



# **How to use APEX Instruments in LabVIEW**

(Version 1.00)

**APEX Technologies**

**9bis, rue Angiboust, 91460 Marcoussis, France**

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## 1. Introduction

Apex provides a range of free Instrument LabVIEW Drivers in order to simplify the development process of instrument remote control applications. These drivers apply VI technology which internally takes advantage of VI scripting - programmatically creating and modifying VIs.

## 2. APEX LabVIEW Drivers

All LabVIEW Apex drivers are included in the zip file “Driver\_Labview\_AP2XXX\_V3.rar” sent to you. The Apex LabVIEW drivers can be considered as subVIs used effectively for your remote control section.

There are several ways to organize your subVIs. The most common way is to organize by application. In this case, all the VIs for a particular application are saved into the same directory or into a VI Library file. Saving into a library file allows you to transport an entire application within a single file.

Saving into library is simple. After clicking Save As., click New VI Library. This will allow you to name the library, and then save your VI into it. To add subsequent VIs, simply double click the .llb file from the standard Save window, and give the VI a name as shown in Fig. 1.

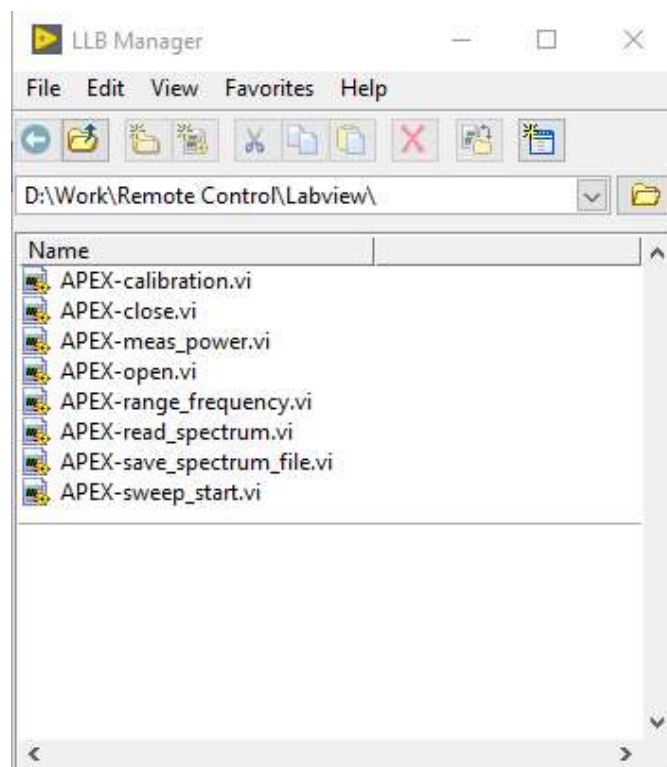


Fig. 1. Save APEX sub Vis into library LLB manager

Note that if the LabVIEW VISA does not detect the TCP/IP address and GPIB address as shown in Fig. 2, you should re-verifying and re-building the remote control system.

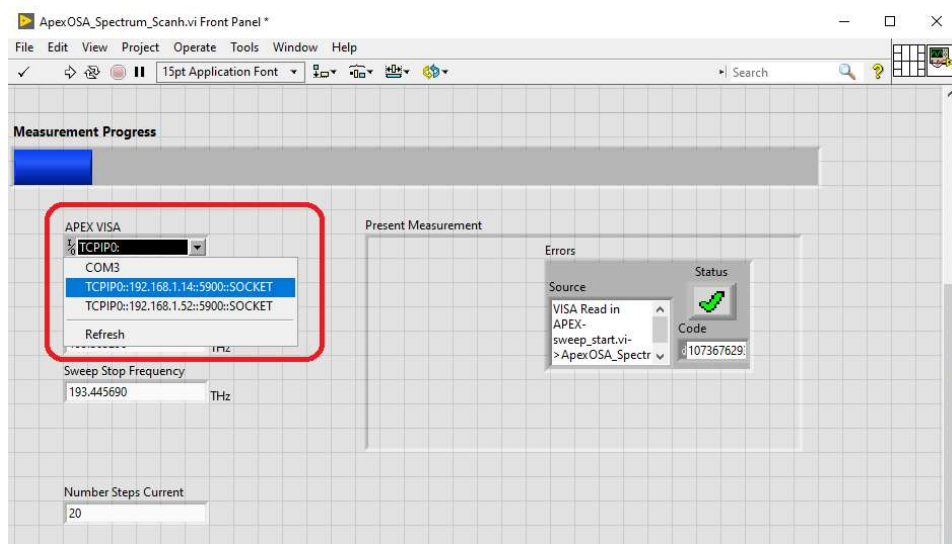


Fig. 2. VISA detects TCP/IP and GBIP address of OSA.

## Required Software

- Windows XP/Vista/7 32-bit/64-bit operating system
- LabVIEW 2010 or later 32-bit/64-bit
- National Instruments VISA I/O library (NI VISA)

## LabVIEW Examples

GPB\_LabVIEW\_Example.zip

Ethernet\_LabVIEW\_Example.zip

GPB\_LabVIEW\_Example: In the **APEX-meas-power.vi**, we set offset = 17 for Fract/Exp String To Number Function; and in **APEX-sweep\_start.vi**, the offset = 1 for Decimal String To Number Function

Ethernet\_LabVIEW\_Example: In the **APEX-meas-power.vi**, we set offset = 16 for Fract/Exp String To Number Function; and in **APEX-sweep\_start.vi**, the offset = 0 (unwired or default) for Decimal String To Number Function