MEscope Window

March 7, 2025

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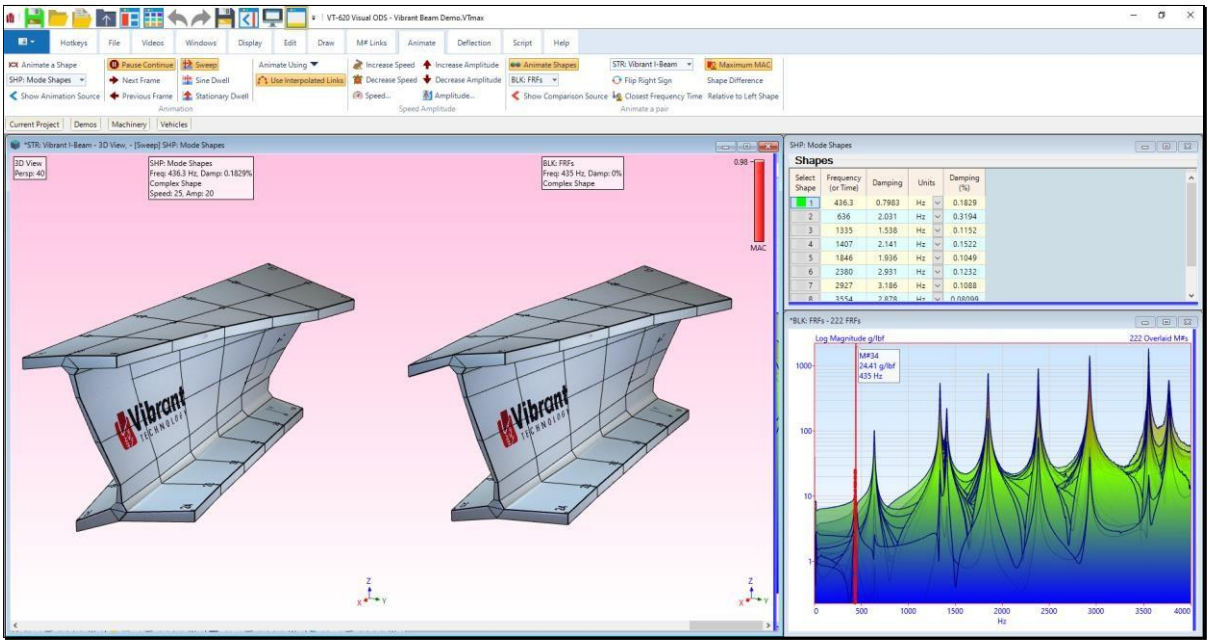
Table of Contents

MEscope Window

This chapter contains descriptions of the commands in the MEscope window.

The MEscope window is open whenever MEscope is running.

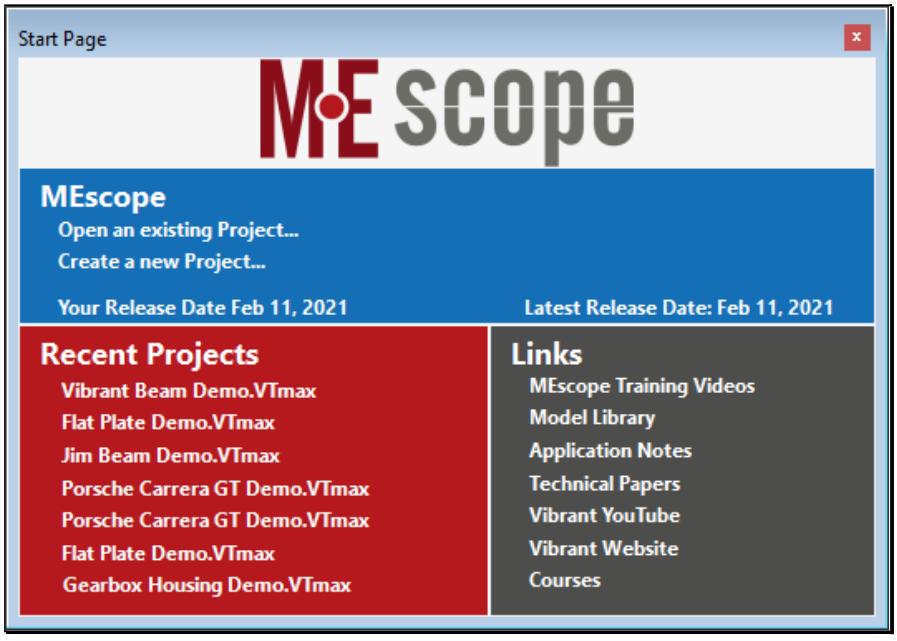
Only the commands for a **VT-620 Visual ODS** package are documented in this chapter. Additional commands authorized by MEscope Options are documented in separate chapters. Execute **Help | License Manager** to verify the Options authorized by your MEscope license.



MEscope Window Showing Side-by Side Display of a Mode Shape and ODS.

Start Page

When MEscope is started, the **Start Page** is displayed, as shown below.



MEscope Start Page.

The Recent Projects section lists the **last five Project files** that were open in MEscope.

The MEscope section contains ***"hot spots"*** for opening an existing Project from disk, or for creating a new Project.

The **MEscope** section also lists ***Your Release Date*** and the ***Latest Release Date*** of software available for downloading from the Vibrant Internet website.

The **Links** section contains ***links*** for assessing MEscope Training Videos, the shared Model Library, Application Notes, Technical Papers, Vibrant YouTube videos, the Vibrant Web Site, and a list of available Courses.

Menu Commands

Menu command descriptions are ordered in this manual by command menu ***(from left to right)***, and then by the commands in each menu ***(from top to bottom)***

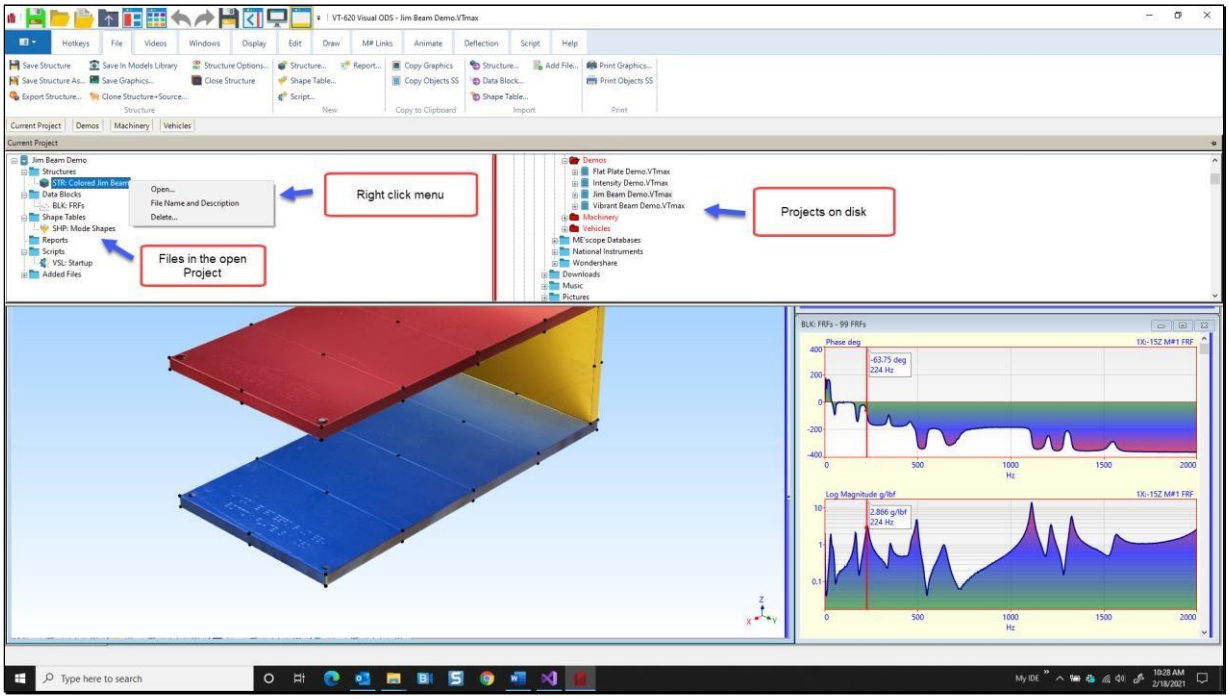
Each menu command is executed by choosing it from a command **menu**, by ***clicking*** on its **Tool** if it is on a **Toolbar** or by clicking on it in the **Ribbon** menu style

Current Project Fly-out panel

- ***Click on the* Current Project tab** to open the **Current Project Fly-out panel**
- The **Current Project Fly-out panel** contains two panes, separated by a moveable **red splitter bar**.

The ***Left Pane*** lists the files in the ***currently open* Project** file

The ***Right Pane*** lists all other Project files on disk



MEscope Window Showing Current Project Fly-out panel.

All work in MEscope is done in the ***currently open* Project**.

Only one* Project *can be open at a time in MEscope.

Right Click Menu

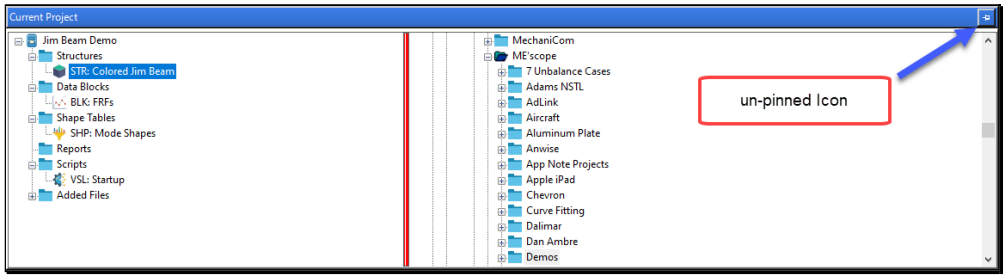
Right click on one of the Project file names in the **Current Project Fly-out panel** to display a **right click menu**.

