

Emergency Vehicle Preemption

Improve Incident Management for Better Public Safety

Emergency vehicle drivers as well as traffic engineers know that for effective incident management, traffic right-of-way must be regulated at its normal point of conflict — the signalized intersection. Control the intersection and you automatically command traffic movement and safety.

These products enable authorized vehicles to activate, detect and select signalized intersections for momentary right-of-way. Civilian traffic responds appropriately because drivers react naturally to their red or green signal indications. Emergency vehicles cross the intersection efficiently. The intersection returns quickly to its routine.

2070 OSP CARD and Card Cage



The 2070 Optical Signal Processor (OSP) is an entry level card providing the advanced detection and discrimination capabilities of all 2000 Series OSPs without the communication and configuration options needed in large traffic systems. Installed inside the traffic cabinet, the 2070 provides power for the 2090 and 2091 Optical Detectors, receives, decodes, and prioritizes signals from the detectors, and optically isolates the preemption channels.

The 2070 OSP is delivered default programmed to respond on a first-come, first-served basis to optical signals from vehicles within two signal bands.

Tri-color LEDs and test switches on the front panel of the 2070 provide output status indication and diagnostic feedback assisting in troubleshooting and range setting.

The 2070 OSP is compatible with NEMA TS-1, TS-2, and CA/NY 170 controllers and meets all NEMA and CalTrans environmental requirements. The 2070 plugs directly into a 170 input file without any additional hardware and does not use the internal 24VDC cabinet power.

Features and Benefits:

Modular construction allows tool-less field repair and firmware upgrades.

Plug-and-Play Firmware allows the ability to add preemption channels or other accessories in the field without manual configuration.

OSP 2070 SPECIFICATIONS:

Range: 2500 feet maximum adjustable down to 200 feet in 255 steps for each signal band.

Output Signals: The 2070 will provide four optically isolated output channels for placing calls on the traffic controller's preempt inputs. All output signals will comply with NEMA signal level definitions.

Electrical Requirements: 120VAC 50/60 Hz

Temperature Range: -40°C to +75°C

Part Number 2070-M4 SPM 4-Channel

Part Number 2070-M2 SPM 2-Channel

1881 Card Cage

The 1881 Card Cage provides all the necessary hardware and harnessing required to allow the simple wiring of the 2070 card to the detector outputs and controller inputs.



SPECIFICATIONS:

Electrical Requirements: 120VAC 50/60 Hz

Temperature Range: -40°C to +75°C

Transient Protection: Input power will be MOV and fuse protected from line transients.

Fusing: Input power connections will be fused at 1/2 amp to prevent cabinet wiring damage in the event of an electrical failure.

Part Number 2484-6

10 YEAR WARRANTY

NOTICE:
The sale of these items is restricted to state and local governments and to authorized distributors only.

Emergency Vehicle Preemption

2080 OSP CARD *(Also uses 1881 Card Cage and Harness)*

The 2080 Optical Signal Processor (OSP) is our midrange OSP providing the advanced detection and discrimination of all 2000 Series OSPs with improved system security and upgradeability. Installed inside the traffic cabinet, the 2080 provides power for the 2090 and 2091 Optical Detectors, receives, decodes, and prioritizes signals from the detectors, and optically isolates the preemption channels.

The 2080 is delivered default programmed to respond on a first-come, first-served basis to optical signals from vehicles within two signal bands.

The 2080 OSP is compatible with NEMA TS-1, TS-2, and CA/NY 170 controllers and meets all NEMA and CalTrans environmental requirements. The 2080 plugs directly into a 170 input file without any additional hardware and does not use the internal 24VDC cabinet power. For NEMA cabinets without pre-wired preemption slots, the TOMAR model 1881 card cage provides the necessary hardware and harnessing to allow simple connection to detector outputs and controller inputs.

Features:

Competitive Coded Detect allows the 2080 to detect 3M emitters without decoding their signal. The 2080 can lock out non-coded emitters and still detect and prioritize coded TOMAR and 3M emitters.

