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2. An Opticom™ Detector at the intersection receives the infrared transmission and relays the request to the phase selector.
3. The Opticom™ Phase Selector validates the request and provides input to the traffic controller, which then provides a green light through normal operations.
4. In a manner that appears natural, the vehicle gains valuable time along the route without hindering overall traffic flow.

Opticom™ Infrared System components: detectors (top), emitters (left), phase selectors (right).

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Helping manage the world’s traffic problems, one intersection at a time.

As the world becomes a busier and more crowded place, traffic concerns are growing everywhere.

The Opticom™ Infrared System can go a long way toward meeting these challenges. Using coded infrared transmitters mounted on your emergency and transit vehicles, the Opticom infrared system communicates securely with the intersection traffic controller to gain a temporary right of way. The system has been proven effective at thousands of installations all over the world—helping elevate safety, minimize traffic disruptions, accelerate response times, improve service reliability, reduce crashes and save lives.

So whether you work in traffic management, transit or emergency services, you now have the ability to manage intersection traffic flow. And that can make a big difference in the efficiency, reliability and safety of your roadways.

About Global Traffic Technologies

Global Traffic Technologies was formed from 3M’s pioneering intelligent transportation systems. Our mission is to use our proven technologies and innovative mindset to improve traffic management and safety all over the world.

For emergency service providers:

Faster response for a world where every second counts.

Studies show that an effective signal preemption system improves response times by an average of 20%, while simultaneously reducing crashes at controlled intersections.¹ It’s no secret that response times and risk mitigation are critical in the emergency service world. The Opticom infrared system provides unique, precise control that anticipates vehicle movement and helps responders get to their destinations as quickly and safely as possible.

For mass transit operations:

Lower costs, happier riders and reduced environmental impact.

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For traffic engineers:

“Comprehensive” doesn’t have to mean “complicated.”

The Opticom infrared system can handle the needs of both emergency vehicle preemption and transit signal priority. What’s even more impressive is that it does this without making things complicated. The system installs easily at intersections and on vehicles, integrates with existing traffic controllers, minimizes the impact on general traffic flow and helps reduce the number of crashes at intersections. Life, after all, can be complicated enough.

For traffic engineers: “Comprehensive” doesn’t have to mean “complicated.”

Improves safety by eliminating priority conflict at the intersection

• "First-come, first-served" authorization

Validates emergency vehicle status and authorizes signal preemption

• Secure, encoded infrared communication

• Protection from unauthorized devices

• Vehicle identification with time stamp and activity log

Provides data reporting

• Preemption logs by vehicle for liability identification and diagnostic capability

For traffic engineers: “Comprehensive” doesn’t have to mean “complicated.”

Integrates easily into current cabinets

• Opticom™ Phase Selector plugs directly into CAN¹/170 and most NEMA hardware

• Compatible with most traffic controllers with internal preemption and priority

Enables conflict-free use among emergency service and transit vehicles

• "First-come, first-served" authorization

• Priority differentiation

Minimizes disruption of traffic flow

• Adjustable activation range for optimal green time and minimal traffic disruption

Provides complete call history log

• Confirmation of authorization, time of preemption and priority, direction, duration, and vehicle passage for up to 1,000 events

Whether you’re looking to improve headway, increase schedule adherence or activate queue jumping, the Opticom infrared system will serve you well. It provides a temporary advantage to individual buses, as needed, to help them catch up to schedules and maintain progression—crucial factors for maintaining a loyal rider base and attracting newcomers. Improving route timing by 10% or more may help you reduce your fleet needs.

For mass transit operations: Lower costs, happier riders and reduced environmental impact.

Enables automated operations

• Communication with AVL for conditional priority, enabling automated operation

Integrates with existing systems

• Supports J1700 standard

Provides per-vehicle identification data

• Eases creation of “before and after” effectiveness reports

• Enhances traffic signal controller reporting

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• Protection from unauthorized devices
• Vehicle identification with time-stamp and activity log

Provides data reporting
• Preemption logs by vehicle for liability identification and diagnostic capability

Integrates easily into current cabinets
• Opticom™ Phase Selector plugs directly into CA/NY170 and most NEMA hardware
• Compatible with most traffic controllers with internal preemption and priority

Enables conflict-free use among emergency service and transit vehicles
• First-come, first-served authorization
• Priority differentiation

Minimizes disruption of traffic flow
• Adjustable activation range for optimal green time and minimal traffic disruption

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