- Execute **Open** to open the Project (same as clicking on the Project name)
- Execute **Name & Description** to rename the Project and add a description
- Execute **Delete** to mark the Project file for deletion from the disk
- A Project file that is marked for deletion can be ***un-deleted by right clicking on it***

Moving the Current Project Fly-out panel

The **Current Project Fly-out panel** can be attached at the **top, bottom, left or right side** of the MEscope window.

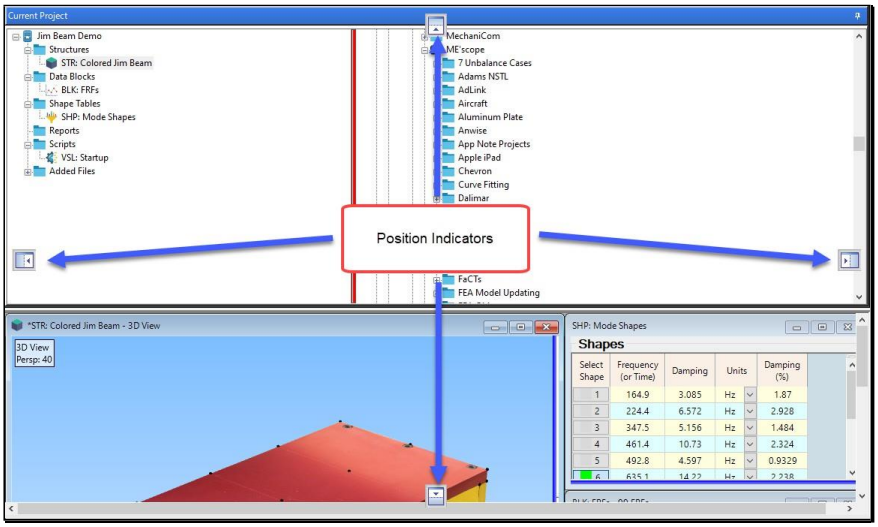
- ***Click* on the un-pinned icon** in the ***upper-right corner*** of the Current Project Fly-out panel to change it to a **pinned icon**



- ***Click and drag*** the the Current Project Fly-out panel into the center of the MEscope window **Work Area**

Position Indicators are displayed on the four edges of the MEscope window as shown below.

- Move the mouse over a **Position Indicator** to attach the **Current Project Fly-out panel** to that side of the window
- ***Click* on the pinned icon** in the ***upper-right corner*** of the Current Project Fly-out panel to return it an **un-pinned icon**



Opening a Project

There are several ways to open a previously saved Project,

1. Execute **Project | Open** in the **MEscope** window
2. On the Current Project Fly-out panel,
   - ***Double click*** on the Project name in the ***right pane***
   - ***Right click*** on the Project name in the ***right pane***, and select **Open** from the **right click** menu
3. Execute **Help | Start Page** to display the Start Page
   - ***Click*** on a Project from the list of **Recent Projects**
   - Or ***click*** on **Open an existing Project**

Data Files

A Project file can contain ***one or more*** of the following data files,

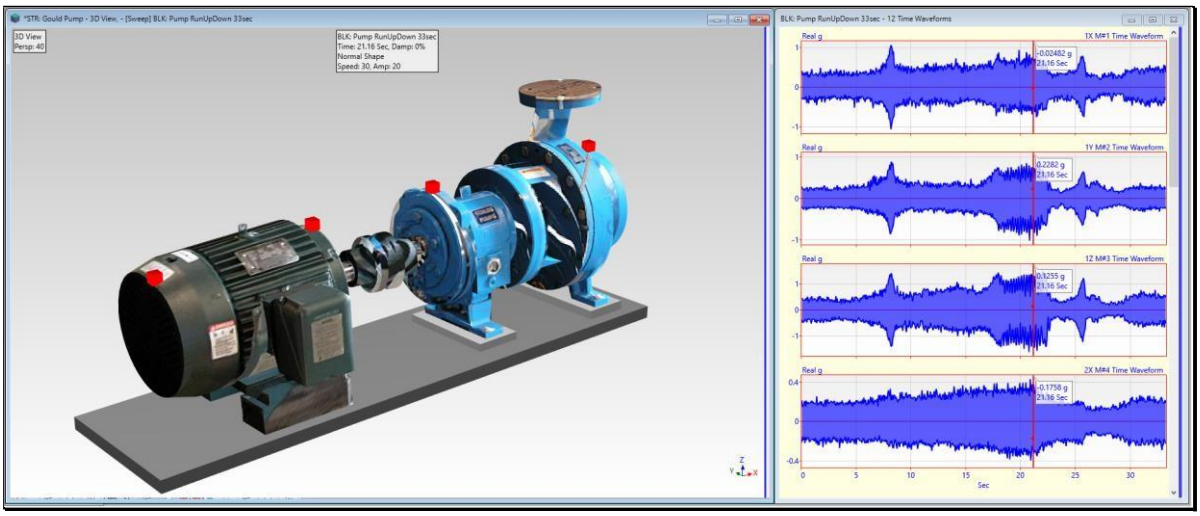
- Structure (**STR**) file
- Data Block (**BLK**) file
- Shape Table (**SHP**) file
- Acquisition window (**ACQ**) file
- Script (**VSL**) file
- Report (**RTF**) file
- Added Files (**MP4**, **PDF**, **JPG**, or files that run in other windows applications)

A separate window is used to display and manipulate the contents of each data file within the ***currently open*** Project.

When a data file is opened, a copy of its contents on disk is put into the **computer RAM memory** and displayed in its own window.

All data files in a Project are contained within the Project file on disk, ***except*** **Added Files**.

Added Files are stored separately on disk and are opened in a separate program associated with the file type in MS Windows.



*MEscope with a Structure (**STR**) and Data Block (**BLK**) Window Open.*

Saving Data Files

When a Project data file is saved, its file contents in **RAM memory** replace the contents of the file stored in its Project file on disk.

If a Project is closed without saving changes to one of its data files, the ***contents of that file on disk are not changed***.

Opening a Data File Window

- ***Double click*** on the data file in the ***left pane*** of the **Current Project Fly-out panel**
- Or ***Right click*** on data file in the ***left pane*** and select **Open** from the **right click menu**

Adding a File to the Open Project

There are several ways to add a data file to the ***currently open*** **Project** file,

- Execute one of the **File | New** commands in the MEscope window
- Execute one of the **File | Import** commands in the MEscope window
- ***Double click*** on the data file in the ***right pane*** on the **Current Project Fly-out panel**
- Or ***Right click*** on the data file in the ***right pane*** and execute **Add** in the **right click** menu

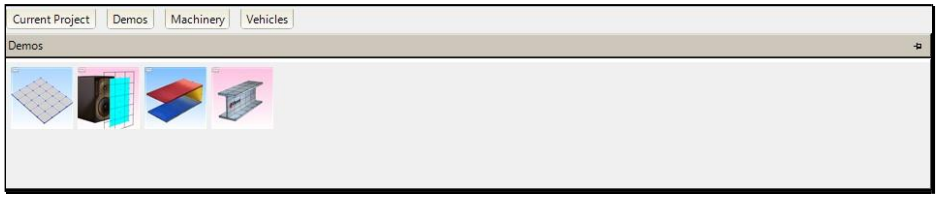
Project Tabs

In addition to the **Current Project** tab, ***several*** **Project** tabs are added to the MEscope window when it is installed.

- ***Click*** on a **Project Tab** to open its ***fly-out panel*** containing the MEscope Projects in that folder

Opening a Project From a Project Tab

- ***Hover*** the mouse pointer over each Project ***thumbnail*** (picture) on the panel to display its name
- ***Double click*** on any Project in the fly-out panel to open that Project
- ***Move*** the mouse pointer ***off the fly-out panel*** to close it

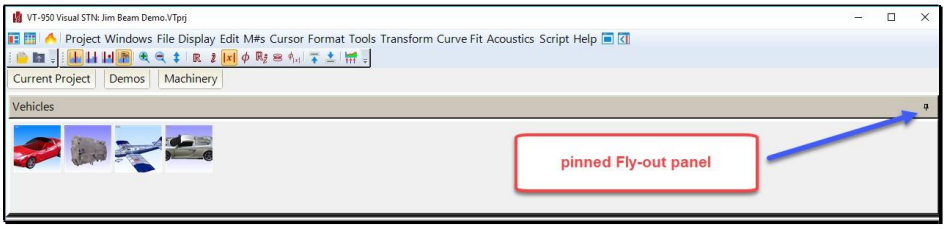


Demos Folder Fly-out Panel.

Moving a Fly-out Panel

Any Project Fly-out panel can be moved to one of the edges of the MEscope window Work Area.

- ***Click*** on a **Project Tab** to open its Fly-out panel
- ***Click*** on the **un-pinned icon** in the ***upper right corner*** to **pin the Fly-out panel open**, as shown below



Pinned Folder Fly-out panel.

- ***Drag*** the ***pinned*** **Fly-out panel** into the ***middle*** of the Work Area

Notice that ***four arrow icons*** appear near the ***top, bottom & sides*** of the window.

