

TOMAR ELECTRONICS

Strobecom II

Model 3060 Emitter Installation & Operation (REV 1)

ATTENTION

THE STROBECOM II SYSTEM IS DESIGNED TO AID IN THE TRANSIT OF DESIGNATED VEHICLES THROUGH THE TRAFFIC CONTROL SYSTEM, TO THEIR DESTINATIONS.

IT IS IMPERATIVE THAT THE DRIVERS OF EACH TYPE OF VEHICLE THAT USES THE STROBECOM II SYSTEM BE MADE AWARE OF THE RESPONSE HE CAN EXPECT FROM THE TRAFFIC CONTROL SYSTEM.

IT IS THE RESPONSIBILITY OF THE CUSTOMER TO CONFIGURE THE SYSTEM'S RESPONSE TO EACH VEHICLE TYPE AND TO EDUCATE EACH DRIVER TO EXPECT THE APPROPRIATE RESPONSE FROM THE SYSTEM.

AT NO TIME SHOULD A DRIVER OF A VEHICLE EXPECT THAT HE IS GUARANTEED TO RECEIVE PROTECTED RIGHT-OF-WAY THROUGH TRAFFIC INTERSECTIONS. DRIVERS OF VEHICLES THAT WILL OPERATE OUTSIDE OF THE NORMAL TRAFFIC LAWS AND CONVENTIONS MUST ALWAYS TAKE RESPONSIBILITY FOR ENSURING THE SAFE PASSAGE OF HIS VEHICLE THROUGH AN INTERSECTION REGARDLESS OF THE OPERATION OR NON-OPERATION OF THE STROBECOM II SYSTEM.

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Strobecom II – Model 3060 Emitter Installation Instructions

1 MODEL 3060 EMITTER DESCRIPTION

The Model 3060 emitter is mounted on a vehicle and transmits vehicle identification information, to suitably equipped intersections, via optical pulses. The 3060 includes continuous diagnostic monitoring to ensure its proper operation.

The 3060 emitter is modular, consisting of the 3060-HOUSING, RECT-37SWP-C Lamp, 3060-CABLE, and 3060-SWITCH. The RECT-37SWP-C is the only component that requires routine maintenance and is easily field replaceable.

The RECT-37SWP-C consists of a xenon arc tube mounted in a metallized, polycarbonate reflector and then linear vibration welded to an optically clear polycarbonate cover creating a hermetically sealed assembly.

The 3060-HOUSING is a black, glass-filled, UV-stabilized polycarbonate shell. The RECT-37SWP-C is secured into the 3060-HOUSING with four stainless steel screws. Optionally, a RECT-37-VLF visible light filter can be fitted over the lamp, rendering the operating emitter signal virtually invisible.

The 3060-HOUSING contains a power supply that is completely encapsulated in polyurethane, and is equipped with automotive waterproof connectors to ensure a long, stable, life even in the most adverse environmental conditions. The power supply is RFI filtered, polarity protected, and damage proof from mis-wiring during installation.

The emitter's vehicle code is programmed via a PC compatible computer either at the factory or in the field. The 3060 emitter can be reprogrammed thousands of times without disassembly.

The 3060-CABLE connects the 3060 lamp and housing assembly to the 3060-SWITCH, an optional customer supplied door or parking brake switch, and the vehicles electrical power. The 3060-CABLE is equipped with a mating sealed connector for attaching to the 3060-HOUSING assembly.

The 3060-SWITCH provides a method of turning the 3060 emitter on and off and includes an LED that provides positive visual feedback that the 3060 is on AND operating normally.

2 3060 CODED EMITTER INSTALLATION

REFER TO TOMAR DRAWING #13266 (ATTACHED) FOR EMITTER INSTALLATION AND WIRING PICTORIAL DETAILS.

For optimum range and best performance, mount the 3060 emitter on top, or near the top, of the vehicle so that its signal is most likely to be seen over the tops of other vehicles in front.

Drill a ½" hole through the surface to which the emitter will be mounted. The mounting surface should be strong enough to adequately support the emitter and retain the emitter in case of a vehicle accident.

Mounting the emitter to an inadequate surface could allow the emitter to become loose in an accident and possibly impact a vehicle passenger, causing injury. IT IS THE INSTALLERS RESPONSIBILITY TO INSURE THE EMITTER IS SECURED ADEQUATELY.

If mounted outside the vehicle, drill a 1-1/4" hole to allow the model 3060-CABLE to pass into the vehicle.

Secure the emitter using the supplied 7/16" stainless steel hardware. Point the emitter in the direction of forward vehicle travel and aim the emitter up just a few degrees to point at the detectors mounted in the intersections.

Engage the 3060-CABLE connector to the mating connector on the 3060 emitter. This connector is waterproof and can be operated outside the vehicle if desired. Be sure to adequately secure the 3060-CABLE.

Run the other end of the 3060-CABLE through the vehicle to the location where the 3060-SWITCH will be located. If the 3060-CABLE penetrates any vehicle panels, take care to protect the cable from abrasion of the insulation.

Mount the 3060-SWITCH bracket in a location visible to the operator, using the supplied hardware.

