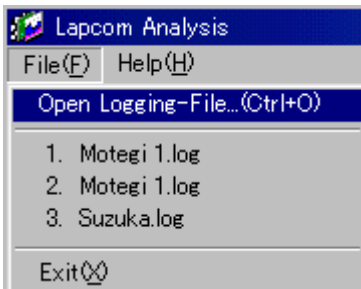


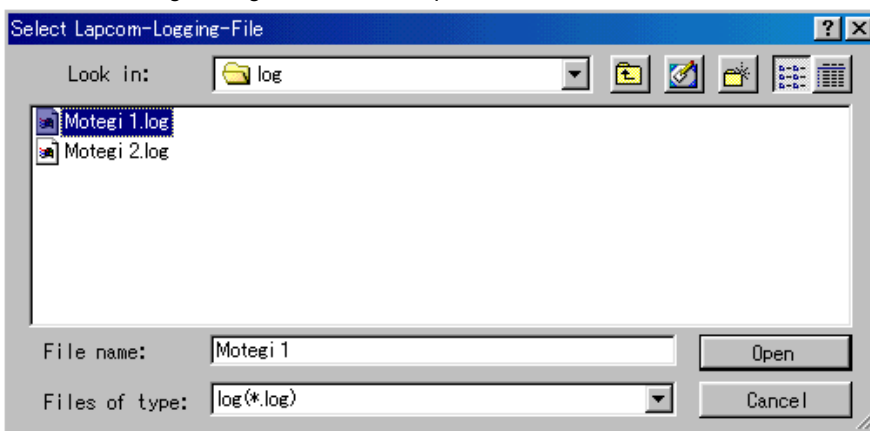
Basic Operation Manual for Lapcom Analysis Ver. 2.05.04a/b

Open Logged Data File

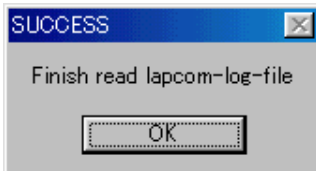
1. Start **Lapcom Analysis** from the Windows program menu. Click **File** in the menu bar. Click **Open Logging-File** from the popup menu.



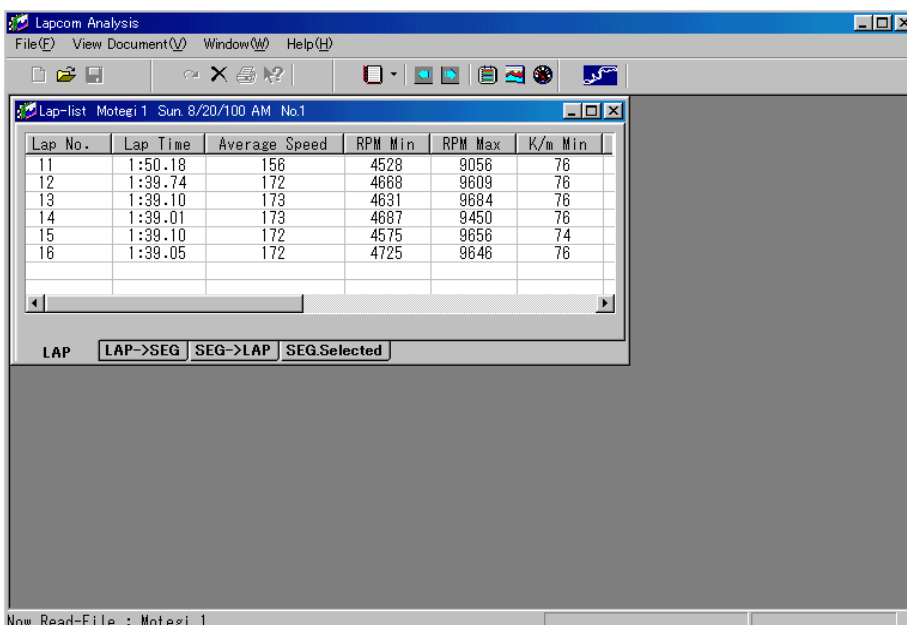
2. After selecting the log data file to be opened click **OK**.



3. After the file has finished loading, the following dialog box is displayed. Click **OK**.



4. The **Lap-list**, including lap times, is displayed.

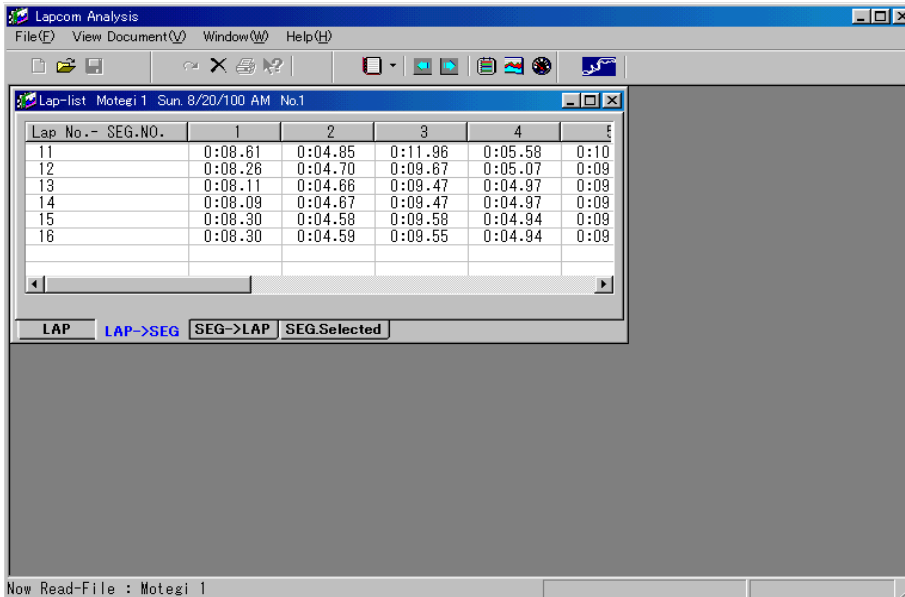


To open another log data file, Click **File** in the menu bar. Click **Append File** from the popup menu. Click **Open**. After selecting the log data file to be opened click **OK**. After the file has finished loading, the dialog box is displayed. Click **OK**.

