

LabVIEW Driver for Conditioning Amplifier type 2694. Release 1.0: May, 2002

Introduction

This release includes almost complete support of the Amplifier functions. There is no support for Transducer setup. The release includes the following components:

- A LabVIEW library of driver functions to set and get amplifier parameters.
- A LabVIEW library of examples showing how to use the driver functions.
- This Word document.

System requirements and installation

To run the LabVIEW driver functions you need to have LabVIEW 6i (6.0) (or higher) including ActiveX support installed. There are no other requirements.

To **correctly install your 2694 driver toolkit** and make use of all the functions and examples palettes:

- Close LabVIEW
- Unzip the downloaded 2694_LabView6.zip file into your ...LabVIEW **\instr.lib\ directory
- Launch LabVIEW.

From a diagram window open the **Functions→Instrument I/O→Instrument Drivers→** palette. You should now see a new item called B&K-2694

The driver library

The driver library *2694 Driver.llb* includes approximately 24 functions that are organized in a 3 levels hierarchy. A **high-level** function set allows setup of entire 16 channels amplifiers type 2694. These functions call sub-functions at an **intermediate-level** that can get or set parameters for a single channel. These functions then call **low-level** sub-functions that can set single parameters on any channel of any amplifier. That way the user can implement his 2694 control at the most appropriate level for his application. Figure 1 shows a simple diagram for the described hierarchy. (The figure is a screen-shot of the diagram of the *All VIs.vi* that is included in the driver library). Figure 2 shows a screen shot of the VI-hierarchy window for the included example.

High-level functions (amplifier level):

- Connect/Disconnect Port
- Get/Set Amplifier
- Get/Set Auxiliary amplifiers

Intermediate-level functions (channel level):

- Get/Set Channel parameters
- Get/Set single Auxiliary amplifier parameters
- Get/Set Multiplexer channel
- Get Overload information

Low-level functions (single parameter level):

- Get/Set single parameter (input enabled, floating input, ICP enabled, high-pass filter and gain)