Snap the rocker switch into the 3060-SWITCH bracket.

Following Tomar drawing 13266, included with this document, connect the 3060-CABLE to the 3060-SWITCH as shown.

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Disconnect the vehicle battery and make the final power connections from the 3060-CABLE, the included 10-amp fuse, and the vehicles door or parking brake switch (customer supplied), to the vehicles electrical system.

Reconnect the battery and operate the 3060-SWITCH to the ON position.

Observe the emitter lamp for flashing, and verify that the indicator LED on the 3060-SWITCH is ON steady.

Activate the vehicle door or parking brake, and verify that the emitter stops flashing. The LED in the 3060-SWITCH should blink at a slow .5 Hz rate to indicate the 3969 has been disabled.

Return the 3060-SWITCH to the OFF position. Installation is complete.

If the LED in the 3060-SWITCH flashes at a fast 2 Hz rate during testing, refer to Section 5. — 3060 Emitter Troubleshooting for assistance.

3. 3060 EMITTER OPERATION

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INTERSECTION REGARDLESS OF THE OPERATION OR NON-OPERATIONS OF THE STROBECOM II SYSTEM.

Activate the 3060 emitter by operating the 3060-SWITCH to the ON position. The LED on the 3060-SWITCH should display a steady condition indicating the emitter is operating properly.

If the 3060-SWITCH is in the ON position but the LED on the 3060-SWITCH blinks slowly at a .5 Hz rate, the emitter may be in cutoff mode because the vehicle door is open or the parking brake is set. Once the door is closed or brake released, the 3060 should operate.

If the LED on the 3060-SWITCH begins to flash rapidly at a 2 Hz rate, the emitter lamp is getting old and is missing flashes. In this condition, the transmission of vehicle identification and preemption request is unreliable. The emitter may be left on, but the driver should understand that the intersection may not be able to decode the vehicle's emitter, and may not give the vehicle the expected response. The emitter should be serviced as soon as possible.

After activation of the emitter and verification of a steady burning indicator, no further operator intervention is required. The emitter will continuously emit the vehicle's programmed code during the vehicle's travel.

4. 3060 EMITTER MAINTENANCE

The 3060 emitter should be inspected for proper operation at the beginning of every vehicle shift.

Visually confirm the solid illumination of the LED on the 3060-SWITCH and if possible the flashing of the emitter lamp.

Monthly, the emitter lamp should be visually inspected. Any arc lamp that is blackened over more than 30% of its length should be replaced.

If the LED on the 3060-SWITCH flashes quickly at a 2Hz rate, indicating a lamp that is beginning to misfire due to age, the emitter system should be taken out of service and the emitter lamp replaced immediately.

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5. 3060 EMITTER TROUBLESHOOTING

When a report of system failure is received from the field, the Strobecom II system must be analyzed and the source of the failure repaired. The major components of the Strobecom II system have self-diagnostic functions that aid in troubleshooting.

The 3060 emitter is equipped with a monitoring system that continuously checks for the proper operation of the emitter lamp.

Troubleshooting the emitter is required when the status indicator located on the emitter control switch is flashing.

An indicator flashing quickly at a 2Hz rate indicates that the emitter lamp is reaching end of life and is beginning to miss flashes. Immediately replace the emitter lamp.

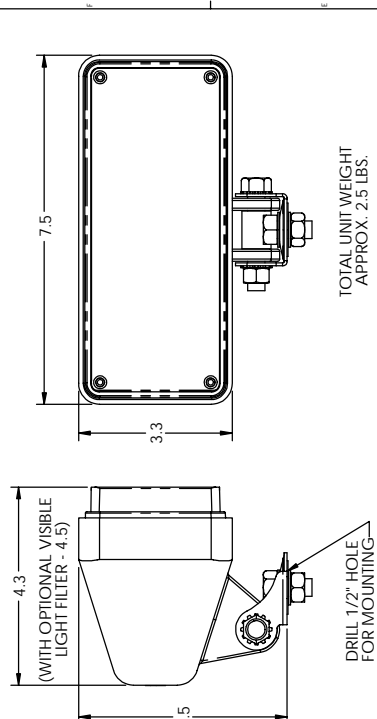
THE EMITTER LAMP IS UNRELIABLE AND MAY NOT INITIATE PREEMPTION IN THIS CONDITION AND SHOULD BE SERVICED IMMEDIATELY.

If the 3060-SWITCH is activated but the LED indicator does not illuminate, or the emitter does not generate a signal, check the following items.

- 1) Check the 10-amp fuse.
- 2) If the 10-amp fuse is OK, measure the voltage to the RED wire of the 3060-CABLE. With the 3060-SWITCH in the ON position, vehicle battery voltage should be applied.
- 3) Check all wiring for damage.
- 4) If all above fail replace the 3060-HOUSING containing the power supply with a known good unit. Return the defective 3060-HOUSING to Tomar Electronics, Inc. for service.