Modular construction allows tool-less field repair and firmware upgrades.

Plug-and-Play Firmware allows the ability to add preemption channels or other accessories in the field without manual configuration.

Preemption channel disconnect switches allow the pre-emption outputs from the 2080 to be physically disconnected from the controller inputs during setup and testing. This allows traffic technicians the ability to perform all system setups and testing without disrupting traffic flow.



OSP 2080 Specifications:

Range: 2500 feet maximum adjustable down to 200 feet in 255 steps for each signal band.

Range Adjustment: Range adjustment is accomplished via front panel switches and emitter.

Priority Determination: Signals in the Emergency signal band are given priority over signals in the Transit signal band. Signals in the same band are serviced on a first-come, first-served basis.

Output Signals: The 2080 provides four optically isolated output channels for placing calls on the traffic controllers preempt inputs. All output signals comply with NEMA signal level definitions.

Max Call Timer: Each channel is equipped with a MAX CALL TIMER which will disable a channel's response to an emitter code should that code remain within range for more than 2 minutes. Once the emitter is shut off for 10 seconds or more, the channel will again respond to that emitter.

10 YEAR WARRANTY

Part Number 2020-44SPM

NOTICE: The sale of these items is restricted to state and local governments and to authorized distributors only.



Emergency Vehicle Preemption

2090-SD, 2091-SD Optical Preemption Detectors



2090-SD Detector

Optical Preemption Detectors sense the optical pulses emitted by properly equipped emergency or transit vehicles.

Using 209X-SD Detectors and STROBECOM II throughout your traffic control system reduces emergency response time, allows emergency vehicles to travel with greater safety, and improves transit vehicle timeliness.

Features:

- Fully encapsulated electronics for complete resistance to water, heat, and vibration.
- Complete electronics protection from damage due to miswiring or electrical transients.
- Wide field of view option for uncompromised detection even in untethered span wire applications without the risk of side street activation.
- Military derived sensor technology for direct sunlight rejection and detection performance unmatched by ANY other system.
- Simple parallel detector installation without any special cabling for enhanced detection around corners and over hills.

SPECIFICATIONS:

Range: 2500 feet minimum

2090-SD Field of View: 13 degrees conical centered about the viewport normal axis (typical).

2091-SD Field of View: 60 degrees conical centered about the viewport normal axis (typical).

Power Requirements: Voltage - 12 to 30VDC Current -15 mA maximum

Temperature Range: -40° Celsius to +75° Celsius

Size and Weight: 2.75" dia. (69.8 mm) X 3.375" tall (85.7 mm) with side mounted 4" long (101.5 mm) sight tube

Mounting: The 2090-SD and 2091-SD are easily mounted using standard hardware on either span wire or mast arm.

The unit has a 1/2" female pipe mount hub and internal terminal block for connection to a 3/C shielded detector cable.

10 YEAR WARRANTY

Part Number 2484-1 With Mount

Part Number 2484-4 No mount, Long Tube

Part Number 2484-5 No mount, Short Tube

NOTICE: The sale of these items is restricted to state and local governments and to authorized distributors only.



2091-SD Detector



Emergency Vehicle Preemption

3060 Preemption Emitter



The model 3060 preemption emitter is used on authorized vehicles to activate optical preemption and priority control systems. The 3060 is self-contained, weather resistant, and operates on 12 or 24 VDC vehicle power. Configured via optional software, the 3060 can emit any of 65,000 vehicle ID's of either Emergency Band (high) or Transit Band (low) priorities. The 3060 is equipped with continuous self-diagnostics with visual feedback and a highly adaptable automatic disable system to prevent intersection lockup. An optional visible light filter can be added to make emitter operation invisible on undercover, transit, or maintenance vehicles.

Features:

- Hermetically sealed lamp
- Power and control cable included
- Waterproof connectors
- Control switch and indicator included
- Low power mode for transit applications

SPECIFICATIONS:

Range: 2500 feet in high power – 1000 feet in low power

Output: Xenon flash compatible with STROBECOM and competitive, non-coded, preemption equipment.

