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TRAX ACCUMULATOR Reference Guide

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The TRAX Accumulator is an automatic traffic counter designed and built by JAMAR Technologies, Inc. It is designed to collect volume totals without the need to download to a computer.

Divide-by-Two Volumes

The Accumulator uses the divide-by-two method when recording traffic volume. This means that the recorder will increment one for every two axle hits. It will record a two-axle car as one (1) count while a four-axle truck will be recorded as two (2) counts.

For a vehicle with an odd number of axles, the Accumulator will record each pair of hits, then carry over the last hit. For example, a three axle vehicle will record as one and the Accumulator will hold the third hit in temporary memory until the next vehicle passes over the tube. If the next vehicle also has an odd number of axles, the count will correct itself. If not, the temporary memory will retain the last axle hit until it can correct itself.

Recording Counts

When the Accumulator is turned off, the last count is stored in memory. It can be viewed when the unit is turned back on. Press the DO Key twice to clear the count to start a new one.

**To start a new count, turn the unit on
and press the DO key twice.**

To reset the count, press the DO key twice.

Power Saving Function and Battery Care

The Accumulator contains a power saving feature that will blank out the display if it has not been disturbed for several minutes. To bring the display back up to view the current count, hit the TAB key.

The Accumulator is powered by a rechargeable lead gel battery. We recommend using a voltmeter to monitor the status of your battery's voltage. Rechargeable batteries should be charged to their full capacity (6.4-6.9) once they have reached 5.9 volts.

Road Tube Setup

Road tube installation is very important in terms of collecting accurate data. The tube and air switch comprise the sensing device for the road tube counter. As with all receivers, the sensor has to be functioning properly to record reliable information. With this in mind, examine your installations carefully and be absolutely certain that your unit is recording data as programmed. The following sections apply to both round (.25 ID x .60 OD) and mini (.20 ID x .375 OD) tubes.

Tube Length

Tube length is **very critical** in order to record accurate vehicle data. In general, a tube length of **sixty (60) ft.** should be used for **round tube**, while **fifty (50) ft.** should be used for **mini tube**. **If the tube you use are too short, you may see double counting on the Accumulator.**

The amount of tube from the edge of the road to the counter is also critical to prevent pulses from overdriving the air switch. A tube length of thirty (30) ft. is recommend from the edge of the road back to the counter. An exception to the above guidelines for tube lengths is low speed counting. Shorter tube lengths should be used for speeds below 15 mph.

Tube Placement

Tubes should be placed exactly perpendicular to the flow of traffic to prevent double counting. After starting your count, observe traffic as it is recorded on the Accumulator to ensure that vehicles are being counted correctly. One count is recorded for every two axle hits.

Mini Tube Installation (.187 ID x .365 OD)

Since mini tube is smaller and lighter than standard round tube, less hardware is required to install the tubes. Also, mini tube should **not** be stretched when installed, just placed on the road.

Webbing can be used to secure the tube at each end of the roadway.

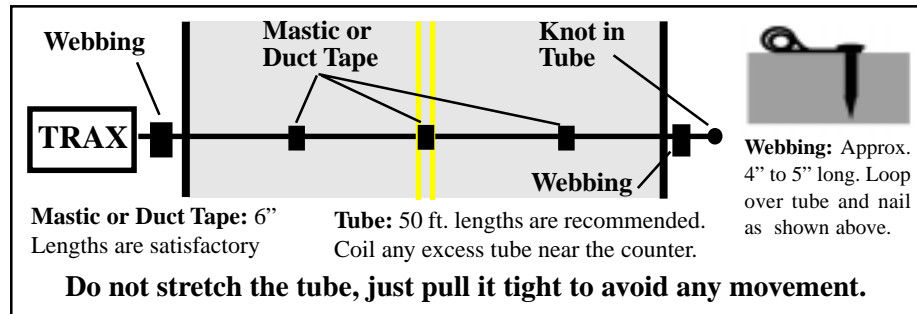
You may tie a knot at the far end of the tube instead of using an end plug or PK nail. Since the mini tube is light and low profile, you may use duct tape or two-inch mastic to secure the tube to the roadway. Generally, three pieces of tape/mastic are sufficient. To reduce wear and/or breakage of the tape, do not install the tape in the path of the vehicle tires.

When installing an L2 configuration you may install both tubes completely across the road and tie a knot midway of the half tube. This eliminates nailing the half tube on the center line which can create a safety problem for installation personnel. **Note that mini tube is not recommended for interstate or high speed highways.**

Actual
Size



Mini



Standard Round Tube Installation (.25 ID x .60 OD)

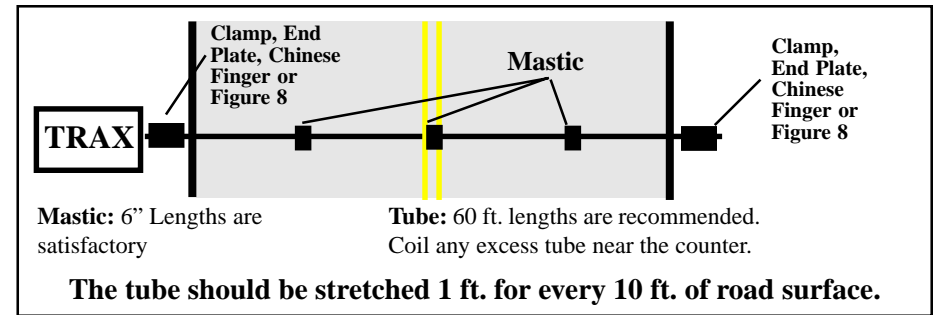
Round tube should be stretched one foot for every ten feet of roadway when being installed. Each tube should be secured at each end of the roadway by using a galvanized C-Clamp, Chinese Finger, Figure 8 Grip or an End Plate. Whichever is used, ensure the proper nail size is used. Use the longer nail size (normally 2 1/2" or longer) in hot weather due to the softness of the asphalt. In cold weather the asphalt becomes harder, making it more difficult to drive in the nails. In this situation, smaller nails (1 1/2") can be used.

Actual
Size

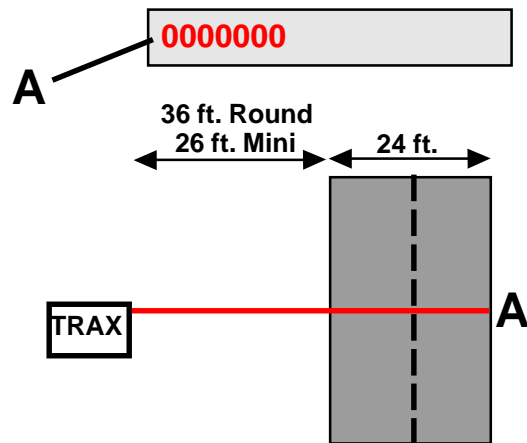


Round

Next, secure the tube on the traveled portion of the road surface by using mastic. As a minimum, one piece of mastic should be placed on the zone line (middle of the road) and two pieces of mastic should be placed in the middle of each lane. Additional mastic should be used as deemed necessary to prevent the tube from moving when stuck by a vehicle.



Tube Layout - One Channel



Tube Layout - Two Channels

