

Chapter II-5 — Waves

When you save a packed experiment as unpacked, home waves are stored in their default disk folder in the experiment folder.

When you save an unpacked experiment as packed, home waves are saved in the packed experiment file.

You can use the Data Browser to determine if a wave is shared. For shared waves, the Data Browser info pane shows the path and file name of the wave file on disk. For home waves this information is omitted.

You can convert a shared wave to a home wave by adopting it. See **Adopting Files** on page II-24 for details.

Wave Properties

Here is a complete list of the properties that Igor stores for each wave.

Property	Comment
Name	Used to reference the wave from commands and dialogs. 1 to 255 bytes. Standard names start with a letter. May contain letters, numbers or underscores. Prior to Igor Pro 8.00, wave names were limited to 31 bytes. If you use long wave names, your wave files and experiments will require Igor Pro 8.00 or later. Liberal names may contain almost any character but must be enclosed in single quotes. See Wave Names on page II-65. The name is assigned when you create a wave. You can use the Rename operation (see page V-796) to change it.
Data type	A numeric, text or reference data type. See Wave Data Types on page II-66. Set when you create a wave. Use the Redimension operation (see page V-788) to change it.
Length	Number of data points in the wave. Also, size of each dimension for multidimensional waves. Set when you create a wave. Use the Redimension operation (see page V-788) to change it.
X scaling (x0 and dx)	Used to compute X values from point numbers. Also Y, Z and T scaling for multidimensional waves. The X value for point p is computed as $X = x0 + p*dx$. Set by SetScale operation (see page V-853).
X units	Used to auto-label axes. Also Y, Z and T units for multidimensional waves. Set by SetScale operation (see page V-853).
Data units	Used to auto-label axes. Set by SetScale operation (see page V-853).
Data full scale	For documentation purposes only. Not used. Set by SetScale operation (see page V-853).
Note	Holds arbitrary text related to wave. Set by Note operation (see page V-694) or via the Data Browser. Readable via note function (see page V-694).
Dimension labels	Holds a label up to 255 bytes in length for each dimension index and for each dimension. See Dimension Labels on page II-93. Prior to Igor Pro 8.00, dimension labels were limited to 31 bytes. If you use long dimension labels, your wave files and experiments will require Igor Pro 8.00 or later.

Property	Comment
Dependency formula	Holds right-hand expression if wave is dependent. Set when you execute a dependency assignment using := or the SetFormula operation (see page V-847). Cleared when you do an assignment using plain =.
Creation date/time	Date & time when wave was created.
Modification date/time	Date & time when wave was last modified.
Lock	Wave lock state. A locked wave can not be modified. Set by SetWaveLock operation (see page V-858).
Source folder	Identifies folder containing wave's source file, if any.
File name	Name of wave's source file, if any.
Text encodings	See Wave Text Encodings on page III-472.

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