

# Strip Charts

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## Description

The DSix strip chart function provides the ability to view time history simulation results in real time. This section describes how to enable, create and configure DSix scrip chart displays as well as how to load and save strip chart configuration templates. We will explore the wide array of parameters available for tailoring strip chart displays and will demonstrate the use of strip charts for displaying simulation data.

## What you will learn

*Upon completion of this section, you will be able to:*

- **Create** strip charts to plot real time results during DSix simulation run
- Select simulation **variables** to be plotted on project strip charts
- **Format** the look of project strip charts
- **SAVE** and **LOAD** strip chart formats for a DSix project
- **Proficiently** develop a strip chart for desired DSix results

# Strip Chart Topics

- ✈ Module
- ✈ Creating
- ✈ Location and Number
- ✈ Configuration Window
  - ✈ Explanation of commands
  - ✈ Selecting Display Variables
  - ✈ Scaling plots
- ✈ Strip Chart File Types and Location
- ✈ Saving/Loading Formats
- ✈ Strip Chart Efficiency

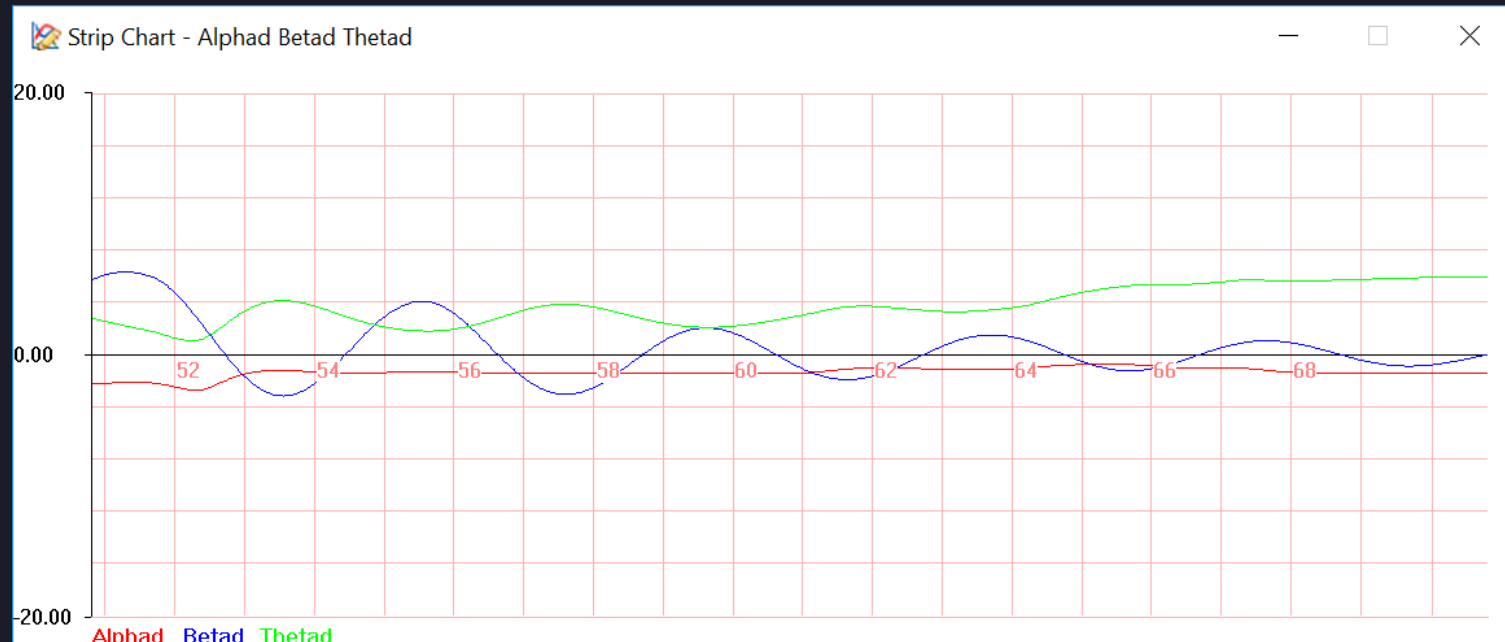
# Strip Chart Module

- ✈ To use the Strip Chart feature, the plug-in **module** “StripChart32.d6x” must be loaded into DSix Creating
- ✈ All modules are **loaded** when DSix is started
- ✈ The module is **designated** to be loaded via the DSix Module Manager Tool located in the pull down menu ‘Tools ... Module...Manager’
- ✈ DSix must be **restarted** for changes in module loads to take effect

