



Global Traffic  
Technologies

# Opticom™ Project Management Services

## Intersection and Vehicle Equipment Installation/ Intersection and Vehicle Installation and Service Training

June 2008

### Intersection Equipment Installation

Global Traffic Technologies (GTT) will install Opticom™ GPS or Infrared System components and equipment at designated intersections and work with authorized agencies to facilitate and verify traffic controller cabinet interface wiring.

#### Customer Prerequisites

- Provide a specific list of intersections including descriptions—with drawings if desired/available.
- Provide site survey results detailing suggested equipment and placement (if not specified by the GTT Intersection Site Survey Program).
- Provide mode of operation so that correct equipment may be selected/specified.
- Provide and/or agree to a standard preempt wiring and output plan.
- Insure that each traffic controller cabinet is configured to accept all necessary equipment to accommodate the Opticom system installation.
- Designate a contact person with the authority to decide any issues relating to installation preferences, operation/activation options and help address installation difficulties.
- Provide any non-standard keys for traffic controller cabinet access and/or a maintenance representative if required.
- Obtain or assist in obtaining all necessary permits along with contact information.
- Provide details on any local traffic control requirements.

#### GTT Project Management Processes

- Insure that work adheres to permit requirements.
- Obtain or assist in obtaining all necessary permits along with contact information.
- Provide traffic control with traffic control plans.
- Mount Opticom™ GPS Radio Units or Infrared Detectors in positions specified by the site survey to insure proper operation.
- Install brackets, poles, mast arms, etc. needed to insure secure mounting.
- Pull cable from Opticom radio unit or detector down to the traffic controller cabinet through conduit and connect within the control cabinet to insure proper connection to the Opticom™ Phase Selector.
- Connect cable shield to earth ground in the traffic controller cabinet.
- Install and wire Opticom phase selector and Opticom™ Card Rack (if applicable) connecting to power source after circuit breaker and surge protectors.
- Install auxiliary or green sense harness/AIP (if applicable) and connect all green phase monitor lines (up to eight phases).
- Connect Opticom phase selector outputs and logic common from Opticom card rack (if applicable) to preempt Opticom™ Interface Panel.
- Verify proper connections and operation by observing Opticom phase selector output.
- Complete an output connection worksheet (leave in cabinet).
- Verify good GPS reception.
- Verify that radio is transmitting by listening for adjacent intersections or vehicles.
- Obtain final installation approval from the authorizing agency.

## Vehicle Equipment Installation

Global Traffic Technologies (GTT) will install all Opticom™ GPS or Infrared System vehicle equipment and components on designated emergency and transit agency vehicles and work with designated/authorized agency personnel to facilitate and verify interface wiring.

### Customer Prerequisites

- Provide a specific list of all user vehicles with descriptions.
- Identify the locations/facilities where all vehicles are located along with address and phone information.
- Provide a contact person for each location/facility for scheduling.
- Provide mode of operation that will be used to facilitate correct equipment selection/specification.
- Provide and/or agree to a coding plan that uniquely identifies each vehicle by operating agency, vehicle type and vehicle ID number (if not specified by our Vehicle Code Management service). The plan should accommodate all agencies including those affected through mutual aid (if available).
- Provide and/or agree to standard wiring plans for each vehicle type.
- Designate a contact person with the authority to answer any questions and decide any issues relating to installation preferences, operation/activation options and help address installation difficulties.
- Designate a traffic contact person with the authority to assist in the use of an equipped intersection for vehicle testing.
- Obtain or assist in obtaining all necessary permits along with contact information.

### GTT Project Management Processes

- Insure that work adheres to agency requirements.
- Obtain or assist in obtaining all necessary permits along with contact information.
- Determine Opticom™ Emitter or Opticom™ GPS Radio Units mounting method and location (if not provided by our Vehicle Survey service).
- Mount Opticom emitters or radio units in position to insure proper operation and accommodate aesthetic concerns whenever possible.
- Install Opticom vehicle control equipment/unit to insure proper operation accommodating aesthetic and ergonomic concerns whenever possible.
- Equipment will be connected to:
  - Proper power source and fuse all power connections.
  - Appropriate vehicle turn signal lines.
  - Appropriate disable activation point.
  - Appropriate remote/automatic activation points and fused.
- Update electrical drawings indicating installation points—if desired.
- Dress all cables and seal all holes per customer specifications.
- Verify proper connections and operation by observing that all required parameters listed above are set correctly using Opticom software.
- Program authorized codes into the vehicle equipment according to coding plan.
- Drive vehicle through an equipped intersection to verify performance (if necessary and authorized).
- Obtain final installation approval from the authorizing agency.

## **Intersection Installation and Service Training**

GTT will provide comprehensive training to enable the customer and/or contractor to perform intersection activities to include Opticom GPS or infrared system component and equipment installation, troubleshooting, servicing and maintenance.

### **Customer Prerequisites**

- Provide an on-site location for training.
- Provide a list of expected attendees.
- Provide intersection information and access for in-field training.
- Provide access to refreshments and meals during training.

### **GTT Project Management Processes**

- Provide comprehensive training covering: equipment installation, verification, troubleshooting, site surveys and code management.
- Training sessions to take place at the customer's location(s).
- One to three full days may be required to accommodate classroom study and field training.
- Prepare all classroom materials and provide at the training session.
- Provide all equipment and software necessary for the training. (Including Spares and Software License.)
- Provide session to include "in-field" training of equipment.
- Provide a "recommended" spare parts list with re-order information (hardware and software).
- Obtain training acceptance sign-off from the authorizing agency.
- Facilitate the order of all new equipment for the vehicle to ensure proper vehicle coding is enforced and managed.
- Work with user agency(s) to coordinate Intersection Code Maintenance to ensure priority access through equipped intersections. (See Intersection Code Maintenance data sheet.)
- Provide a periodic report of authorized vehicle codes to customer.

## Vehicle Installation and Service Training

Global Traffic Technologies (GTT) will provide comprehensive training to enable the customer and/or contractor to perform vehicle activities to include installation, troubleshooting, servicing and/or maintenance of Opticom™ GPS or Infrared Systems vehicle equipment and components.

### Customer Prerequisites

- Designate a contact person with the authority to answer any fleet questions and decide any issues relating to installation preferences, operation/activation options and help address installation difficulties.
- Provide a location/facility for the install to occur (if desired).
- Provide a vehicle for the install to occur (if desired).
- Provide a list of expected attendees.
- Provide access to refreshments and meals during training.

### GTT Project Management Processes

- Provide a concise, self-contained resource for technicians or mechanics.
- Training is suggested to take place at the customer's training facility.
- One day will be required to accommodate classroom study and hands-on of vehicle installation and service training.
- Prepare all classroom materials and provide at the training session.
- Provide all equipment and software necessary for the training. (Including Spares and Software License.)
- Provide a step-by-step overview of how to install and troubleshoot Opticom vehicle equipment.
- Obtain training acceptance sign-off from the authorizing agency.



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