

# Instructions for Saving Multiple Traces on LeCroy DSOs

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## Introduction

The following explanations show how to properly save traces acquired at the same time on a LeCroy DSO.

It is essential to save simultaneously acquired traces when there is a strong timing relationship between 2 or more signals. Here are some examples:

- Data and Clock on I2C signals
- Data and Strobe on SpaceWire signals
- On a sensor, Analog temperature output and digitally encoded temperature output,
- High and Low signals on MIL-STD-1553-B signals when a differential probe cannot be used.

TRC files are binary files. They are a fast and efficient way to exchange DSO data, by reloading them into DSO Memories. These files can then be used for DSO developments, analysis or bug searches. There is no functional difference between a Channel and a Memory for the algorithms executing on the oscilloscope.

There is however one exception: The trigger cannot function on a signal stored in a file.

## Saving the Waveforms

Once acquired according to the instructions in other items of the FAQ, the waveforms need to be saved into a set of file. The following image shows the 4 key settings. The settings shown will save C1 into the file listed under "Trace Title"



Figure 1: The Save Waveform dialog

When several waveforms are needed, select "All displayed" in the **Source selection box**. This will create several files with names matching their sources. In order to select "All displayed", open the Source Picker and go under Category "Other". Here you will find the "All displayed" icon (or at the end of the "All" Category).

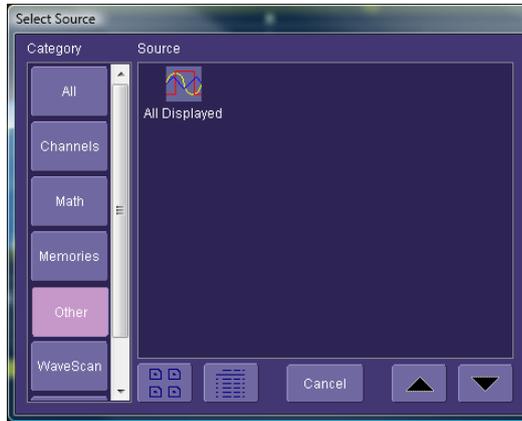


Figure 2: Selection of Source to save all necessary Waveforms at once



When returning to the “Save Waveform” tab, the source will be **All Displayed**. This method will warrant that you save all the waveforms displayed on screen. Before you save, make sure that only the necessary traces are on screen, typically a combination of 1 to 4 channels. Usually zooms, memories and computations are useless and must be turned off before saving.

### Exporting the files out of the oscilloscope

The files saved as per above instructions can then be retrieved from the oscilloscope (in the directory selected) using a USB key and moved to a PC for mailing or archiving.

### Uploading the files

There are several ways to transfer the TRC files to other users using the Internet. When the files are not too large, e-mail can be used. When the file size exceeds the capabilities of normal e-mails accounts, both Lahniss and LeCroy provide FTP type solutions. Please refer to the corresponding documents in the FAQ section.