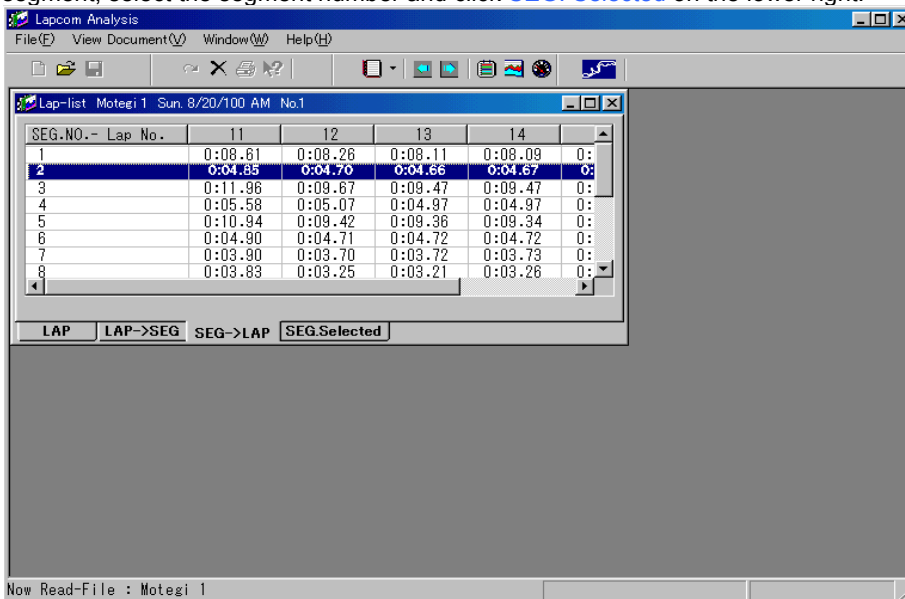
Analysis of Data

1. Lap and Segment List

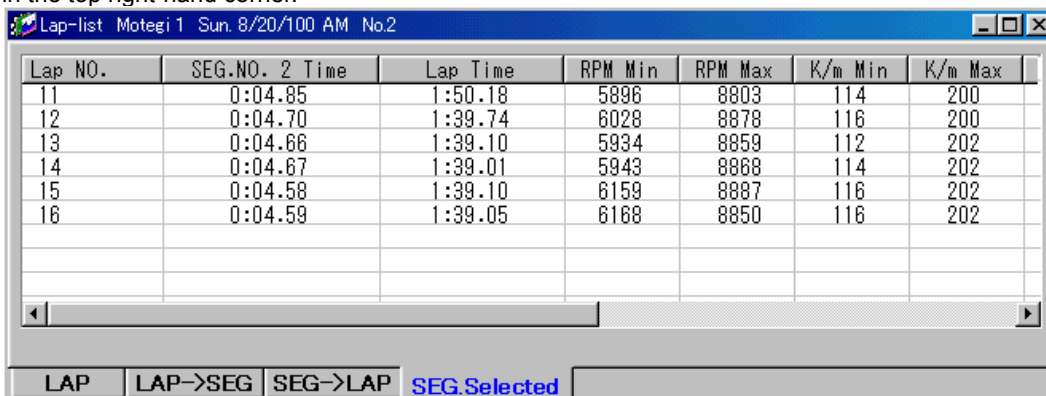
1. Click data type ([Lap No.](#), etc) to sort the data in ascending/descending order. With the [LAP->SEG](#) button at the lower left, it is possible to display segment times for all laps and to sort it in ascending/descending order.



2. Click [SEG->LAP](#) to display the segment times for the same segment in each lap. To display the details of the desired segment, select the segment number and click [SEG. Selected](#) on the lower right.



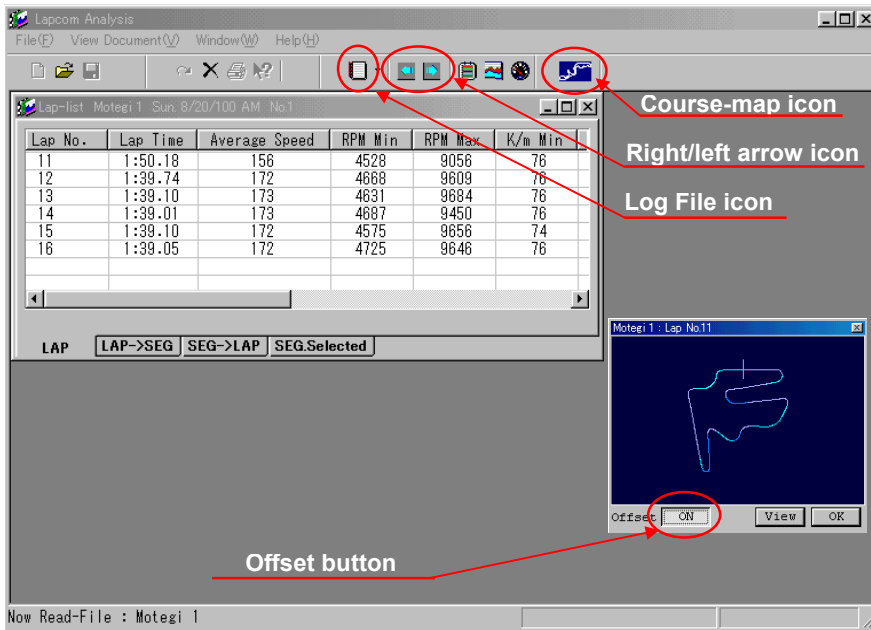
3. The details of the selected segment for all laps are displayed. To end this dialog box, click [the close window button \(X\)](#) in the top right-hand corner.



