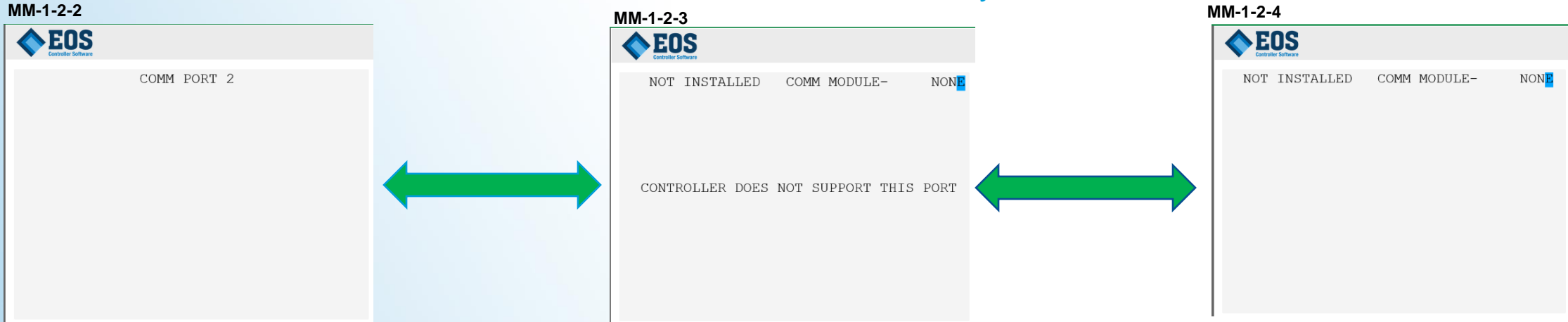


```
ETHERNET      MAC 00:00:00:00:00:00
DHCP ENABLE           NO
CONTROLLER IP      10. 70. 10. 51
SUBNET MASK        255.255.255. 0
DEFAULT GATEWAY IP 10. 70. 10. 1
SERVER IP          10. 70. 10. 1
LINK SPEED/DUPLEX  100/FULL
ENET-2 IP          172.30.30.30
DROP-OUT TIME      300
ENABLE WEB FRONT PANEL YES
```

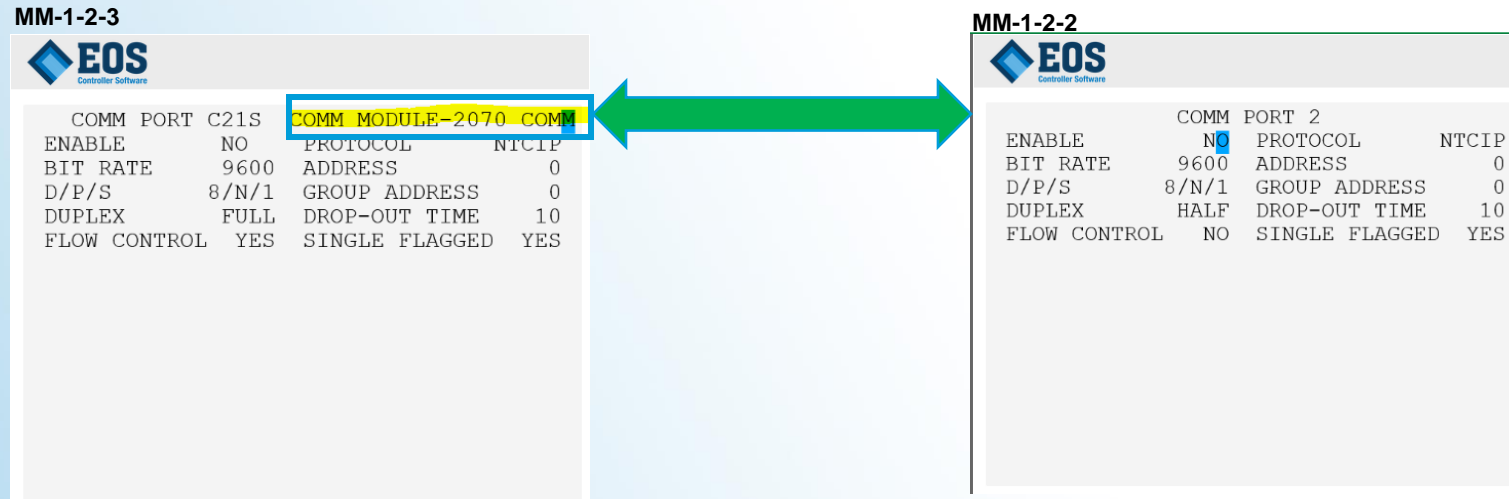
- ENET-1 WAN default IP is 10.70.10.51 and programable field
- Server IP is used with CV and ICD-2009 SPaT format. Enter IP of CV RSU at Server IP field
- ENET-2 is always 172.30.30.30 and non-programable field
- Enable/Disable Web Front Panel Access

