MMU16LE SmartMonitor™ Configuration & Installation Overview

Topics

- Configure the SmartMonitor for Field Use
  - Configuration Parameters
  - Configuration Programming Methods
  - Managing Configuration Databases
  - ATSI Testing
Program Card

- Permissive Matrix
  - Insert a jumper for each channel pair that can run concurrently.

- Minimum Yellow Change Disable
  - Insert a jumper for each channel that does not drive a true Yellow Clearance output (G → Y → R). For example, Ped.

- CVM & 24VDC Latch
  - Insert a jumper to change non-latching operation to latching.
    - CVM Latch requires adequate minimum flash time
    - CVM Latch precludes TOD flash
    - 24VDC Latch can be problematic due to varying loading issues on the Cabinet Power Supply combined with short AC Main interrupts.

Enhanced Functions

- Field Check Enable
  - Enable each color input if the signal reflects the Controller load switch command.

- Dual Indication Enable
  - R-G, R-Y, & G-Y for each channel

- Red Fail Enable

- Minimum Yellow + Red Clearance
  - Disabled only for special conditions

- Unit options
Unit Options

- Recurrent Pulse (ON)
  - Enables detection of flickering or intermittent field signals. Should be disabled for diagnostics only.
- RYG Only Red Fail (OFF)
  - TS1 mode only, eliminates Walk input from Red Fail algorithm
- Log CVM Faults (ON)
  - Disable CVM logging if used for TOD Flash
- Extern Watchdog (OFF)
  - Monitors toggling watchdog signal from an external device

Unit Options (cont)

- 24V-2 = 12VDC (OFF)
  - Enable if monitoring of the 12VDC detector supply is required and wired to 24V Monitor II input of the monitor
- PGM Card Memory (ON)
  - Enables shadow memory on the EDI Program Card
- LEDguard™ (ON)
  - Adjusts field thresholds to better suit LED signal operation
- Force Type 16 (OFF)
  - TS1 mode only, eliminates need for Type Select input
- Type 12 with SDLC (OFF)
  - TS1 mode only, enables SDLC communication with a TS2 Controller Unit
- Flashing Yellow Arrow
Programming Methods

- Program Card soldering
- **SmartMonitor** Front Panel Menu
  - Set-up Wizard (recommended)
  - Manual data entry
- ECcom\textsuperscript{tm} Program
  - Set-up Wizard (recommended)
  - Manual data entry
  - File Upload

Set-up Wizard

- The Set-up Wizard builds the Enhanced Function database based on intersection wiring and geometry.
- Detailed understanding of monitor terminology and load switch effects is avoided.
- The Set-up Wizard configures the Enhanced Functions only and NOT the Program Card or Unit Options.
Set-up Wizard Example

First Wizard Screen
(Select Unused Channels)

Second Wizard Screen
(Select Don't Walk Monitoring)

Set-up Wizard Example (cont)

Third Wizard Screen
(Select Pedestrian Channels)

Fourth Wizard Screen
(Select Prot-Perm Channels)
Set-up Wizard Example (cont)

- The final step of the Wizard is to review and verify the channel assignments.
- The results will be used to automatically program:
  - Field Check Enable
  - Red Fail Enable
  - Dual Indication Enable
  - MYRC Disable

Configuration Examples

- Vehicle or Protected Left Turn
  - Field Check Red & Green & Yellow Enable ON
  - R-G, R-Y, G-Y Dual Enable ON
  - Red Fail Enable ON
- Protected / Permissive Left Turn (R=AC+)
  - Field Check Green & Yellow Enable ON
  - G-Y Dual Enable ON
  - (Red Fail Enable OFF)
- Pedestrian with DW Monitoring
  - Field Check Red & Green Enable ON
  - R-G Dual Enable ON
  - Red Fail Enable ON
  - MYCD jumper installed
- Pedestrian without DW Monitoring (R=AC+)
  - Field Check Green Enable ON
  - (Red Fail Enable OFF)
  - MYCD jumper installed
Manual Data Entry - Front Panel

All parameters can be viewed or set in detail using the individual settings found in the *SmartMonitor* front panel menu:

```
MENU → SET / VIEW CONFIG
```

**But why would you?**

- Factory Default Settings can be reapplied from the *SmartMonitor* front panel menu:

```
MENU → SET / VIEW CONFIG → SET FACTORY DEFAULT
```

Manual Data Entry - ECcom

- ECcom can also be used for manual entry:
  - STATUS → MONITOR CONFIGURATION

- Factory Default Settings can be reapplied from *ECcom*:
  - INIT MONITOR → RESET CONFIGURATION
    - PROGRAMMING TO FACTORY DEFAULT
Save / Load Configuration File

- ECcom can save a configuration database from the *SmartMonitor* to a disk file.
- ECcom can load a configuration database from a disk file to the *SmartMonitor*.
- This provides an easy method to maintain the configuration settings for each cabinet.

Program Card Memory

- Enhanced function programming is also stored in nonvolatile memory on the EDI Program Card.
- Replacing the card transfers the total *SmartMonitor* configuration database.
- The PGM CARD MEMORY option should be enabled in Unit Options. If a card without memory is used, this option must be OFF.
Program Card Memory (cont)

- If the database on the Program Card is different than the *SmartMonitor*, the unit will remain in the fault mode.
- A front panel menu choice results:
  - Program Card Memory doesn’t match MMU:
    - Copy FROM PgmCard?
    - Copy TO PgmCard?

Configuration Check Value

- This parameter is calculated as a check value on the configuration database.
- The value be used as a quick check to verify the settings of the *SmartMonitor* have not been modified.
  - MENU → SET / VIEW CONFIG → CONFIG CHECK VALUE
ATSI Testing

- Prepare a Test Program Card
  - No jumpers
  - R-G Dual Enable Ch 1:16 Enabled
  - R-Y Dual Enable Ch 1:16 Enabled
  - G-Y Dual Enable Ch 1:16 Enabled
  - Red Fail Enable Ch 1:16 Enabled
  - Y+R Clearance Ch 1:16 Enabled
  - Unit Options set to Factory Default

ATSI Testing (cont)

- Insert the test Program Card, Reset, then select “Copy FROM PgmCard” option.
- Test the unit
- Clear the event log buffers
  Front Panel: MENU → CLEAR LOGS → ALL LOGS
  ECcom: INIT MONITOR
- Replace the intersection Program Card, Reset, then select “Copy FROM PgmCard” option.
Thank You...

Setting the Standard for Quality and Reliability

Eberle Design Inc.

www.EDitraffic.com

SmartMonitor, LEDguard, and ECcom are trademarks of Eberle Design Inc.

Page 21