2. Course Map and Data Graphs

1. To display the course map window, click the **Course-map icon** in the toolbar or click **Course-map** of **View Document** in the menu bar. The head lap's course map is displayed in the window. If another log data file is opened, click **Log File icon** to check the log data file to be displayed in advance.

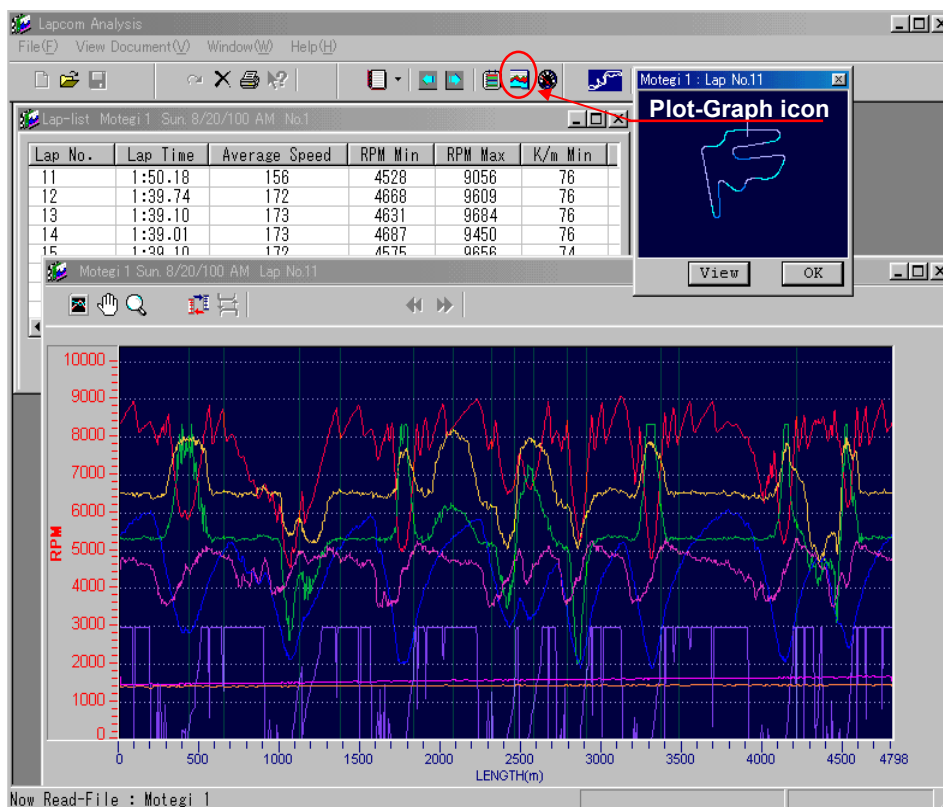
Click the **right/left arrow icon** in the toolbar or double click the lap number in the **Lap-list** to display the desired lap's course map.



To correct the course map, click **Offset button**.

2. To display the data graph window, click the **Plot-Graph icon** in the toolbar or click **Plot-Graph** of **View Document** in the menu bar. The head lap's data graph is displayed in the window. If another log data file is opened, click **Log File icon** to check the log data file to be displayed in advance.

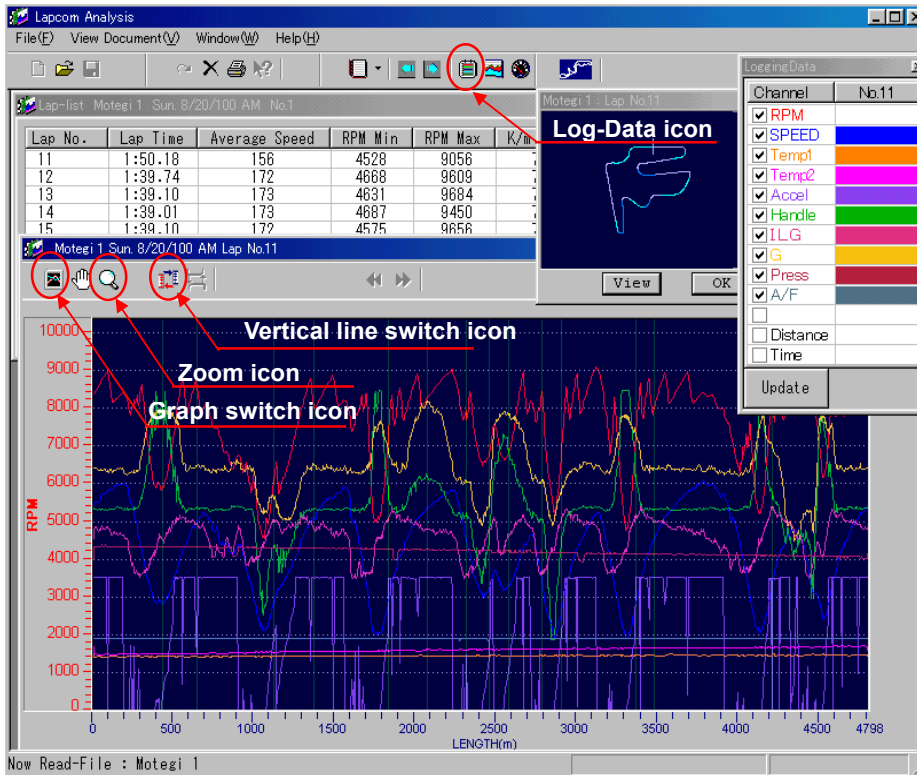
Click the **right/left arrow icon** in the toolbar or double click the lap number in the **Lap-list** to display the desired lap's data graph.