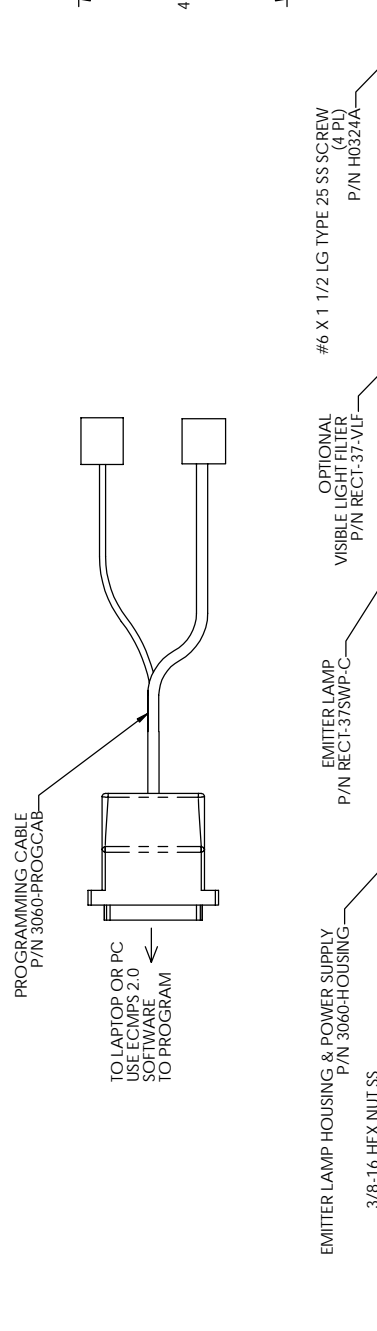
If the 3060-SWITCH is activated and the LED on the 3060-SWITCH flashes slowly at a .5 Hz rate, check the following items:

- 1) Check the door or parking brake cut-out switch for proper operation.
- 2) Check the wiring to the door or Parking brake switch.



TOTAL UNIT WEIGHT
APPROX. 2.5 LBS.

INDICATOR	STATUS
STEADY	EMITTER ON
2 HZ FLASH	LAMP MISSING FLASHES
.5 HZ FLASH	EMITTER DISABLED



#6 X 1 1/2 LG TYPE 25 SS SCREW
(4 PL)
P/N H0324A

OPTIONAL
VISIBLE LIGHT FILTER
P/N RECT-37-VLF

EMITTER LAMP
P/N RECT-37SWP-C

EMITTER LAMP HOUSING & POWER SUPPLY
P/N 3060-HOUSING

3/8-16 HEX NUT SS
P/N H0401

TO PROGRAM UNIT
OPEN CONNECTOR
AND INSERT
3060-PROGCAB IN-LINE

3/8 EXTERNAL
LOCKWASHER SS
(2 PL)
P/N H0147

5/8 X 13/16 LG SPACER
P/N H0440-81-A

BRACKET - SS
P/N H0364

MOUNTING
PANEL

7/16 FLAT WASHER SS
P/N H0154

7/16 INTERNAL
LOCKWASHER SS
(2 PL)
P/N H0155

7/16-14 HEX NUT SS
P/N H0391

7/16 X 3/4 LG HEX BOLT SS
P/N H0367

3/8-16 X 2 1/8 LG HEX BOLT SS
P/N H0365

WIRE COLOR	FUNCTION
RED	+POWER
BLK	GND
GRN	INDICATOR
WHT	DISABLE
BLU	DISABLE LATCH SELECT

3060-SWITCH
REAR VIEW



BLK/GND
GRN/INDICATOR
RED/PWR
10 AMP FUSE

BLK/GND
BLK/GND
GRN/INDICATOR
RED/PWR

3060-SWITCH
(INCLUDED)

FUSE
10 AMP
(INCLUDED)

+12 - 28
BATTERY

TO +BAT FUSED
OR GND

CUSTOMER SUPPLIED
DOOR SWITCH
(CLOSE TO
DISABLE EMITTER)

NOTE: TO MAKE DOOR
SWITCH A LATCHING
FUNCTION, CONNECT
BLU/LATCH WIRE
TO RED/PWR WIRE.
LEAVE BLU/FLOAT
FOR NON-LATCHING
DOOR DISABLE.

WHT/DISABLE

NOTE: WHY/DISABLE WIRE
POLARITY IS SET VIA
ECMPS 2 SOFTWARE.
UNITS SHIPPED
FROM FACTORY, SET FOR
GND TO DISABLE

REV	DATE	DESCRIPTION
01	6/11/00	REVISED SWITCH
02	10/20/00	REVISED SWITCH

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES
TOLERANCES ARE:
DECIMALS .010
XXX +.010
ANGLES +/- .10
DRAWN AML 10/21/99
APPROVED

DO NOT SCALE DRAWING

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SCALE: VARIOUS CAD FILE: 13286.DWG 8/20/00W

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2100 WEST OBISSO
GILBERT, ARIZONA 85233

3060 SELF-CONTAINED
EMITTER INSTALLATION
PICTORIAL PARTS LIST
AND WIRING DIAGRAM

TOMAR PART NO. **13266 102**
DWS: JMS
REV

SHEET 1 OF 1