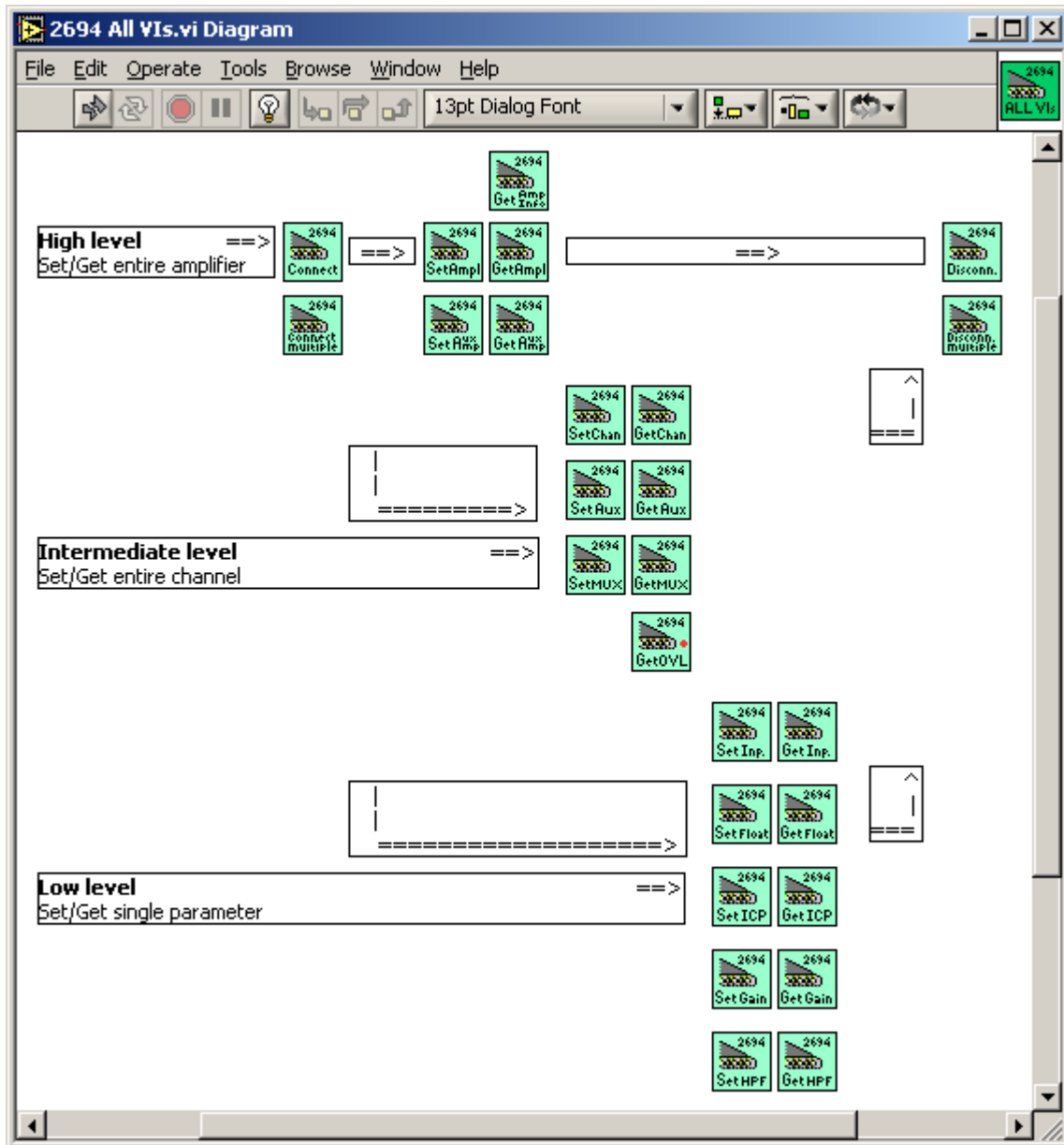


Figure 1: Diagram window of the All Vis.vi that is included in the driver library.

The example library

The library *2694 Examples.llb* includes 4 examples. The examples show how to control a number of amplifiers type 2694 daisy chained on a single or on multiple COM ports.

The main example supports control of up to four 2694 units. The four displayed tabs are identical each one controlling an independent 2694 unit. All implemented driver functions are used by the example. The following figure shows the programming hierarchy for the main example.

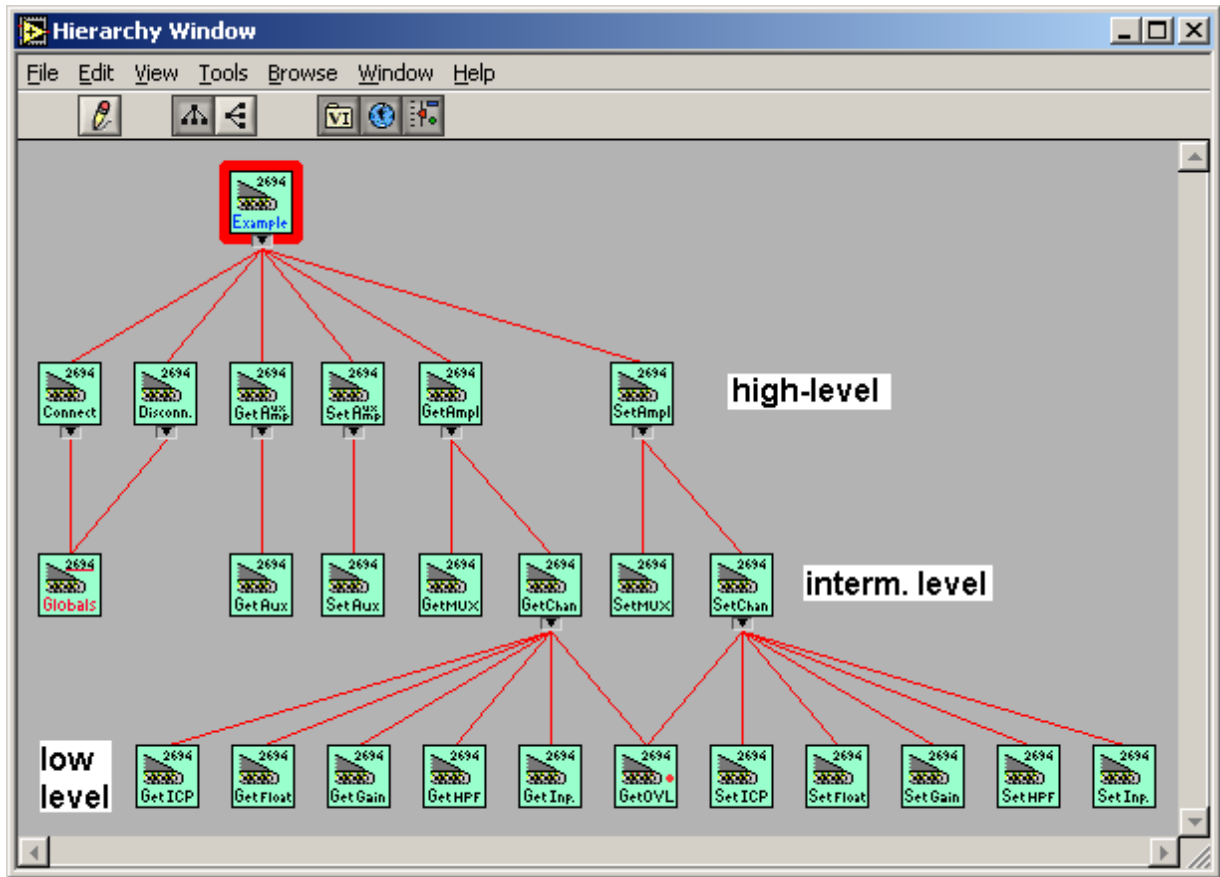


Figure 2: Hierarchy window for the main example VI

Questions and comments

Please do not hesitate to contact Kevin Bernard Ginn at KBGinn@Bksv.com