MM-1-2-2 PORT 2/C50S, 3A/C21S, 3B/C22S

COMM PORT 2, 3A, 3B is Disabled by default




To enable: Go to MM-1-2-3 and Choose **COM MODULE-2070 COMM**; when you go back to MM-1-2-2 COMM PORT 2 is enabled



MM-1-2-2 PORT 2/C50S, 3A/C21S, 3B/C22S


HELP CONTENT

 **EOS**
Controller Software

PROTOCOL
Range: TERMINAL, NTCIP, AB3418, FSK,
METRO RAPID, or GPS NMEA
Econolite Feature

Ports 2, 3A, 3B: Toggle to select NTCIP,
AB3418, or TERMINAL.
METRO RAPID is only available on
Port 2. GPS NMEA is available on
Port 2 and Port 3A.

2070 NOTE
Ports C50S, C21S, C22S: Toggle to select
NTCIP, AB3418, or TERMINAL.
GPS NMEA is only available on ports
C21S and C22S. 1/6


 **EOS**
Controller Software

NOTE
A null-modem adaptor or cable may
be required if a modem is going to be
connected to this regardless of what
protocol is selected.

Port 2 is the only port that supports
Metro Rapid Bus-to-Signal Priority
communication.


Port 3B is the only port that supports
FSK communication using the Econolite
TLM-925.

2070 NOTE 2/6

 **EOS**
Controller Software

Metro Rapid is supported on either C21S
or C22S, but not simultaneously. Ensure
only one port is configured and enabled
at a time. GPS NMEA is supported on both
C21S and C22S.


2070 NOTE - TERMINAL PRINTOUTS
C50S connector needs to be disabled for
the log printout to work. To change the
baud rate select the desired rate.
Change the protocol to NTCIP. Enable
the port. Wait 15 seconds and then
disable the port. Change the protocol
back to TERMINAL. The port is now
ready. 3/6

 **EOS**
Controller Software

TERMINAL: Provides a VT100 compatible
connection between the controller and
computers, printers or Modems. For
Port C50S, C21S and C22S, PORT must
be set to disable to allow proper
printing.

NTCIP: Provides a NTCIP compatible
connection between computers and
modems. This protocol is tailored to
function in an NTCIP System.

AB3418: Provides an AB3418 compatible
connection between computers and
modems. This protocol is tailored to
comply with the California AB3418 4/6

 **EOS**
Controller Software

specification.

METRO RAPID: Provides a Metro Rapid
and Pilot Protocol Bus-to-Signal
Priority compatible connection
between computers and modems. This
protocol was developed for the
LACMTA (Los Angeles County
Metropolitan Transportation
Authority).

GPS NMEA: Provides an NMEA interface to
GPS receiver for time sync. The GPS
receiver must send the GPRMC
sentence once per second. 5/6

 **EOS**
Controller Software

FSK: Provides support for Econolite 25-
pin connector I/O via the legacy
Telemetry I/O (TIO) interface. 6/6

MM-1-2-5 NTCIP



NTCIP

BACKUP TIME	0
ETHERNET UDP PORT	501
ETHERNET PRIORITY	1
PORT C50S PRIORITY	4
PORT C21S PRIORITY	3
PORT C22S PRIORITY	2

NTCIP settings is where you program the UDP port to talk to an ATMS system like Centracs



NTCIP UDP PORT

Range: 161-65535 Econolite Feature

STMP or IP over PMPP using SNMP or STMP Frame should use this port setting. If port is set to 161, recycle power of controller is required to take effect.

Do not use 2101 for NTCIP UDP PORT.

