

# OPTICOM™ PRIORITY CONTROL SYSTEM

## OPTICOM™ MODEL 794M MULTIMODE LED EMITTER

*OPTICOM™ SYSTEM COMPONENT FOR ENVIRONMENTS  
WITH INFRARED AND GPS TECHNOLOGY*



### Description

The Opticom™ Model 794M Multimode LED Emitter is a compact, lightweight, weather-resistant encoded signal device intended for use on priority vehicles. When used in vehicles equipped with both Opticom™ infrared (IR) and Opticom™ GPS, the 794M Multimode LED Emitter eliminates the need to have a separate IR emitter and radio/GPS antenna modules on the roof of the vehicle. The Opticom™ GPS radio/GPS unit and vehicle control unit are still required for Opticom™ GPS operation.

Model 794M consists of an IR LED array with an integral power supply, integrated radio and GPS antennas for use with Opticom™ GPS vehicle equipment and the required cables. Accessory switch devices are also available for controlling the IR emitter. The operation of the IR emitter may be customized through its interface software or remote coding unit.

The IR encoded signal pattern (composed of the individual vehicle class code and vehicle identification number) generated by Model 794M is programmed through the use of interface software or remote coding unit.

Model 794M IR emitter emits precisely-timed pulses of infrared light at the base flash rate of approximately 10 or 14 Hz. It also interleaves programmed encoded pulses that carry the vehicle class and ID number information. These infrared pulses are sensed and processed by other Opticom™ IR system components to activate the system.

Model 794M is capable of being programmed via the Model RC790 remote coding unit, eliminating any dependency on a computer. By simply pointing the RC790 at the 794M, the user can set vehicle class and ID, visible LED, disable mode, restore factory default settings and initiate diagnostics with just a few pushes of a button.

### Available Models

Opticom™ Model 794HM Multimode LED Emitter: High-priority emitter

Opticom™ Model 794TM Multimode LED Emitter: Low-priority emitter with reduced output for transit signal priority applications

*Global Traffic Technologies, LLC*

*(GTT), formed in 2007 from*

*3M's pioneering Intelligent*

*Transportation Systems business,*

*is the manufacturer of Opticom™*

*priority control systems and*

*Canoga™ traffic sensing systems.*



*Building critical  
traffic connections<sup>sm</sup>*

# OPTICOM™ MODEL 794M MULTIMODE LED EMITTER

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## Features

- Integrated GPS and 2.4 GHz antennas for use with Opticom™ GPS vehicle equipment
- Discrete, penetrating infrared communication
  - Directional
  - Consistent, day and night transmission
  - All-weather performance
- Compact, single source system
- High- and low-priority IR operation as well as probe-frequency capability
- IR Encoded signal transmission
  - High priority: 10,000 discrete vehicle IDs (10 classes of vehicles and 1,000 individual codes available within each class)
  - Low priority: 10,000 discrete vehicle IDs (10 classes of vehicles and 1,000 individual codes available within each class)
- Remote range-setting capability
- J1708 serial interface
- Low power consumption
- FCC part 15 Class A specifications compliance
- Installation flexibility
  - Mounts directly on roof of vehicle
- Automatic IR emitter disable, indicated by slow flashing of the emitter switch's indicator light or the emitter's visible LEDs
- Self-diagnostic with visual feedback through the IR emitter switch's indicator light and visible LED indicator lights
- Cumulative IR emitter flash counts available through the interface software or RC790 diagnostic mode
- Included 25' cables
- Included mounting bracket and hardware
- Antennas assembly and IR emitter assembly individually replaceable

## Accessories

- Opticom™ RC790 Remote Coding Unit

## Operating Parameters

- Integrated Opticom™ GPS system 2.4 GHz RF antenna
- Integrated Opticom™ GPS system GPS antenna
- High- or low-priority and probe-frequency operation selected by model and switch combination
- 10,000 vehicle codes available in high priority
- 10,000 vehicle codes available in low priority
- Automated range-setting feature
- Less than 1 amp peak current draw
- Self-diagnostics
- Precisely controlled high-priority flash rate of 14 Hz
- Precisely controlled low-priority flash rate of 10 Hz
- Transmission range up to 2,500 feet (762 m)
- Electrical
  - Input Voltage: 10 to 32 VDC
  - Current: < 1 amp
- Environmental
  - Operating Temperature: -34°C to +74°C (-30°F to +165°F)
  - Relative Humidity: 5% to 95%

## Physical Dimensions – Model 794M LED Multimode Emitter

Depth: 5.0 in. (12.8 cm)  
Width: 5.8 in. (14 cm)  
Height: 3.7 in. (9 cm)  
Weight: 3.0 lb. (1.36 kg)  
Cables length 25'(7.6m)

## Physical Dimensions / Operating Parameters Model RC790 Remote Coding Unit

- Length: 6.3 in. (16 cm)
- Width: 3.7 in. (9.4 cm)
- Thickness: 1.0 in. (2.5 cm)
- Weight: 0.5 lb. (.2 kg)
- LCD display and a keypad
- Operates on four AAA batteries

For complete warranty information visit [www.gtt.com](http://www.gtt.com).



### Global Traffic Technologies, LLC

7800 Third Street North  
St. Paul, Minnesota 55128-5441  
1-800-258-4610  
651-789-7333  
[www.gtt.com](http://www.gtt.com)

### Global Traffic Technologies Canada, Inc.

157 Adelaide Street West  
Suite 448  
Toronto, ON M5H 4E7  
Canada  
1-800-258-4610