

# TC-26B Vehicle Detector

## INSTALLATION INSTRUCTIONS

### Section 1

#### General Description

The Model TC-26B is a microprocessor controlled vehicle detector with a selectable range (long or short). It is designed to trigger the operation of a traffic controller. The TC-26B will only respond to motion in one direction (approach or depart only—selectable) which makes it ideal for long-range detection at intersections. A microprocessor analyzes the reflected microwave energy and responds to motion in the proper direction. The TC-26B generates an extremely low power microwave beam aimed to cover the same area normally covered by a loop detector system. It is less expensive to install and less susceptible to damage and malfunction from ice, salt and heavy vehicular traffic.

The TC-26B operates on much the same principle that police radar uses. The unit transmits a low power microwave signal, some of which is reflected by a moving target, such as an automobile or truck. Larger vehicles, such as semi-trucks, reflect more energy than automobiles and can be detected at further distances. Since the TC-26B uses microwave signals as its means of detecting a moving target, it is not affected by air motion, temperature and humidity changes, or high frequency sounds.

### Section 2

#### Installation

The TC-26B vehicle detector will perform best when it is aimed directly at traffic. This can be accomplished by mounting the unit at the typical mounting height of 14' to 24' and aiming the sensing head so it can "view" the traffic coming toward or moving away from the unit. Side-fire mounting is also acceptable.

The TC-26B is mounted with 2 lag bolts through 2 - 1/2" prepunched mounting holes, or by banding to the poles.

To remove the fastening bracket from the sensor, take out the 1/4-20 bolt holding the bracket to the hinge. Using the bracket as a template for locating screw holes, mark and drill the pole or band the bracket and refasten the sensor to the bracket with the 1/4-20 bolt removed earlier.

#### Wiring -

Operating voltage is 12V to 24V AC or DC and is usually supplied through a transformer. Current consumption of the unit is 0.075 Amps.



**NO AMPLIFIER REQUIRED!**

**NOTE:** 18V, 20VA transformer included

#### Wiring of the cable is as follows:

Red & Black = 12V to 24 V AC/DC (no polarity)  
Brown = Relay COM  
Org = Relay N.O.  
Yel = Relay N.C.

**NOTE:** Relay contact designation is with power applied.



**CAUTION:** Do Not apply 120V AC primary power to the transformer until all secondary wiring is complete.

**NOTE:** When power is applied, allow 30 Seconds of warm-up before testing sensor

For more information, call us toll-free at (800) 842-2545.

#### Alignment

Align the TC-26B by adjusting the range control and the aiming angle. The range control allows the detection pattern to be varied to sense vehicles at a maximum of 200' for cars, and 350' for semi-trucks or other large vehicles. The Direction switch allows the sensor to detect traffic traveling either toward or away from the sensor. Please see **Figure 1** for proper switch settings.

To adjust the sensor's head angle, loosen the 1/4-20 hinge bolt. This allows vertical movement of the TC-26B. When alignment is complete, make sure that all bolts and screws are tightened.

#### Operation



**REMINDER:** When power is applied, allow 30 Seconds warm-up before testing sensor.



**NOTE:** This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference.

**Note: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.**

### Section 3

#### Technical Data

Model .....	TC-26B
Operating Frequency .....	10.525 GHz +/- 25 MHz
Detection Method .....	Microprocessor-Analyzed Doppler Microwave
Detection Pattern .....	Adjustable- (see <b>Fig. 2</b> )
Detection Angle .....	Adjustable, Tilt & Swivel
Detection Mode .....	Continuous with Motion
Response Time .....	0.150 seconds
Time Delay .....	Adjustable, 0-5 seconds
Power Requirements .....	12V to 24V AC or DC
Wiring Requirements .....	Four-Conductor Cable (see Wiring Section, Pg.1)
Current Consumption.....	75 mA (0.075 Amps)
Power Consumption.....	1.8 watts max. @ 24V
Relay Contacts .....	Form C, rated at 3 amps
Mounting .....	Heavy-duty bracket, predrilled & slotted for pole mount
Temperature.....	-35°F to 165°F (-37°C to 75°C)
Weight.....	3 lbs. (1.4 kg)
Size .....	7" x 4" x 4" (17.8cm x 10.2cm x 10.2cm)
Color .....	Gray, Powder Coated
Enclosure .....	Aluminum with stainless steel hardware

### Section 4

#### Warranty

MS Sedco guarantees this product to be free from manufacturing defects for one year from date of installation. Unless MS Sedco is notified of the date of installation, the warranty will be in effect for one year from the date of shipment from our factory. If, during the first year, this motion detector or support device fails to operate and has not been tampered with or abused, the unit can be returned prepaid to the factory and it will be repaired free of charge. After one year, the unit will be repaired for a nominal service charge. **This limited warranty is in lieu of all other warranties, expressed or implied, including any implied warrantability of merchantability, and no representative or person is authorized to assume for MS Sedco any other liability in connection with the sale of our products. All warranties are limited to the duration of this written limited warranty. In no event shall MS Sedco be liable for any special, incidental, consequential or other damages arising from any claimed breach of warranty as to its products or service.**

8/28/01