

Customize Your Scope

CustomDSO Files Create Custom Menus And Operations

CustomDSO files allow users to create custom menus with a series of user specific measurement operations behind them. Figure 1 includes a typical use of the CustomDSO file. Each user created menu in this example sets up a series of specific tests including both mask and parameter testing on multiple waveforms. An experienced scope user can easily produce a semi-automated test sequence which permits users with limited scope familiarity to operate the most advanced features of the scope.

CustomDSO is based on ASCII text files labeled with a .DSO extension. Each of the .DSO files contains a series of oscilloscope remote commands. These files are input to the scope using a floppy disk, hard disk, or SRAM memory card. At power-on, the scope looks for the primary file, named 'AUTOEXEC.DSO' located in the LECROY_1.DIR directory, and executes the commands found in the file. Alternatively, CustomDSO files can be recalled using the Recall Panels menu. WavePro™ Scopes have a dedicated CustomDSO button to assign user selected CustomDSO files to menu keys from floppy, SRAM, or virtual disk (VDISK)..

The commands in the primary CustomDSO file can call additional .DSO files so that relatively complex measurement sequences can be implemented.

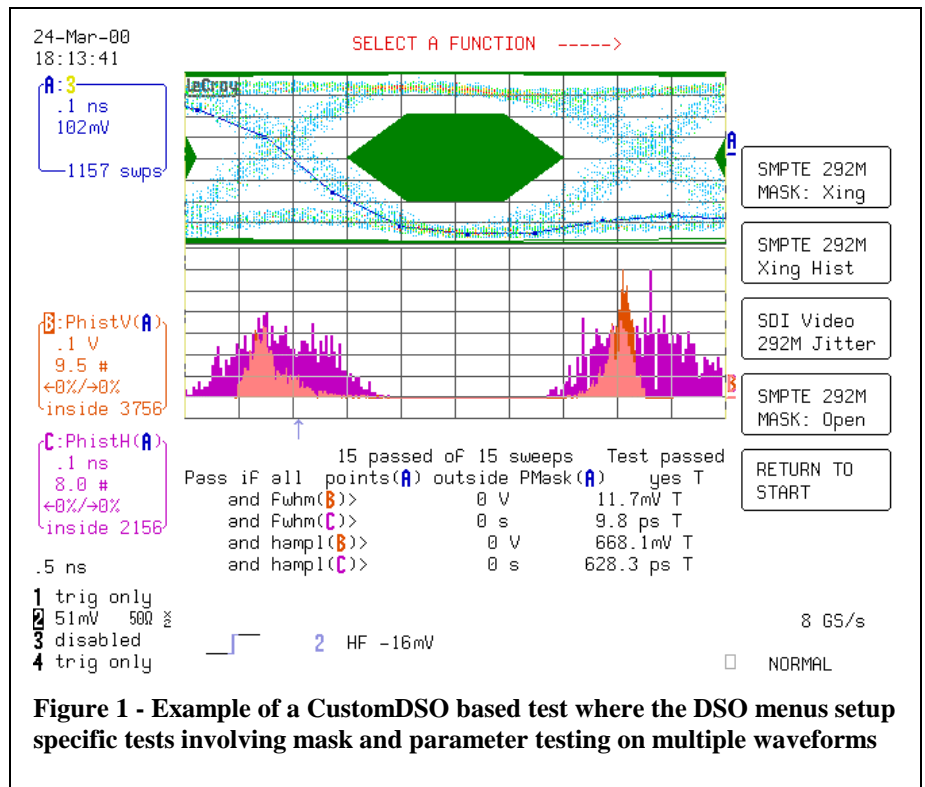


Figure 1 - Example of a CustomDSO based test where the DSO menus setup specific tests involving mask and parameter testing on multiple waveforms