MM-1-2-6 PEER TO PEER

MM-1-2-6



PEER TO PEER SETUP							v
PEER	PORT	IP ADDRESS				TIMEOUT	
	LOCAL PORT	503					
1	503	0.	0.	0.	0	1	
2	503	0.	0.	0.	0	1	
3	503	0.	0.	0.	0	1	
4	503	0.	0.	0.	0	1	
5	503	0.	0.	0.	0	1	
6	503	0.	0.	0.	0	1	
7	503	0.	0.	0.	0	1	
8	503	0.	0.	0.	0	1	
9	503	0.	0.	0.	0	1	
10	503	0.	0.	0.	0	1	
11	503	0.	0.	0.	0	1	
12	503	0.	0.	0.	0	1	
13	503	0.	0.	0.	0	1	

Help Content for LOCAL PORT



LOCAL PORT
Range: 0-65535 Econolite Feature

UDP port to be used by Peer to Peer feature. Other peers refer to this peer by its IP address and this port number.

The value 0 disables the peer to peer service.

The local peer may serve up to 250 testable elements to remote peers.

NOTE: Port 67, 111, 2101, 17230 and 17231 are reserved.

Help Content for PEER UDP Port



PEER UDP PORT
Range: 0-65535 Econolite Feature

UDP port to be used by peer.

Help Content for PEER IP ADDRESS



PEER IP ADDRESS
Range: 0-255 x 4 Econolite Feature

IP address to be used for running Peer to Peer protocol with the associated peer.

Each peer may be assigned up to 100 logic processor testable elements for evaluation on the remote peer.

Help Content for PEER TIMEOUT




PEER TIMEOUT
Range: 1-256 seconds Econolite Feature

Maximum time in seconds to wait for response.

MM-1-2-7 V2I / CONNECTED VEH

This CV screen is for J2735 SPaT and MAP format

MM-1-2-7




V2I / CONNECTED VEH

SPAT/MAP DESTINATIONS

DEV-1	0.	0.	0.	0	Port	0
DEV-2	0.	0.	0.	0	Port	0
DEV-3	0.	0.	0.	0	Port	0
DEV-4	0.	0.	0.	0	Port	0

PRESS 0..9 TO CHANGE


Help Content - Destinations



SPAT/MAP DESTINATIONS
Econolite Feature

Allows up to four IP addresses to be configured as destinations for the SPaT and MAP broadcast.

Help Content - Port




SPAT/MAP DESTINATIONS PORT
Econolite Feature

Assign a UDP port designation for respective IP destination.

MM-1-2-8 TRANSIT / LA METRO RAPID

MM-1-2-8




TRANSIT

LA METRO RAPID

MON IP ADDR	10.70.10.1
CLIENT PORT	4097
SERVER PORT	4096

Help Content
IP ADDRESS



LA METRO IP ADDRESS


Range: 0-255 x 4 Econolite Feature

Network monitor IP address used by the LA Metro for Countywide Signal Priority.

By default, EOS will only send Decision To Grant Priority (DTGP) replies to the originating address.

If the IP is non-zero, EOS will also send DTGP replies to that address.

Help Content
Port




LA METRO CLIENT PORT

Range: 0-65535 Econolite Feature

Network monitor port used by the LA Metro for Countywide Signal Priority.

If the port is zero, then the default 4097 will be used.

Help Content
SERVER PORT



LA METRO SERVER PORT

Range: 0-65535 Econolite Feature

Network monitor port used by the LA Metro for Countywide Signal Priority to receive messages.

If the port is zero, then the default 4096 will be used instead.

EOS LOGGING

MM-1-3

 **ECONOLITE**

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MM-1-3 LOGGING

EOS Controller Software			
EVENT LOGGING			
VIOT	NO	HI-RES MOE	NO
RFEs (MMU/TF)	YES	ACCESS	YES
MMU FL FAULTS	YES	DATA CHANGE	YES
3 RFEs > 24 H	YES	LOW BATTERY	YES
RFE (DET/TEST)	YES	CTR DOWNLOAD	YES
DETECTOR ERROR	YES	POWER ON/OFF	YES
SCP	YES	LOCAL FLASH	YES
PREEMPTION	YES	ONLINE/OFFLINE	YES
ALARM 1	YES	ALARM 2	YES
ALARM 3	YES	ALARM 4	YES
ALARM 5	YES	ALARM 6	YES
ALARM 7	YES	ALARM 8	YES
ALARM 9	YES	ALARM 10	YES
ALARM 11	YES	ALARM 12	YES

