

## Attachment A

### **Build Specifications for University of Oregon Police Department 2013 Ford Interceptor Sedan Patrol Vehicles**

Install (including all necessary parts and labor) the following equipment in three (3) customer-supplied 2013 Ford Interceptor Sedan patrol vehicles:

#### **ELECTRICAL SYSTEM**

- One (1) Patrol Power (or approved equivalent) fuse panel including circuit breaker, Power Tamer (or approved equivalent) timer and heavy duty relay (time set to one hour)
- One (1) 300 amp super relay (with waterproof sub. assembly, harness and connector)
- One (1) DEI module
- One (1) E-123 Potter & Brumfield 40 amp relay (SPDT)
- **NOTE: SEE ATTACHMENT C FOR ELECTRICAL WIRING SPECIFICATIONS**

#### **PUSH BUMPER**

- One (1) PB400, high strength aluminum push bumper (mid-length)
- One (1) STC254 jumpstart 25' cable kit (mounted per customer specifications to front push bumper)

#### **SIREN, CONTROLLER AND SPEAKERS**

- One (1) Whelen 295SLSA6 single unit siren (no substitutions, wired to customer specifications)
- One (1) Whelen WPKM1 (or approved equivalent) park kill module
- Two (2) Whelen SA315P (or approved equivalent) ultra slim siren speakers (123dB, nylon composite construction, mounted behind front grill)
- Two (2) Whelen SAK39 (or approved equivalent) siren speaker mounting brackets

#### **OVERHEAD LIGHTS**

- One (1) Whelen LFL Liberty WeCan Duo Color Series Super LED light bar (with 18 LED corners and 2xSXTDLED white takedowns center front) in B-R-B-TD-TD-R-B-R (front L-R) and R-R/A-B/A-R/A-B/A-R/A-B/A-B (rear L-R)
- One (1) WeCan Electronic Control Module (ECM), Windows-based software and programming cable

#### **FORWARD FACING LIGHTS**

- Two (2) Vertex Super-LED (or approved equivalent) white lights (mounted per customer specifications in front corner light assemblies)
- Two (2) Whelen 500 Series LED lights in split red/blue (mounted per customer specifications behind grill)
- One (1) Code 3 (or approved equivalent) heavy-duty epoxy-sealed dual pattern headlight flasher

#### **REAR FACING LIGHTS**

- Two (2) Whelen 500 Series LED lights in split red/blue (mounted on rear deck per customer specifications)

- Two (2) Vertex Super-LED light (or approved equivalent) in blue (mounted in vehicle back-up light assemblies)
- Two (2) Vertex Super-LED light (or approved equivalent) in red (mounted in vehicle taillight assemblies)

### **OFFICER AREA**

- One (1) Havis C-VS-1508-INSE (or approved equivalent) 23" radio and equipment console
- One (1) Havis C-CUP2-I 4" faceplate cup holder
- One (1) Havis C-AP-0325 accessory pocket
- One (1) Havis C-ARM-103 arm rest
- Four (4) single microphone hanger plates with microphone clips (installed per customer specifications)
- One (1) 3-outlet 12v power accessory boxes (mounted per customer specifications)
- Two (2) Pelican 8060 LED flashlights (installed per customer specifications and hardwired to 12v power)
- One (1) Havis PKG-PSM-241 premium passenger-side computer mount package
- One (1) Havis C-ADP-104 docking station device mount
- One (1) LED interior dome light with dual illumination (red/white)
- One (1) Able 2 (or approved equivalent) ignition override/anti-theft device
- One (1) Setina T-rail double weapon system for shotgun/AR15 (mounted to partition)
- Four (4) NMO antenna mount assemblies and antennas with coax (installed as follows):
  - One (1) in front of lightbar, WatchGuard antenna, coax to console
  - One (1) behind lightbar, UHF antenna, coax to inside console
  - One (1) behind lightbar, UHF antenna, coax to trunk
  - One (1) on trunk lid, VHF antenna, coax to trunk
- *Install the following customer-supplied equipment (to customer and manufacturer specifications):*
  - *One (1) WatchGuard 4RE in-car video system and peripherals*
  - *One (1) Panasonic CF19 docking station*
  - *One (1) Motorola UHF mobile radio in trunk with remote head in console*
  - *One (1) Kenwood VHF mobile radio in console*
  - *One (1) Kenwood VHF mobile radio in trunk with remote head in console*
  - *One (1) fixed-mount moving radar unit with front and rear antennas*

### **PRISONER AREA**

- One (1) Setina 10SC2-RP (or approved equivalent) partition (with horizontal sliding center section, coated polycarbonate window and slotted polycarbonate window cover)
- Setina lower extension panels and/or bucket seat adapter plates (as specified by manufacturer)
- One (1) Laguna (or approved equivalent) molded rear seat and with seat belts
- One (1) interior dome light (white, controlled from officer area switch)
- One (1) Patriot Products 475-0284 (or approved equivalent) vertical window armor and door panels

## Attachment B

# Electrical Wiring Specifications for University of Oregon Police Department 2013 Ford Interceptor Sedan Patrol Vehicles

All wire shall be of SXL (Cross Linked Polyolefin Insulated) XLP type and meet the following specifications:

- Ford (M1L-85A) and Chrysler (MS-5919)
- Heat resistance rates according to SAE-J-1128
- Abrasion Resistance rating to meet or exceed MIL T-5438

All wire is to be color coded, with no repeats in color/stripe combination in the same gauge of wire. All wire shall be clearly labeled every six (6) inches as to identify purpose of said wire.