- ***Drag*** the ***pinned*** Fly-out panel onto an ***arrow icon*** to attach it to the ***top, bottom, or a side*** of the Work Area
- ***Click*** on the **pin icon *again*** in the ***upper right corner*** to ***un-pin*** **the Fly-out panel**

Creating a New Project Tab

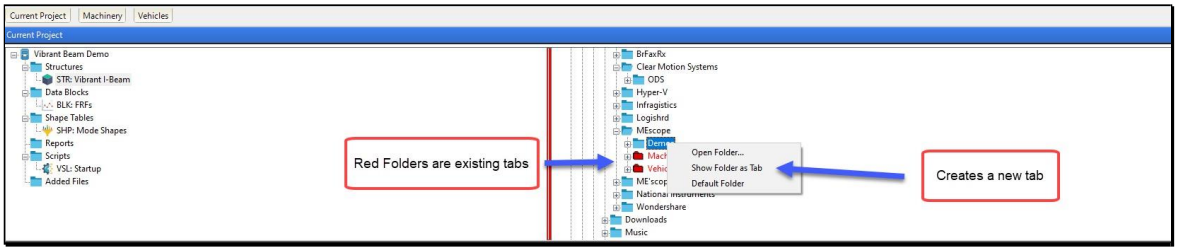
Any Folder of Project files on your computer disk can be added as a Fly-out panel to the MEscope window.

- ***Right click*** on a Folder in the ***right pane*** **of the Current Project Fly-out panel**
- Select **Show Folder as Tab** from the right click menu

The Project Tab will be added to the Toolbar

Removing a Project Tab

- ***Click*** on the tab to open its Fly-out panel
- ***Right-click*** on the Fly-out panel and execute **Close Tab**



Right Click to Create a New Project Tab.

Project Menu

Project | New Project

Creates a new (empty) Project file.

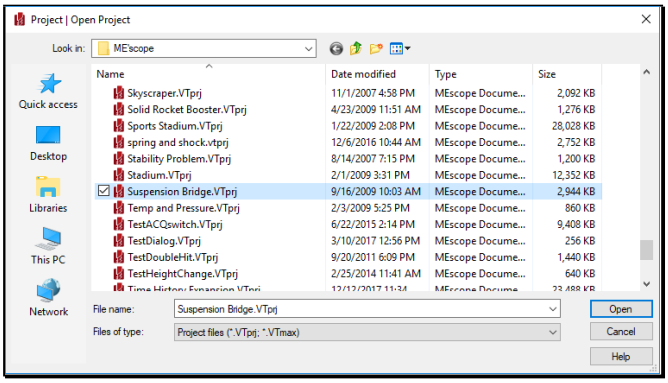
Each new Project file must be named and stored to disk before it can be opened.

When the new Project is created, all data files in the ***currently open*** **Project** are removed from the computer RAM memory.

Project | Open Project

Opens a previously saved Project file from disk

- All files in the current disk folder with the file extension **(VTprj** or **VTmax)** are listed in the Windows File dialog box
- ***Double click*** on the Project file name or select the file and ***click*** on the **Open** button



Project File Dialog Box.

Project | Close Project

Closes the ***currently open*** **Project** file and removes its data files from the computer RAM memory.

You will be prompted to save all **new or modified** data files in the **currently open Project** before they are removed from RAM memory.

Project | Save Project

Saves the ***currently open*** **Project** file into a file on the computer disk.

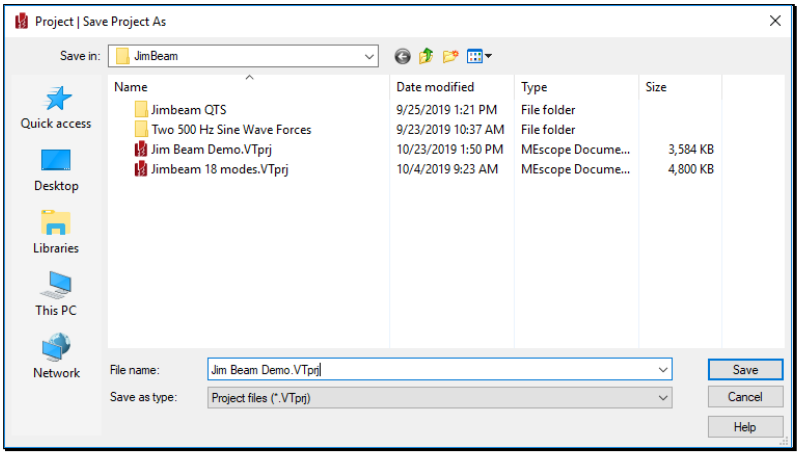
WARNING: Routinely save your Project to avoid having to re-create any data files should a system error occur.

Project | Save Project As

Saves the ***currently open*** **Project** file into a file on disk with a new name.

When this command is executed, the Windows File dialog box is opened

- Select the ***desired*** **folder** for storing the Project
- Enter the ***desired*** **name** for the Project file into the **File name** box and ***click*** on the **Save** button



Project Save As Dialog Box.

Project | Save a Project Copy

Saves a copy of the ***currently open*** **Project** into a separate file on disk.

Project | Open Models Library

Opens the Local Models Library.

The Local Models Library is a Project file saved on your computer disk named **MEscope Library**

The **MEscope Library** file contains Structure (**STR**) files, and each Structure (**STR**) file contains a 3D structure model.

Any structure model can be added to the **Shared Models Library** maintained by Vibrant Technology on the Internet, or in the **Local Models Library** on your disk drive.

File | Save in Models Library in a Structure (**STR**) window is used to save models in either library.

Drawing Assistant Substructure Tab

The contents of your Local Models Library are displayed in the browser on the **Substructure** tab when the **Drawing Assistant** tabs are displayed in a Structure (**STR**) window.

Project | Save MEscope Graphics

Saves the graphics in the **Work Area** of the MEscope window into a disk file.

Graphics can be saved in the **JPG, GIF, PNG or BMP** file formats.

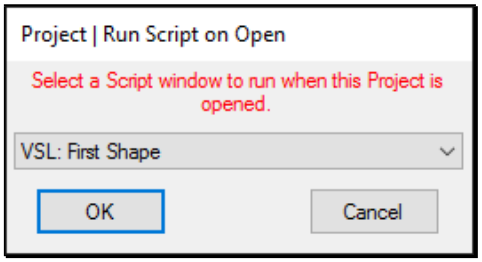
Project | Open Last Project on Startup

If ***checked***, the Project that was last open in MEscope is opened again when MEscope is started.

Project | Run Script on Open

If ***checked***, the commands in a **Script (VSL) window** are executed after the Project is opened from disk.

When this command is executed, the following dialog box will open,

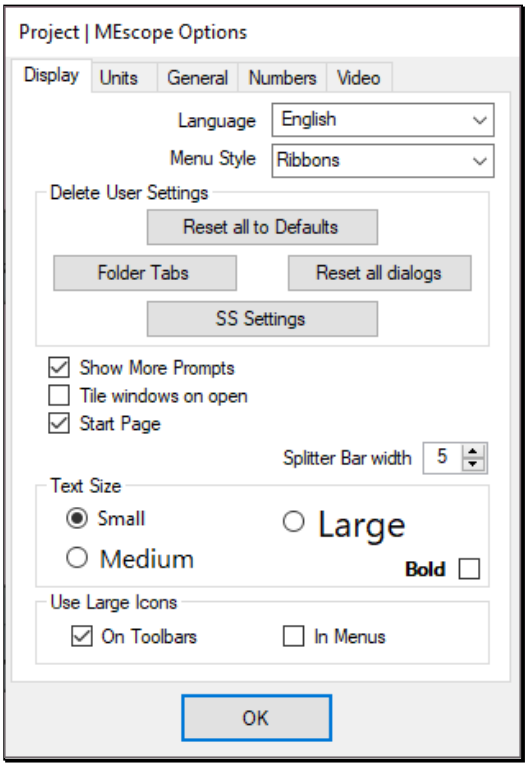


- ***Choose*** an existing Script in the Project and ***click*** **on OK**

If you choose **"None"** in the dialog box, no Script will be executed when the Project is opened

Project | MEscope Options

Opens the MEscope Options dialog box as shown below.



Display Tab in the MEscope Options Box.

The MEscope Options box ***contains several* Tabs** with options pertaining to the operation of MEscope

Display Tab

Language

Displays all text in MEscope in the chosen local language.

Menu Style

Changes the style for displaying the commands in MEscope.

- **Ribbon** ➔ displays the commands for the ***active*** window in a Ribbon
- **Single menu** ➔ displays the commands for the ***active*** window in a single menu
- **Window** ➔ displays a command menu & Toolbar in each window

When the menu style is changed, MEscope will shut down and restart to implement the change.

Delete User Settings

Toolbars, **Spreadsheets**, **Dialogs** and **Folder Tabs** can be modified to display them differently in MEscope. These buttons are used to restore them to default settings.

Show More Prompts

If ***checked***, more prompting message boxes are displayed during the execution of some commands.

Tile windows on Open

If ***checked***, all open windows in a Project ***will be tiled*** in the Work Area when the Project is opened

Start Page

If ***checked***, the Start Page will be displayed when the Project is opened.

Splitter Bar width

Changes the ***width of the splitter bars*** between graphics and spreadsheets in all MEscope windows.

Text Size

Changes the ***size of the text*** used in all MEscope windows.

When the text size is changed, MEscope will shut down and restart to implement the change.

Use Large Icons

Changes the ***size of command Icons*** used on the Toolbars and in the menus.

Units Tab

The units chosen on the **Units** tab are used in the Structure (**STR**) window and by some commands in the SDM & FEA options.

Correct units are not required to create a structure model and animate shapes on it.