EOS Controller Software			
EVENT LOGGING			
3 RFEs > 24 H	YES	LOW BATTERY	YES
RFE (DET/TEST)	YES	CTR DOWNLOAD	YES
DETECTOR ERROR	YES	POWER ON/OFF	YES
SCP	YES	LOCAL FLASH	YES
PREEMPTION	YES	ONLINE/OFFLINE	YES
ALARM 1	YES	ALARM 2	YES
ALARM 3	YES	ALARM 4	YES
ALARM 5	YES	ALARM 6	YES
ALARM 7	YES	ALARM 8	YES
ALARM 9	YES	ALARM 10	YES
ALARM 11	YES	ALARM 12	YES
ALARM 13	YES	ALARM 14	YES
ALARM 15	YES	ALARM 16	YES
NTCIP SCP MSG	NO		

VIOT, HI-RES MOE, NTCIP SCP MSG (EOS.TRACE) enabled at MM-1-3

MM-1-3 LOGGING VIOT

MM-1-3



EVENT LOGGING				v
VIOT	<input type="checkbox"/>	HI-RES MOE		NO
RFES (MMU/TF)	<input checked="" type="checkbox"/>	ACCESS		YES
MMU FL FAULTS	<input checked="" type="checkbox"/>	DATA CHANGE		YES
3 RFES > 24 H	<input checked="" type="checkbox"/>	LOW BATTERY		YES



VIRTUAL INPUT/OUTPUT TRACE (VIOT)

Range: YES,NO,OVERWRITE

Econolite Feature

Toggle to enable (YES), disable (NO) or enable and clear VIOT files at power up (OVERWRITE)

YES: Enables VIOT Tracing. All latest I/O events are captured in realtime within a fixed number of records. When a Fault Flash event occurs, CIBCOB.CAP file will be automatically saved.

NO: Manual save of the CIBCOB.CAP ..1/2



and disable VIOT Tracing.

OVERWRITE: Same as (YES) except that all VIOT files including CIBCOB.CAP will be deleted at power up.

NOTE: CIBCOB.CAP will not be overwritten until the next saved events unless OVERWRITE is selected.

2/2

MM-1-3 HI-RES MOE

MM-1-3

EOS Controller Software			
EVENT LOGGING			v
VIOT	NO	HI-RES MOE	NO
RFES (MMU/TF)	YES	ACCESS	YES
MMU FL FAULTS	YES	DATA CHANGE	YES

EOS Controller Software	
High Resolution Data/Measures of Effectiveness (HI-RES MOE) Econolite Feature	
Range: NO, 1MIN, 15MIN, 1HR	
MOE logs will be collected at the time interval specified. No MOE logs will be collected if set to NO.	

MM-1-3 NTCIP SCP MSG

MM-1-3

ALARM 11	YES	ALARM 12	YES
ALARM 13	YES	ALARM 14	YES
ALARM 15	YES	ALARM 16	YES
NTCIP SCP MSG	NO		

Feature records NTCIP
1211 SCP PRIORITY
REQUEST



NTCIP SCP MESSAGES
Range: YES, NO Econolite Feature

Toggle to enable (YES) or disable (NO).

YES: Enables logging all control exchanges from a Priority Request Generator (PRG) for the last seven days. Logs include Check-in, Request Update, and Cancel. This feature also lets you generate a playback file to capture all input events, including SCP requests.

NO: Disables logging NTCIP SCP messages.
1/2



NOTES:

- This feature is intended for transit system integration and is not intended for general use.
- Playback file is retrievable via USB options.
- NTCIP SCP Log must be retrieved via a Secure Shell (SSH).

2/2

EOS DISPLAY OPTIONS

MM-1-4

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MM-1-4 DISPLAY OPTIONS

EOS Controller Software	
DISPLAY OPTIONS	COBALT-1000
KEY CLICK ENABLE	<input checked="" type="checkbox"/> NO
SWITCH TO GRAPHICS MODE	NO
TRANSACTION MODE POP-UP	YES
MAIN STATUS DISPLAY MODE	ADVANCED
LED MODE	AUTO
DISPLAY IP FOR ADMIN	YES

- **Key Click Enable**
 - Enable/Disable Ding or Bell Sound for Keystrokes
- **Switch to Graphics Mode**
- **Main Status Display Mode**
 - Advanced
 - Basic

