
Apollyon Plus II

Setup Options



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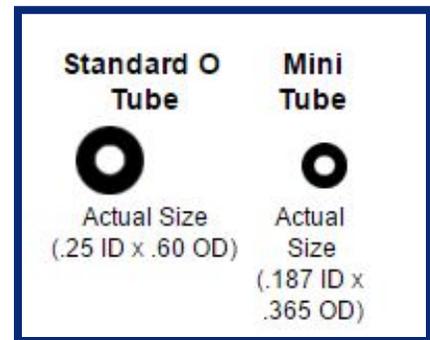
Apollyon Plus II

Setup Options

The **TRAX Apollyon Plus II** allows you to collect data for vehicle traffic, bike traffic, and mixed-use (vehicle/bike together) traffic. The options below give instructions on common tube setup, length and spacing for the specific type of data you need to collect. These instructions are somewhat simplified explanations of these options. For a more detailed explanation, please contact JAMAR Technologies.

Important:

When collecting bike data, in any of these options, it is *required* that you use 'mini tube' with an inside diameter (ID) of .187" and an outside diameter (OD) of .365". Tubes with alternative sizes will not be able to generate the air pulse needed for bikes.



Tube Installation:

- Road tubes should be placed exactly perpendicular to the flow of traffic.
- Vehicles should hit tubes straight on and never at an angle.
- Road tube pairs should be exactly the same length.
- Road tube spacing should be perfectly consistent across the entire count site.
- Road tubes should be installed on a straight, free-flowing section of traffic, with little chance of vehicles queuing up or stopping on the tubes.

Secure Tubes: Be sure that the tubes are secured to the road surface to avoid 'tube bounce' when tires run over the tubes. If a large vehicle bounces the tube, it could generate a low level pulse which could be incorrectly interpreted as a bike pulse.



When collecting bike data, it is required that you use 'mini tube' with a .187" ID and a .365" OD.

Setup Accuracy: Proper road tube installation is very important for collecting accurate data with the Apollyon Plus II. Examine your installation carefully and be certain that the counter is collecting the data as you intend.

Common Data Collection Options

Option 1: Vehicle Traffic Only

This is the option for when you need data for vehicle counts only and no bike data needs to be collected. In this option, the Apollyon Plus II is essentially a standard traffic counter and all standard procedures should be followed.

Tube Length: 40 ft. – 60 ft.

Tube Spacing: 24 in.

Setup: *Figure 1* shows a standard, two-lane, bi-directional roadway. The most popular layout for this road is the L6 layout.



Figure 1

Option 2: Bike Traffic Only

This is the option for when you are counting bikes only, on a dedicated bike path, where the bikes can be traveling in either direction. This option is also used to separate bikes from strollers, pedestrians, etc.

Tube Length: 20 ft. – 40 ft.

Tube Spacing: 24 in.

Setup: When collecting bike only data, a shorter pair of tubes can be used. However, bike paths and conditions can vary greatly. Because of this, it is common to start with 40 ft. tubes and observe the strength of the bike pulses. If the pulse strength is too low, cut the tubes down to 30 ft. and again observe the strengths. If needed, cut the tubes to 20 ft.

Figure 2 shows a common bike path. Bikes on this path can be traveling in either direction. To collect the bike data and direction of travel, an L6 layout should be used. The L6 layout will classify the bikes appropriately and filter out hits that are not bikes, such as strollers, pedestrians, etc.



Figure 2

Option 3: Vehicle and Bike Traffic Together

This is the option for when you need to count vehicle and bike traffic at the same time. For example, your standard traffic lanes with a dedicated bike path on the shoulder. This would provide bike direction as well.

Tube Length: 45 MPH or less, use 40 ft.
45 MPH or more, use 50 ft.

Tube Spacing: 24 in.



Figure 3

Setup: For mixed-use traffic applications, such as bike lanes on one, or both sides, of a normal 2 lane roadway, road tubes can be used across all lanes. *Figure 3* shows an example of this type of road. It is especially important in this configuration to secure the tubes to avoid ‘tube bounce’. It is recommended to observe the traffic flow and mastic tape the areas that are being hit most by vehicles. Also, be sure to check the tube hits and pulse strength on the counter. The L6 layout is most common for a road like that shown in *Figure 3*. JAMAR’s software will provide a separate column of Class data to represent the bikes.

Option 4: Bike Volume Only

This is the option for when you only need bike data and the bikes will only be traveling in one direction.

Tube Length: 20 ft. - 30 ft.

Tube Spacing: N/A: Single tube setup

Setup: If you are confident that only bikes will be on a particular path, as shown in *Figure 4*, you can use a single tube, volume only setup. When collecting bike only data, a shorter pair of tubes can be used. However,

bike paths and conditions can vary greatly. Because of this, it is common to start with a 30 ft. tube and observe the strength of the bike pulses. If the pulse strength is too low, cut the tube down to 20 ft. and again observe the strength.

Be sure that the tube does not extend beyond the bike lane or into the vehicle traffic. Since only bikes will be present, there is no need for a two tube classification set up. It is assumed that every hit collected is from a bike. Keep in mind that you will not get bike speeds, or individual bike timestamps.



Figure 4

For more information on this, and other related topics, feel free to contact JAMAR Technologies.

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