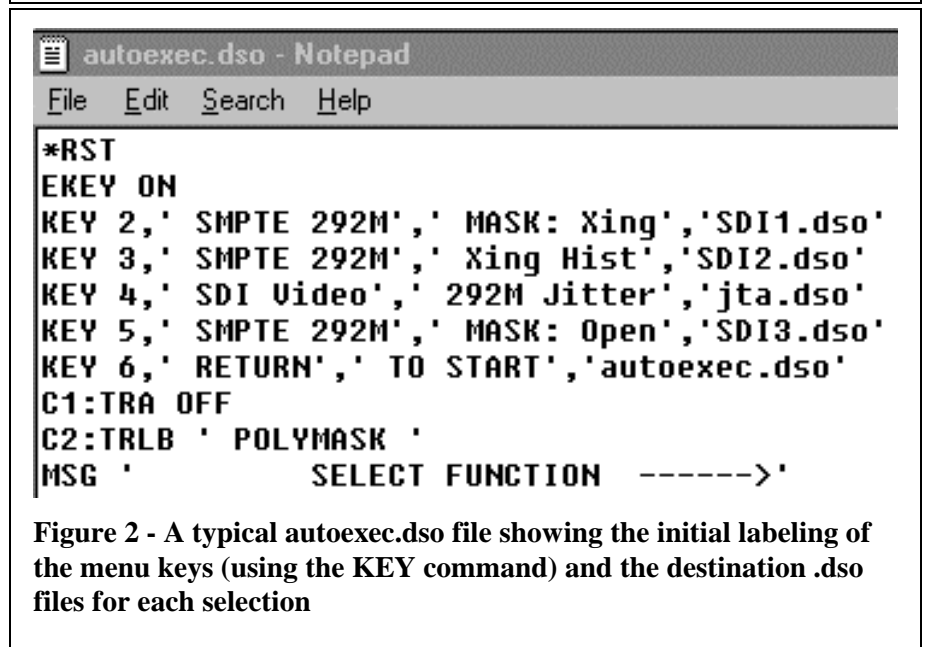


Figure 2 - A typical autoexec.dso file showing the initial labeling of the menu keys (using the KEY command) and the destination .dso files for each selection

The CustomDSO files are created and edited in a text editor such as the Windows Notepad. Figure 2

shows a typical AUTOEXEC.DSO file.

The most frequently used commands in CustomDSO files are:

EKEY - Enable key labels

KEY n - Labels menu key (1-7) and defines the .DSO file to run if that key is pressed.

MESSAGE - Prints a message on the screen

The other remote commands used in the .DSO files can be found in the scope's Remote Control Manual. An easier way to obtain the more complex commands is to set up the scope function you are interested in and use ScopeExplorer (a free utility) to query the command. Cut and paste the response from ScopeExplorer into the .DSO file. Figure 3 shows an example of recalling the command for setting up trace A to perform the FFT of channel 2, which had to be set up manually. The "TA:DEFINE?" query in the upper half of the figure reads the scope's existing setup, which appears in the lower half of the figure as "TA:DEF EQN,"

Another way to simplify the initial setup of the scope is to set all the controls of the scope up manually then save the entire state using a panel setup to floppy disk. The remote command: "RCPN DISK,FLPY,"P000.PNL"" reads the panel setup from the floppy disk and returns the scope to the desired set up.

The internal Remote Control Assistant (RCA) is a powerful tool for debugging both remote operation and internal CustomDSO file operation. RCA is accessible under the Utilities menu, special modes. Figure 4 shows the use of RCA for debugging a command trying to turn on a non-existent trace.