EOS Controller Software	
MAIN STATUS DISPLAY MODE	
Range: ADVANCED, BASIC	
	Econolite Feature
Use this field to change the default Main Status Display option. Switch between display modes by pressing [NEXT SCREEN] key	

EOS LOGIC PROCESSOR

MM-1-5

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MM-1-5 LOGIC PROCESSOR




LOGIC PROCESSOR SUBMENU

1. LOGIC STATEMENT CONTROL
2. LOGIC STATEMENTS
3. EXTENDED OPTIONS

MM-1-5-1 LOGIC PROCESSOR

 EOS
Controller Software

LOGIC STATEMENT CONTROL		1	2	3	4	5	6	7	8	9	0	1	2	3	4	5
LP	1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP	16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP	31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP	46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP	61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP	76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP	91-100	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

 EOS
Controller Software


MANUAL LOGIC PROCESSOR STATEMENT ENABLE
Range: E, D, . Econolite Feature

Toggle to enable (E), disable (D) or allow others to determine (.).

E: Allows the logic processor statement to be evaluated, unless a higher priority command is in effect.

D: Disallows the logic processor statement from being evaluated, unless a higher priority command is in effect.

.: Allows the evaluation of a logic processor statement to be determ..1/2

 EOS
Controller Software

by a lower priority command.

NOTE: Priority of commands are Manual Data Entry, Time Base Event Plan in effect. If there is no control by these, then the logic processor statement will not be evaluated.

2/2

MM-1-5-2 LOGIC PROCESSOR



```
LP#: 1 COPY FROM: 1 ACTIVE:N  
IF --F  
THEN  
ELSE
```



LOGIC PROCESSOR - LOGIC GATE
Range 1-100 Econolite Feature
(Applies to ALL Cabinet types.)

1-100: Selects that logic gate.
NEXT DATA: go to the next programmed LP

CAUTION

The logic statements are executed
once every 1/10th second from 1-100.
Any condition that is to be used
by a logic gate must be determined
before that gate evaluated.

The format of the logic processor is IF-
THEN-ELSE. 1/2



When all of the conditions of the IF
Condition are met, the THEN elements
are executed from top to bottom.

When all of the testable elements of
the IF Condition are not met, the ELSE
elements are executed from top to
bottom.

Refer to the controller programming
manual for instructions and examples on
programming the Logic Processor.

2/2

MM-1-5-2 LOGIC PROCESSOR



```
LP#: 1 COPY FROM: 1 ACTIVE:N  
IF -F  
THEN  
ELSE
```



PEER NUMBER
Range: 0-15 Econolite Feature

Select the source of the state of the associated element.

0(--): Local

1-15 : Peer number

Each peer may be assigned up to 100 logic processor testable elements for evaluation on the remote peer.

-- is the Peer number for Peer-to-Peer

MM-1-5-2 LOGIC PROCESSOR

```
EOS  
Controller Software  
LP#: 1 COPY FROM: 1 ACTIVE:N  
IF --F  
THEN  
ELSE
```

Press Enter next to F to
open LP choices

```
EOS  
Controller Software  
TENTER]LP Selected, [Submenu]No Change v  
COORD CYCLE LENGTH COORD CYCLE TIMER  
COORD PATT FLASH COORD PATT FREE  
COORD IN STEP COORD MSTR CYC TMR  
COORD OFFSET COORD PLAN  
COORD SPLIT PATTRN COORD SPLT TMR RNG  
CTR BIKE GRN ON PH CTR FORCE OFF RING  
CTR GAP OUT CNT PH CTR INHBT MAX RNG  
CTR MAX 2 RING CTR MAX 3 RING  
CTR MAX GRN TMR R1 CTR MAX GRN TMR R2  
CTR MAX GRN TMR R3 CTR MAX GRN TMR R4  
CTR MAX OUT CNT PH CTR MIN GRN TMR R1  
CTR MIN GRN TMR R2 CTR MIN GRN TMR R3  
CTR MIN GRN TMR R4 CTR OL GRN EXT  
CTR OL TRL RED CLR CTR OMT RD CLR RNG  
CTR ON PHASE CHECK CTR ON PHASE CALL
```