* This version supports speed in **MPH**.

3. To display the **Logging Data box**, click the **Log-Data icon** in the toolbar or click **Log-Data** of **View Document** in the menu bar. After checking the desired data items click **Update** in the **Logging Data box**. The graphs for the selected data items are displayed.

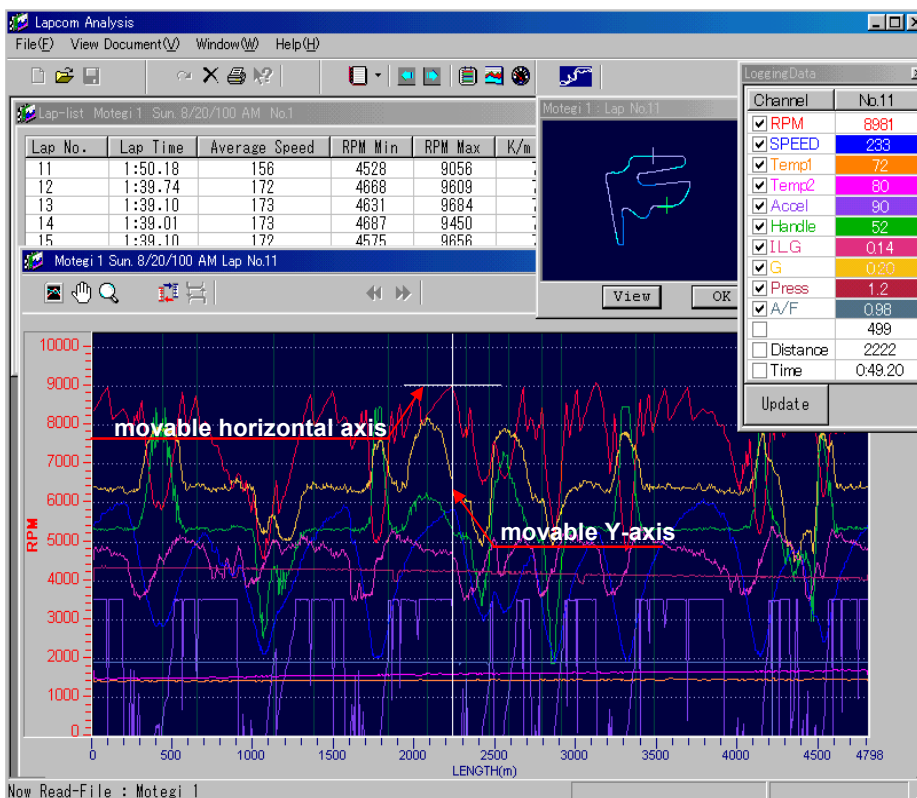
Click the **Vertical line switch icon** to change the vertical axis and scale in turn. Click the **Graph switch icon** to display each data item's graph in turn.



To enlarge the displayed graph, click the **Zoom icon**. Click the point to be enlarged on the graph. The graph is sidingly enlarged.

Note: Do not enlarge the graph after displaying single data item's graph by clicking the **Graph switch icon**. It occurs an error. After enlarging the displayed graphs by clicking the **Zoom icon**, display the single data item's graph.