# Strip Chart Creation

- ✈ To create **new** strip chart
  - ✈ Click on 'New Strip Chart' toolbar icon
  - ✈ Select DSix pull down menu:
    - ✈ 'View...Strip Charts...New'
  - ✈ If strip chart open, use 'Add New Chart' in Strip Chart Configuration Window
- ✈ Strip chart will **appear**
  - ✈ At top left corner of monitor
  - ✈ Below the last chart created
- ✈ Repeat above steps to create **more** Strip Charts
- ✈ Each Strip Chart can plot up to **4 variables**

# Strip Chart



Right click on chart to **open** Configuration Window

# Using the Strip Chart Configuration Window

**Chart Title** - Selects Strip Chart to be configured

**Add Chart** - Creates new Strip Chart after first two they are created on top of each other

**Auto Arrange** – Aligns all Strip Charts on monitor in two rows

**Y Axis Min and Max** – These are the minimum and maximum values shown for any data series being plotted on the Strip Chart

**Y Axis Tic Marks** – Number of red grid lines parallel to the X axis  
 $Y \text{ Grid value} = (Y \text{ axis Max-Min}) / (Y \text{ Tics})$

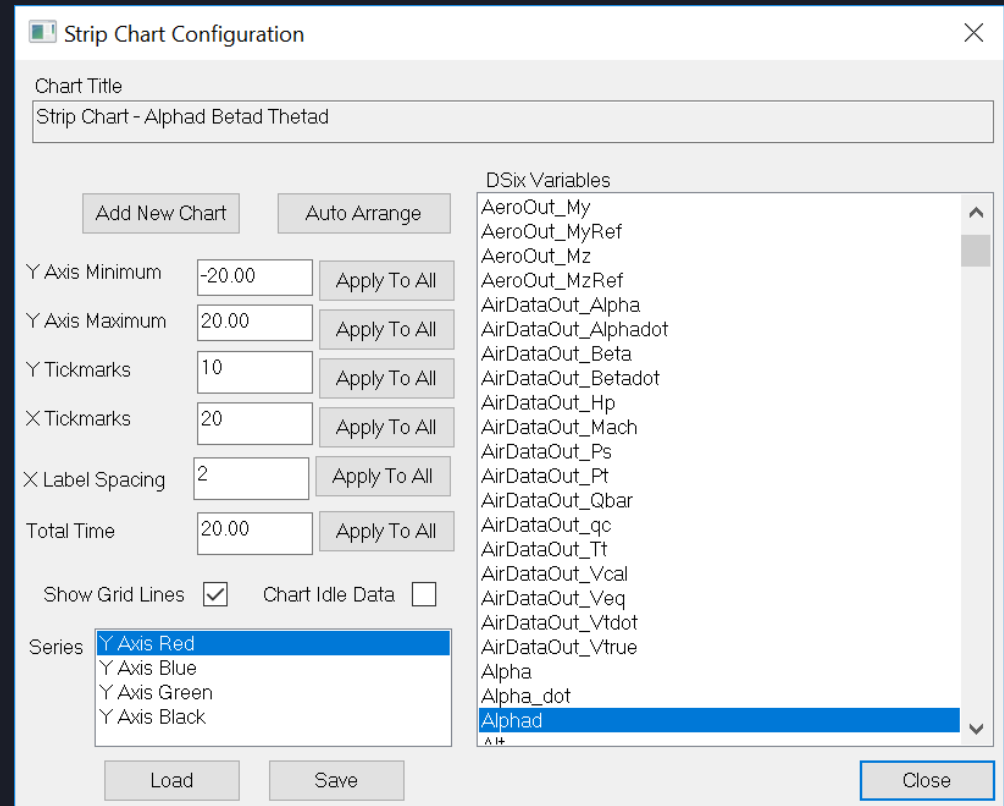
**X Axis Tic Marks** – Number of red grid lines parallel to the Y axis

**Total Time** – Time (in seconds) displayed on Strip Chart X axis

**Apply to All** – Click on to apply indicated characteristic to all open Strip Charts, New charts have default scales and parameters

**Show Grid Lines** – Toggle grid lines **ON** (check) or **OFF** for selected Strip Chart

**Chart Idle Data** – If checked Strip Chart runs continuously showing values when DSix is not running



# Using the Strip Chart Configuration Window

**Series** - Selects Strip Chart color to use for plot. When color is highlighted select the variable desired for plotting. Up to 4 plots can be made in each Strip Chart. If less are desired select the color to not be plotted and select **None** for DSix variable.