MM-1-5-2 LOGIC PROCESSOR

```
EOS  
Controller Software  
LP#: 1 COPY FROM: 1 ACTIVE:N  
IF --F COORD CYCLE LENGTH IS 150  
THEN |  
ELSE
```

Press Enter next to
THEN to open LP
choices

```
EOS  
Controller Software  
[ENTER]LP Selected, [Submenu]No Change v  
CRD SET FREE CRD SET OSET B 1-3  
CRD SET SPLT B 1-2 CRD SET SYNC  
CRD ST CYC BIT 1-3 CTR CALL PED PHASE  
CTR CALL PHASE CTR HOLD PHASE  
CTR OMIT PED PHASE CTR OMIT PHASE  
CTR OMIT RD CLR RG CTR S EXT STRT DIS  
CTR SEL AT SEQ A-D CTR SET ALARM  
CTR SET AUTO FLASH CTR SET CNA1  
CTR SET CNA2 CTR SET DB CRC  
CTR SET DIS PRETM CTR SET EXT START  
CTR SET FO RING CTR SET INH MAX RG  
CTR SET INT ADV CTR SET LMP CTRL  
CTR SET LOCAL FL CTR SET MAINT REQD  
CTR SET MAN CTR EN CTR SET MAX2 RING  
CTR SET MAX3 RING CTR SET MIN RECALL
```


MM-1-5-2 LOGIC PROCESSOR

```
EOS  
Controller Software  
LP#: 1 COPY FROM: 1 ACTIVE:N  
IF --F COORD CYCLE LENGTH IS 150  
THEN CRD SET FREE ON  
ELSE
```

Press Enter next to
THEN to open LP
choices

```
EOS  
Controller Software  
TENTER]LP Selected, [Submenu]No Change v  
CRD SET FREE CRD SET OSET B 1-3  
CRD SET SPLT B 1-2 CRD SET SYNC  
CRD ST CYC BIT 1-3 CTR CALL PED PHASE  
CTR CALL PHASE CTR HOLD PHASE  
CTR OMIT PED PHASE CTR OMIT PHASE  
CTR OMIT RD CLR RG CTR S EXT STRT DIS  
CTR SEL AT SEQ A-D CTR SET ALARM  
CTR SET AUTO FLASH CTR SET CNA1  
CTR SET CNA2 CTR SET DB CRC  
CTR SET DIS PRETM CTR SET EXT START  
CTR SET FO RING CTR SET INH MAX RG  
CTR SET INT ADV CTR SET LMP CTRL  
CTR SET LOCAL FL CTR SET MAINT REQD  
CTR SET MAN CTR EN CTR SET MAX2 RING  
CTR SET MAX3 RING CTR SET MIN RECALL
```

MM-1-5-3 Extended Options

No Configurable Data by Default

```
EOS  
Controller Software  
  
EXTENDED OPTIONS  
  
NO CONFIGURABLE DATA
```

Example of Extended Features loaded

```
EOS  
Controller Software  
  
EXTENDED OPTIONS  
  
EXTENDED FEATURES: STATE OF MI  
MI 3 Sect Prot/Perm Flsh Red Ph 1.... NO  
MI 3 Sect Prot/Perm Flsh Red Ph 3.... NO  
MI 3 Sect Prot/Perm Flsh Red Ph 5.... NO  
MI 3 Sect Prot/Perm Flsh Red Ph 7.... NO
```

MM-8-5 Also shows Extended Features is loaded

```
EOS  
Controller Software  
  
ECONOLITE CONTROL PRODUCTS, INC.  
  
EOS-1000  
Copyright (c) 2020  
  
Solutions that Move the World  
DATA BASE 1541  
CITY 0 INTERSECTION 0  
  
SOFTWARE VERSION ..... 03.02.22  
EXTENDED FEATURES.....STATE OF MI  
CONFIGURATION L3580
```

ASC3.EXT is the Extended Logic 100+ LP ; IF you don't have .EXT file you will not have Extended Features

EOS DATABASE

MM-1-6

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MM-1-6 DATABASE



DATABASE

ENABLE CU/CABINET INTERLOCK CRC	NO
CU/CABINET INTERLOCK CRC VALUE	1BE8
CU/CABINET INTERLOCK HW VALUE	0000
CONTROLLER DATABASE CRC	889B
REQUEST D/L CTR DATA	NO
AUTO BACKUP TO DATAKEY/SD CARD	NO
PHASE COMPATIBILITY TESTS	YES