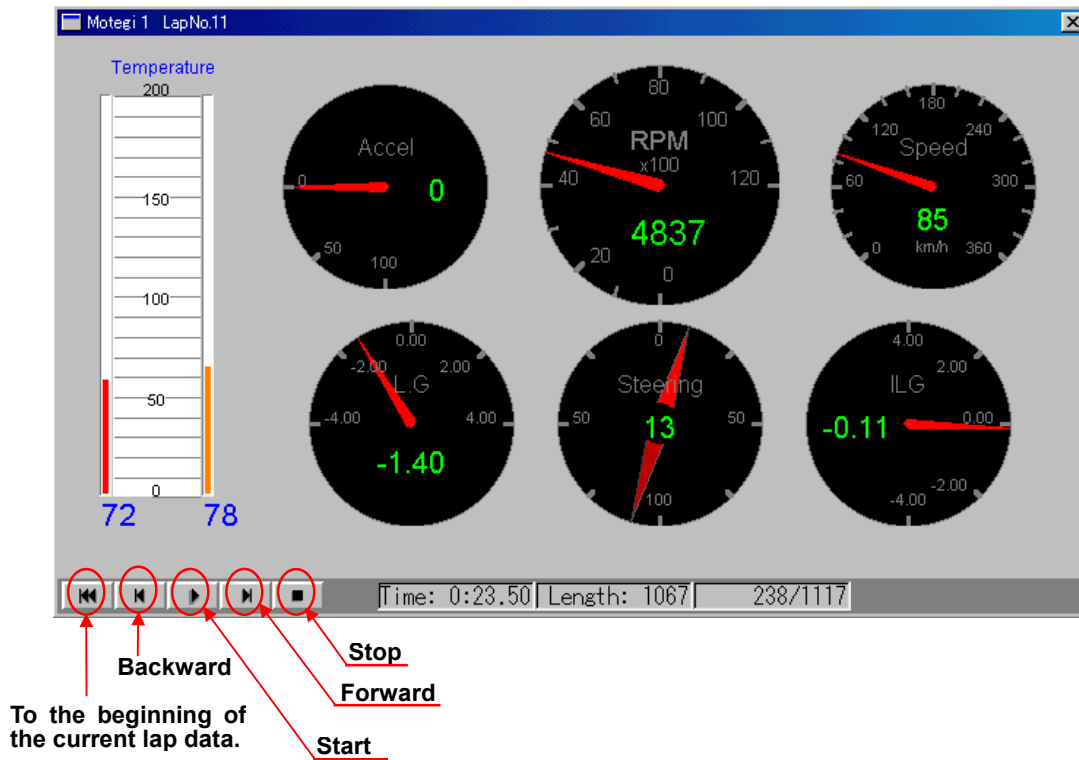
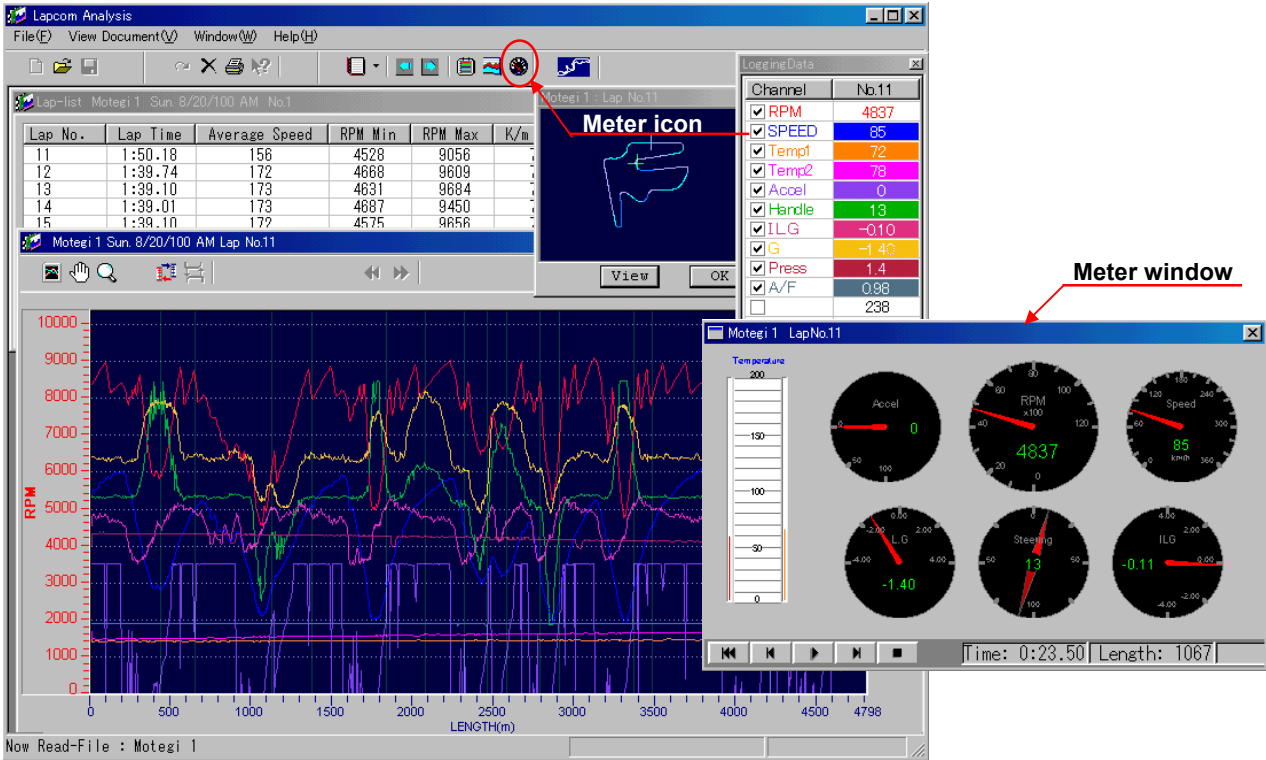
4. Click any point in the graph to display the **movable Y-axis** and data in the **Logging Data box**. Drag the Y-axis with the mouse to see the data at the point where the Y-axis is located. Or drag the **cross point** on the course map with the mouse to see the data.



Movable horizontal axis is displayed on a data item's graph. To display the horizontal axis on another graphs, double click the desired data item's value in the **Logging Data box**.

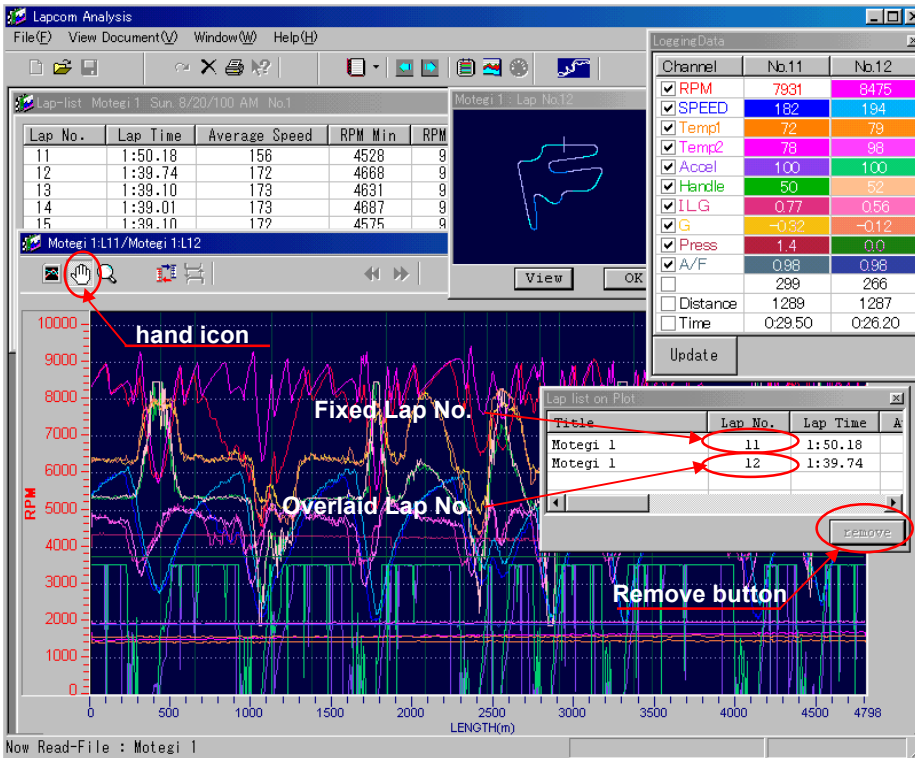
To display the graphs and data for another lap, click the **right/left arrow icon** in the toolbar to select the desired lap. Click any point in the graph to display the **movable Y-axis** and the selected lap's data.