Power Requirements: Input voltage: 9 to 30VDC

Input current: 2.8A average @ 12.8V, 1.4A average @ 25.6V

Size: 7.5" (191mm) x 4.5" (114mm) x 4.5" (114mm)

Weight: 2.5 lbs. (1.14kg)

10 YEAR WARRANTY

Part Number 2484-3060

NOTICE: The sale of these items is restricted to state and local governments and to authorized distributors only.

2060 Preemption Emitter



The model 2060 Preemption Emitter Systems are used to operate Optical Traffic Preemption Systems. The lamp, cable, power supply, and coding module are completely water-proof and may be hosed down without fear of shorting them out. The power supply has a parking brake disable feature which may optionally be connected to the vehicle's brake switch to automatically switch the emitter off when the vehicle is parked to prevent traffic signal lockup at the scene of an emergency.

Features:

- 15 foot lamp cable (furnished with head)
- 15 foot control cable and switch
- 25 foot power cable
- Potted power supply with waterproof connectors
- Hermetically sealed waterproof lamp
- 3000 hour lamp life
- Low power mode (reduces range)
- Control switch included

10 YEAR WARRANTY

Part Number 2484-2060

ALSO AVAILABLE: 3065 EMITTER KIT

The 3065 emitters include an SAE J1708/J1587 interface that can be used for on/off control, disable override, and code programming from an onboard vehicle computer.

Part Number 2484-3065



Order by Phone 1-262-814-7000 Toll-free 1-800-236-0112
or Order by Fax 1-262-814-7017 Toll-free 1-800-444-0331



Emergency Vehicle Preemption

1800B Cordless Preemption Emitter

The 1800B Cordless Emitter Tester gives you complete freedom to test your STROBECOM® or 3M Opticom® preemption emitters for proper frequency at the station house to verify that they are operational on a regular preventive maintenance basis. The 1800B tester will identify both hi and low priority emitters from a range of 1000 feet or more and uses TOMAR's state-of-the-art programmable crystal controlled discriminator to verify that the emitters being tested are operating in the correct frequency band.

The 1800B operates from a built-in lightweight battery and can be recharged in the shop or in the vehicle from 110VAC or 12VDC. The 1800B is molded from high impact plastic and includes a pistol grip with lockable trigger action switch, green LED power-on low battery indicator, and red LED to indicate signal acquisition.

Ordering Information:

Model No. Description

1800B Emitter Tester, includes 12VDC and 120VAC chargers and rechargeable 6V battery.

NOTES: 1.) The frequencies tested can be reprogrammed at the factory to cover any special emitter frequency or bandwidth.

2.) Uses the same 120VAC and 12VDC battery charger that the 1850B Cordless Emitter uses.

SPECIFICATIONS:

Frequency Indication:

Steady RED light emitting diode indicates that a valid high priority signal is being received.

Flashing RED light emitting diode indicates that a valid low priority signal is being received.



Power: 6V sealed lead acid rechargeable battery 2.4 AH Panasonic LCR6V2.4P. Green LED illuminates when a trigger is pulled to indicate that a battery charge is adequate to make an accurate measurement.

Size and Weight: 4.5" deep x 4.5" diameter x 1.75lbs (114mm x 114mm x 796kg)

Part Number 2484-1800B

NOTICE: The sale of these items is restricted to state and local governments and to authorized distributors only.

Detector Mounts & Cable

Choose from single or dual mounts, conduit body with terminal blocks or without terminal blocks.

The M913 Strobecom® detector cable is made specifically for connecting 209X-SD detectors to 2000 series optical signal processors.

Model	Description	Material
2090M-1	1/2" conduit body single mount for 2090-SD or 2091-SD detector	Aluminum
2090M-2	1/2" conduit body dual mount for 2090-SD or 2091-SD detector	Aluminum
M913	Detector cable (available in 500, 1000, and 2500 foot reels)	-

Part Number 220-1 — for 1000 feet



2090M-1



2090M-2



M913