The wiring harness/fuse panel shall be modular in design. It shall include all power wires and any trigger or activation wires so that no extra wires are outside the harness. This harness is to include all under-hood wiring, strobe, back flash, rear light-kill wires, gunlock, MDT pre-wire, cell-phone, scanner, etc. Additional labeled power wires shall be wired into the harness to facilitate future equipment upgrades. Future use power wires shall have fuse terminal locations pre-existing in the modular fuse panel.

All fuse terminal connectors shall be mechanically crimped to meet or exceed UL<sup>®</sup> pull test specifications with a maxi fuse or ATO fuse connector and wired to run without interruption to the hardware it controls. **No butt connectors or crimp caps shall be used in the harness. No push on terminals of any type, specifically Scotch-Loc, or T-Tap connectors are to be used within the harness or the completed vehicle. Additionally, no "Fuse Taps" of any type are permissible, as these add an additional amp load on the factory electrical wiring which was not intended by the vehicle manufacturer.** Any aftermarket equipment which has the ability to be wired to the Patrol Power (or approved equivalent) harness shall have a provision within the harness to be individually fused within the modular panel and any fuses over 30 amps in value shall be a maxi-fuse. Each component's wiring must be sized to handle at least 125% of that circuit capacity. All wire runs are to be within factory wiring channels, and secured every 6 inches at a minimum. Extra wiring is to be cut short; still allowing a service loop, but no bundles of wire under the carpet, dash, or trunk will be acceptable.

The fuse/relay panel must be secured under the hood and have the headlight flasher, super relay, master circuit breaker, and Power Tamer (or approved equivalent) timer integrated within the panel. The mounting of the panel shall be done to manufacturer specifications, and sonic welded brass nutserts shall be contained in the panel, so no back mounted nuts are required. The construction material of the panel must be of a plastic composite that is rated to withstand standard operating under hood temperatures that will be seen over the service period of the vehicle. ABS plastic, or steel, is not acceptable. No aftermarket fuses shall be mounted in any other location within the vehicle. The power timer shall be mounted beneath the panel so as to protect it from moisture. The headlight flasher shall have factory cable length sufficient to mount the flasher within the panel, and the resulting connectors that would be required otherwise. The flasher shall be a direct plug in unit matching vehicle's headlight connector. The main supply fuse for the headlight flasher shall be located within the fusing panel and not an inline fuse in the flasher itself. Likewise, the power timer fuse is also to be located within the fuse panel itself, and not an inline fuse. In this manner, all fuses are immediately accessible without removing any portion of the harness from the vehicle, with the exception of the fuse lid. This panel and all electrical wiring contained can be replaced as a single unit. A single 4-gauge power wire shall be wired directly to the battery positive terminal from the solenoid. The 4-gauge main power wire shall run directly into a 125 amp manually resettable circuit breaker. All terminal ends for any 4-gauge wire must be mechanically crimped to meet or exceed UL<sup>®</sup> pull test specifications, and covered with red, temperature activated adhesive, heat shrink. The circuit breaker shall mount on the side of the panel, and its output side wired with a 4-gauge power wire to a 300 amp super relay. This relay shall also mount on the side of the panel housing, and its construction shall be of a fully sealed and encapsulated unit so that no moisture or dust can penetrate it. The trigger wires to control this unit shall utilize a waterproof connector, and plug directly into the base of the relay. All power wires from the modular fuse panel shall then hookup to the output terminal of the super relay, which is ignition and time controlled by the power timer. Seven (7) of the ATO fuses within the panel shall be hot all the time, with the remainder on the timed circuit. A minimum of 4 Maxi fuses shall be wired into the panel as well. All future use wiring in electrical harness shall be neatly contained within back of console body.

A plastic molded lid covering the fuse panel shall indicate the location and function of each fuse within the panel, including future use wiring and values.

All supplemental wiring shall meet the same standard as the modular wire harness, i.e. Quality, Labeling & Specifications. The harness shall include the specific power wires: power timer, spare (yellow), MDT (2 ea), strobe power, backflash, wig wag, spare (red), siren amp, CB, Scanner, Radio 2, MDT (switched) arrowstick, gunlock, cell phone, cig. lighter, map light, flashlight, aux. 1, main power, aux. 2, radio power.

Additional labeled wiring, including all under hood wires shall be included in the wiring harness: grill light, siren speaker (2 ea.), siren speaker 2 (2 ea.), wig wag activation, bumper light, aux light, horn, ring, strobe (2 ea.) ground (2 ea.).

*All supplemental wiring is to be continuous runs with no cable extension other than at the hardware it is wired to.*

The master ground is to be an 8-gauge wire connecting from the factory ground terminal behind the passenger "B" pillar kick panel and run in to the console, terminating with a common ground bolt in the console. All grounds not wired to the common ground shall use star type lock washers at the ground end, i.e. head light flasher, strobe power supply. No barrier strip grounding is permitted.

Failure to meet the above electrical specifications may result in refusal of vehicles.

**Warranty and Inventory Requirements:** For the first year of vehicle service, the vendor shall replace defective or failed manufactures equipment, with new hardware **from vendors stock, at no cost to the department.** This will minimize down time in the event a siren speaker, light bar controller, power supply, etc. fails. This replacement warranty service shall be provided at no charge and within 48 hours of notification. Beyond 48 hours, the department reserves the right to self support, and invoice vendor for any charges incurred. All installation work is to be warranted for the in-service lifetime of the vehicle.