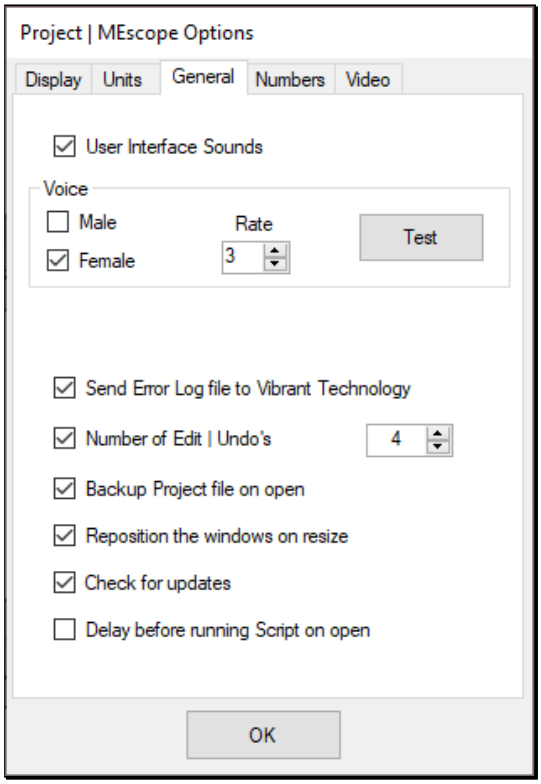
Certain **SDM** & **FEA** commands require that ***these units match the units*** in a Shape Table (**SHP**) or Data Block (**BLK**) before they can be used.

General Tab

User Interface Sounds

If ***checked***, a sound will occur when an ***internal error*** occurs during the use of MEscope.

- If an ***internal error*** occurs during the operation of MEscope, an ***"Uh-Oh"*** sound will come from the computer.



General Tab in the MEscope Options Box.

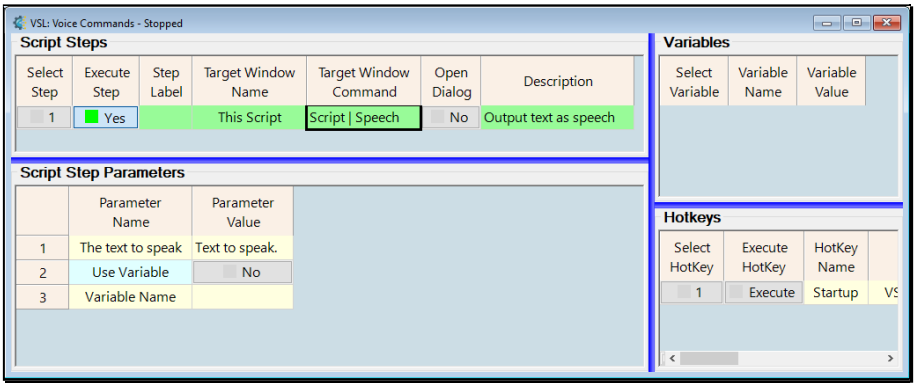
Voice

Voice commands and prompts can be used in MEscope in two places,

1. With the **Script | Speech** command
2. While using the **Acquisition** window during **Impact testing**

Voice can be either **Male** or **Female** or either fast or slow by changing its **Rate**

- ***Press*** the **Test** button to listen to the Voice on your computer



Script | Speech *Command in a Script Window*

Send Error Log file to Vibrant Technology

If ***checked***, a log file of all internal errors that occurred during the operation of MEscope will be sent to a Vibrant Technology Website when the operation of MEscope is terminated.

Software bugs that create internal errors are fixed more quickly when you ***check*** this function.

Number of Edit Undo's

If ***checked***, the number of edits specified in the adjoining box will be saved in computer memory during many operations.

- When **Edit | Undo** is executed in a window, a previous copy of the data is restored

Backup Project file on Open

If ***checked,*** and a Project file ***opens successfully*** from disk storage, a **backup copy** of the Project file is stored in the same location as the Project file.

- If the Project file ***does not open successfully***, a backup file will be opened instead if available

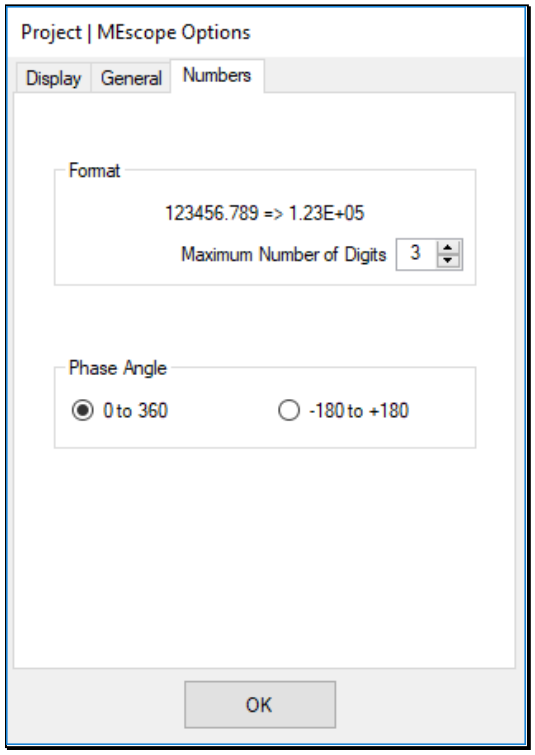
Numbers Tab

Format

The format in which numbers are displayed on graphs and in spreadsheets.

Maximum Number of Digits

The maximum ***number of decimal digits*** that will be used to display numbers.



Numbers Tab in the MEscope Options Box.

Phase Angle

The format used to display phase angles in the **M#s spreadsheet** in a Shape Table (**SHP**) or in the **Modal Parameters spreadsheet** during curve fitting in a Data Block (**BLK**)

Project | Exit MEscope

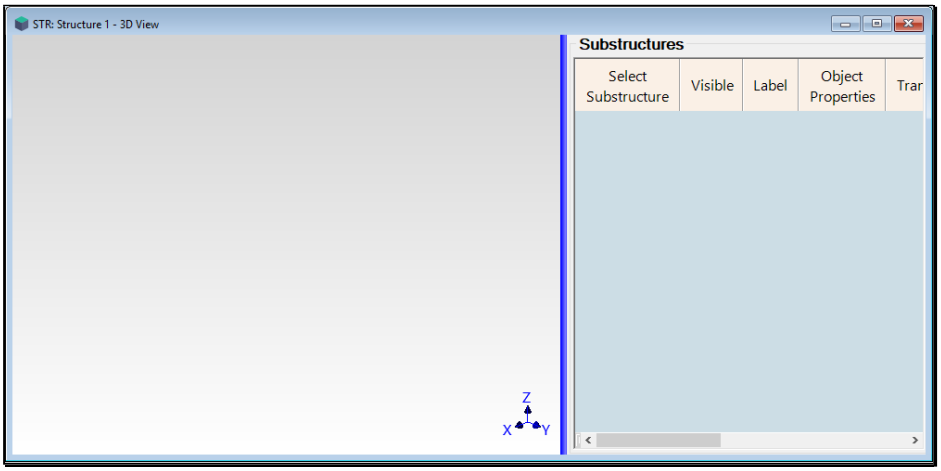
Terminates the operation of MEscope.

If ***any files*** in a Project have ***not been saved***, or have been ***modified*** since they were last saved, you will be prompted to save them before MEscope is terminated.

File Menu

File | New | Structure (STR)

Creates a new Structure (**STR**) file and opens an (***empty***) Structure window for the new **STR** file.

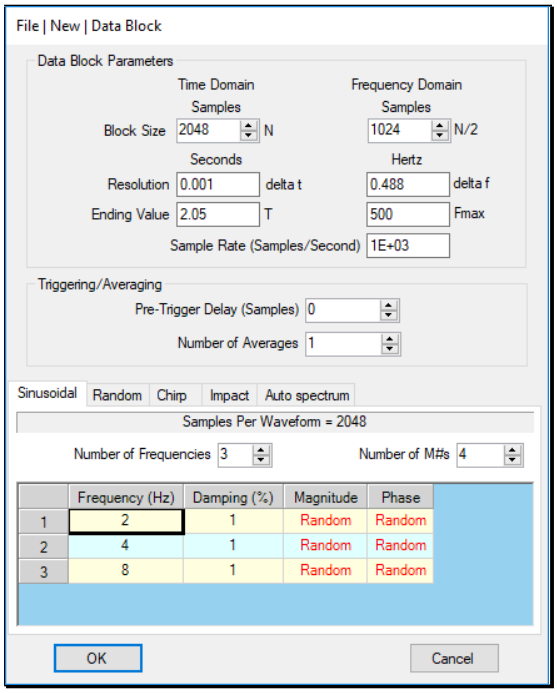


New (Empty) Structure (STR) window.

File | New | Data Block (BLK)

Creates a new Data Block (**BLK**) file and adds **TWFs** to it.

When this command is executed, a dialog box is opened as shown below



New Data Block Dialog Box.

Time Domain

Block Size (**N samples**) ➔ The number of time samples in each **Sampling Window**

Resolution (delta t) ➔ The increment between samples on the horizontal time axis (in seconds)

Ending Value (T) ➔ The ending time of the horizontal time axis in each **Sampling Window** (in seconds)

Frequency Axis (DFT of Time Domain waveforms)

Block Size (**N/2 samples**) ➔ The number of frequency samples (Lines) of each **Digital Fourier Spectrum** (**DFT**)

Ending Value (Fmax) ➔ The ending frequency of the frequency axis of each **DFT** (in Hertz)

Resolution (delta f) ➔ The increment between frequency Lines of each **DFT** (in Hertz)

Sample Rate (samples/second) ➔ **(Sample Rate = 2 x Fmax)** (in Hertz)

Triggering/Averaging

Pre-Trigger Delay (samples) ➔ Adds zero valued samples to the beginning of each **Sampling Window**

Number of Averages ➔ The number of **Sampling Windows** used for Spectrum averaging

Samples per Waveform ➔ **(Averages x Block Size)**

Time and Frequency Relationships

The following formulas ***are always enforced*** by the FFT algorithm.

