

**Suggested Reference Materials:**

Law Enforcement Preparation Guide may be downloaded from the EVT web site at [www.evtcc.org](http://www.evtcc.org) , Exams and Preparation, or go directly to page by typing in: [http://static.evtcc.org/pdf\\_files/LawEnforcementPrepGuide.pdf](http://static.evtcc.org/pdf_files/LawEnforcementPrepGuide.pdf)

**Auto Electricity & Electronic Technology**, by James Duffy. Goodheart-Wilcox 1-708-687-5000 or the book can be ordered from [www.Amazon.com](http://www.Amazon.com)

**OR**

**Heavy Duty ProClinic Manual** by Interstate Battery call Jeff Barron at 469.221.4655 for your local interstate dealer ordering information

## Internet Resources:

[www.autoshop101.com](http://www.autoshop101.com)

<https://fordbbas.com/publications>

[https://www.fcausfleet.com/assets/docs/dodge-charger\\_pursuit-pdf/2016\\_DG\\_Charger\\_Pursuit\\_.pdf](https://www.fcausfleet.com/assets/docs/dodge-charger_pursuit-pdf/2016_DG_Charger_Pursuit_.pdf)

<http://www.gmfleet.com/resources/fleet-guide.html>

[https://www.fedsig.com/resource-library?resource\\_category%255B%255D=260&product\\_category=All&title\\_selective=All&sort\\_by=title&sort\\_order=ASC](https://www.fedsig.com/resource-library?resource_category%255B%255D=260&product_category=All&title_selective=All&sort_by=title&sort_order=ASC)

<https://sigmasafety.ca/2013/07/24/sae-demystified/>

[www.powersource.net](http://www.powersource.net)

[www.wattco.net](http://www.wattco.net)

**LEARNING OBJECTIVES FOR THE L-1 EXAM**

1. Definition and Terms
  - a. Light Emitting Diode (LED)
  - b. Global Positioning System (GPS)
  - c. SIR/SRS-Restraint Systems
  - d. Wig-Wags
  - e. Radio Frequency Interference (RFI)
  - f. Traffic Pre-emptive Systems
  - g. Ohms Law
  - h. Lo-Jack Tracking System
  - i. Strobes
  - j. Anti-lock Brake System (ABS)
  - k. Voltage Drop
  - l. Liquid Crystal Display (LCD)
  - m. Wire Gauge
  - n. Impedance
  - o. Digital Multi-meter (DMM)
  - p. Cold Cranking Amps(CCA)
  - q. Memory Saver Device
  - r. Ignition Off Draw (IOD)
  - s. Hertz (HZ)
  - t. Society of Automotive Engineers (SAE)
  - u. Convolute / Split Loop
  - v. 4 Wheel Anti Lock Brake (4WAL)
  - w. Tire Pressure Monitoring System (TPMS)
  - x. Anode
  - y. Fuse Element Cartridge
2. Installation
  - a. Trunk
  - b. Partition/Prisoner Compartment
  - c. Push bumper
  - d. Plastic seat/floor liner
  - e. Fire extinguisher
  - f. Gun cases
  - g. Light bar
  - h. Wig-wag headlights
  - i. Strobes
  - j. Traffic pre-emption systems
  - k. Radio
  - l. Computer
  - m. Weapons release
  - n. Video camera and recorder
  - o. Chargers (flash light, radio)
  - p. Battery timer
  - q. Alarm systems
  - r. Radar
  - s. GPS
  - t. LED
  - u. Siren & Speakers
  - v. Control module/switch
  - w. Load management
  - x. Antennas
  - y. Power inverter
  - z. Dash & Dash lights
  - aa. Slide out tray
  - bb. Occupant restraint system
  - cc. Pillar mounted spotlight
  - dd. K-9
3. Basic Electrical
  - a. Parallel and series circuits
  - b. Wiring
  - c. Relays
  - d. Switches
  - e. Diagnostic equipment/tools and procedures
  - f. Circuit protector
  - g. Battery and charging systems
  - h. A/C power inverter
  - i. Diodes
  - j. Capacitor
  - k. Ohm's Law

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#### 4. Troubleshooting and Repair of Auxiliary Equipment

- a. Light bar
- b. Wig-wags
- c. LED.
- d. Pre-emptive systems
- e. Strobes
- f. Radio
- g. Computer
- h. Weapons release
- i. Video camera and recorder
- j. Chargers (flashlight, radio)
- k. Load Management
- l. Sirens and speakers
  - (1) Mounting requirements
- m. Programming lights
- n. R.F. Interference
- o. Battery timer
- p. Spare tire
  - (1) Tire-pressure monitoring