5. Click the **Meter icon** in the toolbar to display the **Meter window**. Click the **start** button to replay the lap data of the current graph displayed in the graph window. Click the **stop** button to **stop** replaying the lap data. Click the **forward/backward** button to go forward/backward.



3. Overlay Graphs in the Same Log File

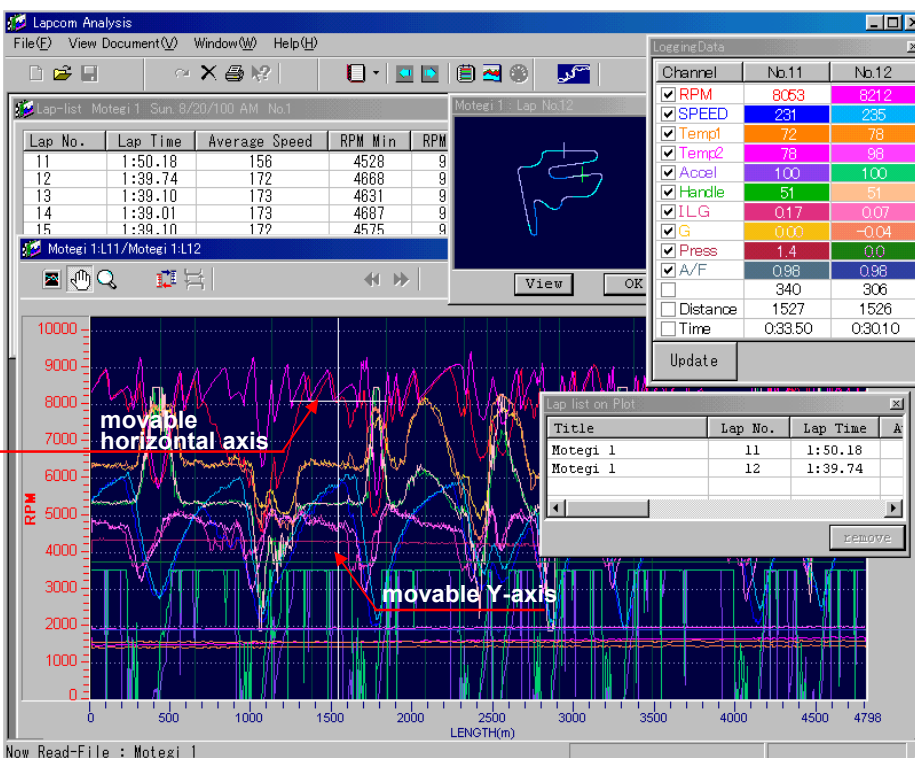
1. Click the **hand icon** in the graph window to fix the current displayed lap's graph. The **Lap list on plot box** is opened. In this box the fixed lap's and overlaid laps' details are indicated. Double click the desired lap number in the **Lap-list** or click the **right/left arrow icon** in the toolbar to select the lap to be overlaid. The selected lap's graph is overlaid over the previously fixed graph and the selected lap number is added to the **Logging Data box**. It is possible to overlay graphs for two laps over the fixed graph.



To remove the overlaid graph on the fixed graph, Double click the lap to be removed in the **Lap list on plot box**. Click the **Remove button** to remove the selected lap's graph.

For the fixed and overlaid graphs, it is possible to change the vertical axis and scale, display each data item's graphs, and enlarge the displayed graphs.

2. Click any point in the graph to display the **movable Y-axis** and data in the **Logging Data box**. Drag the Y-axis with the mouse to see the data at the point where the Y-axis is located. Or drag the **cross point** on the course map with the mouse to see the data.

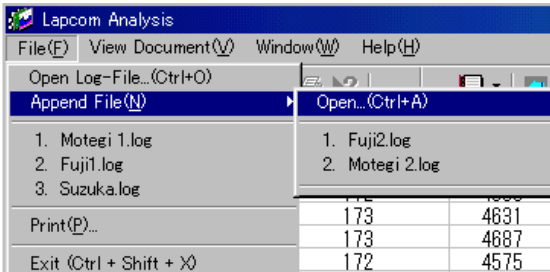


Movable horizontal axis is displayed on a data item's graph. To display the horizontal axis on another graphs, double click the desired data item's value in the **Logging Data box**.

To change the graphs to be overlaid, double click the desired lap number in the **Lap-list** or click the **right/left arrow icon** in the toolbar to select the desired lap.

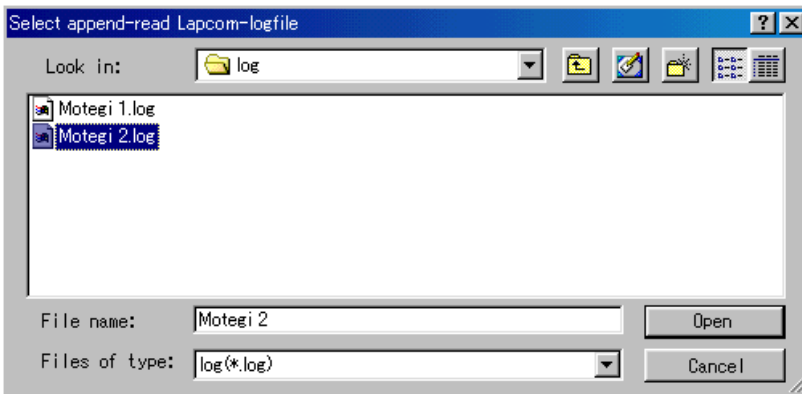
3. To release overlaid graphs, click the hand icon.
4. **Overlay Graphs in the Different Log Files**

1. Click the hand icon in the graph window to fix the current displayed lap's graph. The Lap list on plot box is opened. In this box the fixed lap's and overlaid laps' details are indicated.