Fmax = (N / 2) x (delta f)

Fmax = 1 / (2 x (delta t))

T = N x (delta t)

(delta f) = 1 / T

Sinusoidal Tab

If this Tab is ***active***, a new Data Block is created with ***sinusoidal waveforms*** in it.

Number of Frequencies ➔ Number of sinusoidal frequencies

Number of M#s ➔ Number of waveforms to be synthesized

Frequency (Hz) ➔ Sine wave frequency

Damping (%)➔ The percentage of critical damping for each **M#**

Enter **0** for no damping

Enter (0<damping<100) to synthesize Impulse Response Functions (IRFs)

Magnitude ➔ The sine wave magnitude

Phase (degrees) ➔ The sinusoidal phase

When (Number of **M#s** =1), you can enter a magnitude & phase

When (Number of **M#s** >1), magnitudes & phases are ***randomly created*** for each waveform

Random Tab

If this is Tab ***active***, a new Data Block is created with ***random TWFs*** in it.

Number of M#s ➔ Number of **M#s** to be synthesized

Magnitude ➔ All **M#s** are synthesized with this magnitude and a ***random phase***

Burst Random Width ➔ **(%)**

Used to make burst random *response* ***signals periodic*** in the **Sampling Window**

Width of the ***non-zero random signal*** as a percentage of the **Sampling Window**

Chirp Tab

If this is Tab ***active***, a new Data Block is created with ***chirp (swept sine) waveforms*** in it.

Number of M#s ➔ Number of **M#s** to be synthesized.

Starting Frequency (Hz) ➔ Starting frequency of the swept sine waveforms

Ending Frequency (Hz) ➔ Ending frequency of the swept sine waveforms

Magnitude ➔ Magnitude of all waveforms

Burst Chirp Width ➔ (%)

Used to make ***chirp response signals periodic*** in the Sampling Window

Width of the ***non-zero chirp signal*** as a percentage of the Sampling Window

Impact Tab

If this Tab is ***active***, a new Data Block is created with one ***impact (pulse)*** waveform in it.

Magnitude ➔ Magnitude of the pulse signal

Width (samples) ➔ Width of the pulse (samples)

Auto spectrum Tab

If this Tab is ***active***, a new Data Block is created with an Auto spectrum in it.

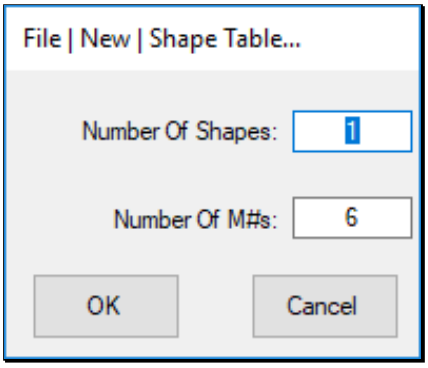
Number of Frequencies ➔ Number of sinusoidal frequencies

The **frequency & magnitude** of each sinusoid must be entered into the spreadsheet

File | New | Shape Table (SHP)

Creates a new Shape Table (**SHP**) file and adds it to the ***current Project.***

When this command is executed, the following dialog box will open



Manual Shape Data Entry

- ***Click*** on a cell in the new Shape Table to ***select*** it, type the entry on the keyboard, and ***press*** the **Enter** key

File | New | Acquisition (ACQ)

Creates a new Acquisition (**ACQ**) file and adds it to the ***current Project***

This command is available if the **VES-700 or VES-780 option** is authorized by your MEscope license.

An Acquisition window is used to setup and acquire multi-channel noise & vibration data using third-party front-end hardware.

File | New | Report (RTF)

Creates a new (***empty***) Report (**RTF**) file and adds it to the ***current Project.***

- A Report is used to document a project using both text and graphics

File | New | Script (VSL)

Creates a new (***empty***) Script (**VSL**) file and adds it to the ***current Project***.

A Script is a spreadsheet of MEscope commands that is executed by pressing its **Hotkey** on the Menu or Ribbon bar.

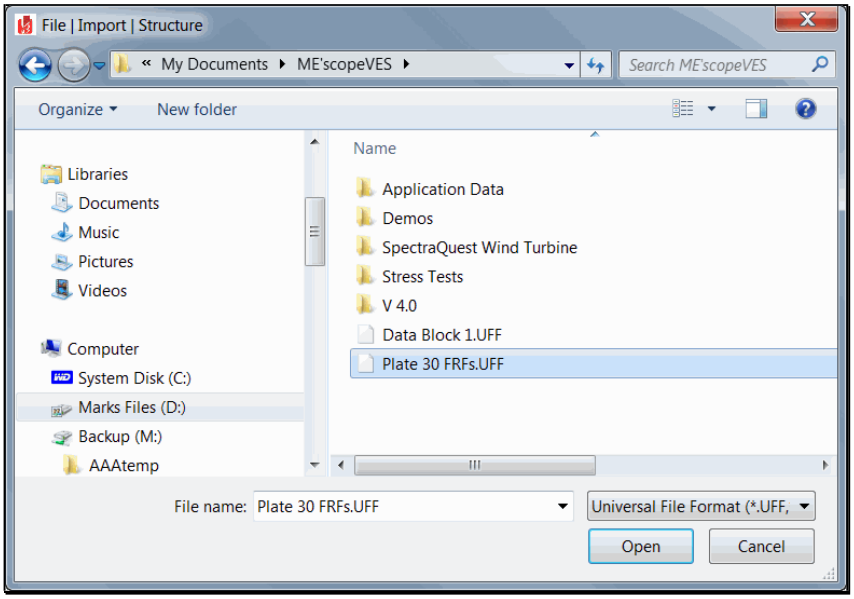
When a new Script (**VSL**) window is created and saved, a **Hotkey** is created from which to execute the Script.

Hotkeys & Scripts are used to automate the use of MEscope by ***automatically executing multiple command***s listed in spreadsheet form in a Script (**VSL**) window.

File | Import | Structure (STR)

Imports Structure data from a third-party disk file into a new Structure (**STR**) file and adds it to the ***current Project.***

When this command is executed, the **Windows File Open** dialog box will open, as shown below



Import Structure File Dialog Box Showing a Structure File Selected.

- Choose the appropriate external file from the **File Name & Extension list** on the **lower right** of the dialog box

The File Name & Extension list in the Windows File dialog box contains the names and extensions of all third-party file formats that can be imported into a Structure (**STR**) file

- Select a file to import and ***click*** on **Open** to import it

Importing an ASCII Text Spreadsheet File

Many third-party software packages can export data in an **ASCII text spreadsheet** format.

Structure (**STR**), Data Block (**BLK**) and Shape Tables (**SHP**) can each be imported from **ASCII text spreadsheet** files.

MEscope data files can also be exported in **ASCII text spreadsheet** format from **STR**, **BLK**, and **SHP** windows.

Creating an ASCII Text File Template

1. Open any Project that contains a Structure (STR), Data Block (**BLK**), or Shape Table (SHP) file
2. Execute File | Export in the appropriate file window to export the file in ASCII text spreadsheet format
3. Open the file in a text processor (such as MS Word) or a spreadsheet program (such as MS Excel)
4. Paste the columns of data from the third-party spreadsheet into the MEscope text file
5. Edit the header information as required to describe the new data in the file
6. Save the ASCII text file to disk
7. Execute one of the File | Import commands to import the ASCII text file

UFF File Format

The **Universal File Format (UFF)** is used for importing data from multi-channel data acquisition systems, and for exchanging data between different structural analysis programs.

MEscope can import & export data files in the UFF format. The most common UFF file format stores the data in an ***ASCII text format***

- **TWFs** and frequency spectra can also be stored in a ***binary data format***

Each line of data in a UFF file is arranged in ***fixed field format***

- Fixed field format requires that all characters on each line must be in the correct columns

Each UFF data type is stored as a **data set**

- Each data set begins & ends with a "-1" line
- Each data set also has a **Data Set Number on the second line** of the data set

MEscope can import and export the following numbered data sets

UFF Data Set Number	Type of Data
15	Points
82	Lines
55	Shapes
58	Time or Frequency domain functions

In UFF terminology, Points are called **Grid Points**, Lines are called **Trace Lines**, and mode shapes are called **Functions** at Nodal DOFs.