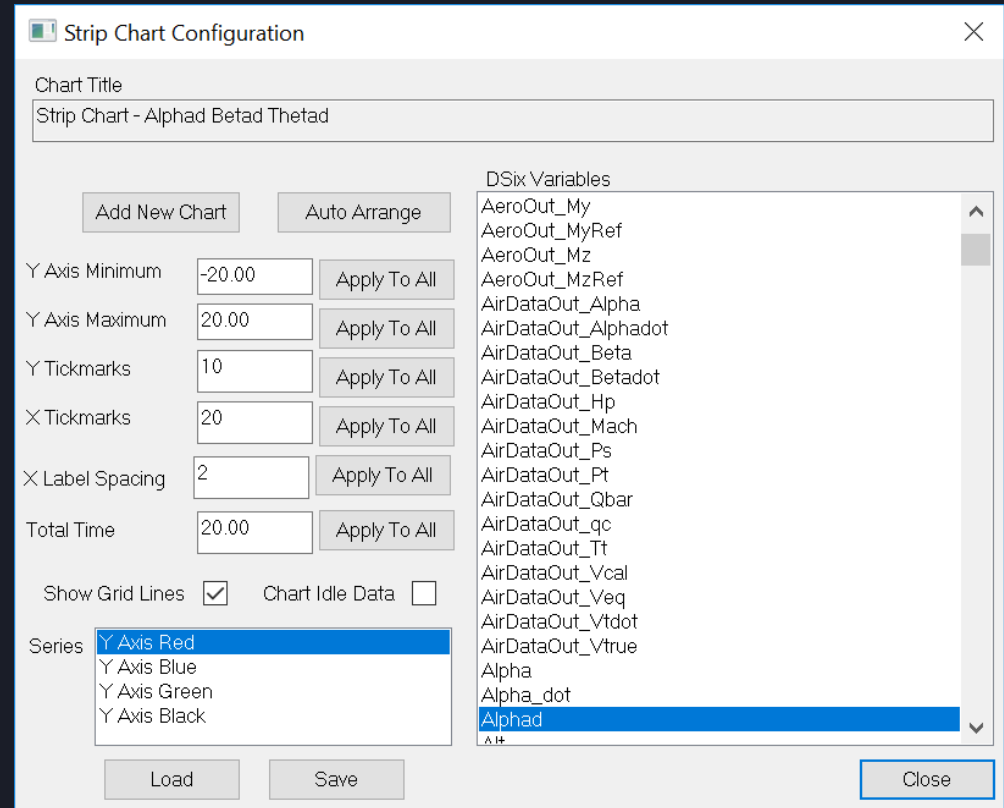
**DSix Variables** - List of variables that can be plotted on the Strip Chart

**Save** - Allows the user to save the format of all Strip Charts open at time of save

- Size
- Location
- Y Max and Min
- Time
- Variables

**Load** – Loads a .StripChart.d6x file of Saved format

**Close** – Closes the Configuration Windows





# File Types and Storage Location

## .StripChart.d6s

- Project-dependent files
- Stores Format only for all Strip Charts on monitor (No Data)
- Stored in main project directory when file saved by user in Strip Chart Configuration window
  - Can be stored in any directory by user

## .SCC

- Legacy format file from DSix 1.95
- Properties same as above
- Will work in DSix 2.0

## Save/Load Strip Chart Formats

- ✈ Strip Chart files **only** save plot **formats**
- ✈ File saves format for **all** Strip Charts on monitors
- ✈ **Saving project** saves all open Strip Charts as they are at time of save
- ✈ Strip Charts Load from:
  - DSix **Pull Down Menu** View...Strip Charts...Load
  - Strip Chart **Configuration Window** ... Load
- ✈ Loading project opens all Strip Charts that were open at time project was Saved

## Strip Chart Efficiency

- Strip Charts are processor intensive displays
- If a simulation is unable to run in real time consider the following:
  - Reduce the **number** of Strip Chart Windows
  - Ensure Strip Chart Windows **do not span** multiple monitors
  - Move all Strip Charts to **primary** monitor



Flight Simulation Environment