- **ENABLE CU/CABINET CRC** Interlock checks to verify the CU/CABINET INTERLOCK CRC matches the **CU/CABINET CRC HARDWARE VALUE**. Any discrepancy causes the controller to go to flash.
- **CU/CABINET INTERLOCK CRC** is a requirement for ILLINOIS DOT, any mismatch will produce a CVM.
- **CU/CABINET INTERLOCK HW** is the 16-bit CRC value read from the cabinet CRC inputs.
- **CONTROLLER DATABASE CRC** is computed over the entire EOS database.
- **Request D/L CTR DATA** is to request a download of the controllers database from the Traffic Management Center.
- **AUTO BACKUP TO DATAKEY/SD CARD** enables the controller to backup database changes to the Datakey and SD Card (if available) 20 minutes after the change has occurred.
- **PHASE COMPATIBILITY TEST** is used for TX Diamonds or mismatch sequences.

EOS SECURITY ACCESS

MM-1-7

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MM-1-7 SECURITY ACCESS



SECURITY ACCESS	-SELECT NAME-	v
01 administrator---	02 public-----	
03 public-----	04 public-----	
05 public-----	06 public-----	
07 public-----	08 public-----	
09 public-----	10 public-----	
11 public-----	12 public-----	
13 public-----	14 public-----	
15 public-----	16 public-----	
17 public-----	18 public-----	
19 public-----	20 public-----	
21 public-----	22 public-----	
23 public-----	24 public-----	
25 public-----	26 public-----	
27 public-----	28 public-----	
29 public-----	30 public-----	

- Up to 50 Security Access Accounts
- USERCFG.DB is the file where the Security Access is stored
- Security Access Names are used for SNMP COMMUNITY NAME for ATMS.
 - Text must match exactly in ATMS SNMP community name and the security access name

MM-1-7 SECURITY ACCESS

```

EOS
Controller Software

USER ACCOUNT[ 1] v

CURRENT ID administrator
UPDATE ID

CURRENT CODE *****
UPDATE CODE 0
CONFIRM CODE 0

USER PRIVILEGE ALL

RESTRICT ACCESS READ-ONLY DATA
UNIT OPT NO UNIT OPT NO
SEQUENCE NO SEQUENCE NO
PHASE NO PHASE NO
OVERLAP NO OVERLAP NO
    
```

```

EOS
Controller Software

DETECTOR NO DETECTOR NO ^v
COORD NO COORD NO
TIMEBASE NO TIMEBASE NO
PREEMPT NO PREEMPT NO
SCP NO SCP NO
LOGGING NO LOGGING NO

SECURITY NO SECURITY NO
CABINET NO CABINET NO
LOGIC PROC NO LOGIC PROC NO
EXT OPTIONS NO EXT OPTIONS NO
DATABASE NO DATABASE NO
BACKUP/DKEY NO BACKUP/DKEY NO
INTERFACE NO INTERFACE NO

IP/SERIAL NO IP/SERIAL NO
PROTOCOLS NO PROTOCOLS NO
    
```

```

EOS
Controller Software

RESTRICT USER MENU ACCESS
YES/NO Econolite Feature

Toggle to YES if user is not allowed to
view menus that fit the menu context.

Menu Context Map:
UNIT OPT = MM-2-6
SEQUENCE = MM-2-7
PHASE = MM-2-1-1 thru 6,9, MM-2-4,6,8
OVERLAP = MM-2-1-7,8, MM-2-2,3
DETECTOR = MM-6
COORD = MM-3
TIMEBASE = MM-5
PREEMPT = MM-4-1,2
SCP = MM-4-3 thru 5
    
```

```

EOS
Controller Software

LOGGING = MM-1-3, MM-8-6-3
SECURITY = MM-1-7
CABINET = MM-1-1,4,5
LOGIC PROCESSOR = MM-1-5-1,2
EXTENDED OPTIONS = MM-1-5-3
DATABASE = MM-1-6, MM-8-1, MM-9-1-1,3
MM-9-2
BACKUP/DATAKEY = MM-8-2
INTERFACE = MM-1-4, MM-8-5
IP/SERIAL = MM-1-2-1 thru 4,
MM-7-5-1 thru 4
PROTOCOLS = MM-1-2-5 thru 7
    
```



Questions?

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