- Imported **Grid Points** and **Trace Lines** are put into a Structure (**STR**) file
- Imported **mode shapes (Functions)** are put into a Shape Table (**SHP**) file

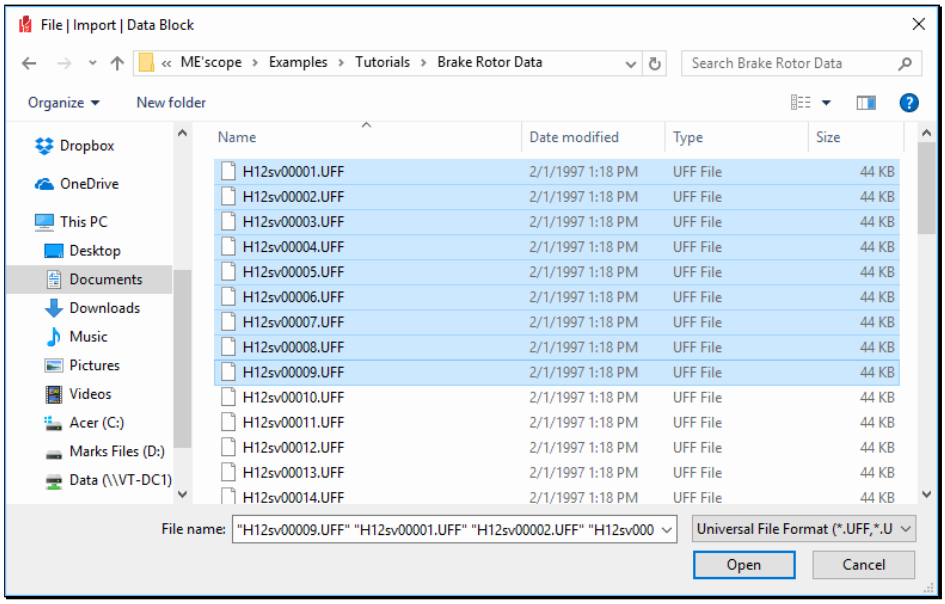
Exporting a UFF File

- Execute **File | Export** in any Structure (**STR**), Data Block **(BLK)** or Shape Table (**SHP**) window
- Choose **ASCII Universal File Format** in the **Save as type** list in the dialog box that opens and ***click*** on **Save**
- Open the UFF file in a text processor

File | Import | Data Block (BLK)

Imports time or frequency data from third-party data files into a new Data Block (**BLK**) file and adds it to the ***current Project.***

- When this command is executed, the Windows Open dialog box will open, as shown below.



Import Data Block Dialog Box Showing Multiple Files Selected.

- Choose the appropriate external file from the **File Name & Extension list** on the **lower right** of the dialog box.

The **File Name & Extension list** in the Windows File dialog box contains the names and extensions of all ***third-party file formats*** that can be imported into a Data Block (**BLK**) file.

- Select a file to import, and ***click*** on **Open** to import it

Selecting Multiple Files

Some analyzers and data acquisition systems save only one measurement per disk file

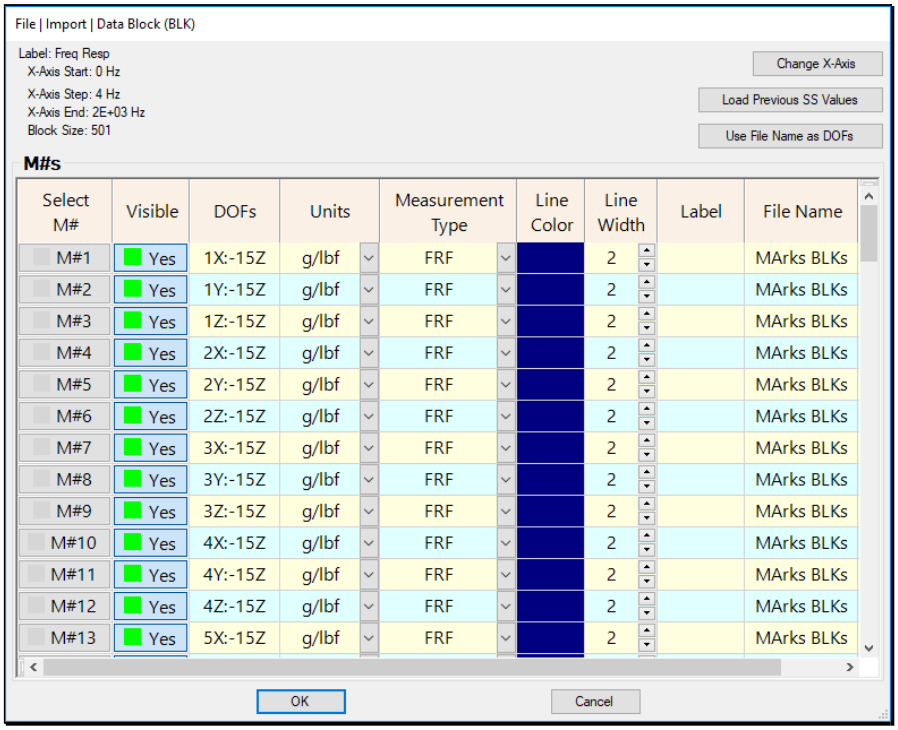
- ***Hold down*** the **Shift** to ***select*** a **range** of files listed in the Windows Open dialog box
- ***Hold down*** the **Ctrl** key to ***select*** **individual** files listed in the Windows Open dialog box
- ***Click*** on the **Open** button to open the files

Measurement Selection Dialog Box

If the selected files contain different types of measurements, the Measurement Selection dialog box will open

- ***Select*** the **time domain** or **frequency domain** measurements tab, if both are available in the imported files

Translate Files Dialog Box



Translate Files Dialog Box.

- ***Press* Select M#** buttons to select individual measurements

Each measurement listed in this dialog box is imported as a separate measurement **(M#)** and put into a Data Block file

Change X Axis Button

Allows you to edit the time or frequency axis parameters (**Block Size, Start Value, Resolution, End Value**).

Load Previous Values Button

Loads previously used spreadsheet values into the spreadsheet.

This is useful for restoring previously used DOFs, Units, etc.

Use File Name as DOFs Button

Uses the imported data file name as the DOFs on each measurement.

DOFs are listed in the **DOFs** column of the spreadsheet.

Following are examples of file names that can be interpreted as M# DOFs.

Roving DOF: **1Z.Ext**

Roving & Reference DOFs: **1Z2Z.ext**, **1Z_2Z.Ext**

Reference DOF: **_2Z.Ext**

Measurement Set: 1Z_2Z[1].Ext, _2Z[1].Ext

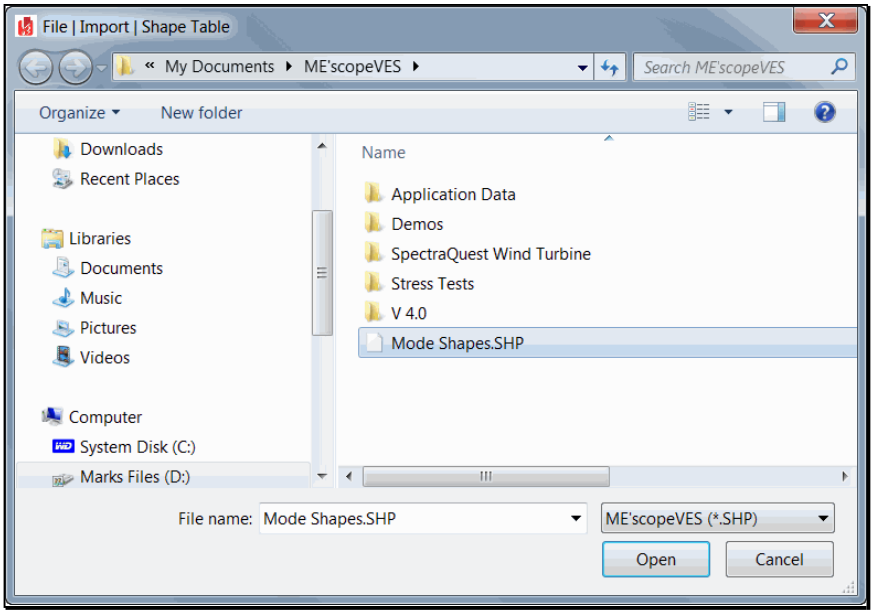
Negative Direction: **-1Z.Ext**, **m1Z.Ext**

Rotational DOF: 1rX.Ext or 1U.Ext, 1rY.Ext or 1V.Ext, 1rZ.Ext or 1W.Ext

File | Import | Shape Table (SHP)

Imports Shape data from a third-party disk file into a new Shape Table (SHP) file and adds it to the current Project.

When this command is executed, the Windows File dialog box will open, as shown below



Import Shape Table Dialog Box Showing a File Selected.

- Choose the appropriate external file from the **File Name & Extension list** on the ***lower right*** of the dialog box

The **File Name & Extension list** in the Windows File dialog box contains the names and extensions of all of the ***third-party file formats*** that can be imported into a Shape Table (**SHP**) file.

- Select a file to import and ***click*** on **Open** to import it

File | Import | Report (RTF)

Imports a Report (**RTF**) file from a third-party disk file and adds it to the ***current Project***.

File | Import | Add File

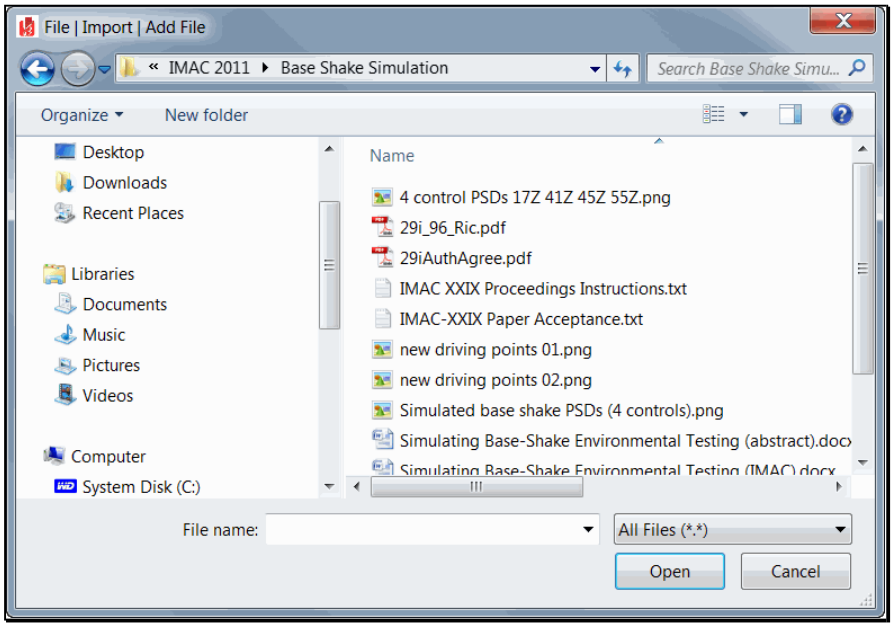
Adds a third-party disk file to the ***current Project***.

