

## Chapter II-9 — Importing and Exporting Data

The Save Igor Binary dialog is similar to the Save Delimited Text dialog. There is a difference in file naming since, in the case of Igor Binary, each wave is saved in a separate file. If you select a single wave from the dialog's list, you can enter a name for the file. However, if you select multiple waves, you can not enter a file name. Igor will use default file names of the form "wave0.ibw".

When you save an experiment in a packed experiment file, all of the waves are saved in Igor Binary format. The waves can then be loaded into another Igor experiment using **The Data Browser** (see page II-114) or **The LoadData Operation** (see page II-156).

.ibw files do not support waves with more than 2 billion elements. you can use the **SaveData** operation or the Data Browser Save Copy button to save very large waves in a packed experiment file (.pxp) instead.

### Saving Waves in Image Files

To save a wave in TIFF, PNG, raw PNG, or JPEG format, choose Data→Save Waves→Save Image to display the Save Image dialog.

JPEG uses lossy compression. TIFF, PNG and raw PNG use lossless compression. To avoid compression loss, don't use JPEG.

JPEG supports only 8 bits per sample.

PNG supports 24 and 32 bits per sample. Raw PNG supports 8 and 16 bits per sample.

The extended TIFF file format supports 8, 16, and 32 bits per sample and you can use image stacks to export 3D and 4D waves.

See the **ImageSave** operation on page V-405 for details.

### Saving Sound Files

You can save waves as sound files using the **SoundSaveWave** operation.

## Exporting Text Waves

Igor does not quote text when exporting text waves as a delimited or general text file. It does quote text when exporting it as an Igor Text file.

Certain special characters, such as tabs, carriage returns and linefeeds, cause problems during exchange of data between programs because most programs consider them to separate one value from the next or one line of text from the next. Igor Text waves can contain any character, including special characters. In most cases, this will not be a problem because you will have no need to store special characters in text waves or, if you do, you will have no need to export them to other programs.

When Igor writes a text file containing text waves, it replaces the following characters, when they occur within a wave, with their associated escape codes:

Character	Name	ASCII Code	Escape Sequence
CR	carriage return	13	\r
LF	linefeed	10	\n
tab	tab	9	\t
\	backslash	92	\\

Igor does this because these would be misinterpreted if not changed to escape sequences. When Igor loads a text file into text waves, it reverses the process, converting escape sequences into the associated ASCII code.

This use of escape codes can be suppressed using the /E flag of the **Save** operation (see page V-812). This is necessary to export text containing backslashes to a program that does not interpret escape codes.