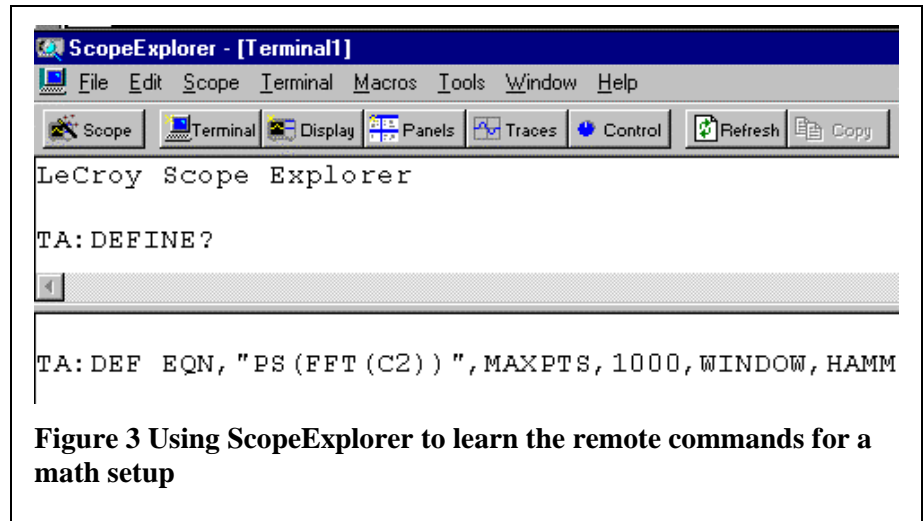


Figure 3 Using ScopeExplorer to learn the remote commands for a math setup

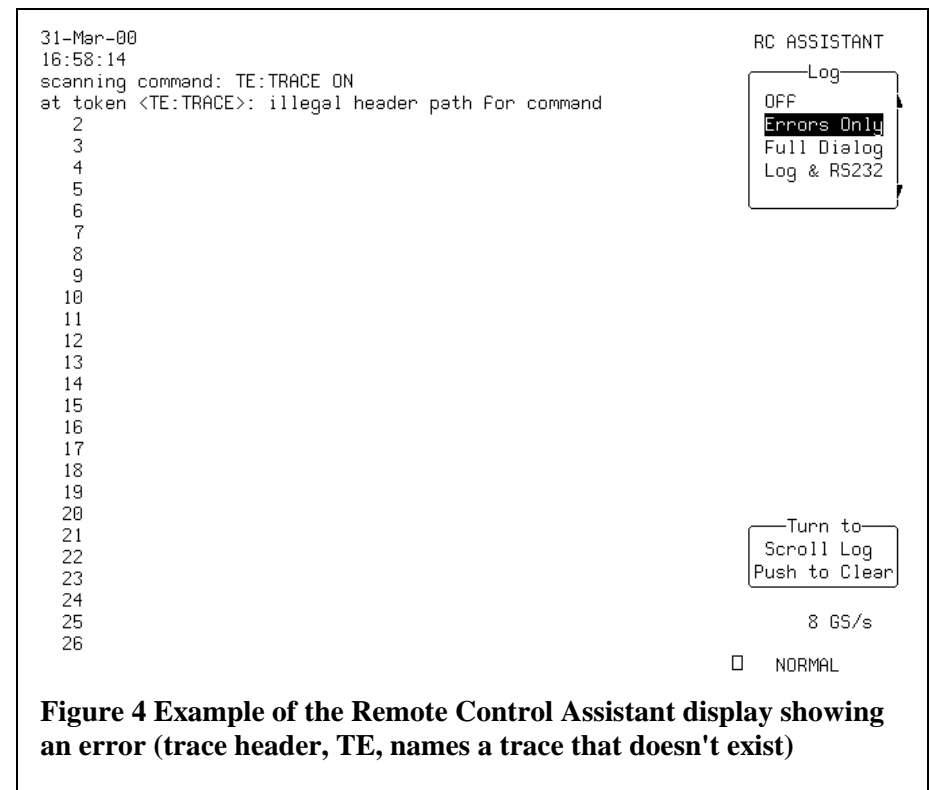


Figure 4 Example of the Remote Control Assistant display showing an error (trace header, TE, names a trace that doesn't exist)

CustomDSO files offer the opportunity to create custom default setups, provide semi-automated prompted operation, or create short cuts to commonly used features.