Complete Streets Toolkit

Equipment Library

Quick guide to using Eco-Counter Pneumatic Tubes



Equipment:

Logger (Eco-Twin Logger)

Magnetic Key

Tubes (Eco-Counter Pneumatic Tubes)

Nails

Loops (Nail Loops)

Hammer

Chain

How It Works-Overview

Two **Tubes** are laid on the road and send a pulse of air to the **Logger** every time bicycles go over the tubes. The **Logger** can discriminate direction, but please note this system cannot be used for vehicle counts. Counts are recorded on the tube that is crossed first.



Selecting the **Tubes** Installation Site

When choosing an installation site, keep the following factors in mind:

- 1. Choose a major cycling route.
- Choose a site where the **Tubes** can be laid perpendicular to the road.
- 3. Choose a straight road.
- 4. Choose a site with a stationary object to secure the **Logger** (light post, pole, tree, etc.).

Connecting the Equipment

- 1. Place clamps inside the steel box protecting the **Logger** (one for each tube).
- Slide Tubes through the clamps into the Logger.

Turning on the Logger

To turn the **Logger** on, bring the **Magnetic Key** at a slight angle to the "SWITCH ON WITH MAGNET" area of the **logger**. This will switch the display on and activate the infra-red link. Note that this will display the cumulative count total.

Installing the Tubes

Please use extreme caution when installing the **Tubes**. The end result will be two **Tubes** nailed into the roadway. The **Tubes** will be laid out parallel to each other, 12 inches apart, and perpendicular to the roadway.



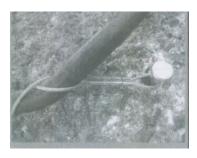


- 1. Make markings at opposite ends of the roadway to indicate where the **Tubes** will be nailed.
- 2. **Hammer** to get the **Nails** into the roadway, initially leaving an inch or two out of the roadway.



3. Slide the **Loops**, which will be attached to the **Tubes**, to match the placement of the nails, making sure to leave some lag room. (Note: There should be little lag room on the end attached to the **Logger**.)

4. Attach the **Loops** to the **Nails**, and use the **Hammer** to place the **Nails** firmly into the roadway. As previously mentioned, make sure the tubes are installed precisely 12 inches apart.



5. Once the **Tubes** are nailed into the ground, pull the excess tube (if applicable) on opposite end of where the logger is installed towards you to tighten. Make sure the tubes are installed to allow air to travel through them so counts can be read.



6. Once the tubes are installed into the ground attach the **Chain** to the protective box. **Lock** the **Chain** to a stationary object, and lock the box containing the **Logger**.

Viewing Counts by Direction

To view "way IN" counts only, keep the Magnetic Key on the "TEST RESET" area of the Logger. The screen will display "in 3". Leave the Magnetic Key on the area until "0" is displayed. To come back to the cumulative counts, just bring the Magnetic Key to the "SWITCH ON WITH MAGNET" area.

To view "way OUT" counts only, keep the **Magnetic Key** on the "TEST RESET" area of the **Logger**.

The screen will display "in 3". A countdown will begin, and the **Magnetic Key** will need to be removed from the area prior to "0" being displayed. To come back to the cumulative counts, just bring the **Magnetic Key** to the "SWITCH ON WITH MAGNET" area.

Re-initializing the Logger

If the **Tubes** need to be moved to a new site, previous counts recorded on the **Logger** will not be erased. If the **Logger** needs to be reinitialized, it can be done as follows (**NOTE THAT THIS WILL ERASE ALL PREVIOUSLY RECORDED COUNTS):**

- 1. Place the **Magnetic Key** on the "TEST RE-SET" area of the **Logger**. The screen will display "in 3". Remove the **Magnetic Key** before the countdown reaches 0.
- 2. Place the **Magnetic Key** on the "TEST RE-SET" area of the **Logger**. The screen will display "out 3". Remove the **Magnetic Key** before the countdown reaches 0.
- 3. Keep the **Magnetic Key** on the "TEST RESET" area of the **Logger**. The screen will display "rst 3". Let the countdown reach 0, then remove the **Magnetic Key**.
- 4. The **Logger** will switch to the diagnostic mode and will display "di". This means that the **Logger** has re-initialized.
- To return to the cumulated counts, bring the Magnetic Key to the "SWITCH ON WITH MAGNET" area of the Logger.