

ACKAPI BIOPAC FILE FORMAT API



BIOPAC File Format Application Programming Interface (ACKAPI) functions give software developers the ability to retrieve data from files in BIOPAC's file format.

ACKAPI is a software library that people with programming knowledge can use to identify and parse information in BIOPAC's ACQ binary file format. The API is a software library for programmers to use when creating applications- it is not a stand-alone data extraction program.

The API is the easiest way for people with programming knowledge to extract data from ACQ files for advanced analysis. Use the base functions in a variety of combinations to extract specific data from an ACQ file to use in a new application. Use these base functions in a variety of combinations to extract specific data from an ACQ file and then use or transform the data in other analysis programs. The API allows you to:

- Initialize an ACQ file structure
- Close an ACQ file structure
- Retrieve channel information
- Retrieve samples by segment of a specified channel
- Retrieve all the samples of a specified channel
- Retrieve a particular sample of a specified channel
- Retrieve samples by time slice of a specified channel
- Retrieve Journal Text from *AcqKnowledge* 3.7.3 or below
- Retrieve marker information
- Retrieve marker text of a specified marker

IMPORTANT Access to Journal contents is only supported for *AcqKnowledge* 4.1 - 4.1.1; access to Journal contents is **NOT** supported for files created with *AcqKnowledge* 4.2 and above or Biopac Student Lab 4.0.0 and above. If Journal access is required for files created with the latest BIOPAC software, use the "Windows *AcqKnowledge* 3.7" export option.

Windows OS required. The API requires a Windows OS. The implementation of these functions is compiled into a pair of Windows library files. Each has been compiled twice, once for 32-bit operating systems and again for 64-bit operating systems. Although the interface is documented here in C/C++, any programming language that is able to utilize Windows DLL files should be able to access the BIOPAC File Format API. The API was developed using Microsoft Visual Studio C/C++ and is designed to be compatible with Microsoft C++ and Microsoft Visual Basic. The API may work with other developer's tools, but has not been tested for compatibility.

Current Release File Compatibility

ACKAPI can be used to read data from single sample rate files containing stored channels of the same length and saved with the following BIOPAC software products:

- **Windows**
 - single sample rate, non-compressed, not GLP:
 - *AcqKnowledge* 4.1 . 5.x and 3.7.0 - 3.9.1
 - Biopac Student Lab 4.0 - 4.1.x and 3.7.0 - 3.7.2
- **Macintosh.**
 - single sample rate, non-compressed, not GLP:
 - *AcqKnowledge* 4.1 . 5.x
 - Biopac Student Lab 4.0.0 - 4.1.x
 - single sample rate, non-compressed, not GLP, saved as "Graph (Windows)":
 - *AcqKnowledge* 3.7 - 3.9
 - Biopac Student Lab 3.7.1 - 3.7.2

Optional Support License

The API is intended for users with some programming knowledge. Issues that the Support Department can resolve do not require and are not counted toward a license. Optional Support Licenses provide for up to 5, 10, or 20 software-related programming issues that require a programmer to resolve. Click for [Support License](#) options.