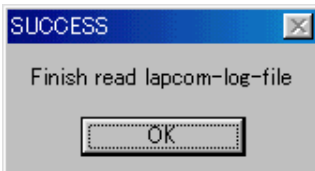


Click File in the menu bar. Click Append File from the popup menu. Click Open.

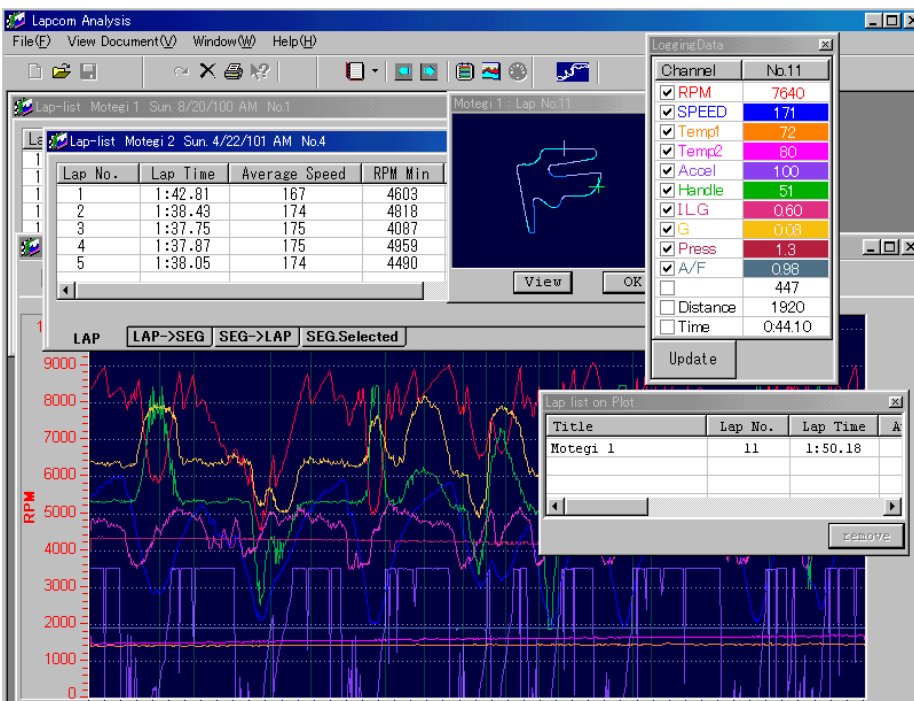
2. After selecting the log data file to be opened click OK.



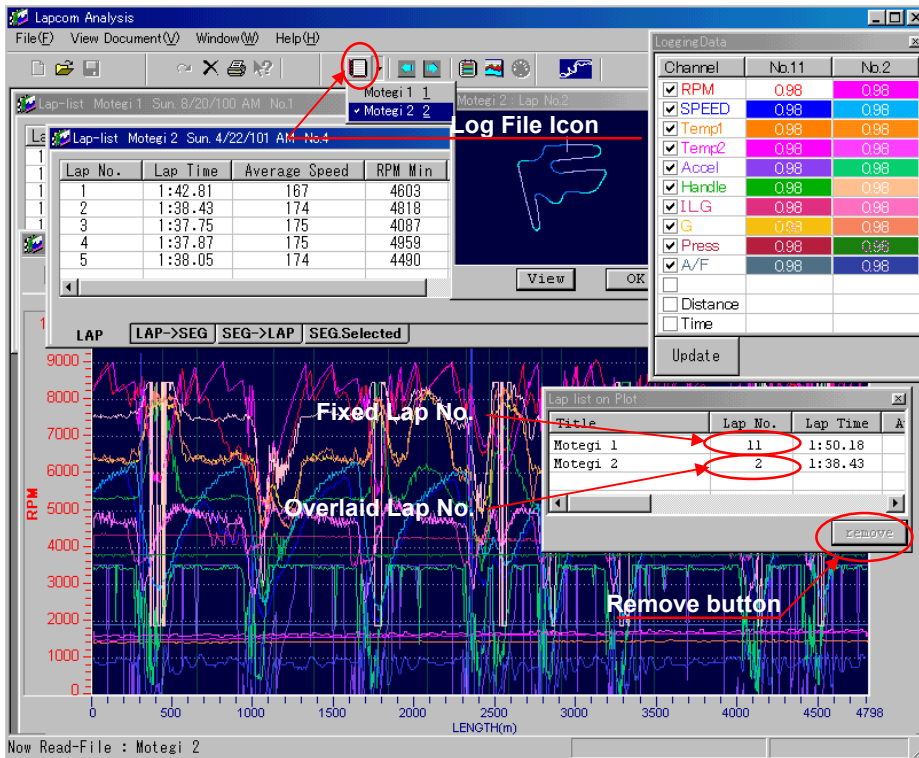
3. After the file has finished loading, the following dialog box is displayed. Click OK.