An added File is opened in its own ***associated*** Windows program and must be ***associated*** with another Windows program to open it from within MEscope

Examples of added files are Windows media (**WMV**), MS Word (**DOC**) or MS Excel (**XLS**) files

An added File remains separate from the current Project, and is referenced by the current Project

When this command is executed, the Windows File dialog box will open



Add File Dialog Box Showing All File Extensions Displayed.

- Choose the appropriate external file from the **File Name & Extension list** on the ***lower right*** of the dialog box
- ***Double click*** on the file name, or select it and ***click*** on the **Open** button

Documentation with Videos

MEscope allows you to interactively record a video of the contents of a Structure (**STR**) window or the MEscope window.

A video is a sequence of animation frames saved into a video **mp4** file. A Video can be played back on any computer that can play an **mp4** file

You can send videos to your clients, and they can view the animation just as it appears in MEscope. Videos can also be embedded in Microsoft ***Power Point*** presentations or ***Word*** documents and played by clicking on them. Individual frames can be cut from a video and pasted into documents, or annotations added to frames with a graphics or text processor.

Videos Menu

The commands in the **Videos** menu are used to record two different types of videos, Animation Frames or the entire MEscope window.

Each video is saved as a **MP4** file.

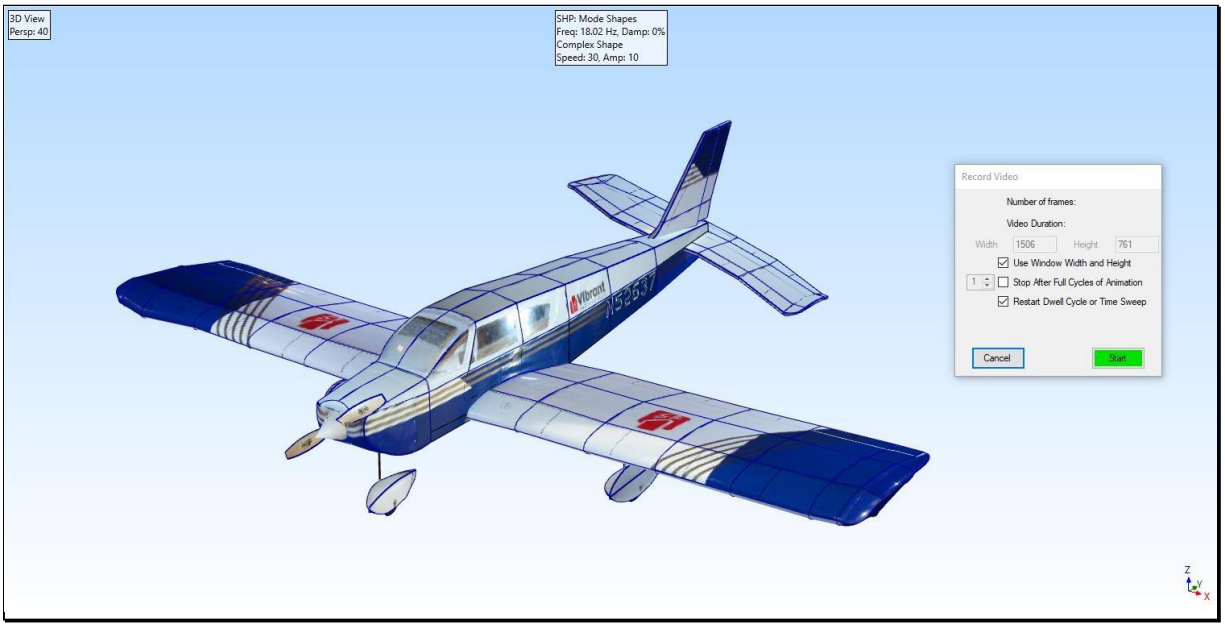
Videos | Animation Frames

Records the animation frames in the active Structure (**STR**) window. When this command is executed, the **Record Video** dialog box will open, as shown below.

- ***Press*** the **Start** button to start recording a video
- ***Press*** the **Stop** button to finish recording the video, and open it in your attached **Windows MP4 player**

While a video is being recorded, you can change the 3D View Rotation, Zoom, Pan, display Points, Lines, Surfaces, etc.

The **Videos** tab in the **File | Structure Options** box contains controls for video **Quality** and **Frames per Second.**



Record Video Dialog Box.

Record Video Commands

Use Window Width and Height

If ***checked***, the video will be the size of the graphics area, either the Structure (**STR**) window or the **Work Area**.

- If ***un-checked*** the **Width** and **Height** can be entered their respective boxes

Stop After Full Cycles of Animation

If ***checked***, video recording will stop after (**N**) animation cycles are completed.

Restart Dwell Cycle or Time Sweep

If ***checked***, video recording will start at the beginning of an animation dwell cycle.

Videos | Record

Records a screen capture of the MEscope window.

- ***Press* Record** to start a screen capture of the MEscope window
- ***Press* Record *again*** to stop recording a video

Windows Menu

Windows | Arrange Windows | For Animation

Arranges all open Structure and Animation Source windows in the Work Area.

Structure **(STR)** windows typically occupy the ***left side*** of the **Work Area**

Data Block **(BLK),** Shape Table **(SHP)** and Acquisition **(ACQ)** windows typically occupy the ***right side*** or ***bottom*** of the **Work Area**

The ***size of the active window is preserved*** when this command is executed

Windows | Arrange Windows | Tile

Arranges all open Project windows in the **Work Area** in a tiled format.

The ***upper left corner*** of each window relative to all other windows is used to arrange the windows

Windows | Arrange Windows | Tile Vertically

Arranges all open Project windows ***horizontally*** in the **Work Area.**

The ***upper left corner*** of each window relative to the other windows is used to arrange the windows

Windows | Arrange Windows | Tile Horizontally

Arranges all open Project windows ***vertically*** in the **Work Area.**

The ***upper left corner*** of each window relative to the other windows is used to arrange the windows

Windows | Arrange Windows | Cascade

Arranges all open Project windows in a cascading format in the **Work Area.**

The ***upper left corner*** of each window relative to the other windows is used to arrange the windows.

Windows | Arrange Icons

Arranges all minimized Project window Icons on the ***lower left corner*** of the Work Area.

Windows | Minimize All

Minimizes all open Project windows in the **Work Area** into Icons on the ***lower left corner*** of the Work Area.

Windows | Restore All

Restores all open Project windows in the **Work Area** from Icons.

Windows | Open All

Opens all Project windows in the **Work Area**.

Windows | Close All

Closes all open Project windows in the **Work Area**.

Windows | Open Windows

All open Project windows in the **Work Area** are listed in this menu.

- If a window is ***minimized***, selecting it from this list will restore it to its previously opened position
- The currently ***active*** window has a **darker outline**

Display Menu

Display | Toolbars

If ***checked***, Toolbars are displayed in the MEscope window.

Display | Status Bar

If ***checked***, the **Status Bar** is displayed at the bottom of the MEscope window.

Display | Center MEscope Window

Centers the MEscope window on the Windows desktop.

- ***Repeated*** execution of this command alternately centers the window and returns it to its former position.

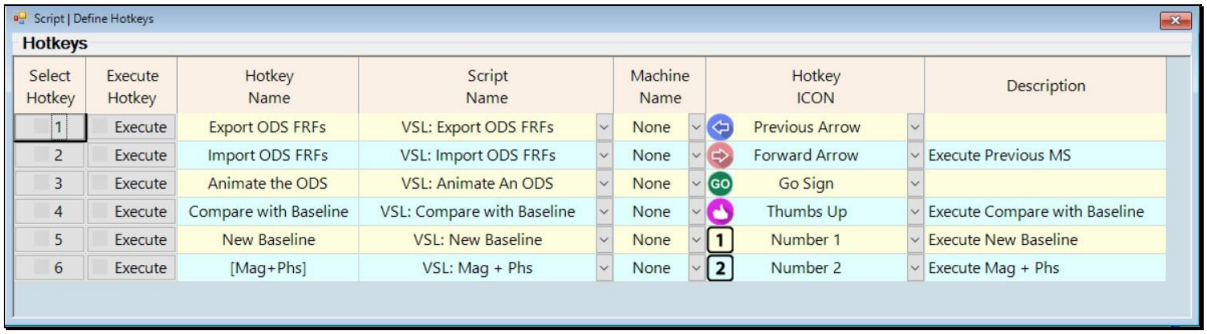
Script Menu

Script | Define Hotkeys

Opens the **Define Hotkeys** window as shown below.

Each Hotkey is used to execute the commands in a Script (**VSL**) window.

Each **Hotkey Icon** in the **Define Hotkeys** window is displayed on the Menu bar or Ribbon.



Define Hotkeys Window

Define Hotkeys Commands

File | Save Hotkeys

Saves the Define Hotkeys window in the ***current Project***.

File | Copy Hotkeys to Clipboard

Copies the Hotkeys spreadsheet to the Clipboard.

File | Print Hotkeys SS

Prints the Hotkeys spreadsheet on the Windows printer.

File | Close

Closes the Define Hotkeys window.

Edit | Add

Adds a new Hotkey to the Hotkeys spreadsheet.

Edit | Select

These commands are used for ***selecting***, ***inverting selection***, and ***un-selecting*** Hotkeys.

Edit | Move Up or Down

These commands move Hotkeys up or down in the Hotkeys spreadsheet.

