

Time Distance – Multiple Vehicles

Overview: Computes comparative data for two vehicles in two individual acceleration, deceleration or constant velocity events and offers animation of the maneuver.

Entry into Module:

This module of the program is normally entered by clicking on the **REC-TEC** block in the upper left of the **REC-TEC Window** causing the drop-down menu to appear. Place the cursor on the **Time - Distance** block and click on **Multiple Vehicles** on the sub-menu to initiate this module.

Under certain circumstances, the user may choose to use the **Files** block instead of the drop-down menu approach. Selecting any file with a **.TDM** extension in the **Dialog box** accessed from either the **Open Single File** or **Open Multiple Files** block opens this module.

Selecting **AutoLoad [ON]** from either the **Setup Menu** or the **AutoLoad Icon** on the upper right side (third line) of the **REC-TEC Window** automatically loads the scenario that was on the screen when the module was closed, either individually, or when the program was closed. With **AutoLoad [OFF]** on the main **REC-TEC Window**, modules will start without loading a file.

Data Entry:

Used to compare two vehicles or show their relationship to one another. Entries for either Vehicle can consist of **Acceleration, Deceleration** or **Constant Speed** and will contain two or more of the following data entry blocks within the leftmost frame:

- **Mu (Acceleration/Deceleration) - required**
- **Grade (Test) – Deceleration (default is zero)**
- **Grade (Scene) – Deceleration (default is zero)**
- **Braking (%) – required for Deceleration**
- **Distance**
- **Time**
- **Speed (Initial)**
- **Speed (Final)**

Output information appears in the **Output - Unit N** frame. As the input data is changed, the output data is automatically updated without the need to tell the program to update the output. The user is instructed to increase or decrease the inputs as required.

Output – Unit (1 / 2):

The output from this module consists of the repeated input variables plus all of the

unknowns that were not entered into the left **Input** frame expressed in the primary and secondary configurations. If the deceleration (acceleration) either as entered, or as computed, was not to (or from) a final (initial) speed of zero, the times and distances are shown for both the event as defined with the input variables and to (or from) zero.

Options:

Several **Command Buttons** appear in a frame located at the lower right corner of the module Window. The **Command Buttons** allow the user to engage options including the option to **Open** and **Save** the data required to generate the scenario shown on the screen at the time the file was saved.

- **Open .TDM File** – Calls up a **Dialog box**, which **Opens** any pre-existing **.TDM** file and displays the output results.
- **Save .TDM File** – Calls up a **Dialog box**, which **Saves** data on the screen to files with any user-selectable filenames. This is independent of the automatic saving as “**LastFile.TDM**” of the data at the close of this module or the close of the program.
- **Time** – Displays a data table by input interval of Time.
- **Distance (1 or 2)** – Displays a data table by input interval of Distance for Unit 1 or Unit 2.
- **Closure** – Displays a data table for Closure Speeds and Angles based on Time intervals from Time or Distance that must be run before running Closure.
- **Formulae** – Opens a word processor (set by the user in **Setup**) with a file showing the basic formulae used in this module of the program. While the user may add to or modify the information in this file, it does not change the formulae imbedded into the program.
- **Animation** – by Distance or Time in real time (1:1) or slow motion. The display shows the Units in 360 (User selectable angles) or Parallel format to Impact or from Start positions. User selectable views include the ability to Tilt or Rotate the X, Y and Z-Axis of the animation, which may be stopped and then resumed using the mouse or the spacebar. Distance markers and objects can be located on the graphics to show relationship to vehicle(s). Animation is useful for vehicle following (rear-end), passing and entering traffic lane in front of other vehicles. **[Esc]** to Exit
- **Graphics** – Displays the graphics curves for Time (with scales) or Distance (with scales). The right and left scales show the Speed. **[Esc]** to Exit
- **N** – This button toggles a graphical number pad on the screen that can be used to

enter data into the input boxes without using your keyboard number pad. This may be useful for presentations as data entry can be accomplished using a wired/wireless mouse.