4. The newly opened Lap-list is displayed over the previously opened Lap-list.



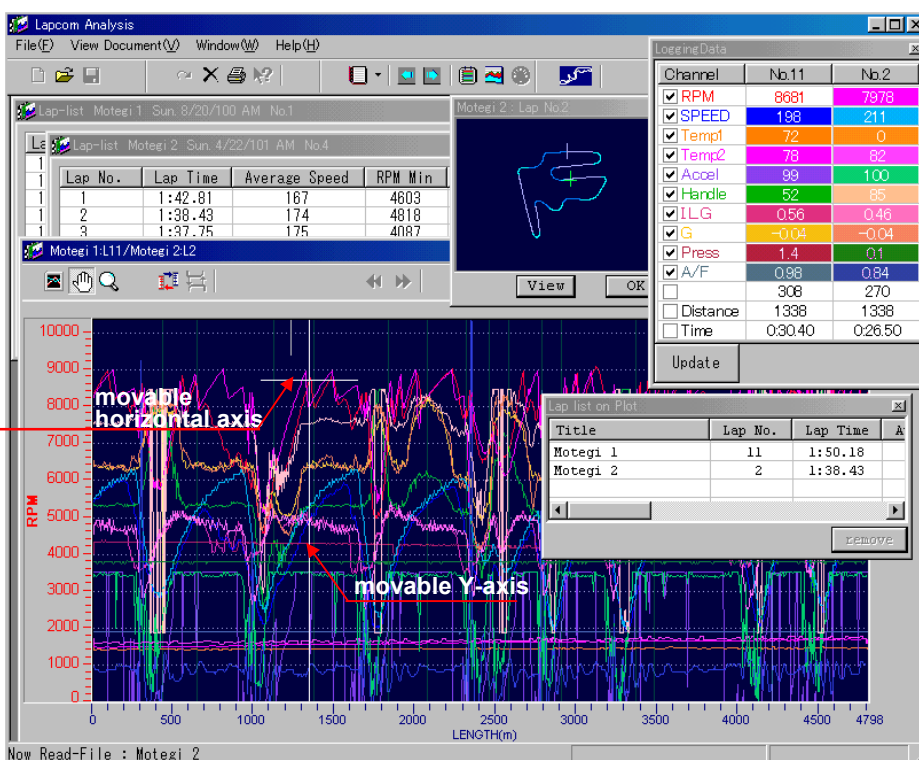
5. To overlay graphs in the newly opened log file over the fixed graph, double click the desired lap number in the newly opened **Lap-list**. Or click the **Log File Icon** to check the newly opened log file and click the **right/left arrow icon** in the toolbar to select the lap to be overlaid. The selected lap's graph is overlaid over the previously fixed graph and the selected lap number is added to the **Logging Data box**. It is possible to overlay graphs for two laps over the fixed graph.



To remove the overlaid graph on the fixed graph, Double click the lap to be removed in the **Lap list on plot box**. Click the **Remove button** to remove the selected lap's graph.

For the fixed and overlaid graphs, it is possible to change the vertical axis and scale, display each data item's graphs, and enlarge the displayed graphs.

6. Click any point in the graph to display the **movable Y-axis** and data in the Logging Data box. Drag the Y-axis with the mouse to see the data at the point where the Y-axis is located. Or drag the **cross point** on the course map with the mouse to see the data.



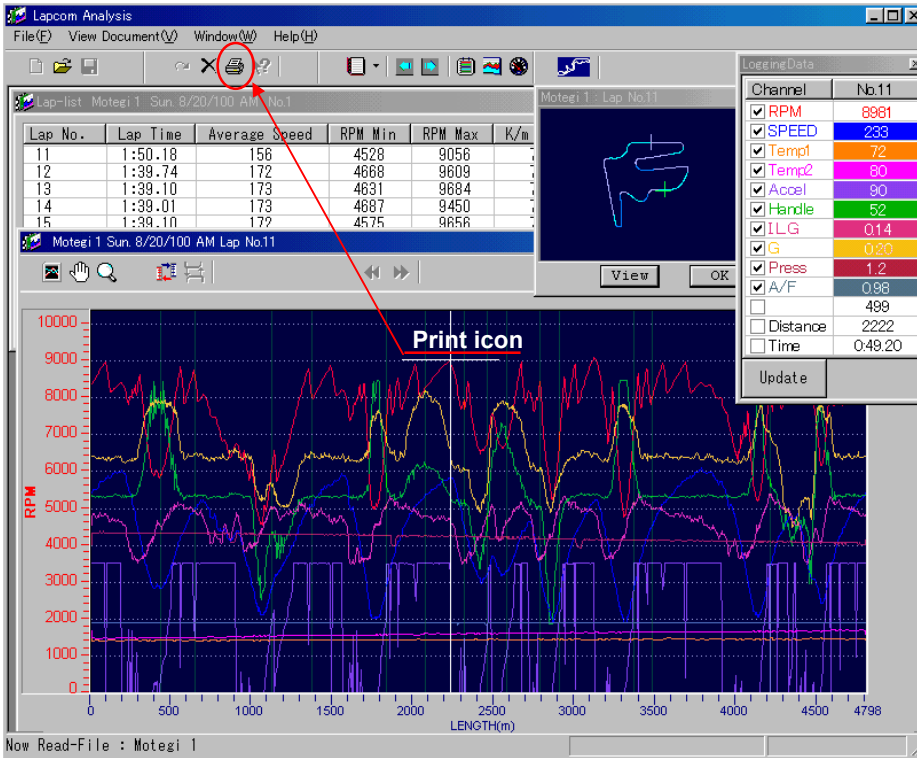
Movable horizontal axis is displayed on a data item's graph. To display the horizontal axis on another graphs, double click the desired data item's value in the **Logging Data box**.

To change the graphs to be overlaid, double click the desired lap number in the **Lap-list** or click the **right/left arrow icon** in the toolbar to select the desired lap.

3. To release overlaid graphs, click the hand icon.

Print out Logged Data

.1. Display the graph to be printed out. Click **Print icon** in the toolbar. Or click **File** in the menu bar. Click **Print** from the popup menu. The displayed graphs and course map are printed out. When setting the printing condition, set the paper direction lateral. Please see the printed graphs and course map below as a sample.



It is possible to print out overlaid graphs, each data item's graphs, and enlarged graphs.

NOTE: It is impossible to print out the Lap-list. Print out the all lap list with the Lapcom Terminal.

