

BATTERY INSTALLATION:

Install 'D' cell alkaline only (industrial grade recommended), or Lantern batteries as battery holder requires.

LOOP CONNECTION:

An external 4 pin round socket and matching plug is provided for loop installation. If you have previously installed a connector for a Safetran LDC 355, of Stevens CV 5140 L counter, you will not have to change connectors on the loop leads. The Traffic Tally 14/21/41/51 can use the same connector. If you need to connect the provided plug to the loop lead, solder the two **GREEN** wires or **GREEN/WHITE** wires extending from the connector to the two loop leads. Insulate the connections with a watertight insulating material. The **RED** and **BLACK** leads are used to trigger an external device as described in the next section.

CONNECTING AN EXTERNAL DEVICE:

The **RED** (positive) and **BLACK** (negative) leads on the external plug are for triggering an external device such as a camera or gate from the Traffic Tally 14/21/41. Devices having trigger voltages up to 20 volts and a current draw of up to 150 milliamps can be triggered. Inductive loads are allowed. This trigger gives a .1 second positive to negative pulse for each count on the counter.

To connect an external device to the Traffic Tally 14/21/41, connect the positive lead to the **RED** lead and the negative lead to the **BLACK** lead of the external plug. You may have to use a voltmeter to ermine the polarity of your specific device LED's. If you do not have a voltmeter, you can make the proper connections by first connecting any one lead to the plug. Next momentarily touch the lead to the plug. If the external device is activated, the leads are reversed.

NOTE: If you are not triggering another electrical device, tape the **RED** and **BLACK** wires so that they cannot touch each other or any other wire or metal surface. With the plug connected to the loop, remove the protective cap from the external socket and insert the plug. Tighten the locking ring for a secure connection.

OPERATING INSTRUCTIONS:

After completing the above installation procedure, the Traffic Tally 14/21/41/51 is ready for operation. The following describes the operation of the Traffic Tally 14/21/41/51.

DETECTOR RESET:

To fast tune the loop detector to the loop installation, press the button for one or two seconds and release. The Detector will tune within 20 seconds after release of the button for detectors having an inductance of 70 to 500 micro henries.

ADJUSTABLE TIME DELAY:

This delay is provided to allow the operator to adjust the detector to eliminate multiple counts from certain types of trucks (example: a utility truck hauling a telephone pole). The Time Delay is adjustable with the knob on the panel from 0.1 seconds to approximately 4 seconds. The "S" and the "L" stand for Short and Long delay times. The length of the delay time is indicated by the panel light when it is in the "On" position. The light of a properly adjusted time delay will turn off after the last of a

long truck or vehicle has crossed the loop. This will assure a count for a vehicle close behind a truck, but not double count for longer vehicles. The light should set to be "Off" when it's not needed in order to conserve battery life.

LCD RESETTABLE COUNTER:

This counter will show the vehicle count registered by the loop detector. To reset the counter, press the yellow button directly to the right of the display. It is normal for the counter to register random counts before and during installation also before tuning has been done.

TROUBLE SHOOTING:

If the counter is not operating as expected the following troubleshooting steps may identify the issue.

Unit will not
Turn On:

- The batteries in the holder may not be making good contact. Check the batteries in the battery holder to make sure they are making contact will all pins and springs. Check the battery plug connection to the unit.
- Batteries may be dead. Check the batteries or replace them with new batteries
- Possible electronic damage has occurred. If the unit stopped due to water or other damage contact diamond at support@diamondtraffic.com

Counter is not
Counting:

- Make sure the correct wires are connected to the loop. Black and Red wires are not used for loop connections.
- Inductive loop may be out of inductance range. If the installed loop is either too small, or was not installed properly it may not work properly. Loops that are further than 75ft from the unit may also be too far to energize properly. Check the installation to make sure the loop is installed properly.

Counter is Over
Counting:

- Runaway counts occur if the loop is not properly connected. Check all loop connections.
- Counting more than once per vehicle. Check the Led indicator to change the delay setting to increase the delay to reduce double counting.
- Random counting occurs when power or other interference may be present near the loop or the counter unit. Check to make sure no high voltage or Radio equipment is nearby.

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