Hotkeys are displayed on the Menu or Ribbon bar ***in the same order*** as their order in the spreadsheet

Edit | Delete

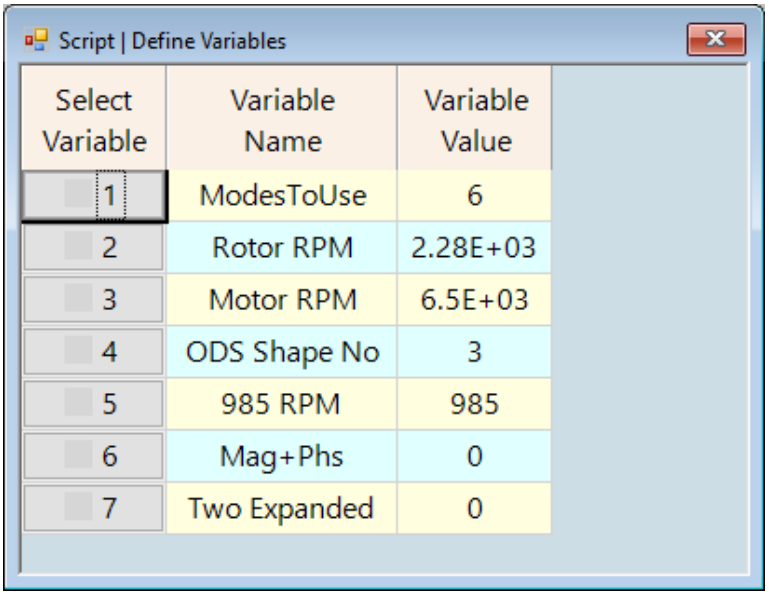
Deletes ***selected*** Hotkeys from the Hotkeys spreadsheet.

Script | Define Variables

Opens the **Define Variables** window as shown below.

Variables are used for storing parameters that can be used by Script commands

Certain Script commands perform **math** and **logical** operations on Variables



Define Variables Window

Define Variables Commands

File | Save

Saves the Define Variables window in the ***current*** **Project**.

File | Copy Variables to Clipboard

Copies the Variables spreadsheet to the **Clipboard**.

File | Print Variables SS

Prints the Variables spreadsheet on the Windows printer.

File | Close

Closes the **Define Variables** window.

Edit | Add

Adds a new variable to the **Defines Variables** window.

Edit | Select

These commands are used for ***selecting***, ***inverting selection***, and ***un-selecting*** variables.

Edit | Move Variables Up or Down

These commands move variables up or down in the Variables spreadsheet.

Edit | Delete

Deletes ***selected*** variables from the **Define Variables** window.

Help Menu

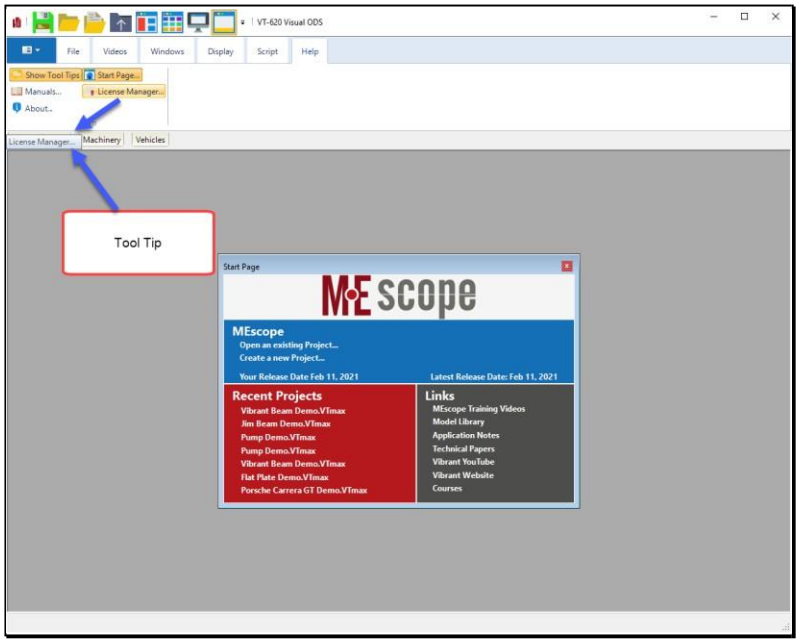
Help | Manuals

Opens the **MEscope Manual**s window.

This window contains links to all the MEscope Operating Manuals

Help | Show Tool Tips

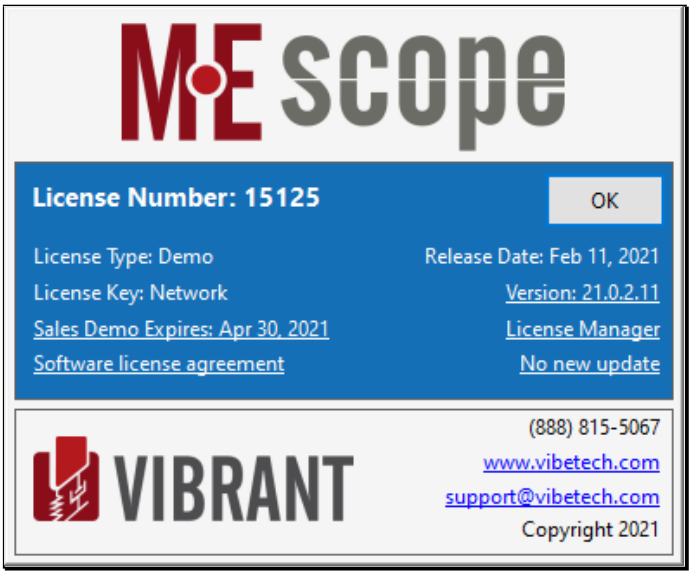
If ***checked***, a brief description of a command is displayed when the mouse pointer is ***hovered*** over a button on a Toolbar or Ribbon.



MEscope Window Showing a Tool Tip.

Help | About

Opens the MEscope About box, as shown below.



About Box.

License Number

The license number of your software.

The license number of your software is ***unique***

If your software uses a hardware Security Key, your license number must match the serial number on your Security Key

License Type

The type of license for your software (Single User, Educational, Network (VLS), or Monthly Subsription).

License Key

The name of the hardware **Security Key** required by your license.

- **Network** denotes that the **Vibrant License Server (VLS)** is required with your license

SMS Expiration

The date ***after which*** you can no longer use a ***newer Release Code*** of software from the Vibrant Internet website.

Your current software will operate indefinitely, unless you have a **Monthly License.**

It is ***strongly recommended*** that your **Software Maintenance & Support (SMS)** be renewed annually to keep your software current with the latest improvements.

Release Date

The Release Date is the date on which your software was released for customer shipments and put on the Vibrant Technology Internet website for downloading.

Version

The Version number is a unique number assigned to the software currently installed on your computer.

Help | Start Page

Opens the MEscope Start Page, as shown below.

Start Page

Recent Projects

This section contains links to the ***last five Projects*** that were opened on your computer.

MEscope

This section allows you to open an ***existing Project*** that has already been stored on your computer or network, or to ***create a new Project.***

The ***Release Date*** of your software is listed, along with the ***Latest Release Date*** of MEscope software available for download from the Vibrant Internet site.

Click on **Latest Release Date** to download and install the ***Latest Release Date*** of MEscope on your computer.

Your computer must be connected to the Internet to list and download the ***Latest Release Date***.

Links

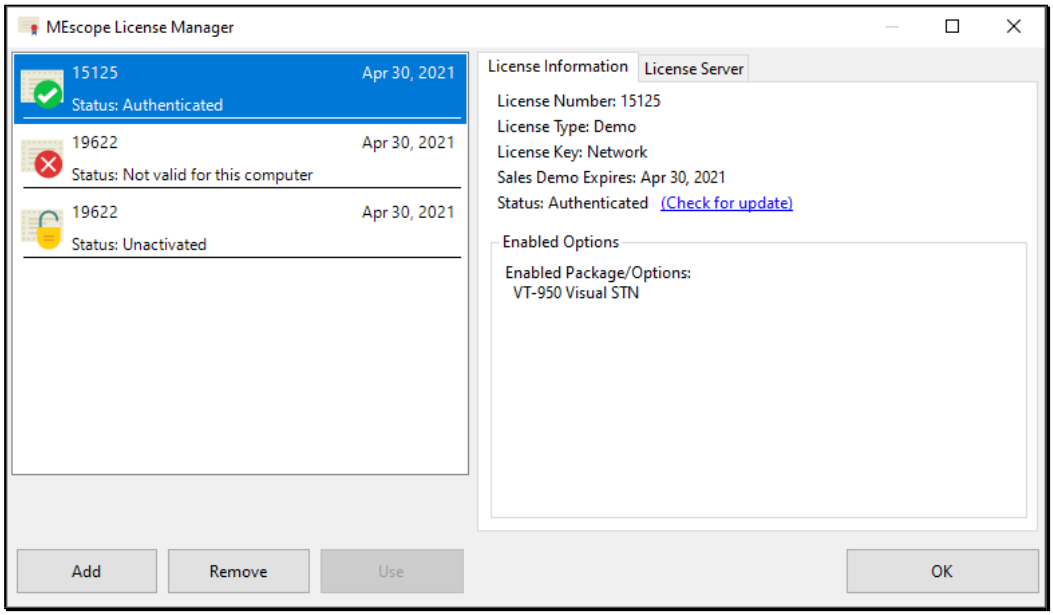
This section contains links for accessing online videos and documents.

Your computer must be connected to the Internet to use these links

Help | License Manager

Opens the MEscope License Manager window, as shown below.

Refer to the 1. Installation & Introduction for details concerning the License Manager.



License Manager.